

MINUTES OF THE 315TH MEETING OF EXPERT APPRAISAL COMMITTEE FOR PROJECTS RELATED TO COASTAL REGULATION ZONE HELD ON 29TH NOVEMBER, 2022

The 315th meeting of the Expert Appraisal Committee for projects related to Coastal Regulation Zone was held on 29th November May 2022 at Teesta Hall, IPB, Ministry of Environment, Forest and Climate Change, New Delhi. The list of Members presents in the EAC (CRZ) is at **Annexure**.

The deliberations held and the decisions taken are as under:

1.0 OPENING REMARKS OF THE CHAIRMAN

At the outset, Dr. Deepak Arun Apte, Chairman, EAC (CRZ) welcomed the Members of the EAC and requested Dr. H. Kharkwal, the Member Secretary of the EAC to initiate the proceedings of the meeting with a brief account of the activities undertaken by the Ministry under CRZ Division.

2.0 CONFIRMATION OF THE MINUTES OF THE LAST MEETING

The Committee has noted that the Minutes of the 311th meeting held on 2nd November 2022 are in order and confirmed the same with suggestions that in case any typographical / grammatical errors are noticed in due course, the same may be corrected suitably.

3.0 RECONSIDERATION OF PROPOSALS FOR CRZ CLEARANCE

Item No. 3.1

Proposal for Establishing of 10 MLD capacity Desalination plant at R.S.No.355, Mullakadu Village, Thoothukudi Taluk, Thoothukudi District by M/s Tamil Nadu Generation and Distribution Corporation Ltd. (TANGEDCO), Chennai, Tamil Nadu - CRZ Clearance [IA/TN/CRZ/261055/2022] [F.No.11/14/2022-IA.III]

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

1. The proposal was earlier considered and deferred by the EAC in its meeting held on 27th April, 2022 and 4th August 2022. The Committee in its earlier meeting noted that the project proponent has not provided sufficient information about EIA report specially water quality parameter at outlet point, the copy of original proposal submitted to TNCZMA, Brine dispersion study, water quality and ecology data at the adjoining areas of outlet predictive modelling on dispersion etc. The project proponent has now submitted documents as desired by EAC and placed before the Committee. The project proponent and their consultant

submitted reply on additional information desired by EAC earlier and made a detailed presentation of salient features of the project and informed that:

- (i) The proposal is for CRZ clearance to the project for the Establishment of 10 MLD capacity Desalination plant at R.S.No.355, Mullakadu Village, Thoothukudi Taluk, Thoothukudi District by M/s Tamil Nadu Generation and Distribution Corporation Ltd. (TANGEDCO), Chennai.
- (ii) The Centre co-ordinates of the project site are Latitude 8°45'53.35"N Longitude 78°10'53.21"E and proposed to construct and operate a RO Desalination Plant of capacity 10 MLD at the existing Tuticorin Thermal Power Station (TTPS) campus to meet the raw water requirement of its 5 x 210 MW capacity Thermal Power Station.
- (iii) Total project area is 1.95 Acres and the project area is falling in CRZ-II and the area through which the outfall and inlet pass through the CRZ-IB and CRZ-IV.
- (iv) Project Proponent reported that there will be a requirement of 45-50 KLD water during the construction phase and 10 KLD during the operational phase which will be sourced by TANGEDCO.
- (v) Total of 29 MLD raw sea water is required for a 10 MLD Desalination plant.
- (vi) The total cost of the project is ₹98.12 crores and of a total, ₹50 Lakh is for EMP.
- (vii) During the construction phase around 100 workers and operation phase around 35 will be directly employed for the project.
- (viii) Municipal Solid waste generated during construction waste will be 1.0 Ton/month and will be used as manure in the premise. 50 lit/Year of used oil will be generated which will be sold to registered refiners. Discarded Container – 5 Nos./year will be sold to CPCB / MoEF&CC approved recyclers.
- (ix) Total power requirement will be 2500 kW and Emergency DG supply will be 415V, 3 phase, 4 wires, solidly earthed Source.
- (x) The CRZ Map for the proposed project was prepared by the Institute of Remote Sensing, Anna University, Chennai.
- (xi) Project activity is a permissible activity as per CRZ notification, 2011 *vide* Para 4(i) (a), Para 8 I CRZ I (i) (b) and 8 II CRZ II (v). However, project requires clearance *vide* Para 4(ii) (h) of CRZ Notification 2011.
- (xii) The Tamil Nadu State Pollution Control Board has issued NOC / CTE *vide* letter No: T2/TNPCB/F.0042/TTPS/2019, dated: 25/11/2019.
- (xiii) The Tamil Nadu Coastal Zone Management Authority has recommended the proposal for CRZ clearance *vide* its Letter No. P1/2626/2019 dated 22/02/2022.

2. **Deliberations in the EAC:**

The PP has submitted clarifications / information before the EAC on Brine dispersion study, water quality, ecology data at the adjoining areas of outlet predictive modelling on dispersion etc. and intimated that three options of outfall locations are suitable for safe discharge of Brine water. PP has proposed all the three options for brine disposal and had considered option point no 2 (along with existing discharge point) as more feasible for them. To this, TNCZMA committee accepted the submission by PP but recommended to go for option 3 as it is safer option because of sufficient distance from shore line. i.e 3 km deep in sea.

The Committee noted that the detailed hydro dynamic & mathematical model study submitted by PP that the both option 2 and 3 are environmentally safe and there will be no major impact on marine and aquatic ecology due to the brine discharge for both option 2 and 3, however option 3 i.e. deep sea discharge at a point, 3 km away from shore and accepted

for discharge at option 3 sea discharge only. The Committee also noted that TNCZMA recommended the project and intimated that the activity is a permissible activity vide Para 4(i) (a), Para 8 I CRZ I (i) (b) and 8 II CRZ II (v), however, project requires clearance vide Para 4(ii) (h) of CRZ Notification 2011.

The Committee after detailed deliberations and based on the clarifications / additional information submitted and commitment made by PP vide letter No. CE/PrI/SE/C/P&E/EE/EMC-I/AEE/C/F.TTPS10MLD Desal Plant/D.256/22, dated 29/11/2011, recommended the proposal for CRZ Clearance, subject to the following conditions:

- (i). All construction shall be strictly in accordance with the provisions of the CRZ Notification, 2011, as amended from time to time.
- (ii). The PP should take deep sea discharge option 3 at a point, 3 km away from shore as committed vide letter No. CE/Pr-I/SE/C/P&E/EE/EMC-I/AEE/C/F.TTPS10MLD Desal Plant/D.256/22, dated 29/11/2011.
- (iii). Monitoring of Water Quality and Marine Ecology to be undertaken at 4 km radius of outfall point.
- (iv). No storage reservoir for sea water shall be permitted and only pipelines conveyance system shall be installed.
- (v). No construction shall be undertaken to disturb tidal creek, free flow of groundwater or natural course of water flow.
- (vi). Permanent labour camp, machinery and material storage shall not be set up in the CRZ area.
- (vii). No groundwater shall be extracted within CRZ area to meet water requirements during the construction and / or operational phase of the project.
- (viii). No excavated material during the construction shall be dumped in water bodies or adjacent areas. The site shall be restored to its near original condition after completion of construction.
- (ix). Any physical infrastructure setup during construction period shall be removed simultaneously with completion of laying of each segment of the project.
- (x). All the conditions stipulated by the Tamil Nadu Coastal Zone Management Authority has recommended the proposal for CRZ clearance vide its Letter No. P1/2626/2019 dated 22/02/2022 and commitments made by the PP before the CZMA and EAC shall be followed in letter and spirit.
- (xi). All necessary clearance from the concerned authority, as may be applicable should be obtained prior to commencement of project or activity.

Item No. 3.2

Proposal for Widening and desilting the Adyar River from mouth to d/s of Thiru Vi Ka Bridge, Chainageom to 1963 m (42,600m to 40,637m) in Thiruvallur, Tamil Nadu, Chennai by Public Works Department -CRZ Clearance [IA/TN/CRZ/199027/2021] [F.No.11/5/2021-IAIII]

“The EAC noted that the Project Proponent has given undertaking that the data and information given in the application and enclosures are true to the best of his knowledge and belief and no information has been suppressed in the EIA/EMP report. If any part of the data/information submitted is found to be false / misleading at any

stage, the project will be rejected and Environmental and or CRZ Clearance given, if any, will be revoked at the risk and cost of the project proponent.”

1. The proposal was earlier considered and deferred by the EAC in its meeting held on 5th March, 2021 and 8th December 2021. The Committee in its earlier meeting noted that Adyar estuary is highly polluted due to sewage and domestic effluents while the baseline report mentioned DO levels very high, which is not correct. Other parameters such as COD, Coliform, PAC, metals, etc. are also reported below the detectable level based on the data collected in January 2020. The authenticity of data has to be ascertained by an independent and nationally credible institute with compliance from TNPCB and submit. Further, the NIOT / NCCR study is also going on and it will take 6 months to be completed. The Committee also desired to seek a factual report from the Regional Office of the Ministry at Chennai regarding whether the PWD initiated any work of widening / desilting of the Adyar River mouth without requisite CRZ clearance. The project proponent has now submitted documents as desired by EAC and placed before the Committee. The project proponent and their consultant submitted reply on additional information desired by EAC earlier and made a detailed presentation of salient features of the project and informed that:

- (i) The proposal is for CRZ clearance to the project proposal for Widening and desilting the Adyar River from mouth to d/s of Thiru Vi Ka Bridge, Chainageom to 1963m (42,600m to 40,637m) in Thiruvallur, Tamil Nadu, Chennai by Public Works Department, Government of Tamil Nadu.
- (ii) Adyar River starts from Adanur lake in Manimangalam village, Sriperumbudur Taluk at about 15 kilometers (9 m) from west of Tambaram near Chennai, flows through Kancheepuram, Tiruvallur and Chennai District for about 42.5 kilometers (26.4 mi) before joining the Bay of Bengal in Adyar, Chennai.
- (iii) The total area is 231.07 acres. Desilting will be carried over on 176.35 acres in Adyar River. The island in the river covering an area of 54.72 acres is exempted from desilting.
- (iv) The project site falls in CRZ-IA (50m Buffer from Mangroves) (27077.92 sq.m.), CRZ-IB (2054.87 sq.m) and CRZ-IVB (684542.98 sq.m) area, as per the approved CZMP of Tamil Nadu. Total desalting area is 713675.77 sq.m.
- (v) Project activity is a permissible activity as per CRZ notification, 2011, *vide* Para 3 (iv) (c), however, project requires CRZ clearance as per CRZ Notification 2011.
- (vi) The proposed desilting activity project will be carried out in Adyar estuary water body and will not be executed in the mangroves area.
- (vii) The CRZ map of 1:4000 has been prepared by Indian Institute of Remote Sensing, Anna University, Chennai.
- (viii) Desilted material will be sent to corporation of Chennai approved dumping yards namely Kodungaiyur and OSR areas of GCC
- (ix) The need of the project is, to improve the water carrying and holding capacity of the Adyar River.
- (x) Widening will be carried out using earth moving machineries for excavating the earth and will be conveyed by means of tippers for forming embankment wherever required for both sides of river for entire reach.
- (xi) The desilted material will be stored inside the river banks for a short period, without disturbing the mangroves.
- (xii) A temporary road will be formed and will be used for transporting the desilted material from Adyar River.
- (xiii) The desilting of the river bed will remove silt and sand from the mouth to Thiru.Vi. Ka Bridge a total of 486100 m³ of silt that will be diverted to the Corporation dumpsites.

- (xiv) Permission letter for disposing the desilted materials (1,90,458 m³) from Adyar River in the vacant OSR lands of GCC is obtained from GCC vide Ir.No.P.D.C.NO. P2/1099/2020 and Ir.No.S.W.M.C.No. A8/1889/2020 for dumping of 2,43,050 m³ silt at Kodangaiyur Dumping ground.
- (xv) The remaining silt of 52592 m³ will be used for bund strengthening along the river stretch.
- (xvi) The proposed activities will restore the silted watercourse that would improve the channel flow capacity of the river. Overall, the desiltation of Adyar River would improve the water storage capacity, soil texture and water holding capacity which would mark a greater significance to the people of Chennai.
- (xvii) The employment potential of the project is 35 persons.
- (xviii) The total cost of the project is ₹21.63 crores.
- (xix) Tamil Nadu Coastal Zone Management Authority (TNCZMA) has recommended the project vide its letter No.1216/EC.3/2021-1, dated 10/02/2021.

2. Deliberations in the EAC:

The EAC deliberated on the proposal. The Committee noted that the TNCZMA recommended the project and intimated that the activity is a permissible activity *vide* Para 3 (iv) (c), however, project requires CRZ clearance as per CRZ Notification 2011. The Committee also noted that no work initiated by PP as report forwarded by Regional Office of the Ministry at Chennai *vide* letter dated 07/04/2022. The Committee noted that the PP intimated that project will improve the water carrying and holding capacity of the Adyar River and enhancing the tidal exchange into the estuarine region where the Adyar River and Bay of Bengal Sea meets and to restore the marine habitat. The Committee also noted that the Adyar estuary is ecologically very important i.e physiochemical water quality parameters, heavy metals, sediment quality, benthic and Plankton assessment, Petroleum hydrocarbons, chlorophyll etc. and also noted / few recommendations suggested by NIOT in its report.

The Committee after detailed deliberations and based on the clarifications / additional information submitted by the project proponent recommended the proposal for CRZ Clearance, subject to the following conditions:

- (i). All construction shall be strictly in accordance with the provisions of the CRZ Notification, 2011, as amended from time to time.
- (ii). The PP should undertake six month monitoring through National Centre for Coastal Research (NCCR) or any reputed institute on all physico-chemical water quality parameters, petroleum hydrocarbons, chlorophyll, heavy metals, sediment quality, benthic and plankton assessment 5 km inside the Adyar estuary and 5 km in coastal area with 2 .5 km on either side of the river mouth.
- (iii). As recommended by NIOT in its report following should be complied and submit the plan along with year wise physical target and financial budget and same should be submitted to IRO:
 - 1) The sand removal from the beach should not be carried out during the active sea turtle nesting season (January to May).
 - 2) The dredged sand should not be used directly for beach nourishment and its suitability must be examined thoroughly. The sediment grain sizes of the dredging site and the turtle nesting beach must be studied in detailed by Zoological Survey of India in case if this sand is to be used for beach nourishment. ZSI will provide necessary recommendation in this matter.

- 3) A comprehensive marine environmental monitoring should be undertaken through a nationally reputed institute having expertise in the subject to determine impact of the discharge against the baseline water and sediment quality parameters as stated in the EMP in the estuarine areas of the Adyar River confluence with the Bay of Bengal to upstream of about five kilometres. Remedial measures if required to be undertaken and provision for the costs for the same to be provided by the Project Proponent.
 - 4) Monitoring of shore erosion/accretion should be undertaken along the coastal stretch in open coastal waters over a distance covering 3 km on each side to the north of the confluence.
 - 5) PP will submit within six months to the regional office of Ministry the time bound implementation plan for waste water treatment including the state of art STPs to prevent discharge of polluted water in to the Adyar River. Water quality monitoring to be undertaken through two independent Governments recognized institutions of the water quality during the entire implementation stage of this work. The reports of the same will be submitted to the Regional Office of Ministry on six monthly basis.
- (iv). Permanent labour camp, machinery and material storage shall not be set up in the CRZ area.
 - (v). No groundwater shall be extracted within CRZ area to meet water requirements during the construction and / or operational phase of the project.
 - (vi). All the conditions stipulated by the Tamil Nadu Coastal Zone Management Authority has recommended the proposal for CRZ clearance *vide* its Letter No.1216/EC.3/2021-1, dated 10/02/2021 and commitments made by the PP before the CZMA and EAC shall be followed in letter and spirit.
 - (vii). All necessary clearance from the concerned authority, as may be applicable should be obtained prior to commencement of project or activity.

Item No. 3.3

**Proposal for “Dredging at Jatadhari Muhan at Kathupaka of easy discharge of excess rain water to avoid flood in the catchment area by Department of Irrigation, Government of Odisha - CRZ Clearance
[IA/OR/CRZ/404652/2022] [F.No.11/43/2022-IA.III]**

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

1. The project proponent made a detailed presentation of salient features of the project and informed that:
 - (i) The proposal is for CRZ clearance to the project for “Dredging at Jatadhari Muhan at Kathupaka of easy discharge of excess rain water to avoid flood in the catchment area by Department of Irrigation, Government of Odisha.

- (ii) The proposal for dredging of Jatadhari Muhan site at Kathuapaka, in district Jagatsinghpur, Odisha for easy discharge of extra rainwater and flood water from river/nallah to the sea.
- (iii) The project is under Drainage Improvement Programme (DIP), a scheme of Government of Odisha with a project cost of 547.73 Lakhs.
- (iv) The total dredging area is 31500 sqm. and dredging proposed at Jatadhari Muhan with a length of 450m x 100 m at top width x 70 m bed width and Appox. 206235.50 cum of dredging material specifically sand will be generated.
- (v) The dredging materials will be dumped on the private land for levelling for which consent has been taken from the land owners.
- (vi) The benefits of the project will improve the drainage condition of existing drainage cut and reduce the flooding & water logging in the locality and retrieve water logging and enhance crop yield over an area 365 ha. of agriculture land.
- (vii) On completion of the project about 7000 people of villages like Nolia Sahi, Dinkia, Nuagaon, Gadakujanga, Nuaratnapur, Khuranta, Gobindapur of Erasama block in Jagatsinghpur District of Odisha will be benefited.
- (viii) The CRZ map of 1:4000 has been prepared by Indian Institute of Remote Sensing (IRS), Anna University, Chennai and the proposed dredging site falls within CRZ-IB Intertidal area, CRZ-IV-A & IV-B Jatadhari Creek area as per CRZ notification, 2019.
- (ix) The proposed activity is a permissible activity in CRZ Area, as per CRZ Notification 2019 under Para 5.1.2 CRZ-IB (i) (e) "maintenance and clearing of waterways, channels, ports and hover ports for coast guard; and Para 5.4 CRZ-IV (ii) (d) "maintenance and clearing of waterways, channels, ports and hover ports for coast guard".
- (x) The Environmental Clearance is not required for the project.
- (xi) The location of the reference area: Latitude: 20°11'54.96"N to 20°12'4.08"N and Longitude: 86° 33' 07.03" E to 86° 33' 32.46" E.
- (xii) The location of the identified dredging area: Latitude - 20° 11'52.79" N to 20° 11'59.82" N and Longitude - 86° 33'09.91" E to 86° 33'27.41"E.
- (xiii) The Odisha Coastal Zone Management Authority has recommended the proposal for CRZ clearance and also intimated that project does not attract EIA Notification, 2006 *vide* its Letter No.OCZMA/15/2022/59/OCZMA dated 07/09/2022.

2. Deliberations in the EAC:

The Committee noted that the OCZMA has recommended the project as per CRZ Notification 2019 and intimated that the activity is a permissible under Para 5.1.2 CRZ-IB(i) (e) and 5.4 CRZ-IV (ii) (d) and project requires CRZ clearance under clause 7(ii) from MoEFCC "all development activities or projects in CRZ-I and CRZ-IV area as per CRZ Notification 2019. The OCZMA also intimated that project does not attract EIA Notification, 2006. The PP also intimated during the meeting that the no active nesting activities of the turtles / Olive Ridley Sea Turtles in the proposed area of the project and PP has submitted undertaking *vide* letter dated 29/11/2022.

The Committee after detailed deliberations and considering the undertaking made by the project proponent recommended the proposal for CRZ Clearance, subject to the following conditions:

- (i). All construction shall be strictly in accordance with the provisions of the CRZ Notification, 2019, as amended from time to time.
- (ii). The PP should take Consent of each individual land owner before dumping dredging materials / excavated sand on the private land owners for levelling the land.

- (iii). The dredging activities proposed, if any near the turtles nesting site, the NOC should be taken from the Wildlife Department before commencement of the project.
- (iv). No groundwater shall be extracted within the CRZ area to meet the water requirements during the construction and/or operation phase of the project.
- (v). Permanent labour camp, machinery and material storage shall not be set up in the CRZ area.
- (vi). Changes in the shore erosion/accretion and inlet morphology should be monitored along the coastal stretch over a distance covering 5 km along the shore and quantity of dredging and to be reported the same to IRO.
- (vii). Changes in the physio-chemical parameters will be monitored by an independent Government recognized institution and report should be submitted to IRO.
- (viii). Changes in the fisheries and fish species composition to be monitored by Zoological Survey of India, CMFRI or reputed Government Institute and suggest specific measures in case of any adverse impacts of dredging of the sand bar and same should be submitted to IRO.
- (ix). All the conditions stipulated by the Odisha Coastal Zone Management Authority for CRZ clearance 2019 *vide* its letter No.OCZMA/15/2022/59/OCZMA dated 07/09/2022 and commitments made by the PP before the OCZMA and EAC shall be followed in letter and spirit.
- (x). All necessary clearance from the concerned authority, as may be applicable should be obtained prior to commencement of project or activity.

Item No. 3.4

Proposal for Development of Common Treated Wastewater Conveyance and Marine Outfall System of 135 MLD at Kakinada which majorly falls in U. Kothapalli and Thondangi Mandals of Kakinada District and Partly falls in Payakaraopeta Mandal of Anakapalli District Andhra Pradesh by M/s Andhra Pradesh Industrial Infrastructure Corporation Limited (APIIC) -CRZ Clearance [IA/AP/CRZ/405490/2022] [F.NO.11/44/2022-IA.III]

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

1. The project proponent and their consultant made a detailed presentation of salient features of the project and informed that:

- (i) The proposal is for CRZ clearance to the project for “Development of Common Treated Wastewater Conveyance and Marine Outfall System of 135 MLD at Kakinada which majorly falls in U. Kothapalli and Thondangi Mandals of Kakinada District and Partly falls in Payakaraopeta Mandal of Anakapalli District Andhra Pradesh by M/s Andhra Pradesh Industrial Infrastructure Corporation Limited (APIIC).
- (ii) The project is development of common treated wastewater conveyance and marine outfall system for Kakinada SEZ region and surrounding industries with objective of the project to support development of this region with existing and

- proposed industrial projects [Kakinada SEZ, Bulk Drug Park (BDP), M/s Lyfius Pharma Private Limited (formerly M/s Aurobindo Antibiotics Private Limited), M/s Qule Pharma Private Ltd., (formerly M/s Auroactive Pharma Private Limited) and M/s Divi's Laboratories Ltd. etc.] by avoiding Multiple outfalls thereby having harmonious environment with local habitants.
- (iii) The project development consists of capacity: 135 MLD, 30.3 km long pipeline with diameter varying from 450 mm to 1000 mm on land side, 2.0 km long HDPE pipeline with 1400 mm diameter on seaside with diffusers (14.5 m depth), central pump house with sump of 2.95 ML capacity with additional similar capacity Sump to handle the unlikely events.
 - (iv) Project attracts CRZ Notification 2011 under the provision of para 4(ii) (d) - laying of Pipeline and 4(ii) (f)-outfall for discharge of treated water.
 - (v) The majorly falling in U. Kothapalli and Thondangi Mandals of Kakinada District and partly in Payakaraopeta mandal of Anakapalli District, Andhra Pradesh.
 - (vi) The CRZ map of 1:4000 has been prepared by NCSCM Chennai.
 - (vii) Project development area does not fall or contain any environmentally sensitive areas as specified in CRZ Notification and that the project area meets the regulations of CRZ Notification, 2011/2019.
 - (viii) The proposed pipeline falls on the CRZ-1B of creek, CRZ-III (200 to 500m), CRZ – III (NDZ), CRZ-IVA (Marine outfall pipeline) and CRZ-IVB (Creek).
 - (ix) An area falling within 500 meters on either side of the pipeline from centerline is earmarked for primary baseline data generation.
 - (x) 10 km radius from pipeline alignment earmarked as study area for secondary data collection.
 - (xi) The length of marine disposal pipeline is 32.3 km, out of which 24.605 km is falling on non-CRZ area and balance 7.65 km is falling in CRZ area.

S. No.	Type	Length (km)
1	CRZ IB	0.10
2	NDZ of CRZ III	4.16
3	CRZ III (200m to 500m)	1.42
4	CRZ IVA	1.94
5	CRZ IVB	0.03
	Total CRZ Area	7.65
6	Non-CRZ	24.605
	Total	32.255

- (xii) The Power requirement at Pump House in Operation Phase is 32.5 MWH from APTRANSCO.
- (xiii) The water requirement at Pump House in Operation Phase is 500 LPD and source initially from bore well and later from the KSEZ water supply network.
- (xiv) The estimated MSW generation is 5 kg/day and KSEZ solid waste management facility or to the local dump site till KSEZ develops the facility.
- (xv) The Andhra Pradesh Pollution Control Board has recommended NOC *vide* letter No.579/APPCB/CFE/RO-VSP/HO/2022 dated 30/09/2022.

- (xvi) The total cost of the project ₹217.87 Crore. The budgetary estimate for EMP as:

A. Construction Phase Budgetary Estimate:

Sl. No.	Environmental Activity	Amount in Crores
1.	Water Body Crossing (Pipe Carrying Bridge) and Road Crossing and Restoration	3.76
2.	Monitoring (Construction Phase & SCADA) and Utility Shifting Including Compensation for Tree Cutting, Restoration of EP poles etc.,	1.75
	Total	5.51
3.	Provision for Shore line Changes Monitoring and its Protection if any (Based on the requirement of Construction Methodology)	3.5

B. Operation Phase Budgetary Estimate:

Sl. No.	Environmental Activity	Amount in Crores
1.	Trained manpower required for O&M including Environmental Management Cell	0.35
2.	Repair and maintenance of Common Collection Sump, Pumps sets, pipelines, diffuser system and monitoring including marine side inspections (Diver/Videography) and other repair works	0.66
	Total	1.01

- (xvii) The Andhra Pradesh Coastal Zone Management Authority has recommended the proposal for CRZ clearance *vide* its Letter No.426/CRZ/PROJ/2022-618 dated 17/11/2022.

2. Deliberations in the EAC:

The Committee noted that the Andhra Pradesh Pollution Control Board has recommended NOC *for the project and* APCZMA recommended the project and intimated that the activity is a permissible under Para 3(i) (a) and Para 3(v) (a) of CRZ Notification 2011. The PP shall ensure that the treated effluent discharge into sea / marine outfalls as per the prescribed standards of by CPCB / SPCB. The Committee also advised to PP submit compliance report / action report on specific conditions recommended / suggested by APSCZMA *vide* letter dated 17/11/2022 to the Ministry for record.

The Committee after detailed deliberations and considering the submissions made by the project proponent recommended the proposal for CRZ Clearance, subject to the following conditions:

- (i) All construction shall be strictly in accordance with the provisions of the CRZ Notification, 2011, as amended from time to time.
- (ii) The APIIC should strictly ensure disposal of treated effluent discharge into Sea or marine outfalls to the prescribed standards of CPCB / SPCB.
- (iii) A comprehensive marine environmental monitoring should be undertaken through a nationally reputed institute having expertise in the subject to determine impact of the discharge against the baseline water and sediment quality parameters as stated in the

- EMP. Remedial measures if required to be undertaken and provision for the costs for the same to be provided by the PP.
- (iv) No storage reservoir for sea water shall be permitted and only pipelines conveyance system shall be installed.
 - (v) Any temporary physical infrastructure setup and excavated material during laying of Pipelines shall not be dumped in water bodies or adjacent areas and the site shall be restored to its original condition after completion of construction of work.
 - (vi) No groundwater shall be extracted within the CRZ area to meet the water requirements during the construction and/or operation phase of the project.
 - (vii) Permanent labour camp, machinery and material storage shall not be set up in the CRZ area.
 - (viii) All the conditions stipulated by the Andhra Pradesh Coastal Zone Management Authority for CRZ clearance 2019 *vide* its Letter No.426/CRZ/PROJ/2022-618 dated 17/11/2022 and commitments made by the PP before the APCZMA and EAC shall be followed in letter and spirit.
 - (ix) All necessary clearance from the concerned authority, as may be applicable should be obtained prior to commencement of project or activity.

Item No. 3.5

Proposal for “Laying of new marine disposal pipeline in place of existing two lines and increase of marine discharge quantity at N. Narasapuram (V), Ch. Lakshmipuram (V), Rajaihpetta (V), Peda Teemala (V), of Kakkapalli (M), Visakhapatnam District Andhra Pradesh M/s Hetero Infrastructure SEZ Ltd - CRZ Clearance [IA/AP/CRZ/407123/2022] [F.NO.11/45/2022-IA.III]

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

The project proponent submitted documents and their consultant made a detailed presentation of salient features of the project and informed that:

- (i) The proposal is for CRZ clearance to the project for “Laying of new marine disposal pipeline in place of existing two lines and increase of marine discharge quantity at N. Narasapuram (V), Ch. Lakshmipuram (V), Rajaihpetta (V), PedaTeemala (V), of Kakkapalli (M), Visakhapatnam District Andhra Pradesh by M/s Hetero Infrastructure SEZ Ltd.
- (ii) The existing pipelines details as:

Location	Geographical Coordinates	
	Latitude, N	Latitude, E
Intake Depth= 6 m Distance from LFP = 682 m Volume = 15 MLD	17°21'12"	82°44'04"

Effluent Outfall Depth= 12 m OD= 330 mm Distance from LFP = 993.4 m Volume = 10 MLD	17°21'04"	82°44'36"
Brine reject outfall OD= 200 mm Distance from LFP = 1155 m Volume = 1040 KLD	17°21'07"	82°44'31"

- (iii) The CRZ clearance earlier was obtained on 4th January 2007, for disposal of 190 KLD of treated effluent outfall pipeline in the name of Hetero Labs Ltd.
- (iv) Over the period of 12 years, intake pipeline is in good condition, but two outfall pipelines got damaged due chocking up of the pipelines due to barnacle growth in the pipelines, entanglement of more fishing nets around the diffuser, some of the diffuser ports got disoriented and diffuser ports got completely buried below the seabed etc.
- (v) The CRZ map of 1:4000 has been prepared by Indian Institute of Remote Sensing (IRS), Anna University.
- (vi) The APCZMA committee recommended the proposal to MoEF&CC for laying of a new pipeline in place of old pipeline for disposal of treated effluent (2.366 MLD) through marine discharge. There is no change in the existing intake pipeline as it is in the good condition.
- (vii) The location of the proposed pipeline coordinate are:

Location	Geographical Coordinates (WGS 84)		UTM Coordinates (Zone 44)	
	Latitude, N	Longitude, E	X (m)	Y (m)
Landfall Point (LFP)	17°21'33.3"	82°44'11.5"	684508	1920133
Outfall pipeline (500 mm dia.) Distance from LFP = 2000 m Depth= 14.8 m CD	17°21'01.1"	82°45'10.3"	686254	1919158

- (viii) The total pipeline length is 4522.44 m, out of total 3244.85 m falls in CRZ area and 1277.59 m falls in non CRZ. The detail CRZ Classification as:

CRZ Classification		Length of pipeline (m)
CRZ I B	Area between Low Tide Line (LTL) and High Tide Line (HTL)	129.37
CRZ III A	No Development Zone (HTL to 200 m)	821.37
CRZ III B	Area between 200 to 500 m from HTL	346.12
CRZ IV A	Area between LTL and 12 Nm into the sea	1930.64
CRZ IV B	Tidal influenced water body from mouth of the water body at the sea up to the influence of tide which is measured as 5 ppt during driest part of year	17.35
Total in CRZ		3244.85
Outside CRZ		1277.59
Total		4522.44

- (ix) The details of outfall: Volume of Brine Discharge-10MLD, Volume of treated effluent-2.366 MLD, Salinity of Brine Reject-58 PPT, Ambient Salinity-35 PPT, No. of Ports-4 Nos., Diameter of Ports-each 250 mm, Initial Dilution-92 times in 3.5 minutes.
- (x) The total employment generation by the project about 30 workers during construction and operation phase.
- (xi) The total cost of the project ₹15.0 Crore and the EMP cost is about 25 Lakhs per year for Environmental Monitoring Programme, Environment Management Cell, Labour, Safety and Cleanliness Management etc.
- (xii) The Andhra Pradesh Pollution Control Board has recommended NOC *vide* letter No.219/APPCB/CFE/RO-VSP/HO/2010 dated 14/12/2021.
- (xiii) The Andhra Pradesh Coastal Zone Management Authority has recommended the proposal for CRZ clearance *vide* its Letter No. CRZ 382/CRZ/IND/2022-575 dated 09/11/2022.

2. Deliberations in the EAC:

The Committee noted that the Andhra Pradesh Pollution Control Board has recommended NOC for the project and APCZMA recommended the project and intimated that the activity is a permissible under Para 3(i) (a) and Para 3(v) (a) of CRZ Notification 2011. The Committee also suggested that PP shall ensure that the treated effluent discharge into sea / marine outfalls as per the prescribed standards of by CPCB / SPCB. The Committee further also advised to PP forward immediately by e-mail to all EAC Members a comparative fish catch data prior and post of CRZ clearance 2007 by using available secondary sources of data, due to laying of marine disposal pipeline. The same has been submitted by PP *vide* e-mail / letter No. HIS/MoEF/2022-23/02, dated 30/11/2022 and same has been circulated to all EAC members including MoEFCC and same has been accepted by EAC while approving the minutes.

The Committee after detailed deliberations and based on the clarifications / information submitted by PP recommended the proposal for CRZ Clearance, subject to the following conditions:

- (i) All construction shall be strictly in accordance with the provisions of the CRZ Notification, 2011, as amended from time to time.
- (ii) M/s Hetro Infrastructure SEZ Ltd. should strictly ensure disposal of treated effluent discharge into sea or marine outfalls to the prescribed standards of CPCB / SPCB.
- (iii) The existing pipeline is to be removed after commissioning of the new pipeline
- (iv) No brine discharge is permitted currently in the new pipeline. A detailed study to be undertaken on the effluent characteristics due to mixing of brine and treated waste water and its impact and mitigation. PP will apply separately for allowing discharging of brine along with effluent upon completion of such studies.
- (v) Any temporary physical infrastructure setup and excavated material during laying of Pipelines shall not be dumped in water bodies or adjacent areas and the site shall be restored to its original condition after completion of construction of work.
- (vi) Intake and outfall with 3 km radius to be monitored for water quality and marine ecosystem through a nationally reputed institute having expertise in the subject and reported and same should be submitted to IRO.
- (vii) No storage reservoir for sea water shall be permitted and only pipelines conveyance system shall be installed.

- (viii) No groundwater shall be extracted within the CRZ area to meet the water requirements during the construction and/or operation phase of the project.
- (ix) Permanent labour camp, machinery and material storage shall not be set up in the CRZ area.
- (x) All the conditions stipulated by the Andhra Pradesh Coastal Zone Management Authority for CRZ clearance 2019 *vide* its Letter No. CRZ 382/CRZ/IND/2022-575 dated 09/11/2022 and commitments made by the PP before the APCZMA and EAC shall be followed in letter and spirit.
- (xi) All necessary clearance from the concerned authority, as may be applicable should be obtained prior to commencement of project or activity.

Item No. 3.6

Proposal for Laying heat traced pipe line from South Tanker Berth to Kochi Refinery'- Extending 20" pipe line from NJRP to COT & NTB, along with associated facilities etc. in Tehsil Kunnathunad of District Ernakulam (Kerala) M/s Bharat Petroleum Corporation Ltd - Amendment in CRZ Clearance [IA/KL/CRZ/291876/2022] [FNo.11-31/2015-IA.III]

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

1. The project proponent and their consultant made a detailed presentation of salient features of the project and informed that:

- (i) The proposal is for Amendment CRZ clearance to the project for “Laying heat traced pipe line from South Tanker Berth to Kochi Refinery'- Extending 20" pipe line from NJRP to COT & NTB, along with associated facilities etc. in Tehsil Kunnathunad of District Ernakulam, Kerala M/s Bharat Petroleum Corporation Ltd.
- (ii) BPCL – Kochi Refinery laid a 20 inch piggable Heat Traced Pipeline (HTPL) of 10.5 Km length from South Tanker Berth Jetty (Located in Cochin Port Trust area) to Kochi Refinery in the year 2019 for transporting class C intermediate products like Vacuum Gas Oil and Vacuum Residue for refinery.
- (iii) MOEF & CC issued CRZ clearance for the pipeline *vide* letter No.11-31/2015-AI-III dated 12/02/2016. PESO granted permission in February, 2020 for commissioning the piggable pipeline in class C service. Post commissioning, this pipeline remained underutilized due to various reasons.
- (iv) In order to utilize the asset optimally it is proposed to change the service of the pipeline from Class C to Class A & B and extend the pipeline to North Tanker Berth (NTB) and Cochin Oil Terminal (COT) located at Cochin Port Area. PESO approval of Consent to Establish is received for amendment proposal on 27/07/2022.
- (v) There are total three berths in Cochin Port Authority, namely South Tanker berth (STB), North Tanker berth (NTB) and Cochin Oil Terminal (COT).
- (vi) M/s. Bharat Petroleum Corporation Limited (BPCL) proposes for Extension of 20" HTPL pipeline from North Jetty Reclamation Pit (NJRP) to Cochin Oil Terminal (approximately 1.0 Km of HDD section under seabed and 0.4 km on Pipe trestle).

- (vii) Presently, HTPL pipeline is laid from refinery to South Tanker berth (STB) through NJRP. On extending the pipeline to COT, Larger volume parcels can be handled economically.
- (viii) The project Pipeline size is 20", Pipeline Length:1.4 km (approx.) from NJRP to COT, Pipeline Throughput (Highest pumping capacity):1350 m³/hr for 20", Operating Pressure (YP-65A Discharge Press):13.5 Kg/cm²g, Design Pressure:45 kg/cm²g, Design Temperature:65°C, Material grade of Mainline pipe: API 5L Gr. X60, PSL-2,Material grade of Station Piping: ASTM A106 Gr. B - (For all Station Piping).
- (ix) The project located in Latitude: 9°57'56.50" N to 9°58'3.14"N and Longitude: 76°16'45.23" E to 76°16'50.29"E.
- (x) The CRZ map of 1:4000 has been prepared by Indian Institute of Remote Sensing (IRS), Anna University. The CRZ classification of the study area is as:

S.No.	Description	CRZ- Classification	Length in Meters	Total length in Meter
1.	Proposed 20" Multi-Product underground Pipeline from NJRP to Sand Bank Island	CRZ-II	17.67	1000.00
		CRZ- IV B	982.33	
2.	Proposed 20" Multi-Product above ground Pipeline from Sand Bank Island to Cochin Oil Terminal	CRZ- IA	21.05	380.00
		CRZ- IA (50m Mangrove Buffer Zone)	146.46	
		CRZ- IVB	212.49	

- (xi) The project site located 2.3 km from Manglavanam Bird Sanctuary.
- (xii) The estimated cost of project is approx. ₹65.86 Crores.
- (xiii) The Kerala Coastal Zone Management Authority has recommended the proposal for CRZ clearance *vide* its Letter No. 402/A1/2022/KCZMA dated 03/09/2022.

2. Deliberations in the EAC:

The Committee after detailed deliberations and presented before the meeting and suggested PP shall submit a Quantitative Risk Assessment (QRA) study for the entire pipeline corridor including the present HTPL line extension from Refinery to all three loading bays of Cochin Port Trust (CPT). The proposal is accordingly deferred for consideration in the next meeting.

4.0. Any other item with the permission of the Chair.

The meeting ended with a Vote of Thanks to the Chair.

List of the Expert Appraisal Committee (CRZ) Members participated during Meeting held on 2nd November 2022.

S. No.	Name of Members	Designation
1.	Dr. Deepak Arun Apte	Chairman
2.	Prof. Mukesh Khare	Member
3.	Dr. M.V. Ramana Murthy	Member
4.	Shri M.S. Negi	Member
5.	Shri S. Jeyakrishnan	Member
6.	Dr. Manoranjan Hota	Member
7.	Prof. V. K. Jain	Member
8.	Prof. A.K. Pachauri	Member
9.	Shri Sham Wagh	Member
10.	Dr. Niraj Sharma	Member
11.	Shri P.K. Mishra	Member
12.	Shri R.P.S. Verma	Member
13.	Dr. H. Kharkwal	Member Secretary
14.	Dr. Nobi E. P	MoEFCC
