Minutes of the 302nd meeting of Expert Appraisal Committee held on 7th and 8th July, 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 Complexes7(c); Ports, harbours, breakwaters, dredging 7(e) and National Highways7(f)

The 302nd Meeting of Expert Appraisal Committee (EAC) of Infra-1 (IA-III) was held through Video Conferencing at the Ministry of Environment, Forest & Climate Change (MoEF&CC), Indira Paryavaran Bhavan, New Delhi on **7th- 8th July, 2022** under the Chairmanship of Dr. Deepak Arun Apte. A list of participants is annexed as **Annexure-A**.

1. OPENING REMARKS OF THECHAIRMAN

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 under taken by the Ministry under Infra-1 Division.

2. CONFIRMATION OF THE MINUTES OF THE LASTMEETING

The minutes of 300 EAC Meeting held on 15th June, 2022 were confirmed and following corrections was made in the 300th EAC meeting held on 15th June, 2022.

(a) In agenda no.3.4 para no.7 an inadvertent error occurred it was mentioned as Public Hearing was conducted in Hardoi, Shahjahanpur, Unnao, Sambhal, Badaun, Hapur, Raebarelli, Pratapgarh, Meerut, Amroha, Bulanshahar and Prayagraj districts, however, in the table the details of the Prayagraj districts was not mentioned inadvertently, the following shall be inserted along with the existing table.

S. No.	Date	Location	Name of District	Presided by
12	26.05.2022	Tehsil Soraon Sabhagar	Prayagraj	Additional District Magistrate

(b) In agenda 3.5, para no. 3.5.9, following corrections are made.

Para	As per MOM of 297th EAC	Revised statement
Para No. 3.5.9	The Committee after deliberation noted that the PP has obtained the EC under the provisions of EIA notification 1994 the EC validity expires in 5 years. Therefore, the EC granted in 2005 is construed to the facilities established with in the validity period and **operation**. Through the present application submitted online, PP had applied for the expansion of the port project without considering and mentioning the part of the unit which was not	The Committee after deliberation noted that the PP has obtained the EC under the provisions of EIA notification 1994 the EC validity expires in 5 years. Therefore, the EC granted in 2005 is construed to the facilities established with in the validity period and **for commencement of the construction or operation**. Through the present application submitted online, PP had applied for the expansion of the port project without considering and

	completed in the earlier EC dated 2005. Now therefore the Committee advised the PP to include the incomplete part in the present expansion proposal & resubmit the proposal for consideration by the Ministry.	mentioning the part of the unit which was not completed in the earlier EC dated 2005. Now therefore the Committee advised the PP to include the incomplete part in the present expansion proposal & resubmit the proposal for consideration by the Ministry.

3. AGENDA WISE CONSIDERATION OFPROPOSALS:

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

Agenda No.3.1

Modernisation of IFFCO Kisan SEZ – Nellore Agro Park at Racharlapadu village, Kodavaluru Taluka, Nellore district, Andhra Pradesh by M/s IFFCO Kisan SEZ Ltd. – Environmental Clearance under 7(ii) clause of EIA Notification, 2006.

[Proposal No. IA/AP/NCP/241187/2021 and File No. 21-8/2010-IA.III].

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

3.1.1 The aforementioned proposal was earlier considered by EAC in its 283rd meeting of Expert Appraisal Committee held on 9th-10th December, 2021. The EAC, taking into account the submission made by the project proponent has a detailed deliberation in its 283rd meeting on 9th - 10th December, 2021 and deferred the proposal for the want of the following details:(i) IFFCO has to submit the detailed list of industries going to be set up as per CPCB category and possible cumulative impacts of such industries on environment should be assessed and submitted. Further, an Environmental Management Plan based on the probable impacts as an outcome of the above study shall be submitted. (ii) Latest compliance monitoring report conducted by Regional Office of the Ministry shall be submitted. PP submitted the requisite information on 25th June 2022, accordingly at this instance; the aforementioned proposal was further placed before the EAC during 302nd meeting during 07th-08th July, 2022. The project proponent along with EIA consultant Sri Sai Manasa Nature Tech Pvt. Ltd has made a presentation through Video Conferencing and provided the following revised information: -

3.1.2 IKSEZ is a Multi-Product Special Economic Zone with focus on agro based industries. A notified SEZ with DTZ spread over approximately 1111 Ha, situated in Nellore District of Andhra Pradesh.

3.1.3 The proposed project falls under 7(c), Category-A, Industrial Estates/Parks/ Complexes/Areas, Export Processing Zones (EPZs), Special Economic Zones (SEZs), Biotech Parks, Leather Complexes as per EIA notification 2006. Total Project Cost is Rs. 650 crore.

3.1.4 M/s IFFCO Kisan SEZ Limited has obtained Environmental Clearance vide letter dated 22.06.2011 for setting up of a Agro Park at Racharlapadu village, Kodavaluru Taluka, Nellore district, Andhra Pradesh for setting up Green House/Poly houses/nurseries, livestock, cereals and

Pulses, fruits & vegetables, integrated dairy, aquaculture, meat & Poultry industries, Medicinal & aromatic plants, feed manufacturing, Nutraceuticals & Food Additives, Power Generation (420MW) including natural gas based-Central (220MW), Biomass based (70MW), Natural gas & Bio gas based-De central (130MW), Educational & Research, Infrastructure Basic etc.

3.1.5 Now M/s IFFCO Kisan SEZ Limited mentioned that as APTRANSCO has set up a 220KV substation with assured supply of power to the units set up in the industrial park, it was decided to drop the proposed power generation plants of 420MW capacity (including Natural gas & bio gas based de-central plant of 130MW capacity) originally proposed and also submitted that IKSEZ had been notified as Multi Product SEZ vide Gazette Notification no.724-S.O.880(E) dated 19.04.2010 by Ministry of Commerce and Industry, GoI and order to improve the occupancy in the SEZ to provide employment & economic growth in the region and proposed to include following additional industrial sectors in addition to the already approved industrial sectors and withdrawn the proposal for set up the proposed power Generation plants of 420 MW capacity (including Natural gas & bio gas based de-central plant of 130MW capacity) the as per the existing EC vide letter no.21-8/2010-IA.III dated 22nd June, 2011:

- Renewable energy products (wind mill blades, solar etc), Light and Heavy Engineering manufacturing products and Agricultural tools & equipment.
- Nano technology based products, Nano fertilizers (Nano Nitrogen (Urea)/Nano DAP/Nano Sulphur/Nano Zinc/Nano Copper, etc).
- Electric Mobility and associated products and components.
- Electrical and Electronics including Li-ion and solid-state batteries.
- Non-alcoholic and fruit based beverages & other health and energy drinks.
- Processing of shrimp/fish & shell waste.
- Warehousing, Cold storages and Logistics.

3.1.6 Land use/Land cover of project site:

S. No.	Land use/Land cover	Area (ha)	%	Remarks, if any
1	Plotted/ Industrial area	754.3	67.93	-
2	Storage Pond & Rain Water Harvesting	42.3	3.81	-
3	Green belt / Open Spaces	248.0	22.33	IKSEZ will develop on the whole of 22% i.e, 620 acres (248ha) and individual industries will develop 11% of the greenbelt to achieve the total greenbelt of 33%.
4	Road Network	49.2	4.43	-
5	Water Pipeline	0.7	0.07	-
6	Parking Space	10.5	0.94	-
7	Solid Waste Management	6.0	0.49	-
Total		**1111.0**	**100.00**	-

3.1.7 Land use/Land cover around 10 km radius of project site:

S. No.	Land use/Land cover	Area (ha)	%
	Waterbody	2279.54	4.68
	Open scrub	8077.53	16.59
	Agricultural Fields	6275.82	12.89

	Barren land	10510.43	21.58
	Fallow land	21134.47	43.40
	Habitation	415.85	0.85
Total		**48693.64**	**100.00**

3.1.8 Now PP has applied for following amendments in the existing EC:-

Sl. No	**Existing industries as per EC order No. 21-8/2010- IA.III dated 22nd June, 2011**	**Industries Withdrawn/ Dropping of in the IKSEZ area.**	**Proposed Amendment required**
1	Agro park (Processing zone-488.8 ha + 198.9 ha; Non-processing zoe-175.1 ha; Greenbelt-157.1 ha + 66 ha + 25.1 ha). About 10000 workers (5000 single + 5000 families) likely to stay in the SEZ. Power generation (420MW) including natural gas based central (220MW), biomass based (70MW), Natural gas & biogas based –De-central (130MW)	i. Power generation (420MW) including natural gas based- central (220MW), biomass based (70MW), Natural gas & biogas based –De-central (130MW) ii. Reduction in accommodation facility for workers from 10000 nos. to 5000 no's.	i. Residential/Institutional/ Administrative Buildings ii. Food &Agri processing iii. Aqua processing iv. Nano materials and Nano Fertilizers v. Non-alcoholic & Fruit based beverages vi. Electric Mobility and associated products vii. Electrical and Electronics including Li-ion and solid state batteries viii. Light & Heavy Engineering Ware house and logistics.
2	Water requirement	19890KLD	19890KLD
3	Wastewater generation	9754.0KLD	11899 KLD
4	Project cost	As per EC Rs. 560 Crores	Revised Project cost for the Multi-product SEZ and DTA: Rs. 650 Crores
5	Boiler details	2 x 6TPH, 1 x 2 TPH, 1 x 135TPH, 1 x 70TPH, 1 x 200TPH, 2 x 800TPH	1x2TPH, 1x4TPH, 1x6TPH, 1x10TPH, 1x10TPH, 1x6TPH, 1x2TPH
6	DG Sets	Nil	250 KVA, 320KVA, 400KVA, 600KVA, 850KVA, 250 KVA, 320KVA, 400KVA, 600KVA, 850KVA
7	Solid waste details	i. Chicken slaughter waste – 100 TPD	i. Domestic waste – 15.0 TPD Chicken Slaughter

		ii. Domestic waste – 6TPD iii. Ash from Biomass power plants – 500 TPD iv. Recyclable waste (paper, parking, scrap etc.) – 2TPD v. ETP Sludge – 0.8 TPD vi. STP sludge – 0.2 TPD	waste from slaughter house – 100 TPD ii. Industrial solid waste – 100 TPD Recyclable waste – 2.0 TPD Discarded iii. Containers/bags/liners/carton boxes– 1500nos/year Used/Spent oil/mud with oil– 2000LPA. iv. STP sludge – 0.2 TPD E-waste – 5Kgs/month.

3.1.9 Terrain and topographical features: The topography of the site is slightly undulating with a decreasing height gradient from North West to South East from around 27m above Mean Sea Level (+MSL) in the North-Western portion to approximately 12m+MSL in the South East.

3.1.10 Impact on Water bodies/drainage: Pennar River is in south direction at a distance of 19 km from project site. The Pennar is the major river which is passing in the middle of the district. The drainage density varies from less than 1 to 3 km/km^2. Natural slope will be maintained during the site preparation to avoid any effect on the natural drainage pattern of the site. The surface and subsurface drainage system is designed as per IRC guidelines. A minimum longitudinal gradient of 0.3% is maintained in such a way that it attains the minimum self-cleaning velocity of storm water drains.

3.1.11 Water requirement: Water requirement during operation phase would be 19610 KLD after the proposed modernization quantity of 19890 KLD. The water pipeline network and pumping scheme is already operational and will be extended to the new individual units as per the requirement. Ground water will not be envisaged. Water is being drawn from the Kanigiri Reservoir, which is located in West direction at a distance of 11km from the project site. Agreement between M/s. IFFCO Kisan SEZ and Govt. of AP, I & C.A.D. department for permission for drawl of 10 MGD of water from Kanigiri Reservoir was made vide Agt. No. 24 SE/2011-12 dated 14.11.2011. Also rainwater harvested within IKSEZ will be utilized to reduce the consumption of fresh water based on the requirements.

3.1.12 The project does not involve in forest diversion/ Eco sensitive areas.

3.1.13 Waste management details:

3.1.14 Waste management details for the proposed industries.

S.No.	**Name of waste**	**Source of Generation**	**Quantity**	**Mode of Treatment & Disposal Method**
1.	Domestic waste	Residential area	15.0 TPD	Collected, segregated, stored and disposed to municipality. Organic waste will be composted. Plastic and E-waste will be disposed to authorized vendors
2.	Chicken slaughter waste	From slaughter House	100 TPD	Composting

3.	Industrial solid waste	From Industries	100 TPD	Will be segregated and shall be handled according to the statutory norms based on the type of waste
4.	Recyclable waste	Misc.	2 TPD	Disposed to APEMC/ Authorized recyclers
5.	Discarded Containers /Bags / Liners/ Carton boxes	STP	1500 Nos/ Year	Collected, stored and sold to APPCB approved parties/APMEC
6.	Used/ spent oil/ Mud with Oil	Misc.	2000 LPA	Collected, stored and sold to APPCB registered recyclers
7	ETP & STP Sludge	ETP and STP	0.2 TPD (STP sludge)	Manure for the Plants
8	E-waste	Misc.	5kg/ Month	Disposed to authorized recyclers/re-processors

3.1.15 CETP/STP details: **STP:** Individual industries will establish their own STP as per their waste water characteristics. Further treated water will be recycled within their premises and used for greenbelt development. At present 16 KLD STP is in operation by IKSEZ and treated water is used for greenbelt development. **CETP:** The individual units in IKSEZ will install ETP based on the characteristics of the effluent generated within their premises and no CETP is proposed.

3.1.16 Tree cutting and Green belt development: SEZ infrastructure has already been established and no tree cutting has been envisaged. Out of 1111 Ha of project land 248.2 Ha of area has been earmarked for greenbelt development by IKSEZ. As most of the land is plain with tiny bushes, no tree cutting shall be required. A total of 49,449 no of plants in 126 acres : Teak - 4933, Hybrid Teak - 700, Neem - 4465, Burma Neem - 10,000, Eucalyptus – 6000, cycas – 3, casuarina – 14,731, Royal palm – 45, arecae palms – 68 , fox tail palms – 105, duranta – 700, ashoka – 259, spider plants – 115, coloroma – 90, bougainvillea – 2580, black ficus – 1290, ixora – 2560, gulmohar – 228, thespesia – 30, terminalia – 30, Mango – 72, guava – 66, Acid lime – 75, indoor plants – 146, kentia palm – 130, coconut – 78 have been planted around boundary. The green belt will be expanded in a phased manner in tandem with growth of industries in the industrial park. In order to comply with the MoEF&CC guidelines for greenbelt development within the Industrial Park, IKSEZ is planning to develop thick greenbelt of tall and evergreen plants along the periphery and on either sides of the roads and within the individual industrial units of IKSEZ.

3.1.17 Rain Water Harvesting: Well-developed storm water network is in place. The rain water collected during the monsoon season is being routed to the existing pond in the North West part of IKSEZ and used for various purposes within IKSEZ to decrease the load on Kanigiri Reservoir.

3.1.18 Land acquisition and R&R issues involved: Not required as the demised land is already in IKSEZ possession.

3.1.19 Employment potential: The project will generate direct employment of about 20000 nos. and indirect employment of 80000 no's will be through contractual labors and ancillary units.

3.1.20 Benefits of the project: The development of Multi-product SEZ and DTA will provide employment and business opportunities to the local people as well as attract international market for investment. The increase in economic activity is expected to enhance development and CSR activities of the industrial units will result in expansion and strengthening of social infrastructure and other benefits which will increase the wellbeing of the local population. They will also be benefited in the areas such as education, health care, infrastructure facilities and women

empowerment. The Government of Andhra Pradesh will be benefited in terms of taxes and duties, the railways, ports and industries authorities, water supplying agencies etc. will be benefited indirectly. Thus, in view of considerable benefits from the project without any adverse environmental impact, the project is most advantageous to the region. IFFCO Kisan SEZ will thereby adhere to the strict environmental norms and at the same time fulfil the 5 themes of the Andhra Pradesh Industrial policy -2020 - 23 (Infrastructure, Ease of doing business, Skilling and labour Availability, End to End hand holding, Incentives) and thereby emerge as a major industrial hub in the south coast of Andhra Pradesh.

3.1.21 Details of Court cases: The cases pertaining to land acquisition way back in 1997 and compensation related issues majorly against the State Govt. are pending before the High Court of A.P. More than 25 similar cases were either dismissed or withdrawn earlier. However, due to the pandemic situation the cases are awaiting to be heard by the Hon'ble HC of Andhra Pradesh (WP(PIL) 4/2017, WP 14105/2017, WP 22430/2017, WP 32225/2017). A case pertaining to petitioner's prayer to relocate the proposed unit of KRIBHCO near Sarvepalli to IKSEZ site is pending before High Court (WP(PIL) 137/2017). A case pertaining to a sub-contractor (Power of Attorney) on amount paid for compound wall construction is pending at High Court (WP 17592/2010).

3.1.22 Observations of EAC:

i. *EAC observed that the proposal is for amendment of EC under clause 7(ii) and PP has submitted the requisite information relating to probable impacts going to take place due to change in the industrial units and also submitted the desired environmental management plan.*

ii. *The proposed individual units need to take Environmental Clearance separately as per the applicability of the schedule of EIA Notification, 2006.*

iii. *The proponent has to comply with the Ministry's OM no. J-11011/321/2016-IA.II(I), dated 27.04.2018 which made it mandatory for certain type of industries to conduct public hearing irrespective of their location within Industrial Area or outside the industrial area.*

iv. *M/s IFFCO Kisan SEZ Limited has obtained Environmental Clearance vide letter dated 22.06.2011, therefore as per the existing regulatory provisions, the EC is valid till 21.06.2021. However, as per the Notification dated 18th January, 2021* period *from the 1st April, 2020 to the 31st March, 2021 shall not be considered for the purpose of calculation of the period of validity of Prior Environmental Clearances. Therefore, the Validity of EC has been automatically extended upto 21.06.2022.*

v. *EAC further noted that vide notification dated 12th April, 2022 the period of validity of Environmental Clearance with respect to the Projects and Activities may be extended in respect of valid Environmental Clearance, by the regulatory authority concerned by a maximum one year, if an application is made in the laid down proforma to the regulatory authority by the applicant within the validity period of the existing Environment Clearance. However, no application has been received in the Ministry within the validity period of EC i.e. till 21.06.2022.*

vi. *In view of the above EAC concluded that in the present scenario, the validity of EC is expired. Therefore, the PP could not able to do any work related to infrastructure development of the IFFCO Kisan SEZ. In case PP intended to carry-on the infrastructure developmental work of the SEZ, they need to apply for ToR for the balance amount of work in the prescribed format. Till that time no work related to infrastructure development of SEZ can be carried out.*

vii. *As far as the present proposal of amendment in environmental clearance is concerned, since the EC is valid for the portion of SEZ project completed till 21.06.2022, the proposed amendment can be recommended.*

3.1.23 The EAC, after examining the documents submitted by the project proponent and detailed deliberations in its 302nd meeting on 7th - 8th July, 2022, **recommended** the project for grant of Environmental Clearance under 7(ii) clause of EIA Notification, 2006 for 'Modernization of IFFCO Kisan SEZ–Nellore Agro Park at Racharlapadu village, KodavaluruTaluka, Nellore district, Andhra Pradesh by M/s IFFCO Kisan SEZ Ltd.' subject to all specific and standard conditions applicable for such projects.

i. The proponent has to comply with the Ministry's OM no. J-11011/321/2016-IA.II(I), dated 27.04.2018 which made it mandatory for certain type of industries to conduct public hearing irrespective of their location within Industrial Area or outside the industrial area.

ii. The proposed individual units need to take Environmental Clearance separately as per the applicability of the schedule of EIA Notification, 2006.

iii. Air pollution control device viz., gas quencher; treatment with mixture of hydrated lime and activated powder for adsorption of partial acidity and VOCs (if any); bag-filter/ESP for removal of particulate matter; ventury scrubber followed by packed bed scrubber with caustic circulation to neutralize the acidic vapours in flue gas; and demister column for arresting water carry over will be provided to the incinerator. Online pollutant monitoring shall be provided as per CPCB guidelines for monitoring particulate matter, SO2, NOx and CO from the incinerator stack. The periodical monitoring of Dioxins and Furans in the Stack emissions shall be carried out.

iv. No tree can be felled/transplant unless exigencies demand. Where absolutely necessary, tree felling shall be with prior permission from the concern Authority. Old trees should be retained based on girth and age regulations as may be prescribed by the Forest Department. Where the trees need to be cut/transplanted with prior permission from the concerned local Authority, compensatory plantation in the ratio of 1:10 (i.e. planting of 10 trees for every 1 tree that is cut/ nonsurvival of any transplanted tree) shall be done and maintained. Plantations should be undertaken exclusively with native and wild species with majority of the trees from tall Ficus variety like Banyan, Peepal, Umber etc.

v. The landscape planning should include plantation of only native tall tree species. The species with heavy foliage, broad leaves and wide canopy cover are desirable. Water intensive and/or invasive species should not be used for landscaping. No use of Eucalyptus, Casuarina, Australian Acacia, Gliricidia etc is permitted.

vi. Leachates to be collected and utilized within project after proper treatment. PP should submit the details regarding Leachate collection and treatment system to be installed to concerned Integrated Regional Office of the Ministry. Toxicity Characteristic Leaching Procedure (TCLP) test to be performed on leachates.

vii. Ground water monitoring for Physico-Chemical parameters to be carried out and record maintained by providing piezometric wells along the flow channel (up and down).

viii. Natural drainage present within the project site shall not be disturbed and no effluent shall be discharged into the natural drain. also shall be developed the plantation keeping the 15m width around the natural drainage.

ix. All the mitigation measures to reduce pollution be mentioned in EIA/EMP report.

x. All red category projects should be confined at one place/area and a minimum distance of 500-700 m shall be maintained between the Industrial area and the

boundary of Hamlet.

xi. Plantation/greenbelt should be developed at the boundary of the industrial project/area and hamlet/all nearby villages.

xii. All the mitigation measures to reduce pollution as mentioned in EIA-EMP report shall be implemented in toto.

xiii. Fly ash should be used as building material in the construction as per the provisions of Fly Ash Notification of September, 1999 and amended as on 27th August, 2003 and 25th January, 2016.

xiv. As per the Ministry's Office Memorandum F. No. 22-65/2017-IA.III dated 30th September, 2020, the project proponent shall abide by all the commitments made by them to address the concerns raised during the public consultation. The project proponent shall initiate the activities proposed by them, based on the commitment made in the public hearing, and incorporate in the Environmental Management Plan and submit to the Ministry. All other activities including pollution control, environmental protection and conservation, R&R, wildlife and forest conservation/protection measures including the NPV, Compensatory afforestation etc., either proposed by the project proponent based on the social impact assessment and R&R action plan carried out during the preparation of EIA report or prescribed by EAC, shall also be implemented and become part of EMP.

xv. The existing water bodies in the project area shall be conserved and used for effective water management. No ground water shall be used in any case.

xvi. Provision shall be made to recharge the ground water and construct rainwater harvesting structures for augmentation of ground water levels. Rain water harvesting for roof run-off and surface run- off, as plan submitted shall be implemented.

xvii. 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 meters above the highest ground water table. Piezometer be installed adequately to monitor the ground water level.

xviii. The quantity of fresh water usage, water recycling and rainwater harvesting shall be measured/recorded to ensure the water balance is maintained and the record shall be submitted to the Regional Office, MoEF&CC along with six Monthly Monitoring report.

xix. Grading within the project site shall be planned such that there shall be negligible impacts on the existing natural drainage system/pattern. An adequate drainage system shall be provided at the site with separate collection streams to segregate the storm run-off from roads, open areas, material storage areas, vehicle wash water and other wastewater streams. Suitable measures should be taken to prevent the washing away of construction materials into the drainage system.

xx. The Industrial area shall maintain Zero Liquid Discharge and to achieve this 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.

xxi. Ambient noise levels shall be regularly monitored and conform to the prescribed standards both during day and night. Incremental pollution loads on the ambient air and noise quality should be closely monitored during development/ construction

phase.

xxii. 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.

xxiii. A comprehensive plan for disaster management and mitigation be developed taking in to account the products, processes and hazardous waste if any and its disposal. The plan should also include financial provisions for the same and integrate these within EIA/EMP.

xxiv. EMP- Budget allocation for developing adequate infrastructure for healthcare facilities and its operations for the employees and general public be made and implemented. Also adequate financial provisions be made for skill development for local population as provided for in the EIA-EMP

xxv. Green belt should be developed using exclusively native tall trees such of Ficus such as Banyan, Peepal, Umber, Jamun, Tamarind etc all around the settlements and water bodies. Minimum 33% of total project area shall be maintained as green belt.

Agenda No.3.2

Subject: Development of Atal Progress way from Kota, Rajasthan to Etawah, Uttar Pradesh via Sheopur, Morena and Bhind districts in the state of Madhya Pradesh (total length 408.77 km) by M/s National Highway Authority of India – Terms of Reference Proposal No. IA/MP/NCP/278042/2022 and File No. 10/27/2022-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. 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."*

3.2.1 The project proponent along with the DPR Consultant M/s Intratech Civil Solutions (Consortium). and EIA consultant M/s OCEAO ENVIRO Management Private Solutions Pvt. Ltd made a presentation through Video Conferencing and provided the following information:-

3.2.2 The proposed Greenfield project is for development of Atal Progress-way' from Kota to Etawah, an access controlled greenfield expressway project in the states of Rajasthan, Madhya Pradesh and Uttar Pradesh. The total length of the project is approx. 408.77 Km. The Proposed Right of Way (RoW) is 60 m for Rajasthan and Uttar Pradesh area and 100 m for Madhya Pradesh Area.

3.2.3 The proposed Atal Progress way starts from Kota in the State Rajasthan to Etawah in the State of Uttar Pradesh Via Sheopur, Morena and Bhind District in the State of Madhya Pradesh. The length of the proposed expressway alignment is 408.77 Km.

3.2.4 The proposed project falls under 7(f) - Highway, Category-A, as per EIA notification 2006. Total investment/cost of the project is Rs12170.3Crores.

3.2.5 The geocordinates of the proposed highway road at start location is Latitude 25°10'3.88"N, Longitude 76° 5'27.49"E and at end location is Latitude 26°46'18.82"N, Longitude 79°10'2.86"E.

3.2.6 Land use/ Land cover of the project site is as following:

S.No.	Landuse/Land cover	Area(ha)	%	Remarks, if any

1.	Settlement	5.45	0.141141616	
2.	Waterbodies	25.35	0.311288481	
3.	Bare Ground	0.44	0.011394919	
4.	Trees/Forest Area	454.51	11.77069279	
5.	Scrub Land	1872.73	48.84432209	
6.	Agriculture Land	1502.89	38.92116011	
Total		3861	100.00	

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

S.No.	Landuse/Land cover	Area(ha)	%	Remarks, if any
1.	Settlement	1992	2.33	
2.	Waterbodies	361	0.42	
3.	Trees/Forest Area	2790	3.26	
4.	Scrub Land	34652	40.46	
5.	Bare Ground	59	0.07	
6.	Agriculture Land	45801	53.47	
Total		85655	100.00	

3.2.8 The proposed alignments passes through ESZ zone, forest and ravines area of Chambal and Proposed ROW in MP Portion is 100m whereas in Rajasthan and UP it was 60 m.

3.2.9 Details of water bodies: Kuno River Crossing at 159300.000 chainage, Chambal River crossing at 383700.000 chainage. Yamuna River Crossing at 389300.000 chainage. Parbati River Crossing at 71900.000 chainage alongside the proposed alignment.

3.2.10 Water requirements: The total requirement of water for construction is estimated to 40000 KLD. Water will be extracted from surface sources. The ground water will be abstracted for campsite after obtaining the permission from the competent authority.

3.2.11 Tree cutting: About 1735 trees are falling within the proposed alignment out of 1735 approx. 600 no of trees falls in forestland and approx. 600 nos. of trees falls in non-forest land. However, bare minimum no. of trees to be felled for construction of four-lane road. Detailed tree inventories will be provided after joint enumeration with the appropriate authority in EIA report.

3.2.12 The proposed alignment passes through ESZ area of National Chambal Sanctuary and crossing the protected area in Madhya Pradesh.

3.2.13 Land acquisition and R&R issues: About 454.51 ha land is likely to be acquired as per NH Act 1956. A total number of 52 structures will be affected due to proposed Road. Compensation will be given as per NHAI Act, 1956 and Right to fair compensation and transparency in land acquisition, rehabilitation and Resettlement (RFCT LARR) Act, 2013.

3.2.14 Employment potential: During construction phase, about 3000 persons will be employed through contractor temporarily for a period of 2 years. During operation phase about 1500 persons will be employed due to construction of toll plazas.

3.2.15 Benefits of the Project-. The proposed access controlled project 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 project will enhance economic development in the area through industrial areas, tourism commercial development and consequent employment. The junctions with existing road will be planned in the form of interchanges and flyover to ensure uninterrupted flow of traffic. It will enhance opportunities to locals, strengthen

tourist development, ensure road safety, and provide better transportation facilities and other facilities such as wayside amenities. Vehicle operating cost will also be reduced due to improved road quality. The compensatory plantation and road side plantation shall further improve the air quality of the region.

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

3.2.17 During the deliberation, EAC observed the following:

3.2.18 The proposed alignment passes through almost entirely through ravines area of Chambal (about 188 km), more than 200 km through ESZ of Chambal Sanctuary, require about 400 ha of forest area and Proposed ROW in MP Portion is 100 m whereas in Rajasthan and UP it was 60 m. Considering the scale of the impact, Committee directed NHAI to revise the alignment to avoid damage to above features and keep away the project alignment from Ravines area of Chambal and keep uniformity in ROW.

3.2.19 In response to aforesaid directions NHAI has modified the alignment of Atal Progressway as best as possible away from Ravine area and restricted PROW to 60m for all three states i.e. Rajasthan, Madhya Pradesh and Uttar Pradesh. Further, it is submitted that in modified alignment proposed diversion of forest area reduced from 403 ha to 21 ha. in the state of MP, the majority of the ravine area (about 83%) avoided, stretch of ESZ reduced from 241.18 km to 7.0 km only and also length of the stretch reduced about 12 km including the stretch passing through the core area of the protected area.

3.2.20 The details of amended alignment (Green Colour) Vs earlier proposed alignment (Yellow Colour) in tabular form is also submitted for the stretch falls in the state Madhya Pradesh from Km. 72.00 to Km. 371.200.

Sr. No.	**Attributes**	**Earlier Proposed Alignment (Yellow)**	**New Proposed Alignment (Green)**	**Remarks**
1	Length	312.513 km	299.247 km	
2	Length pass through Chambal Sanctuary			**About 97% project length away from ESZ and Core zone of Chambal Sanctuary**
	(i) Core Zone	2.870 km	2.423 km	
	(ii) Eco-sensitive Zone	241.180 km	7.024 km	
	(iii) Area Outside Sanctuary	68.463 km	289.800 km	
3	Length pass through Ravines	188.500 km	32.200 km	**Saving about 83%**
4	Forest Area	403.67 ha	21.15 ha	**About 95%**
5	No of villages Connected	Sheopur-63 nos Morena- 62 nos Bhind- 37nos	Sheopur- 63 nos Morena- 117 nos Bhind- 37 nos	**More number of villages connected which increase the economy for the villagers**
7	Pass through any monuments required ASI clearance	1	NIL	**100% saving**

3.2.21 The EAC, taking into account the submission made by the project proponent, had a detailed deliberation in its 302nd meeting during 7th - 8th July, 2022 **recommended** the proposal for grant

of Terms of Reference (ToR) for the new proposed alignment as stated above with the specific conditions, as mentioned below, in addition to all standard conditions applicable for such projects:

i. NHAI to plan elevated corridors between chainage 146+500 to 160+500 and 366+500 to 381+500 to reduce breaking of patches of ravines and gullies.

ii. Explore reducing ROW to 40-50m considering that only 4 lanes are proposed currently with further possibility of an extension up to 6 lanes. This will further reduce ESZ, ravine areas and forest areas considerably.

iii. The new proposed revised alignment is now passing through the small portions of eco sensitive area, riverine, ravine and forest area. Thus the Committee suggested that the PP shall make more efforts if possible and submit the final alignment at the time of EC avoiding/detouring ESZ zone keeping the safe distance from riverine, Geological structure like ravine, wild life corridors, minimizing the use of diversion of the forest area shall submit the mitigative measures along with the EIA/EMP report.

iv. Detailed Biodiversity assessment, impact of the proposed alignment and conservation/mitigation plan be developed by a reputed institute such as SACON or WII or ZSI or GUIDE with focus on habitat and species diversity of ravine and riverine areas of Chambal.

v. Proposal for fencing the alignment with the thick and tall tree plantation of native species with greater focus of Ficus species and other trees that are peculiar to ravine and riverine habitats of Chambal along riverine and wild life sanctuaries shall be developed in consultation with respective state forest departments with budget allocations and the same shall be submitting along with the EMP.

vi. The final alignment map with chainage shall be submitted along with the EIA/EMP.

Agenda No.3.3

Subject: Development of Orvakal Industrial Park in an area of 2740.88 Acres (1109.195 Ha) at Pudicherla, Kannamadakala, Brahmanapalle, Palakolanu, Somayajulapalle, Komarolu Villages in Orvakal Mandal, Kumool District, Andhra Pradesh under Hyderabad Bangalore Industrial Corridor (HBIC) by M/s Andhra Pradesh Industrial Infrastructure Corporation Ltd. (APIIC) – Terms of Reference-Proposal No. IA/AP/NCP/278621/2022 and File No. 10/28/2022-IA.III

"*The EAC noted that the Project Proponent/consultant has 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. 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"*

3.3.1 The aforementioned proposal was earlier considered by EAC in its 286th meeting of Expert Appraisal Committee to be held on 18th – 19th January, 2022. The proposal was return the proposal and suggested the PP to submit the revised proposal as per norms of EIA Notification 2006 and come back with revised/amended proposal.

3.3.2 At this instance, the aforementioned proposal was further placed before the EAC during 302nd meeting during 07th-08th July, 2022. The project proponent along with the Master Plan Consultant M/s Egis India Consulting Engineers (P) Ltd along with EIA consultant M/s Ecomen Laboratories Pvt. Ltd has made a presentation through Video Conferencing and provided the following revised information:-

3.3.3 Andhra Pradesh Industrial Infrastructure Corporation Limited (the "APIIC"), a Government of Andhra Pradesh undertaking, is a progressive organization responsible for development of Industrial Infrastructure in the state of Andhra Pradesh. Government of Andhra Pradesh proposed to Development of Orvakal Industrial Park in an area of 2740.88 Acres (1109.195 Ha) at Pudicherla, Kannamadakala, Brahmanapalle, Palakolanu, Somayajulapalle, Komarolu Villages in Orvakal Mandal, Kumool District, Andhra Pradesh under Hyderabad Bangalore Industrial Corridor (HBIC) by M/s Andhra Pradesh Industrial Infrastructure Corporation Ltd. (APIIC).

3.3.4 The proposed HBIC Site of 2740.88 Acres (1109.195 Ha.) extends between Longitudes 15°34'50.12"N, Longitude: 78° 9'29.35"E and is located at Pudicherla, Kannamadakala, Brahmanapalle, Palakolanu, Somayajulapalle, Komarolu Villages in Orvakal Mandal, Kumool District, Andhra Pradesh.

3.3.5 The proposed project falls under7(c), Category-A, Industrial Estates/parks/complexes/areas export processing zones as per EIA notification 2006. Total investment/cost of the project is Rs 972.5 Crores.

3.3.6 Land use/land cover of the project site is as following-

Description	Area in sqm	Area in acres	Percentage
Industrial	3937003	972.85	35.5%
Logistics hub & parking	397018	98.11	3.6%
Residential	747490	184.71	6.7%
Commercial	159656	39.45	1.4%
Common amenities (psp)	194035	47.95	1.7%
Common utilities	455753	112.62	4.1%
Road	1050190	259.51	9.5%
Green/open spaces	3989394	985.80	36.0%
Waterbodies	161407	39.88	1.5%
Total	**11091947**	**2740.88**	**100%**

3.3.7 The project site spreads across 3 revenue villages, which are Somayajulapalle, Palakolanu and Komarolu. The topography of Komarolu bit-2 is generally flat with plateau like areas and have gentle slope from north- west to south-east, and the parcels of Somayajulapalle and Komarolu Bit-1 have undulating topography with mild to moderate slope The parcels of Somayajulapalle and Komarolu Bit-1 have plateau like area with slight undulating topography. Komarolu Bit-1 has a Hillock feature in its Southeast extent and a slight cliff along its western part of the project boundary. The elevation difference of the site is approximately 140 meters. The site has lowest elevation towards the eastern part of Komarolu Bit-2 parcel of the project site and highest elevation is observed towards the south- east part of the Komarolu Bit-1 which has a hillock feature. The parcel of Komarolu Bit-2 has an elevation difference of 60-70 m from west to east and an elvation difference of 25m from south to north. The parcels of Somayajulapalle and Komarolu Bit 1 have plateau like area, the project boundary of Somayajulapalle has an elevation difference of 50-60m in south and north and an elevation difference of 40- 50m in east and 35-40m in west from the land adjacent to project boundary respectively. The parcel of Komarolu Bit-1 has an elevation difference of around 80-90m from the adjacent State Highway (SH-380) in the south and an elevation difference of 40-60m from the land adjacent to the project boundary in the North.

3.3.8 District has major land-use of Agricultural and No Forest areas involved in the proposed development area of **2740.88 Acres (1109.195 Ha)**. Prominent Land covers in 10 km impact area of the project are agricultural crop lands, non-agricultural barren lands, water reservoirs and Forest

lands. The major water bodies available within 10 km impact are Rock Garden Lake (10.8 kmtowards North side of the project location) and Kommu Cheruvu (4.2 km towards North side of the project location). And Rock garden lake is situated at the distance of 10.8 Km (N) from the nearest parcel e few patches of protected forest in the vicinity of the project areas observed. Komarolu Reserve Forest, Gani Reserve forest, Betamchela RF, Komarolu RF and Yaparalapau Reserve Forest with open jungle is located in close proximity to the project boundary. Major Forest areas situated within 10 km impact zone are as follows:

- Gani RF: 1.6 km (SE)
- Yambayi RF: 2.5 km (SW)
- Ramallakota RF: 8.6 km (W)
- Yaparlapadu RF: 11.2 km (W)
- Bethamcherla RF: 0.2 km (S)
- Panyam RF: 2.8 km (SE)
- Lanja Banda RF: 8.5 km (SW)

3.3.9 List of industries to be housed with: Categorization of industries has been made in accordance the schedule of EIA Notification, 2006 and CPCB direction dated 07.03.2016. Detailed industrial categorization has been provided as following:

S. No.	**Project as per schedule of EIA Notification.**	**Activities**	**Sub category of the industries**	**Category with threshold limit**
1	-	Non-Metallic Mineral Industries	Stones & slabs, glass cutlery; ceramic tiles; paver block; fly ash bricks, etc.	Not Applicable
2	-	Textile & Apparel	Specialty textiles, wearing apparels, integrated textile mills, sports-based textiles.	Not Applicable
3	-	Food and Beverages	Oil extraction, spice processing such as turmeric, chili, coriander, etc., grain processing, bottled beverages, etc.	Not Applicable
4	-	Rubber & Plastic Products	Plastic toys; plastic packaging; pvc pipes; hdpe & ldpe pipes.	Not Applicable
5	4(d)	Chemicals & Chemical products	Alkalies & allied chemicals.	A
	5(f)	Chemicals & Chemical products	Dyes etc.	B
6	-	Paper & Paper products	Packaging material.	Not Applicable

7	-	Printing & Publishing	Labelling, publishing, etc.	Not Applicable

3.3.10 Details of water bodies: Rock Garden Lake is located at the distance of the 10.8 Km north side of the proposed project area and Kommu Cheruvu (N) is located towards North at the distance of 4.2KM from the proposed project site. Also two Streams/Nahllahs are passing through the proposed project site.

3.3.11 Water requirements: During operation 19.6 MLD (Fresh water: 6.1 MLD, Recycled water: 8.65 MLD and Raw Water: 4.86 MLD) of water will be required. The raw water shall be sourced from Srisailam Reservoir from the withdrawal point at Mutchumarri exclusively for the Orvakal Mega Industrial Hub with the prior approval. The Project proponent has initiated the communication with Irrigation department of Andhra Pradesh and NOC will be submitted immediately after receiving of the same. No Ground Water will be extracted at the project site during the construction and operation of the project.

3.3.12 Tree cutting: Total no of trees will identified within project area during Environmental Screening and survey. Master plan prepared such a manner to maintain the existing trees to the maximum possible extent. During detailed master plan and construction stage at least 3 times higher numbers of trees will be planted against the number of tree cutting. The 33% of area within the proposed project site proposed to be maintained as green cover to maintain the green coverage of the area. No forestland will be diverted due to the development of the Industrial park.

3.3.13 Waste management: The estimated Trade effluent quantity would be 9.83 MLD and Municipal Solid waste will be 36.27 TPD. STP and CETP will be implemented in phase wise mannerProject will comply zero discharge plan.

3.3.14 The Hazardous waste generation during operation stage is estimated 1.97TDP from individual industries' shall be transferred to TSDF facility, Nellore, which is almost 300 km away from the project site or alternatively option for on-site treatment facility will be explored. The non-hazardous solid waste shall be collected from individual industries and different clusters of the park, segregated within the park and treated/ transferred/ disposed accordingly. The bio-degradable solid waste shall be treated by composter within the Solid Waste Management facility area of the park. The recyclable solid waste shall be segregated and transferred to designated recycler/scrapper facility. Non-recyclable, non-biodegradable solid waste shall be disposed off to landfill site. As the project identified at village area, and no nearest MSW facility identified thus, project would facilitate a landfill site for the requirement of treatment of non-hazardous landfill able waste.

3.3.15 Project is not located within 10 km of Protected Areas (PA) including National Parks, Sanctuaries and Tiger Reserves etc**.**

3.3.16 Land acquisition and R&R issues: there is no human settlement, existing structures; public property is present on the identified land hence no R&R issues are involved with the project. The proposed Somayajulapalle and Komarolu Industrial Parks does not envisage any disturbance to local community or the village, since the land is acquired and fully owned/being acquired by the APIIC. 2740.88 Acres land for the said project is available and out of it 2498.86 Acres is in possession of Andhra Pradesh Industrial Infrastructure Corporation (APIIC) and remaining area is under filed for requisition. If any private Land is required for the project access area and road connectivity development, that shall be acquired as according the Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation & Resettlement Act, 2013, and Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation & Resettlement (Andhra

Pradesh Amendment) Act, 2018.

3.3.17 Benefit of the Project: The proposed project is expected to create employment opportunities in the region. The proposed industries would create robust market linkages resulting in regional economic development. The proposed project is estimated to generate the total no employment is 38,417 out of which 13,185 people of will get Direct employment and 25,232 peoplewill get indirect Employment.

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

3.3.19 During the deliberation, the EAC observed and noted the following:

i. The proposed site is divided by three parts like Bit 1, Bit 2, Bit 3 and Bit 1 is overlapped the forest area, PP shall bring out the protective measures for keeping as non-disturbed area in EIA/EMP report.

ii. Govt. of Andhra Pradesh vide G.O.Ms.No442 dated 27.09.2016 issued order for Lands Kurnool district Alienation of land to an extent of Ac.7,214.87ctc in Palakolanu and other 10 villages of Orvakal (M) in favour of APIIC for establishment of Industrial Hub subject to certain conditions, however APIIC has submitted the application over an area of 2740.88 Acres (1109.195 Ha) it was noted that there is a difference in the area thus, the difference along with the detailed land use land cover shall bring out in the EIA/EMP report.

3.2.22 The EAC, taking into account the submission made by the project proponent has a detailed deliberation in its 302nd meeting on 7th - 8th July, 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. Impacts of the industry on the forest shall be assessed by establishing the baseline of the forest cover/agriculture/Households and water bodies and shall submit the mitigative measures along with the EIA/EMP report.

ii. Bio fensing for entire reserve forest border along the forest survey pillars with the native tall tree species to arrest the impacts shall be design and the same shall be submitting along with the EMP.

iii. Access to reserve forest at three places, SW, SE and N sides for the forest department and local shall be clearly demarcated in the project layout.

iv. The southern corner side of the layout in Bit no.1 shall be deleted in the final map and incorporate in the EIA/EMP to limit or modify the study for further submission to the Ministry.

v. Natural drainage present within the project site shall not be disturbed and no effluent shall be discharged into the natural drain. Also shall be developed the plantation keeping the 15m width around the natural drainage.

vi. The impacts on villages due to individual establishment & influx at the local area shall be assessed w.r.t. loss of crop environmental degradation in the area and socioeconomic sensitivity.

vii. The proponent has to conserve the water bodies in the proposed site and provide adequate green buffer around the same.

viii. Nos. of streams crosses the project site Proper mitigation measures will be provided to avoid the disturbances of the stream with adequate safety measures.

ix. 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.

Submit a certificate from local DFO that no forest land is involved in the proposed Industrial Park (in case of no forest land is claimed).

Agenda No.3.4

Subject: Development of Harohalli 4th Phase Industrial Area in an area of 142.595 Ha at Cheeluru and Rampura Villages, Kanakapura Taluk, Ramanagara District, Karnataka by M/s Karnataka Industrial Areas Development Board – Terms of Reference Proposal No. IA/KA/NCP/279588/2022 and File No. 10/30/2022-IA.III.

"*The EAC noted that the Project Proponent/consultant has 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. 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"*

3.4.1 The aforementioned proposal was earlier considered by EAC in its 302nd meeting held during 07th & 08th July 2022. The project proponent along with the EIA consultant M/s Hubert Enviro Care System(P) Ltd has made a presentation through Video Conferencing and provided the following revised information:-

3.4.2 The proposed project is for development of Harohalli 4th Phase Industrial Area in an area of 142.595 Ha at Cheeluru and Rampura Villages, Kanakapura Taluk, Ramanagara District, Karnataka M/s Karnataka Industrial Areas Development Board (KIADB).

3.4.3 The proposed project falls under 7(c), Category-A, Industrial Estates/parks/complexes/areas export processing zones as per EIA notification 2006. Total investment/cost of the project is Rs.36128.98 Lakhs.

3.4.4 Land use/land cover of the project site is as following-

S.No	Description	%	Sq.Km	Acres	Hec
1	Plantation	33.90	127.38	31476.23	12738
2	Cropland	32.08	120.52	29781.09	12052
3	Scrub land	8.15	30.61	7563.88	3061
4	Barren Rocky Area	5.65	21.23	5246.04	2123
5	Scrub Forest	5.54	20.8	5139.78	2080
6	Forest Deciduous	3.95	14.84	3667.04	1484
7	Rural	2.97	11.15	2755.22	1115
8	Reservoirs/ Lakes/ Ponds	2.87	10.79	2666.26	1079
9	Urban	2.73	10.25	2532.83	1025
10	River/ Stream/ Canals	1.12	4.22	1042.78	422
11	Mining	0.85	3.2	790.74	320
12	Forest Plantation	0.10	0.38	93.90	38
13	Fallow land	0.07	0.25	61.77625	25
14	Gullied/Ravinous Land	0.02	0.08	19.77	8
	Total	**100.00**	**375.7**	**92837.35**	**37570**

3.4.5 List of industries to be housed with: Categorization of industries has been made in accordance the schedule of EIA Notification, 2006 and CPCB direction dated 07.03.2016.

Detailed industrial categorization has been provided as following:

S. No	Focus Sector	Anticipated Types of Industries	Activities	Categorization of industry as per EIA notification	Categorization as per CPCB	Pollution Potential
1	Engineering	Fabricated Metal products	Manufacturing of pressure vessels	Not Applicable	Orange	W13, A1D
2		Automobiles	Manufacture of motor vehicles (Two wheelers, Cars etc)	Not Applicable	Red	A1C; W11; HW3 & HW4
3		Automobile components	Manufacture of parts and accessories for motor vehicles such as Engine, Gear box parts, Drive axle, steering and suspension, breaks, Seats, Tyres, rubber products etc	Not Applicable	Orange, green, white	W11, A1C,E,F,G
4		Fibre glass manufacturing	Manufacturing of fibre glass and processing	Not applicable	Red	A2F1, HW1, HW4
5		Batteries Manufacturing	Lead acid batteries manufacturing	Nil	Red	A1G, HW1, HW4, W12
6	Food and beverages	Instant tea/coffee, Coffee processing, Non- alcoholic beverages, processing industries, dairy and dairy products.	-	Not Applicable	Orange	W13, A1D

S. No	Focus Sector	Anticipated Types of Industries	Activities	Categorization of industry as per EIA notification	Categorization as per CPCB	Pollution Potential
7	Other Industries	Manufacturing of vegetable oils	-	Nil	Orange	W12, Group A1G
8		Coated electrode manufacturing	-	Nil	Orange	W12, Group A1F
9		Tile manufacturing	-	Nil	Orange	Group A2F2,
10		Paint	Blending and mixing	Nil	Orange	Group A1G, W12, HW1, HW4
11	Fish and poultry feed	Fish, poultry and cattle feed manufacturing	-	Nil	Orange	Group A1G
12	Printing	Printing ink manufacturing	-	Nil	Orange	W12, Group A1G, HW1, HW4
13		Printing press	-	Nil	Orange	W12, Group A1G, HW1, HW4
14		Silk screen printing	-	Nil	Orange	W12, Group A1G, HW1, HW4
15	Other	Polluting industries Manufacturing of MDF & Ply Boards, Package industries, E-waste recycling, Manufacturing of Cement products,		Yes	Red	

S. No	Focus Sector	Anticipated Types of Industries	Activities	Categorization of industry as per EIA notification	Categorization as per CPCB	Pollution Potential
		Hazardous Waste Incineration facility, Fish and cattle feed manufacturing units,				
16	Other Non EC category industries (as per the re-categorization of Industries by CPCB February 29, 2016 – Red, Orange, Green Category) which are not listed in the following table, but envisaged in the future will be accommodated with stringent pollution control norms, following siting guidelines, without affecting the surrounding environment and local natural resources including flora-fauna.					

3.4.6 During the EAC, taking into account the submission made by the project proponent for the aforementioned proposal had a detailed deliberation during its 302nd meeting on 07th –08thJuly, 2022. It was observed by the EAC that the PP has already started construction work before grant of TOR, and it is a case of violation. PP also agreed that they have started the construction and development work in the proposed site. Thus the EAC, Returned the proposal in present form.

3.4.7 The **EAC after detailed deliberation advised the PP to submit the application under violation category** for further consideration of the proposal.

3.5 Any other Item

(a) Subject Exemption from Environmental Clearance for the projects using floating jetties/pontoons/platforms.

During the meeting held on 8th July 2022, the committee discussed the issues related to floating jetty referred by the Ministry of Ports Shipping Waterways (Sagarmala) with a request to consider exemption of Floating jetty from mandatory environmental clearance request. Shri. Hemant Verma, Deputy Secretary, Officer/Official of MoPSW along with the technical consultant Prof. K. Murali, National Technology Centre for Ports, Waterways, and coasts (NTPWC) had presented the above matter before the EAC and submitted that the building of conventional jetties is taking a long time, MoPSW is exploring the feasibility of developing of new fishing harbors/fish landing centers with floating jetties/platforms, which has multiple advantages such as building quickly at lower cost, long life with minimal maintenance, no falling hazard, prevents siltation and enhance marine life and almost zero environmental impact also informed that floating pontoons do not obstruct water, sediment flow like vessels, flora, and fauna, etc.

2. Floating jetties/jetties/platforms are berthing and landing systems for small crafts and vessels and are suitable for the creation of fish landing facilities, passenger crafts, vessels, seaplanes, and other similar purposes. The conditions under which they may be adopted are where the loading is not permanent. Further, MoPSW submitted that they released guidelines, in consultation with major stakeholders, to all the Major Ports, State Maritime Boards, and coastal

states/UTs on 3rd February 2021. MoPSW has entrusted NTCPWC, and IIT madras for the preparation of DPRs initially at 50 sites for 1st phase in Andhra Pradesh, Tamil Nadu, Kerala, Pondicherry, Karnataka, and Odisha.

3. The Committee went through the Presentation made by the MoPSW and Prof. K. Murali, NTPWC. The Committee opined that Exiting EIA Notification, 2006 under Schedule 7(e) includes all Ports, Harbours, breakwaters, and dredging requires EC. The construction of Passenger Jetties does not attract the provision of the EIA Notification 2006 as amended from time to time.

3. Further, as per the provisions of the EIA Notification 2006 amended from time to time, airports (which include all projects including airstrips, which are for commercial use) are listed at schedule 7(a) of the Notification and require prior Environmental Clearance. However, the EIA Notification provides that 'Air strips which do not involve bunkering/refueling facility and or Air Traffic Control, are exempted'.

4. The Committee also opined that coastal jetties attract the provisions of the CRZ Notification and require prior CRZ clearance from the Competent Authority as per para 4.2 (ii), as may be applicable, however, the Notification does not mention anything about floating jetties. The Committee had decided that more inputs from the experts in the field are required before a decision is taken. Committee further stated that the technical report made by the MoPSW and consultant has not been provided to the Committee therefore, it cannot comment further on the mater. Committee will require the technical report and time to study the same due to multiple components involved in the project as presented. In view of this, the EAC **deferred** the proposal and informed to MoPSW to submit the study reports made by the National Technology Centre for Ports, Waterways and Coasts.

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

The report submitted by Shri M. S. Negi, Member has been presented before the Committee. The Committee accepted the report. The report is enclosed as Annexure B

(c) 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 economic corridors, inter corridors, feeder routes and borders road to improve the direct connectivity in Indian Cities (Lot-8/ Package-1) Surat –Nashik-Ahmednagar Greenfield Stretch (Length 289.00 km) in the States of Gujarat and Maharashtra by M/s National Highways Authority of India.

The report submitted by the sub-committee has been presented before the Committee. The Committee accepted the report. The report is enclosed as Annexure C.

Annexure-A

Following members were present during the 302nd EAC(Infra-1) meeting held on 7th – 8th July, 2022

S. No.	Name	Designation	Remarks	
			7th July 2022	8th July 2022
1.	Dr. Deepak ArunApte	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. MukeshKhare	Member	Requested leave of absence	Present
6.	Dr. Ashok Kumar Pachauri	Member	Absence	Absence
7.	Dr. V. K Jain	Member	Present	Present
8.	Dr. ManoranjanHota	Member	Present	Present
9.	Sh. R Debroy	Member	Absent	Absent
10.	Dr. Rajesh Chandra	Member	Absent	Absent
11.	Dr. M. V Ramana Murthy	Member	Absent	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. Ramesh. A	RO, MoEF&CC	Present	Present

Annexure-B

Site Inspection Report On Site Inspection Of Shri Manmohan Singh Negi On 4th And 5th March 2022

In Respect of

NHAI Project- Development Of 8-Lane Bangalore-Chennai Expressway Phase-Ii From Km 71.000 Near N.G. Hulkur Village, Bangarpet Taluqa, Kolar District, Karnataka And Ends At Km 156.000 Near 190 Ramapuram Village, Gudipala Mandal, Chittoor District, Andhra Pradesh By M/S National Highways Authority of India (Total Length 85.00 Km) IA.III]

In compliance of decision taken by Expert Appraisal Committee (Infra-1) during its 284th meeting held on 29th-30th December, 2011 for grant of environment clearance to above mentioned project Sh Manmohan Singh Negi, member EAC, carried out inspection of existing National Highway(NH 69-old NH 4) under PIU Tirupati on 4th and 5th March 2022.In this regard, MoEF&CC's order of site inspection issued vide letter dated 28th February, 2022is enclosed herewith.

The objective of the inspection was to advise the NHAI regarding precise location,design and dimension for the elephant underpasses/Elephant Crossing structures on this existing NH 69 after consultation with the state forest department. Need to relocate and redesign the elephant crossing structures on this existing NH 69 arose due to the reason that proposed 8-LANE BANGALORE-CHENNAI EXPRESSWAY is passing close to this existing NH and presence of these two highways/expressways can hamper the movement of elephants. It was not technically and administratively possible for NHAI to merge this closely running stretch of the existing NH with the proposed expressway. Therefore it was decided to redesign and relocate the elephant crossing structures on this existing NH to make elephant movement hassle free.

Inspection was carried out after telephonic consultation with PCCF(HOFF) of State Forest Department(SFD) of AP who deputed Mr Ravi Shankar, DFO Chittoor west as representative of the state Forest Department.

Following Officers were present during site inspection under Chairmanship of Shri Manmohan Singh Negi, member, Expert Appraisal Committee (Infra-1) on 04.03.2022 and 05.03.2022.

AP Forest Department:

i. Shri S. Ravi Shankar, Divisional Forest Officer(DFO), Chittoor West
ii. Shri B. Srinivasulu, Forest Range Officer, Palamaneru
iii. Shri Madhan Mohan Reddy, Forest Range Officer, Kuppam
iv. Shri Subash, Forest Range Officer, Chittoor West
v. Shri G. Mohan Murali, Forest Section Officer, Palamaneru,

NHAI:

i. Dr. B. Mukhopadhyay, Environment Division, NHAI HQ, New Delhi
ii. Shri R. Prasanth, Project Director, PIU-Chittoor
iii. Shri G. Hari Krishna, Project Director, PIU-Tirupati
iv. Shri Saurabh Kumar Yadav, Site Engineer, PIU-Chittoor
v. Shri Venkateshwara Naidu, Site Engineer, PIU-Tirupati
vi. Shri Varshith Reddy, Site Engineer, PIU-Chittoor

DPR Consultants (M/s. Egis International in JV with Secon Pvt. Ltd.) Bangalore Chennai Expressway Phase-II:

(i) Shri T. Kiran Kumar, Site Engineer

The recommendations for type, dimensions and locations have been made after consultation with the State Forest Department(in DFO chittoor West), NHAI and on the basis of principles adopted in GOI approved guidelines "Eco Friendly Measures to Mitigate Impacts of Linear Infrastructure on Wildlife."

The State Forest Department has suggested 6 locations for construction of elephant crossing structures and other mitigation measures.

NHAI requested that construction of elephant crossing structures proposed by the SFD on completed 4 lane of NH-69 should be allowed to be started after Defect Liability Period of EPC Contractor i.e., after 31.07.2023 as per contract agreement and the same will be completed before completion of Bangalore Chennai Expressway Phase-II. NHAI intimated that it is ready to submit undertakings with the forest department for construction of above-mentioned structures on completed 4 lanes of NH-04 in a time bound manner as mentioned. They further requested that construction of Bangalore Chennai Expressway Phase-II shall be permitted to start constructions after obtaining all applicable approval under respective Acts. In this regard, the feasibility study & design preparation may be initiated by NHAI as per location and dimensions suggested in this report so that construction can be started on the stipulated time.

The precise locations of proposed elephant passages and other mitigation measures.

SNo	Name of Location	Latitude	Longitude	Chainage @NH-4	Distance from previous location
1	Near Anjaneya -swamy Temple	13.2063221	78.7746264	192+667	_
2	Near Gandhinagar Road	13.205884	78.777680	191+789	1.122 km
3	Befor Jagamerlae Road	13.2006938	78.7953622	189+780	1.991 Km
4	Near Jagamerla (Lothu Vanka)	13.197258	78.803098	188+810	1.030 Km
5	After Jagamerla Road	13.1940106	78.8076846	188+200	0.610 Km
6	At Dora Cheruvu	13.192073	78.820723	186+650	2.450 Km

GENERAL OBSERVATIONS:

Inspection was carried out while moving from Bengaluru side to Tirupati side

The stretch of existing NH69(old NH 04) where elephant crossing structures are to be constructed has an undulating terrain with shallow to moderately deep depressions/valleys and highlands of moderate height.While constructing the road the depressions/valleys have been negotiated by raising the road level through embankment instead of constructing viaducts. Similarly highlands

have been negotiated through box cutting with steep cuts on both sides of roads. Therefore elephants and other wildlife are left with only one option of surface crossing of highway.

Efforts have been made to mitigate the impact by way of creating wildlife underpasses in the form of Box culverts. These box culverts are made at or nearby above proposed location no 1, 2 and 4 and also one between location 2 and 3. Most of these culverts are in depressions of the landscape. Approaches to most of these culverts are narrow at entry points with steep slopes on both sides thereby making entry of the wild animals difficult. Considering the 45 meter RoW of the National Highway the span of the culvert is not large enough to provide better visibility and openness for elephants. Therefore it can be concluded that wildlife crossing structures constructed on this existing NH69 are not suitable for crossing of elephants and therefore these crossing structures have to be relocated and/or redesigned.

LOCATION SPECIFIC OBSERVATIONS AND RECOMMENDATIONS:

Location 1; Near Anjaneya Swamy Temple:

First location identified by the State Forest Department for elephant crossing structures is almost on plateau with road passing through a small depression having a waterbody/seasonal lake on highland side of the road(LHS) and undulating terrain intercepted by the drainage lines/gullies and wide valley on the other side(RHS)(side where bangalore-Chennai expressway is proposed) of the road. Raised level of road helps in retention of water in the water body. Culverts constructed here are largely to drain out excess water in the water body. Culvert is modified to facilitate the movement of wildlife. But for the reasons, as already explained in general observations above, it is not suitable for elephant crossing.

Recommendations: As per field staff of the forest division, the site is being used by a herd of elephants and therefore an elevated road is proposed of at least 70 meter clear span excluding abutment with vertical clearance of 8 meter.The vertical clearance can be considered from the OGL of adjoining area not beyond 5 meters outside ROW of NHAI. Efforts should be made to maintain Natural terrain at the crossing point. OGL shall not be lowered under elevated road and in the area of entry and exit of elephants to the extent that creates steep grades which will discourage the elephants from entering in the underpass. Vertical isolated pier type supports to the elevated road shall be preferred over wall type piers to enhance the lateral visibility. Median shall be kept open to allow sunlight to reach ground level so as to enhance the visibility.

Location 2:Near Gandhinagar Road:

Location 2 is about 1.1 Km away from the first location. The terrain of the location is highland with slopes both towards bengaluru side and Tirupati side. The road is constructed here by box cutting of the hillock. The left side of road(while having back towards location 1) has a high steep slope due to box cutting .But on the right side slopes are low though steep. A box culvert

has been constructed in low land about 50 meter away from this location towards location 1 which is totally unsuitable for elephant crossing due to negligible visibility, insufficient dimensions and inaccessible approach due to steep slopes. As per forest staff elephants herds are using the road surface of highlands, especially the edges of the box cut portion of the road, and flat and slanting areas between the highland and box culvert instead of this culvert.

Recommendations:

At this point construction of elevated road /elephant underpass is not technically possible but the site is suitable for elephant overpass or land bridge or ecoduct as both sides of the road have steep

slopes. A 25 to 30 meter wide elephant overpass/ecoduct is proposed here . Precise location of the overpass to be decided preferably in consultation with DFO chittoor west. The required height of the overpass should be adjusted by way of lowering the road level so that the natural gradient of the highland being used by the elephants for crossing is maintained or at least not made steeper. Overpass should have the provision of keeping a 5 to 6 feet thick layer of soil on both the edges of the superstructure of overpass to grow the medium size trees and about 3 feet layer in the center to grow small trees and bushes.

5 to 6 feet high Guide walls of steel girders should be constructed for funneling the Elephants in forest area for use of Eco-duct/overpass.It should be ensured that gap between two girders should be narrow enough to stop the calf elephant from passing through it.Forest department will carry out landscaping to camouflage the overpass/eco duct at the project cost

Alternatively, the possibility of an elevated road of 50 to 70 meter clear span and 7- 8 meter height between highland and the existing box culvert can be explored but only after consultation with the **DFO.**

Location 3:Before Jagamerla Road:

This location is about 1.99 km away from location 2 towards the Tirupati side. There was a location between this and location 2 where a Box culvert was made on the road. However Forest officers denied having any elephant movement in that location. This proposed location is almost flat terrain with gentle slope towards Tirupati side. As per the forest officers and the evidence in the form of elephant dung, this location is used by herds of elephants.

Recommendations: An elevated road is proposed of at least 100 meter clear span excluding abutment with vertical clearance of 8 meter.The vertical clearance can be considered from the OGL of adjoining area not beyond 5 meters outside ROW of NHAI. Efforts should be made to maintain Natural terrain at the crossing point. OGL shall not be lowered under elevated road and in the area of entry and exit of elephants to the extent that creates steep grades which will discourage the elephants from entering in the underpass. Vertical isolated pier type supports to the elevated road shall be preferred over wall type piers to enhance the lateral visibility. Median shall be kept open to allow sunlight to reach ground level so as to further enhance the visibility.

Location 4: Near Jagamerla (Lothu Vanka):

This location is about 1.03 km away from location 3 towards the Tirupati side. At this location the road meander through two ridges crossing a small dry rivulet.There is a gentle slope in road from ridge on Bengaluru side to the ridge on Tirupati side.Road crosses the rivulet near the ridge on tirupati side where a Box culvert has been constructed. Slopes in rivulet are such which do not permit easy entry of elephants in this box culverts. There is documentary and recent photographic evidence of elephants crossing the road stretch between these two ridges after stepping over the crash barriers. Elephant proof trenches were also noticed on the left hand side of road on highland near the upstream side of the rivulet bed which probably were created to stop the elephant crossing.

Recommendations: An elevated road is proposed of at least 50 meter clear span excluding abutment with vertical clearance of 8 meter.The vertical clearance can be considered from the OGL of adjoining area not beyond 5 meters outside ROW of NHAI. OGL should not be lowered under elevated road and in the area of entry and exit of elephants to the extent that creates steep grades which will discourage the elephants from entering in the underpass. Vertical isolated pier type supports to the elevated road shall be preferred over wall type piers to enhance the lateral visibility. Median shall be kept open to allow sunlight to reach ground level so as to further enhance the visibility.

If technically feasible the span of the elevated road may be increased to 100 meter because no elevated road is being proposed at next proposed location which is only 600 meter away from this location

Ground slopes outside the RoW of NHAI especially on the upstream side should be smoothened for easy access of elephants to the elevated road/underpass.

Location 5: After Jagamerla Road:

This proposed location is only 600 meter away from the previous location. As per forest officers occasional individual elephant crossing has been noticed here. Terrain is almost flat with smooth curves in the road.

Recommendation: Since this crossing point is too close to the crossing point at location 4 no elephant crossing structure is being proposed here. Elephant crossing should be stopped here by erecting 6 feet high girder guide walls on both sides of road and elephants should be guided to crossing point no 4 or 6.

Location 6: At Dora Cheruvu:

This location is about 2.45 Km away from location 5 towards Tirupati side. The terrain of this stretch is relatively more hilly with curves on road and moderate to high gradient. As per NHAI this stretch is highly prone to fatal accidents. NHAI proposed improving the geometry of this stretch of road to reduce accidents and thereafter construction of an elephant overpass/ecoduct of 30 meter width or any other elephant crossing structure after consultation with the forest department. Forest officers also stressed upon the need of crossing structure at this location due to frequent use of this stretch by elephants.

Recommendations: NHAI shall improve the geometry of the road to reduce the accidents in this stretch and construct an appropriate type of elephant crossing structure with appropriate dimensions after consultation with the forest department.

Process of improving the geometry of road and construction of elephant crossing structure, including getting approvals required for such activities, shall be completed well before completion of the proposed Bengaluru Chennai Expressway Ph II.

GENERAL RECOMMENDATIONS:

The stretch of the National Highway 69 (Old NH 4) with approximate length of 6 KM shall be made access controlled at project cost by erecting 6 feet high steel girder guide walls/elephant proof fencing so that elephant and other wildlife can be guided to the nearby elephant underpasses or elephant over bridges proposed in this stretch.

Planting of the Elephant Crossing Structures along with its 5 years maintenance and painting of pillars and walls -for camouflaging the concrete structures ,creating sound barriers, and giving these structures an appearance of natural habitat-shall be carried out by the state forest department(SFD) at the project cost as deposit work from NHAI. Accordingly SFD shall submit the plan and estimate for this to NHAI.

Elevated roads/elephant underpasses or overpasses/ecoducts so proposed shall be fortified by sound barriers to prevent any disturbance to elephants and other animals as per the prescriptions in chapter 11 of the GOI approved guidelines “Eco Friendly Measures to Mitigate Impacts of Linear Infrastructure on Wildlife.”

All preparatory works for constructions of the proposed elephant crossing structures and other mitigation measures including designing of structures, obtaining of applicable approvals for the project, arrangement for financing the project , prior consultation with the contractor and drafting the agreement, if required, shall be completed before the end of Defect Liability period for this NH 04(new NH 69) so that work can be started in time and completed well before completion of Bangalore Chennai Expressway Phase-II. NHAI shall submit a quarterly progress report to DFO Chittoor West about progress of preparatory work till the start of actual construction.

Monitoring of elephant movement in this stretch of 6 Km by fixing cameras at atleast 6 to 7 places should be carried out by SFD at project cost

Physical Monitoring of elephant movement during the construction phase through patrolling teams should be carried out at project cost.

In post construction phase monitoring of elephant movement through the elephant crossing structures should be carried out by SFDupto at least upto 3 years by placing cameras on f these elephant overpasses/underpasses.

BRIEF LOCATION SPECIFIC RECOMMENDATIONS :
(For details recommendations mentioned in above para shall be referred to)

Sr. No	Name of Location	Latitude	Longitude	Chainage @NH-4	Type & Dimension of elephant pass.
1	Near Anjaneya -swamy Temple	13.2063221	78.7746264	192+667	An elevated road with 70m span and with vertical clearance of 8.0 m The vertical clearance of 8m shall be considered from the OGL of the adjoining area up 5 meter distance outside the ROW of NHAI. Median of the road shall be kept open Isolated type of piers (For details refer Location specific recommendations)

2	Near Gandhinagar Road	13.205884	78.777680	191+789	Eco-duct/Overpass of width 30m Provision of 6 feet deep soil layer over the superstructure Height of overpass to be managed by lowering road level planting of overpass by SFD at project cost Alternatively a elevated road of 50 m span and 8m vertical clearance (For details refer Location specific recommendations)
3	Before Jagamerla Road	13.2006938	78.7953622	189+780	An elevated road with 100m span and with vertical clearance of 8.0 m The vertical clearance of 8m shall be considered from the OGL of the adjoining area(RHS) upto 5 meter distance outside the ROW of NHAI. Median of the road shall be kept open Isolated type of piers (For details refer Location specific recommendations)
4	Near Jagamerla (Lothu Vanka)	13.197258	78.803098	188+810	An elevated road with 70m span and with vertical clearance of 8.0 m The vertical clearance of 8m shall be considered from the OGL of the adjoining area up 5 meter distance outside the ROW of NHAI. Median of the road shall be kept open Isolated type of piers smoothening of slopes on both side of road (For details refer Location specific recommendations)

5	After Jagamerla Road	13.1940106	78.8076846	188+200	Fencing/ Metal beam crash on either side of road of length 100m with height of 6 feet. (For details refer Location specific recommendations)
6	At Dora Cheruvu	13.192073	78.820723	186+650	NHAI to improve the geometry of road to prevent fatal & non-fatal accidents. Simultaneously construction of a 30m overpass or underpass of appropriate dimension only after consultation with the Forest department (in DFO Chittoor West) (For details refer Location specific recommendations)

The site visit and meeting ended successfully.

Sd/-

Dated: 22nd March 2022

Manmohan Singh Negi (IFS (Retd)
Member EAC (INFRA I)

Annexure- C

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 economic corridors, inter corridors, feeder routes and borders road to improve the direct connectivity in Indian Cities (Lot-8/ Package-1) Surat –Nashik-Ahmednagar Greenfield Stretch (Length 289.00 km) in the States of Gujarat and Maharashtra by M/s National Highways Authority of India [Proposal No. IA/MH/NCP/229436/2021 File No. 10/47/2021-IA.III]

1.0 Background

1.1 The Green field alignment starts from proposed Vadodara – Mumbai Expressway of Navsari district near to Toli village in the state of Gujarat (20°55'17.78"N, 73° 3'47.56"E) and ends at road connecting NH-61 near Kolhewadi village in Ahmednagar District (Des. Ch 290+700) in the State of Maharashtra (19° 5'3.37"N, 74°50'0.78"E).

1.2 The above-mentioned proposal was earlier placed before the EAC during its 281st meeting on 24th – 25th November 2021 and deferred the proposal for grant of Terms of Reference for the want of following documents/ information:

i. *EAC noted that the project alignment passes through the Western Ghats and the RoW is 70 m which will give a high impact to the environment.*
ii. *EAC noted that project alignment passes through 438 hectares of forest land and crosses rivers like Ambika, Kaveri, Kharera, Sasu, Man, Par, Godavari, Paravara NB canal, Mula River and Dev Nadi. Committee suggested that the alignment will give negative impact to these resources if implemented.*
iii. *Placing of tunnels in the proposed area might have serious impact on the water drainage pattern of the region and should be one of the important consideration before choosing the project location.*
iv. *EAC suggested to NHAI to explore the use the existing road/alignment in Western Ghats region as new alignment in the western ghat section and tampering too much on it will have negative impact on the environment.*
v. *Committee recommends NHAI to revisit the site and identify for a better alignment with least possible impact on the western ghat section of the proposed road.*

1.3 In view of the above facts, the proposal was further placed before EAC in its 289th EAC Meeting is held on 18th February, 2022, and it was decided to withhold the proposal for grant of Terms of Reference (ToR) based on the above mentioned observations are finalized/duly considered after the site visit by the Sub-Committee of the Expert Appraisal Committee (EAC), MoEF&CC, New Delhi.

2.0 Site Visit and Brief of Project

2.1 Accordingly, a site visit by the Sub-committee was conducted on 20th - 21st April 2022 about the proposed project. NHAI inter-alia presented a brief on the project to the sub-

Committee as following:

a. The proposed project falls under 7(f), Category-A as per EIA notification 2006 (as amended till date). Total investment/cost of the project is Rs 13,980.5 Crore.
b. Total Length of the proposed project is 290.70 Km.
c. The predominant land-use along the project corridor is agricultural, which accounts for about 71% of the total land use followed by Forest bodies 23% and Barren 6%.
d. The proposed project involves, diversion of 265 ha of forest land. The project is falling 6 km away from the Nandur-Mahameshwar bird sanctuary.
e. The proposed land acquisition for the proposed alignment is approx. 2229 Ha. The proposed RoW is 70 m (non-forest area) and 45 m along the forest area.
f. Comparison study was carried out between the existing NH-848 and proposed Surat-Nashik-Ahmednagar greenfield stretch in the "Western Ghat" Section. Considering the engineering, environmental and social perspective, the up-gradation of NH-848 will have more impact on existing Western Ghat section. Accordingly, the key features are provided below:

Key Features	Existing NH-848 in Western Ghat Section	Newly Proposed Expressway in Western Ghat Section
Affected Forest Area	368 Ha	265 Ha
Affected Water Bodies (Partly/Abut.)	14 Nos.	08 Nos
Affected Structures	745 Nos.	133 Nos.

g. The proposed road will have 20 nos. of SVUPs, 54 nos. of LVUPs, 31 nos. of VUPs, 13 nos. of VOPs, 16 nos. of MJBs, 131 nos. of MIBs, 3 nos. of ROBs, 2 nos. of Tunnels, 23 nos. of Interchanges, 11 nos. of Viaducts and 430 nos. of Culverts.
h. About 14,535 Nos. trees proposed to be removed/cut within RoW of 70 m. The details of the afforestation in the project will be done in the form of avenue & median plantation within ROW as per the provisions of IRC:SP-21: 2009.
i. The alignment is passing across River Ambika at (Chainages) Km 7.660, River Kaveri at Km 21.640, River Kharera at Km 33.760 and River Sasu at 445.990, River Man at Two locations at Km 58.460 & Km 60.760 in Gujarat state and River Par at Three Locations at Km 70.660 & Km.82.760 & 85.360, Godavari River at 151.960, Paravara NB Canal at 224.760, Mula River at 249.560 and Dev Nadi at Km.256.340.The alignment is passing across Streams Km.4.728,Km 5.163, Km 6.300, Km 8.835, 14.714 Km 122.884 and Km. 168.818 to 181.254.It is also passing through lakes and ponds.

3.0 Project review and Observations of the Sub-Committee

3.1 During the site visit, the Sub-Committee have reviewed the feasibility of Existing NH-848 and the proposed "Greenfield Project" in the Surat-Ahmednagar economic corridor and observed the following:

i. The land use of the existing road (NH-848) is undulated, hilly & steep and the proposed greenfield is rolling & hilly with road traversing the terrain at different elevations by way of ascending and descending. Continuous ascending and descending of the road through this terrain (total 86 nos of hair pin bends) not only has scrapped the land surface badly but might have also changed the drainage pattern there. Now as the latest Technologies being easily available , the PP has the scope of

straightening and lessening the gradient of these meandering and ascending/ descending roads having varying gradient by using tunnel-viaduct or any other suitable methods using latest state -of-the-art technologies across the globe.

ii. Proposed new alignment has tried to address this problem, but it appears that hardly 10 % of the total road length in Ghat area is proposed to be built by tunnel viaduct method (only 2 tunnels of 2.57 Km length and 11 nos of viaducts have been proposed in 107 Km of thec proposed road length in Ghat area). This insufficient quantum of change in road design to address the problem of damage to drainage pattern of the Ghat, coupled with the fact that road is proposed all through new virgin Ghat areas, has the potential to further damage the western Ghats Infact. increase in developmental activities in virgin and ecologically sensitive new parts of Western Ghat areas around this proposed alignment will overweigh the damages caused by the option of retrofitting/improving/upgrading the existing road/alignment.

iii. NHAI mentioned that the total travel length of the existing road (NH-848) is 136 Kms and the proposed greenfield is 107 Kms and likely travel time after improvement on existing road is 3.00 hrs . Whereas, on the proposed road/alignment, it will only be 1 hr 10 min. This marginal reduction of travel length and time,in the new proposed alignment, is expected to overweigh the cost of environmental damages to the Western Ghat in the existing alignment.

iv. NHAI mentioned that the length of the Forest in the stretch is about 63 Kms in the existing alignment while in the proposed alignment it is 60 Kms. The affected forest area in the existing road/alignment is estimated to be 368 Ha., while in the proposed alignment it will be 265 Ha. The tree cutting estimated to be 43, 650 nos., on existing road and 37,500 nos., on the proposed road alignment. The majority of the forests, both the existing and proposed alignments passes through the agricultural land, under the possession status of FRA. The Sub-Committee observed that though there is marginal saving of forest area and number of trees in new green field alignment, yet increase in developmental activities in the lands adjacent to this new alignment has much more potential to damage the forest area around. The committee also observed that the key structures proposed are:

S. No.	Description	Existing Road (NH-848)	Greenfield Alignment (45m RoW)
1	Length of Proposed Bypasses	3 nos. -16.3 km (Mota Wagchippa, Kaprada & Peth)	Nil
2	Major & Minor Bridges (in Nos.)	12 MJB & 43 MIB	2 MjB & 37 MIB
3	Culverts (in Nos.)	126	72
4	Tunnels (in Nos) & Length in (Km)	01 & 0.6 km	2 no’s of 1.22 km and 1.35 km
5	Viaducts (in Nos)	16 & 9.15 km	13 & 12.80

v. The Sub - Committee also observed that there are following few marginal advantages in the proposed new Greenfield alignment

i. There are 14 nos. of water bodies are getting affected (Partially/abutting) on existing road and in the proposed Greenfield expressway, there are 08 nos. of water bodies are getting affected (partially/abutting).

ii. The Project Affected Families (PAFs) are comparatively high on existing road (745 nos) as compared to the proposed road (133 nos.)

iii. The total hill side cutting is estimated to be 5.25 Lakh Cum on existing road and 4.27 Lakh Cum on the proposed road. The filling in existing road assessed to be 11.04 Lakh Cum., which will consume huge natural resources of the region.

iv. The civil cost of the estimated to be 4321 Cores for the existing road and whereas in the proposed road estimated to be Rs.3826 Crores.

4.0 Conclusion and Recommendations

4.1 The Sub-Committee concluded that there is further scope for reducing environmental damage to the Western Ghats by further change in alignment and recommended that the NHAI should review both the alignments, existing and proposed Greenfield road/alignments. The NHAI shall find out the feasibility of reducing the road formation level (with respect to MSL) so that more and more road length can be built up through tunnel cum viaduct or any other suitable methods using latest state -of the art - technologies, which will help in minimizing the damage to land surface as well as to the drainage system of Western Ghats, caused by cut and fill method. The NHAI shall do this exercise for both the existing road alignment and proposed Greenfield alignment and submit the comparative statement of both the alignments suggested after this exercise for further decision/recommendation of the EAC.

4.2 The Sub-Committee opined that though the estimated forest land is more in the existing alignment, however, the developmental activity which is already taking place in the existing alignment will be limited to around existing alignment; this will spare the pristine area of the proposed alignment.

4.3 The EAC Sub-committee further suggested NHAI to prepare comparative statement for both the alignments with the help of Longitudinal sections, cut & fill requirements, improvements of geometrically poor design areas (bypasses/realignments) etc so that environments impacts of these alignments can be scientifically assessed and addressed subsequently.

List of participants

An EAC sub-committee of MoEF&CC, New Delhi members participated in the site visit from Nashik to Surat Section of Surat to Ahmednagar Economic Corridor Project.

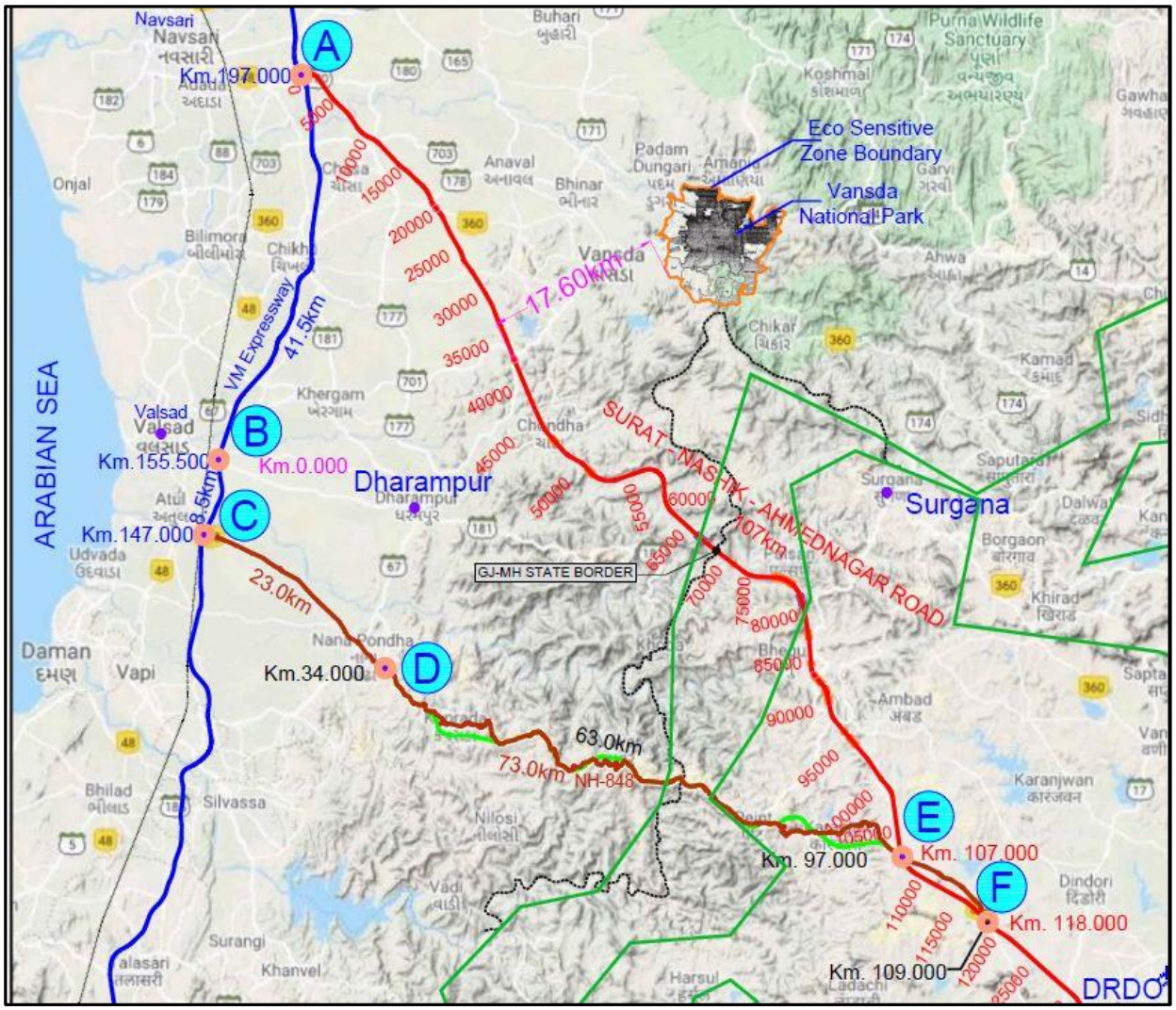
S. No.	**Name**	**Designation**
01.	Dr. Deepak Apte	Chairman of the EAC (Infra-1)
02.	Shri M. S. Negi, Member	Member, EAC (Infra-1)
03.	Neeraj Sharma	Member, EAC (Infra-1)
04.	Amardeep Raju	Member Secretary, (Infra-1), MoEFCC

The following are the members from NHAI (PP) and Consultants side were present:

Project Proponent: NHAI

S. No.	Name	Designation
01.	Dr. Biswajit Mukopadhaya	Environment Division, NHAI HQ
02.	Shri. B. S. Salunke	NHAI, PD, PIU Nashik
03.	Shri. Tushar Vyas	NHAI, PD, PIU Surat Expressway
04.	Shri. Dilip R. Patil	NHAI, Manager, PIU Nashik
05.	Shri. Siddhant Singhal	NHAI, Manager, PIU Surat Expressway
DPR Consultant: M/s Aarvee Associates Architects Engineers and Consultants Pvt Ltd., Hyderabad		
01	P. Srinivasa Rao	Team Leader
02	K. Kareemulla Basha	Environmental Expert
03	U. Paparaju	Project Manager

Project Map and Site Visit Photographs



*****