सत्यमेव जयते

File No: 10-24/2019-1A-III
Government of India
Ministry of Environment, Forest and Climate Change
IA Division
***

Date **13/08/2024**

To,

Unmesh Abhayankar
ADANI PORTS AND SPECIAL ECONOMIC ZONE LIMITED
Adani House, Nr. Mithakhali Circle, Navrangpura, Ahmedabad , Ahmedabad, AHMADABAD, GUJARAT, , 380009
environment.mundra@adani.com

Subject: **Proposed Expansion of Waterfront Development Plan of Mundra Port in an area of 3335 ha for handling of additional 289 MMTPA of multi-purpose cargo in addition to the existing approved capacity of 225 MMTPA, located at Mundra, Kachchh District, Gujarat by M/S Adani Ports & Sez Ltd-Environmental and CRZ clearance reg.**

Sir/Madam,

This is in reference to your application submitted to MoEF&CC vide proposal number IA/GJ/INFRA1/469553/2024 dated 21/04/2024 for grant of prior Environmental Clearance (EC) to the proposed project under the provision of the EIA Notification 2006 and as amended thereof.

2. The particulars of the proposal are as below :

(i) EC Identification No.	EC24A3501GJ5976060N
(ii) File No.	10-24/2019-1A-III
(iii) Clearance Type	Fresh EC
(iv) Category	A
(v) Project/Activity Included Schedule No.	7(e) Ports, harbors, breakwaters, dredging
(vi) Sector	INFRA-1
(vii) Name of Project	Expansion of Waterfront Development Plan for Mundra Port by APSEZ, Mundra, Gujarat
(viii) Name of Company/Organization	ADANI PORTS AND SPECIAL ECONOMIC ZONE LIMITED
(ix) Location of Project (District, State)	KACHCHH, GUJARAT
(x) Issuing Authority	MoEF&CC
(xi) Applicability of General Conditions as per EIA Notification, 2006	No

3. The aforementioned proposal was placed before the EAC during its 364th meeting of the Expert Appraisal Committee held on 15th May, 2024.

4. The proposal is for the expansion of the Waterfront Development Plan of Mundra Port in an area of 3335 ha for handling an additional 289 MMTPA of multi-purpose cargo in addition to the existing approved capacity of 225 MMTPA, located at Mundra, Kachchh District, Gujarat by M/s Adani Ports & Sez Ltd. The proposed project is located between longitude 69°31'6.14"E to 69°47'36.75"E and between latitude 22°43'39.75"N to 22°50'55.34"N.

5. Initially, the waterfront development has been accorded Environmental and CRZ clearance vide letter No: 10-47/2008-IA.III dated 12th January 2009 and addendum F.No:10-47/2008-IA.III dated 19th January 2009. The extension of validity for Environmental and CRZ clearance has been given vide letter no: 10-47/2008-IA.III dated 7th October 2015 with validity up to 11th January 2019 excluding all the clearance for all developmental activities at North port vide letter of even no dated 07th October, 2015.

6. The proposed project falls under 7(e), Ports, harbours, breakwaters, dredging, Category A. Total project cost is Rs. 4,901,400 lakhs.

7. Terms of References (ToR) details: The ToR proposal was considered in the 40th EAC (Infra-2) meeting held on 23rd April, 2019, the committee recommended for grant of the ToR, Ministry granted the ToR vide letter No. 10-24/2019-1A-III dated 17th May, 2019. Subsequently amendment in Terms of Reference was obtained on 27th September, 2019 and 10th April, 2020 for exemption of Public Hearing. Further, amendment in ToR w.r.t. excluding the East port from the master plan was applied in Ministry vide proposal no. IA/GJ/INFRA1/457274/2024 dated 31/12/2023 and the proposal was appraised in the 353rd meeting of Expert Appraisal Committee held on 10th and 12th January, 2024 and the committee recommended for excluding the east port and Ministry granted the amendment in ToR on 26th February, 2014 excluding the East port from the master plan.

8. The proposed expansion of west port and south port along with supporting utilities/infrastructure facilities will be undertaken over an area of 3335 ha. For handling of additional 289 MMTPA of multi-purpose/Liquid/gas/cryogenic cargo will be handled in addition to the existing approved capacity of 225 MMTPA. Cargo handling for the FY 2023-24 is 165 MMT. The entire existing and proposed quay length will be used for handling Multipurpose/Liquid /Gas/Cryogenic cargo.

9. The details of the existing and proposed expansion development details are as following:

Sl. No.	Description	Approved till 2009	Already developed	Proposed Expansion	Cumulative after Expansion	Remarks
1	Quay Length (m)	22000	7870	8890	16760	The proposed quay length is envisaged due to optimization of layout for Multi-purpose cargo handling. (Existing 7870m quay length will also be optimized for multipurpose cargo handling)
2	Dredging (MCuM)	210 (Including East Port)	123 (South Port & West Port)	120	120	Due to optimization of layout within the existing approved waterfront area additional dredging quantity is envisaged
3	Effluent Treatment Plant (KLD)	265	265	800	1065	Based on the future requirement, ~800 KLD is proposed to be developed on Modular basis.
4	Sewage Treatment Plant (KLD)	50000	55	50000	50055	Based on the future requirement 50 MLD will be developed in Modular

						basis
5	Desalination Plant (MLD)	300	47	400 (in addition to already developed 47 MLD)	447	Additional units will be developed in Modular basis. Existing Intake and Outfall channel is suitable for 300 MLD Desalination capacity. For additional desalination plant capacity will have intake & outfall with pipeline system.
6	Sea Island Jetty	-	-	1	1	Off-shore berth for handling of Petroleum cargo
7	Single Point Mooring (SPM)/ Single buoy Mooring (SBM)	2	2	1	3	For handling of Petroleum cargo through VLCC

10. The details of existing Cargo handling:

Sl. No.	Type of Cargo	Capacity per Annum	Cargo Handling Capacity	Remarks
1	Container	MTEUs	9.5	1 TEU = 10 MT
2	Coal, Iron Ore	MMT	70.0	--
3	Steel & Scrap	MMT	10.5	--
4	Dry Bulk, Project and Heavy Engineering	MMT	11.0	--
5	Crude Oil (SPM)	MMT	20.0	--
6	POL, Chemicals and Vegetable Oils	MMT	7.5	--
7	Automobiles	Lac Nos.	8.5	1 Car = 1 MT
8	LNG	MMT	10.0	--
Total		MMTPA	225	--

11. Details of Cargo handling after expansion of Waterfront Development Plan (Proposed).

S. no	Cargo type	Cargo Mix	Cargo Handling Capacity(MMTP)
	Dry Bulk & Break Bulk Cargo	Multipurpose Cargoes including Coal/Iron ore/ limestone/Mines & Minerals & other dry bulk/Fertilizers and raw materials for manufacture of fertilizer/food grains/sugar/ clinker/cement/Project cargo/timber & wood/ machines/Iron steel products/Bulk/Break Bulk etc.	140
2	Containers	Container, Ro–Ro & Automobiles and any other non-hazardous cargo	250
3	Liquid Cargo	All Class A, B, C petroleum products, excluded petroleum products Including Petrochemical products, Hazardous, Toxic and Non-Hazardous chemicals/Liquids and other Liquid cargos. Tentative list of hazardous liquid cargo but not limited to are as follows: Ethylene, Propylene(Propene), Butadiene, Pentane, Ethyl Mercaptan Motor Spirit, Propylene Oxide, Hexane, Naphtha, Acetone, Methyl Chloride/Chloro Methane, Cyclohexane, Benzene,Ethyl Acetate, Acrylonitrile Acetonitrile, Methyl Methacrylate, Meth acrylonitrile,Methanol(MethylAlcohol),Isopropyl Alcohol, Ethyl Alcohol (Ethanol), Ethylene di chloride, Methyl Isobutyl Ketone,	84

		Ethyl Benzene, N-Butyl Acetate, Isobutyl Alcohol (Iso Butanol), N-Butyl Alcohol (N-Butanol), Epichlorohydrine, Styrene, O-Xylene, Acetic Acid, Acetic Anhydride, Nonedible/ Mentha Oil Low Sulphur Heavy Stock/ Furnace oil, Aniline, Methyl Ethyl Ketone Peroxide, Ethyl Hexanol-2, Vinyl Chloride, Phenol, Naphthalene, Ethylene Glycol, Mono Ethylene Glycol, Toluene 2.4 -di isocyanate, Diphenyl Methane Di-Isocynate, Edible oil/Palm Oil, Paraffin, Bitumen, Sulphur, Coal, CNG, NG, Ammonia (NH3), Diammonium Phosphate, Muriate of Potash (MOP), Soda Ash (Sodium Carbonate), Urea, Limestone, Caustic Soda, Sulphuric acid, Phosphoric acid, Piperine/Piperdine, Chloroform, Hydrochloric Acid (HCL), Ethylene diamine (EDA), CMDI etc. PoL such as Motor Spirit, Naptha, HSD, Crude Oil, Aviation Fuel, Kerosene, Low Sulphur Heavy stock/Furnace Oil, Carbon Black Feedstock, Paraffin, Bitumen, Lube Oil, Asphalt etc.	
4	Gas/Cryogenics/ Liquid	LNG, Propane, Butane, n-Butane, Ethane, LPG, CNG, NG and All Class A, B, C petroleum products, excluded petroleum products Including Petrochemical products, Hazardous, Toxic and Non-Hazardous chemicals/Liquids and other Liquid cargos.	40
Total			514

12. Land use/Land cover of project site:

Sl.No	Land use/Landcover	Area (ha)	Percentage (%)
1.	Built up Land-Industry	63.97	1.9
2.	Built-up Land (Rural/Urban)	-	-
3.	Built-up Land-Port development	895.82	26.9
4.	Built up/Level Raised	2228.12	66.8
5.	Coastal Sand	6.07	0.2
6.	Cultivable Land	-	-
7.	Fallow Land	-	-
8.	Gulf	53.68	1.6
9.	Land with/without Scrub	24.73	0.7
10.	Land with Scrub - Sand Flat	-	-
11.	Mangroves	-	-
12.	Tidal Flat	44.37	1.3
13.	Plantation	-	-
14.	Reserve Forest	-	-
15.	Salt Pan	18.24	0.5
16.	Streams	-	-
17.	Tanks	-	-
Total		3335	100

13. Terrain and Topographical Features: The proposed development of west port and south port is on reclaimed land and has an average level of (+) 6.0 m CD to (+) 7.0 m CD. The proposed port area is on land which is required to be reclaimed/level raised in future, the average level at the proposed reclamation site is (+) 5.0 m CD to (-) 2.0 m CD.

14. Details of water bodies, impact on drainage: Baradimata Creek is located at the distance of - 0 km, West of South Port Kotdi Creek is located at the distance of - 0 km at North of West Port, Navinal Creek is located at the distance of - 0 km at North East of South Port, Bocha Creek is located at the distance of - 0.7 km at North East of South Port, Creek near Vandh is located at the distance of - 5.3 km at North West direction, Phot Nadi is located at the distance of - 3 km at North East of South Port, Khari Nadi is located at the distance of - 2.15 km at Northwest of West Port, Danesri Nadi is located at the distance of -1.85 km at North of West Port, Nagavanti Nadi is located at the distance of - 5.5 km at North West of South

Port, River near Nana Bhadiya is located at the distance of - 6.2 km at North West of West Port, River near Gudiyali is located at the distance of - 13.2 km at North West of West Port, Proper drainage facility is provided in the existing WFDP facility. In addition to this, an adequate drainage system will 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.

15. Water requirement: Water requirement for the proposed project during construction phase is 2 MLD which will be met through existing water supply system and Narmada canal water supplied by GWIL. Water demand for the operational phase will be met by the seawater based desalination plant of capacity 400 MLD. No ground water extraction envisaged.

16. Diversion of forestland: No additional land area involved in the proposed expansion. Existing developed area in 2009 involved diversion of forestland over an area of 899 Ha, for which necessary Stage-II approvals were obtained, vide letter F.No.8-2/1999-FC (pt) 30th September 2009.

17. The project is not located within 10 km of Protected Areas (PA) including National Parks, Sanctuaries and Tiger Reserves etc. The project is not located within the Eco-Sensitive Zone (ESZ) or Eco-Sensitive Area (ESA) notified by the MoEF&CC. Nearest bird sanctuary to project site is Khijadiya Bird Sanctuary at 48 km SE located on the opposite bank of Gulf of Kutch followed by Kutch Desert Wildlife at 78 km NE and Narayan Sarovar Wildlife Sanctuary at 105 km NW.

18. Waste Management Plan: The existing facility has 55 KLD STP and 265 KLD ETP. The entire treated wastewater is being reused within the facility for green belt and dust suppression. In addition to the existing facility, STP of capacity 50000 KLD and ETP of capacity 800 KLD is proposed to be developed to treat the wastewater generated due to the proposed expansion. Treated wastewater generated from STP will be reused within the facility for greenbelt development and dust suppression. Treated wastewater from ETP will also be reused within the facility for greenbelt and Dust suppression as much as possible and the excess water will be discharged as combined discharge along with the desalination plant reject. Brine reject from desalination plant and cooling water reject from re-gasification unit of LNG will be discharged at the offshore location as identified through scientific study.

19. CETP details: Existing ETP Capacity–265 KLD, Proposed incremental – 800 KLD. Treated wastewater from ETP will also be reused within the facility for greenbelt and Dust suppression as much as possible and the excess water will be discharged as combined discharge along with the desalination plant reject. STP/ETP Aerobic Digestion Technology will be used.

20. STP details: The existing facility has a STP of capacity 55 KLD. Development of 50 MLD Sewage Treatment Plant (STP) is proposed as part of the current proposal in modular phases as per requirement. The entire treated wastewater is being reused within the facility for green belt and dust suppression.

21. Details of tree cutting and green belt development: The proposed land is a reclaimed land, Shrubs that are present in the site will be cleared during construction phase of the project. APSEZ has 450 Ha of green belt developed with 8.7 Lac saplings in the existing port & SEZ. Out of 450 Ha of green belt in APSEZ, 199 Ha is developed in the west port & south port area. The existing green belt has the native species of such as Date palm, Ficus Infectoria, Ficus Religiosa, Terminalia Arjuna, Cocos Nucifera, Washingtonia Filifera, Casurina Spp., Azadirachta Indica, Eucalyptus Spp., Jatropha Curacus, Ficus Bengalensis, Subabool Spp., Casia Fistula, Delobix Regia, etc., It has been proposed to develop an additional 50 Ha of green belt area as part of the proposed expansion with an average tree density of 2490 tress per hectare.

22. Energy efficiency measures with estimated saving: The energy conservation measures implemented by Adani Ports and Special Economic Zone (APSEZ) at Mundra Port include:(i)LED Lighting Installation: By replacing traditional lighting with LED lights, APSEZ reduced annual electricity consumption by approximately 4.22 million units. This resulted in significant energy savings due to the higher efficiency and longer lifespan of LED lights compared to traditional lighting systems. (ii) Energy-Efficient Fans: Installation of energy-efficient fans at various locations helped in reducing annual electricity consumption by approximately 25 kilo units. Energy-efficient fans consume less electricity while providing the same level of ventilation, contributing to energy conservation. (iii) Air Conditioner Timer Installation: By installing timers for controlling air conditioners in office areas, APSEZ saved approximately Rs. 1.22 Lakhs per annum. This measure ensures that air conditioners are only operational when needed, reducing unnecessary energy consumption during non-working hours or when areas are unoccupied. (iv)Optimization of Boom Flood Lights: APSEZ

implemented PLC programming to optimize the use of boom flood lights, ensuring they automatically turn off when the boom is up. This measure prevents unnecessary energy consumption by ensuring that lights are only operational when required for operational safety.

23. Details of Rain Water Harvesting: As a wise use of natural resource, APSEZ has set up rainwater harvesting system where the rainwater from the roof top are collected in an underground tank for irrigation of greenbelt within the port. As part of the proposed expansion based on the rooftop area available approx. 38500 m3 of rainwater can be harvested annually.

24. Details of CRZ area: The study for demarcation of High tide Line (HTL), Low Tide Line (LTL) and Coastal Regulation Zone (CRZ) for the proposed project has been undertaken by National Centre for Sustainable Coastal Management (NCSCM). The details of the components covered under the CRZ area is as following:

Sl.no	Proposed Facilities	CRZ Classification
1	Multipurpose Storage/Liquid/Gas/Cryogenic Storage areas (with all operation facilities)/Shipbuilding Activity Area/Dry Dock	CRZ I(A) Diverted forest land, CRZ I(B) & CRZ III, CRZ IV(B) (Only permissible activities). No activity is permissible in the existing mangrove area.
2	Multipurpose Storage/ Liquid/Gas/Cryogenic-Berths	CRZ IV(A), & CRZ I (B) Only permissible activities)
3	Breakwater/Off-Shore Island Jetty/SBM/SPM and its associated facilities	CRZ IV (A)
4	Common Operational Building and Other facilities	CRZ I(B) & CRZ III Only permissible activities)
5	Utility Corridor (As defined)	CRZ I(A), CRZ I(B), CRZ IV(B), CRZ III
6	Marine Intake and Outfall structure (as defined) and its associated facilities	CRZ IV(A)
7	Desalination Plant	CRZ I(A) diverted reserve forest, CRZ I(B) & CRZ III
8	Seawater Intake & Outfall pipeline, Offshore pipeline from SBM/SPM/Sea Island Jetty and its associated facilities	CRZ IV(A) & CRZ IB
9	Dredging/Dumping/Reclamation	CRZ IV(A), CRZ I(B) & CRZ III
10	FSRU/FSO and Floating Dry Dock	CRZ IV(A) & CRZ I(B)

25. The Details of CRZ Zones & components of the project as per approved CZMP- 2011.

S.no	Development	CRZ-1A	CRZ-IB	CRZ-III NDZ	CRZ-III (200 to 500 m)	CRZ-IVA	CRZ-IVB
		Area (Ha)					
1	Desalination plant, Utility Corridor Non-Hazardous Cargo Storage Other as per CRZ.	72.3	47.3	25	0	0	0
2	Dredge Disposal Location .	0.0	0.0	0.0	0.0	4.6	0.0
3	Flare Area	0.0	0.0	0.0	0.0	0,2	0.0
4	GSPC LNG Berth 2	0.0	0.0	0.1	0.0	0.0	0.0
5	Intake for Desal	0.0	0.0	0.0	0.0	1.8	0.0
6	LNG Outfall Point	0.0	0.0	0.9	0.0	6.0	0.0
7	Multipurpose Backup Area	147.77	2.8	134.4	114.7	31.6	3.6
8	Multipurpose Backup Area Ship Building Activity	0.0	126.4	0.6	0.9	180.0	10.8

26. Area Breakup of only Utility Corridor proposed in CRZ Area.

S. no.	Corridor	Corridor-1	Corridor -2	Corridor -3	Corridor -4	Corridor -5	Corridor -6	Total
1	Total Area	49.79	54.93	0.77	13.16	1.26	4.39	124.3

	(Ha)							
2	CRZ-IA (Mangrove Area) (Ha)	13.47	6.42	0.28	0.69	-	1.49	22.35
3	CRZ-IA (Mangrove Buffer) (Ha)	10.99	8.26	0.29	0.4	-	2.74	22.68
4	CRZ-IA (Diverted R.F) (Ha)	25.33	29.35	-	1.44	-	-	56.12
5	CRZ-IB (Intertidal Area)	-	3.69	-	5.67	0.44	-	9.8
6	CRZ-III (up to 200 m)	-	3.47	-	4.96	0.35	0.16	8.94
7	CRZ - III (200 m to 500 m)	-	-	-	-	0.47	-	0.47
8	Non CRZ Area	-	-	0.2	-	-	-	0.2

27. Multipurpose back up area.

S. no	Development	CRZ-IA	CRZ-IB	CRZ-III (up to 200m)	CRZ-III (200m to 500 m)	CRZ-IVA	CRZ-IVB	Non CRZ Area
		Area (Ha)						
1	Multipurpose Backup Area	147.7*	2.8	134.4	114.7	31.6	3.6	1510.5
2	Multipurpose Backup Area/ Ship Building Yard	0.0	126.4	0.6	0.9	180.0	10.8	0
3	Multipurpose Liquid/ Gas/ Cryogenic Cargo Storage Area	252.3*	0.3	111.6	118.6	29.9	0	558.3

Gujarat Coastal Zone Management Authority (GCZMA) vide letter no.ENV/10/2024/37/T dated 20thApril, 2024 recommended the proposal.

28. The IRO, MoEF&CC has visited the site and issued the Certified Compliance report to Waterfront Development Project of M/s Adani Ports and Logistics at Mundra, District Kutchh, Gujarat vide letter dated 27th February, 2024.

29. Details of shoreline change: Historical change in the shoreline reveals that the shoreline in the region has a seasonal fluctuation falling under low erosion condition due to various natural and manmade activities. The predicted shoreline change due to the fully developed APSEZ facility indicates erosion in the study area will be less than 0.08m/year due to the proposed development. In 2023, APSEZ, through the Gujarat Institute of Desert Ecology (GUIDE), initiated shoreline monitoring along the Mundra coast. The study revealed a mix of erosion and accretion processes. Erosion was observed in certain patches near Modhva coastal stretches, the western port, and near the mouth of Bocha Island on the eastern side of Mundra port. The rest of the area showed accretion. Ground transect surveys, including beach profiling, were conducted to establish baselines and validate historical analyses using satellite imagery. Future shoreline changes will be monitored through repeated beach profiling and satellite imagery analysis at regular intervals.

30. Hydrodynamic study assessing the impacts of the proposed waterfront development plan expansion has been carried out using scientific models. It has been inferred from the study that the variation in the flow regime (circulation pattern) is local and restricted within the development area.

31. Flooding and related impacts due to cyclonic storm in the region has been studied in detail. The frequency of occurrence of cyclonic storm in the region is once in four years based on 100 years data. Maximum surge of 2m with a return period of 1 in 100 years was predicted, which will inundate the low lying area below 2m contours along the cost.

32. Dredging Disposal and Reclamation: The WFDP expansion involves optimizing the existing layout, adjusting the approach channel, basin, and berthing area to -21m CD to accommodate capsized vessels. Due to optimization of layout within the existing approved waterfront, area additional dredging quantity is envisaged. The envisaged dredging at South Port as per the current proposal accounts to 20 MCM. The envisaged dredging at West Port as per the current proposal is 100 MCM. Capital dredged material will be utilized for area levelling within approved area. The envisaged maintenance dredging as per the current proposal is 12 MCM/Annum, which will be disposed off in off-shore at identified locations.

33. Detailed analysis of impacts due to dredging and disposal on marine ecology along with other impacts are assessed both qualitatively and quantitatively was conducted by the Centre of Advanced Study (CAS) in Marine Biology, Annamalai University and to ensure the credibility and robustness of the findings, the EIA Report underwent a thorough validation process by the Gujarat Institute of Desert Ecology (GUIDE) an institute renowned for its expertise in environmental research and assessment.

34. Details of cargo handling with dust control measures: Full-fledged Dust Control System: The project implements a robust dust control system that encompasses various measures to minimize dust emissions. This system may include techniques such as:(i) Installation of dust suppression equipment such as misting systems, dust collectors, and water sprayers, Wind Breaking Wall/Wind Shield, Implementation of enclosed conveyor systems to contain cargo and prevent dust dispersion, Application of dust suppressants or binding agents on cargo stockpiles to mitigate dust generation.

35. Details of Oil Spill Contingency Plan: APSEZ has developed an effective Oil Spill Contingency Plan as per the stipulation of NOSDCP guidelines to combat the oil spill of 700 T (Tier-I). In order to ascertain the impacts associated with the oil spill during the operation phase, oil spill modelling study was undertaken considering an oil spill of maximum 700 tons at 2 hypothetical locations and the results have shown the oil slick would reach shore within 18 hours and 24 hours during the spring tide and neap tide condition(worst case).

36. Land acquisition and R&R issues involved: Since the proposed project expansion occur within the boundary limits as defined in the master plan for the Waterfront Development Plan, as approved by MoEF&CC in 2009. Thereby no land acquisition and R&R studies are envisaged.

37. Employment potential, No. of people to be employed: During construction phase, approximately 200 workers will be employed. During operation, direct employment of 1200 persons and indirect employment of 3600 persons is envisaged. The proposed project is likely to have positive impact on socioeconomic condition of the region.

38. Benefits of the project: Financially, the proposed expansion of port project will help in increasing the economy at the regional and national level.

39. Details of Court cases: There are two ongoing matters pending (Two at high court and one at Supreme Court). Details are as following:
i. Case No: CA9124 of 2011 Case Name: Kheti Vikas Seva Trust Vs UoI & others. Name of the court: Gujarat High Court.
ii. Case No: SLP28788 of 2016 Case Name: Pravinsinh Bhurabhai Chauhan Vs State of Gujarat & others. Name of the court: Supreme Court.

40. The EAC, taking into account the submission made by the project proponent had a detailed deliberation in its 364th meeting held on 15th May, 2024 and recommended the project for grant of environment and CRZ clearance for subject to all specific and standard conditions applicable for such projects.

41. The Ministry of Environment, Forest and Climate Change has considered the proposal based on the recommendations of the Expert Appraisal Committee(Infrastructure, CRZ and other miscellaneous projects) and hereby decided to grant of environmental and CRZ Clearance for 'Proposed Expansion of Waterfront Development Plan of Mundra Port in an area of 3335 ha for handling of additional 289 MMTPA of multi-purpose cargo in addition to the existing approved capacity of 225 MMTPA, located at Mundra, Kachchh District, Gujarat by M/S Adani Ports & Sez Ltd' under the EIA notification, 2006 as amended and CRZ Notification, 2011 subject to strict compliance of the following specific conditions, in addition to all standard conditions applicable for such projects.

42. This issues with the approval of the Competent Authority.

Copy To

1. The Secretary, Forest & Environment Department, 8th Floor, Block–14, New Sachivalaya, Gandhinagar– 382010.
2. The Deputy Director General of Forests (C), Ministry of Environment, Forest and Climate Change, Integrated Regional Office, Gandhi Nagar, A-Wing – 407 & 409, Aranya Bhawan, Near CH-3 Circle, Sector-10A, Gandhi Nagar – 382010.
3. The Member Secretary, Central Pollution Control Board, Parivesh Bhawan, CBD-cum-Office Complex, East Arjun Nagar, Delhi – 32.
4. The Member Secretary, Gujarat Pollution Control Board, Paryavaran Bhavan, Sector-10A, Gandhinagar (Gujarat)-382010.
5. Parivesh Portal.
6. Guard File/Monitoring File/Website/Record File.

Annexure 1

Specific EC Conditions for (Ports, Harbors, Breakwaters, Dredging)

1. Specific Conditions

S. No	EC Conditions
1.1	Construction activity shall be carried out strictly according to the provisions of the CRZ Notification, 2011. No construction work/activity other than those permitted in Coastal Regulation Zone Notification shall be carried out in Coastal Regulation Zone area.
1.2	All the recommendations and conditions specified by the Gujarat Coastal Zone Management Authority vide letter no. ENV/10/2024/37/T dated 20th April, 2024 shall be implemented.
1.3	All the storage proposed in the CRZ area shall be in line with the CRZ notification, 2011. No storage is allowed other than the products mentioned in the CRZ notification, 2011 in the CRZ area.
1.4	Multipurpose Backup Area of 252.3 ha proposed in the CRZ-IA area only permissible activities shall be taken up. And in no case mangroves falling in proposed backup area shall be disturbed and 50 meter buffer should be kept around mangroves
1.5	In no case mangrove area falling within proposed Multipurpose Backup Area shall be disturbed and a buffer of 50 meters shall be provided all around the mangroves area.
1.6	Compensatory Mangrove Afforestation over 100 ha, as also stipulated in GCZMA conditions and agreed by the PP, shall be carried out at the Project cost. Accordingly, plan shall be prepared in consultation with state Forest Department or any other agency authorized by the government. The plan shall be submitted to the IRO of MoEFCC within3 months of the issue of EC/CRZ clearance and implementation of the plan shall be submitted in 6 monthly monitoring report.
1.7	No mangrove shall be cut or affected due to port construction.
1.8	Brine reject from desalination plant and cooling water reject from re-gasification unit of LNG will be discharged at the offshore location as identified through scientific study. No Objection Certificate from the concern Gujarat State Pollution Control Board need to be obtained.

S. No	EC Conditions
1.9	Construction of Utility corridor on stilts is proposed through Gantry Girder Launching technology which does not require construction of road for transporting heavy machineries and therefore ensure minimal/zero footprint on land /mangrove areas. As per CRZ mapping by NCSCM actual damage to mangroves will be limited to only 0.92 ha. PP will carry out 100 ha Compensatory Mangrove afforestation.
1.10	The Environmental Clearance to the project is primarily under provisions of EIA Notification, 2006. It does not tantamount to approvals/consent/permissions etc required to be obtained under any other Act/Rule/regulation The Project Proponent is under obligation to obtain approvals /clearances under any other Acts/ Regulations or Statutes as applicable to the project.
1.11	All the recommendations mentioned in the Marine Biology study conducted and validation process by the Gujarat Institute of Desert Ecology (GUIDE) shall be implemented. The compliance to the recommendations shall be submitted along with 6 monthly compliance report to the regional office of MoEFCC.
1.12	Continuous monitoring of the ecological characteristics of the habitat during and after the construction, to assess the changes in the water quality, coastal hydrology, bottom contamination and diversity & abundance of marine organisms. The report of the monitoring report shall be submitted to the concern IRO, MoEF&CC along with six monthly report.
1.13	The Project Proponent shall ensure that no creeks or rivers are blocked due to any activities at the project site and free flow of water is maintained.
1.14	No underwater blasting is permitted.
1.15	The closed conveyor gallery along with the junction/transfer towers shall be provided with dust suppression systems (DSS). Dust suppression systems with water sprinklers/fogging system shall be provided to prevent the fugitive dust emissions during handling, transfer and storage. Further, the Greenbelts prevent/arrest/controls the fugitive emissions.
1.16	Construction spoils, including bituminous material and other hazardous materials, must not be allowed to contaminate watercourses and the dump sites for such material must be secured so that they should not leach into the ground water.
1.17	Spillage of fuel/engine oil and lubricants from the construction site are a source of organic pollution which impacts marine life, particularly benthos. This shall be prevented by suitable precautions and also by providing necessary mechanisms to trap the spillage.
1.18	Oil spillage prevention and mitigation scheme shall be prepared. In case of oil spillage/contamination, action plan shall be prepared to clean the site by adopting proven technology. The recyclable waste (oily sludge) and spent oil shall be disposed of to the authorized recyclers.
1.19	Emergency response system for oil spillage and oil spill contingency plan, any other hazardous material spillages shall be in place at the site level. The mock drill in this regard shall be conducted regularly and the same shall be documented and made available during inspections of local pollution control board, port authorities and MoEF&CC.
1.20	Since liquid/gaseous product handling is involved, complete risk safety assessment including

S. No	EC Conditions
	'BLEVE' study and mitigation measures and safety precautions shall be drawn and implemented along with the Robust safety standards and latest fire detection and prevention techniques. The report shall be submitted along with the 6 monthly compliance report.
1.21	The risk assessment and management plan being drawn up with regards to the environmental impacts of natural disasters, oil spills and other waste, dredging and dumping on marine ecology shall scrupulously implemented. It shall be ensured that the marine ecology in the area of influence shall not affect. The monitoring and compliance status of the marine ecology management plan shall be submitted along with the six monthly EC compliance reports.
1.22	All the recommendations mentioned in the risk assessment report, disaster management plan and safety guidelines shall be implemented.
1.23	The project proponent shall install a system to carryout Ambient Air Quality monitoring for common/criterion parameters relevant to the main pollutants released (e.g. PM10 and PM2.5 in reference to PM emission, and SO2 and NOx in reference to SO2 and NOx emissions) within and outside the port area at least at four locations (one within and three outside the port area at an angle of 120°each), covering upwind and downwind directions.
1.24	Appropriate Air Pollution Control (APC) system shall be provided for all the dust generating points including fugitive dust from all vulnerable sources, so as to comply prescribed fugitive emission standards.
1.25	Emission and air quality monitoring and results of manual stack monitoring and manual monitoring of air quality /fugitive emissions to Regional Office of MoEF&CC, Zonal office of CPCB and Regional Office of SPCB along with six monthly monitoring report.
1.26	Rain water harvesting for roof run-off and surface run-off, should be implemented. Before recharging the surface run off, pre-treatment must be done to remove suspended matter, oil and grease.
1.27	Ensure minimum 5% of total electricity requirement be met through installation of solar energy/ green/ non-conventional in the proposed activity area.
1.28	All the commitments made as part of EMP with the budget provisions shall be implemented. The compliance to the recommendations shall be submitted along with 6 monthly compliance report to the regional office of MoEFCC.
1.29	As per the Ministry's Office Memorandum F.No.22-65/2017-IA.III dated 30th September, 2020, the project proponent shall abide by all the commitments made by them to address the concerns raised during the public consultation. The project proponent shall initiate the activities proposed by them, based on the commitment made in the public hearing, and incorporate in the Environmental Management Plan and submit to the Ministry. All other activities including pollution control, environmental protection and conservation, R&R, wildlife and forest conservation/protection measures including the NPV, Compensatory Aforestation etc, either proposed by the project proponent based on the social impact assessment and R&R action plan carried out during the preparation of EIA report or prescribed by EAC, shall also be implemented and become part of EMP.
1.30	Environmental Clearance is granted subject to final outcome of Hon'ble Supreme Court of

S. No	EC Conditions
	India,Hon'ble High Court of Gujarat, and any other court of law, if any,as May be applicable to this project.

Standard EC Conditions for (Ports, harbors, breakwaters, dredging)

1. Statutory Compliance

S. No	EC Conditions
1.1	Construction activity shall be carried out strictly according to the provisions of CRZ Notification, 2011 and the State Coastal Zone Management Plan as drawn up by the State Government. No construction work other than those permitted in Coastal Regulation Zone Notification shall be carried out in Coastal Regulation Zone area.
1.2	A certificate of adequacy of available power from the agency supplying power to the project along with the load allowed for the project should be obtained.
1.3	All other statutory clearances such as the approvals for storage of diesel from Chief Controller of Explosives, Fire Department, Coast Guard, Civil Aviation Department shall be obtained, as applicable by project proponents from the respective competent authorities.

2. Air Quality Monitoring And Preservation

S. No	EC Conditions
2.1	The project proponent shall install system to carryout Ambient Air Quality monitoring for common/criterion parameters relevant to the main pollutants released (e.g. PM10 and PM2.5 in reference to PM emission, and SO2 and NOx in reference to SO2 and NOx emissions) within and outside the project area at least at four locations, covering upwind and downwind directions.
2.2	Appropriate Air Pollution Control (APC) system shall be provided for all the dust generating points including fugitive dust from all vulnerable sources, so as to comply prescribed emission standards.
2.3	Shrouding shall be carried out in the work site enclosing the dock/proposed facility area. This will act as dust curtain as well achieving zero dust discharge from the site. These curtain or shroud will be immensely effective in restricting disturbance from wind in affecting the dry dock operations, preventing waste dispersion, improving working conditions through provision of shade for the workers.
2.4	Dust collectors shall be deployed in all areas where blasting (surface cleaning) and painting operations are to be carried out, supplemented by stacks for effective dispersion.
2.5	The Vessels shall comply the emission norms prescribed from time to time.
2.6	Diesel power generating sets proposed as source of backup power should be of enclosed type and conform to rules made under the Environment (Protection) Act, 1986. The height of stack of DG sets should be equal to the height needed for the combined capacity of all proposed DG sets. Use of low sulphur diesel. The location of the DG sets may be decided with in consultation with State

S. No	EC Conditions
	Pollution Control Board.
2.7	A detailed traffic management and traffic decongestion plan shall be drawn up to ensure that the current level of service of the roads within a 05 kms radius of the project is maintained and improved upon after the implementation of the project. This plan should be based on cumulative impact of all development and increased habitation being carried out or proposed to be carried out by the project or other agencies in this 05 Kms radius of the site in different scenarios of space and time and the traffic management plan shall be duly validated and certified by the State Urban Development department and the P.W.D./ competent authority for road augmentation and shall also have their consent to the implementation of components of the plan which involve the participation of these departments.

3. Water Quality Monitoring And Preservation

S. No	EC Conditions
3.1	The Project proponent shall ensure that no creeks or rivers are blocked due to any activities at the project site and free flow of water is maintained.
3.2	Appropriate measures must be taken while undertaking digging activities to avoid any likely degradation of water quality. Silt curtains shall be used to contain the spreading of suspended sediment during dredging within the dredging area.
3.3	No ships docking at the proposed project site will discharge its on-board waste water untreated in to the estuary/ channel. All such wastewater load will be diverted to the proposed Effluent Treatment Plant of the project site.
3.4	Measures should be taken to contain, control and recover the accidental spills of fuel and cargo handle.
3.5	The project proponents will draw up and implement a plan for the management of temperature differences between intake waters and discharge waters.
3.6	Spillage of fuel / engine oil and lubricants from the construction site are a source of organic pollution which impacts marine life. This shall be prevented by suitable precautions and also by providing necessary mechanisms to trap the spillage.
3.7	Total fresh water use shall not exceed the proposed requirement as provided in the project details. Prior permission from competent authority shall be obtained for use of fresh water.
3.8	Sewage Treatment Plant shall be provided to treat the wastewater generated from the project. Treated water shall be reused for horticulture, flushing, backwash, HVAC purposes and dust suppression.
3.9	A certificate from the competent authority for discharging treated effluent/ untreated effluents into the Public sewer/ disposal/drainage systems along with the final disposal point should be obtained.
3.10	No diversion of the natural course of the river shall be made without prior permission from the Ministry of Water resources.

S. No	EC Conditions
3.11	All the erosion control measures shall be taken at water front facilities. Earth protection work shall be carried out to avoid erosion of soil from the shoreline/boundary line from the land area into the marine water body.

4. Noise Monitoring And Prevention

S. No	EC Conditions
4.1	Noise level survey shall be carried as per the prescribed guidelines and report in this regard shall be submitted to Regional Officer of the Ministry as a part of six-monthly compliance report.
4.2	Noise from vehicles, power machinery and equipment on-site should not exceed the prescribed limit. Equipment should be regularly serviced. Attention should also be given to muffler maintenance and enclosure of noisy equipments.
4.3	Acoustic enclosures for DG sets, noise barriers for ground-run bays, ear plugs for operating personnel shall be implemented as mitigation measures for noise impact due to ground sources.
4.4	The ambient noise levels should conform to the standards prescribed under E(P)A Rules, 1986 viz. 75 dB(A) during day time and 70 dB(A) during night time.

5. Energy Conservation Measures

S. No	EC Conditions
5.1	Provide solar power generation on roof tops of buildings, for solar light system for all common areas, street lights, parking around project area and maintain the same regularly;
5.2	Provide LED lights in offices and project areas.

6. Waste Management

S. No	EC Conditions
6.1	Dredged material shall be disposed safely in the designated areas.
6.2	Shoreline should not be disturbed due to dumping. Periodical study on shore line changes shall be conducted and mitigation carried out, if necessary. The details shall be submitted along with the six monthly monitoring reports.
6.3	Necessary arrangements for the treatment of the effluents and solid wastes must be made and it must be ensured that they conform to the standards laid down by the competent authorities including the Central or State Pollution Control Board and under the Environment (Protection) Act, 1986.
6.4	The solid wastes shall be managed and disposed as per the norms of the Solid Waste Management Rules, 2016.

S. No	EC Conditions
6.5	Any wastes from construction and demolition activities related thereto shall be managed so as to strictly conform to the Construction and Demolition Waste Management Rules, 2016.
6.6	A certificate from the competent authority handling municipal solid wastes should be obtained, indicating the existing civic capacities of handling and their adequacy to cater to the M.S.W. generated from project.
6.7	Used CFLs and TFLs should be properly collected and disposed off/sent for recycling as per the prevailing guidelines/ rules of the regulatory authority to avoid mercury contamination.
6.8	Oil spill contingency plan shall be prepared and part of DMP to tackle emergencies. The equipment and recovery of oil from a spill would be assessed. Guidelines given in MARPOL and Shipping Acts for oil spill management would be followed. Mechanism for integration of terminals oil contingency plan with the overall area contingency plan under the co-ordination of Coast should be covered.

7. Green Belt

S. No	EC Conditions
7.1	Green belt shall be developed in area as provided in project details with a native tree species in accordance with CPCB guidelines.
7.2	Top soil shall be separately stored and used in the development of green belt.

8. Marine Ecology

S. No	EC Conditions
8.1	Dredging shall not be carried out during the fish breeding and spawning seasons.
8.2	Dredging, etc shall be carried out in the confined manner to reduce the impacts on marine environment.
8.3	The dredging schedule shall be so planned that the turbidity developed is dispersed soon enough to prevent any stress on the fish population.
8.4	While carrying out dredging, an independent monitoring shall be carried out through a Government Agency/Institute to assess the impact and necessary measures shall be taken on priority basis if any adverse impact is observed.
8.5	A detailed marine biodiversity management plan shall be prepared through the NIO or any other institute of repute on marine, brackish water and fresh water ecology and biodiversity and submitted to and implemented to the satisfaction of the State Biodiversity Board and the CRZ authority. The report shall be based on a study of the impact of the project activities on the intertidal biotopes, corals and coral communities, molluscs, sea grasses, sea weeds, sub-tidal habitats, fishes, other marine and aquatic micro, macro and mega flora and fauna including benthos, plankton, turtles, birds etc. as also the productivity. The data collection and impact assessment shall be as per

S. No	EC Conditions
	standards survey methods and include underwater photography.
8.6	Marine ecology shall be monitored regularly also in terms of sea weeds, sea grasses, mudflats, sand dunes, fisheries, echinoderms, shrimps, turtles, corals, coastal vegetation, mangroves and other marine biodiversity components including all micro, macro and mega floral and faunal components of marine biodiversity.
8.7	The project proponent shall ensure that water traffic does not impact the aquatic wildlife sanctuaries that fall along the stretch of the river.

9. Public Hearing And Human Health Issues

S. No	EC Conditions
9.1	The work space shall be maintained as per international standards for occupational health and safety with provision of fresh air respirators, blowers, and fans to prevent any accumulation and inhalation of undesirable levels of pollutants including VOCs.
9.2	Workers shall be strictly enforced to wear personal protective equipments like dust mask, ear muffs or ear plugs, whenever and wherever necessary/ required. Special visco-elastic gloves will be used by labour exposed to hazards from vibration.
9.3	In case of repair of any old vessels, excessive care shall be taken while handling Asbestos & Freon gas. Besides, fully enclosed covering should be provided for the temporary storage of asbestos materials at site before disposal to CTSDF.
9.4	Safety training shall be given to all workers specific to their work area and every worker and employee will be engaged in fire hazard awareness training and mock drills which will be conducted regularly. All standard safety and occupational hazard measures shall be implemented and monitored by the concerned officials to prevent the occurrence of untoward incidents/ accidents.
9.5	Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.
9.6	Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.
9.7	Occupational health surveillance of the workers shall be done on a regular basis.

10. Environment Responsibility

S. No	EC Conditions
10.1	The company shall have a well laid down environmental policy duly approved by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have

S. No	EC Conditions
	proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental / forest /wildlife norms/ conditions. The company shall have defined system of reporting infringements / deviation / violation of the environmental / forest / wildlife norms / conditions and / or shareholders / stake holders. The copy of the board resolution in this regard shall be submitted to the MoEF&CC as a part of six-monthly report.
10.2	A separate Environmental Cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of senior Executive, who will directly report to the head of the organization.
10.3	Action plan for implementing EMP and environmental conditions along with responsibility matrix of the company shall be prepared and shall be duly approved by competent authority. The year wise funds earmarked for environmental protection measures shall be kept in separate account and not to be diverted for any other purpose. Year wise progress of implementation of action plan shall be reported to the Ministry/Regional Office along with the Six Monthly Compliance Report.
10.4	Self environmental audit shall be conducted annually. Every three years third party environmental audit shall be carried out.

11. Miscellaneous

S. No	EC Conditions
11.1	The project proponent shall make public the environmental clearance granted for their project along with the environmental conditions and safeguards at their cost by prominently advertising it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days and in addition this shall also be displayed in the project proponent's website permanently.
11.2	The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.
11.3	The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.
11.4	The project proponent shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the ministry of Environment, Forest and Climate Change at environment clearance portal.
11.5	The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.
11.6	The criteria pollutant levels namely; PM2.5, PM10, SO2, NOx (ambient levels) or critical sectoral parameters, indicated for the project shall be monitored and displayed at a convenient location near the main gate of the company in the public domain.

S. No	EC Conditions
11.7	The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.
11.8	The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee.
11.9	No further expansion or modifications in the project shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change (MoEF&CC).
11.10	Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.
11.11	The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory under the provisions of the Environmental (Protection) Act, 1986, to ensure effective implementation of the suggested safeguard measures in a time bound and satisfactory manner.
11.12	The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.
11.13	The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information/monitoring reports.
11.14	The above conditions shall be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 and the Public Liability Insurance Act, 1991 along with their amendments and Rules and any other orders passed by the Hon'ble Supreme Court of India / High Courts and any other Court of Law relating to the subject matter.
11.15	Any appeal against this EC shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.

12. Specific Conditions

S. No	EC Conditions
12.1	The unit shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling. Fire fighting system shall be as per the norms.