

F. No. 10-47-2016-IA-III  
Government of India  
Ministry of Environment, Forest and Climate Change  
(IA.III Section)

Indira Paryavaran Bhawan,  
Jor Bagh Road, New Delhi - 3

Date: 1<sup>st</sup> August, 2017

To,

**Adani Hazira Port Private Limited,**  
1<sup>st</sup> Floor, Infrastructure House, Adjacent to Adani House,  
Near Mithakhali Circle, Navrangpura,  
Ahmedabad – 380 009  
Email: [info@adani.com](mailto:info@adani.com), [pnroy.chowdhury@adani.com](mailto:pnroy.chowdhury@adani.com)

**Subject: 'Expansion of Outer Harbour Development of Hazira Port (Gujarat) by M/s Adani Hazira Port Pvt. Ltd - Terms of Reference - reg.**

Sir,

This has reference to your proposal No. IA/GJ/MIS/55944/2016 dated 11<sup>th</sup> June, 2016, submitted to this Ministry for seeking Terms of Reference (ToR) in terms of the provisions of the Environment Impact Assessment (EIA) Notification, 2006 under the Environment (Protection) Act, 1986.

2. The proposal for grant of Terms of Reference (ToR) to the project 'Expansion of Outer Harbour Development of Hazira Port' (Gujarat) promoted by M/s Adani Hazira Port Pvt. Ltd was considered by the Expert Appraisal Committee (Infra-2) in its meeting held on 29<sup>th</sup> June 2016, 12<sup>th</sup> -14<sup>th</sup> April, 2017 and 25<sup>th</sup>-27<sup>th</sup> May, 2017.

3. The details of the project, as per the documents submitted by the project proponent, and also as informed during the above said meetings are under:-

(i). The M/s Adani Hazira Port Private Limited (AHPPL) has set up multipurpose port at Hazira. Port and related infrastructure facilities have been developed as per EC & CRZ clearance of 2003, 2007 and 2013. Master plan includes total 12 multi-purpose berths out of which 7 berths (two container berths, one coal berth, one liquid berth and three multipurpose berths) were proposed to be developed in first 5 years (2012-2017). The project has been issued following clearances:

1. Environmental and CRZ clearance issued by MoEF&CC, New Delhi vide letter No. 11-150/2010-IA.III dated 03<sup>rd</sup> May, 2013.
2. CRZ Clearance issued by MoEF&CC, New Delhi vide letter No. 160-11/11/2003-IA.III dated 26<sup>th</sup> June, 2003.
3. Amendment in CRZ Clearance issued by MoEF&CC, New Delhi vide letter No. J-16011/11/2003-IA-III, dated 12<sup>th</sup> November, 2003.
4. Amendment in CRZ/Environment Clearance issued by MoEF&CC, New Delhi vide letter No. J-16011/11/2003-IA-III, dated 19<sup>th</sup> February, 2007.

(ii) Currently two container berths and three multipurpose berths and one liquid berth are developed. Construction of balance six multi-purpose berths as per the master plan is yet to start. Back up infrastructure is developed for handling and storage of multipurpose cargo including liquid.



- (iii) AHPPL now proposes an expansion of port through outer harbour development and also conversion of existing berths to multipurpose berths. Outer harbour will consist of total 19 multi-purpose berths which can handle all kinds of dry cargo, project cargo, container cargo, liquid cargo and Cryogenic Gas up to -160°C.
- (iv) Total 521.4 Ha back up area will be reclaimed by using dredge material for creating back up infrastructure, utilities, amenities, storage and other ancillary facilities. Total Dredging will be 50 Million m<sup>3</sup> for creating manoeuvring channel, basin and jetty with (-) 21 m CD draft. Construction of port basin in 189 Ha area. Rail sidings and road networks will be used for cargo evacuation.
- (v) Desalination plant of 100 MLD capacity is proposed with intake and outfall channel. STP of 4 MLD capacity and ETP of 5 MLD capacity will be developed in phased manner.
- (vi) Cumulative configuration (already approved and proposed expansion) of the Adani Hazira Port is given below
  - a. Number of berth: 31 Nos (existing 12 and expansion 19)
  - b. Cargo Handling Capacity: 234 MMTPA (Existing 84 and expansion 150)
  - c. Area of the project: 1583.67 Ha. (Existing 873.27 and expansion 710.4)
  - d. Water requirement: 116.5 MLD (Existing 16.5 and Expansion 100 MLD)
  - e. Desalination Capacity: 115 MLD (Existing 15 MLD and expansion 100MLD)
  - f. Power requirement: 940 MWh/Day (Existing 240 and Expansion 700)
- (vii) Water required during construction activity (2.0 MLD approx.) of Outer Harbour expansion Plan will be met through the bowsers (Tanker) and existing water supply system.
- (viii) Water requirement during operation phase (30 year Master Plan) will be approximately 30 MLD which will be met by proposed Desalination Plant of total 100 MLD capacity. This will be in addition to the approved 15 MLD capacity of desalination plan.
- (ix) Feasibility of the utilization of treated waste water from the neighbouring industry will also be explored.
- (x) STPs of 50 KLD + 25 KLD capacities are already operational against the approved capacity of 2 MLD. It is estimated that more 2 MLD domestic effluent will be generated. Thus the total capacity required for the STPs will be 4 MLD which will be developed in phased manner.
- (xi) An ETP of 50 KLD capacity is already operational against approved capacity of 2.5 MLD. Capacity of the ETP will be increased up to 5.0 MLD (additional 2.5 MLD) in phased manner.
- (xii) Municipal solid waste will be disposed of in compliance to the Solid waste management Rules 2016.
- (xiii) The electric power requirement during construction phase will be approximately 9000 kWh/day which will be sourced from the existing power source (GEB). Electricity requirement during operation phase will be around

7,00,000 kWh/day. It will also be sourced from GEB. However, Renewable energy source will be explored. During operation phase, power back up in form of DG sets will be available to the tune of approximately 25 MVA. Diesel consumption for the same will be approx. 200 Lit/hr.

(xiv) Cost of the project is Rs. 14030.50 Crore.

4. The EAC, deliberated upon the proposal and recommended for grant of additional ToR and the standard ToR as presented by the Project Proponent who indicated that they have already collected baseline data from the month of October, 2016 to January, 2017 (after the submission of Form 1 by the project proponent). The Committee allowed using data for preparation of EIA-EMP Report. As per the recommendation of the EAC, the Ministry of Environment, Forest and Climate Change hereby accords additional ToR to the project 'Expansion of Outer Harbour Development of Hazira Port' (Gujarat) by M/s Adani Hazira Port Pvt. Ltd for preparation of the Environmental Impact Assessment (EIA) Report and Environmental Management Plan (EMP) with the following additional conditions:

- (i) The ToR is subject to final order of the Hon'ble Supreme Court of India in the Civil Appeal No. 256 of 2016.
- (ii) Importance and benefits of the project.
- (iii) The data collection and impact assessment shall be as per standards survey methods.
- (iv) A separate chapter on status of compliance of Environmental Conditions granted by State/Centre to be provided. As per circular dated 30<sup>th</sup> May, 2012 issued by MoEF&CC, a certified report by RO, MoEF&CC on status of compliance of conditions on existing port to be provided in EIA-EMP report.
- (v) Submit a copy of layout superimposed on the HTL/LTL map demarcated by an authorized agency on 1:4000 scale.
- (vi) Recommendation of the SCZMA.
- (vii) Stage -1 forest clearance for the involvement of forest land.
- (viii) Various Ports facilities with capacities for proposed project.
- (ix) List of cargo to be handled along with mode of transportation.
- (x) Layout plan of existing and proposed Port.
- (xi) A detailed analysis of the physico-chemical and biotic components in the highly turbid waters round the project site (as exhibited in the Google map shown during the presentation), compare it with the physico-chemical and biotic components in the adjacent clearer (blue) waters both in terms of baseline and impact assessment and draw up a management plan.
- (xii) Study the impact of dredging on the shore line.
- (xiii) A detailed impact analysis of rock dredging.
- (xiv) Action plan for disposal of dredged soil and rocks.
- (xv) Dispersion modelling for the dumping of the dredge materials shall be carried out. The study report shall be incorporated.
- (xvi) Details of air pollution control measures to be taken as well as cost to be incurred.
- (xvii) Total water consumption and its source. Wastewater management plan.

- (xviii) Details of Environmental Monitoring Plan.
- (xix) The impacts of rock excavation and dredging separately.
- (xx) A para-wise compliance to the consent conditions as may have been prescribed by the State Pollution Control Board.
- (xxi) A note on all complaints and representations that may have been received including the one received from Conservation Action Trust.
- (xxii) The EIA would follow the orders of the respective courts and include a chapter in the EIA on the Court cases including those at the Supreme Court and the NGT.
- (xxiii) The Marine biodiversity impact assessment report and management plan through the National Institute of Oceanography (NIOS) or any other institute of repute on marine, brackish water and fresh water ecology and biodiversity. The report shall study the impact of the project activities on the intertidal biotopes, corals and coral communities, molluscs, sea grasses, sea weeds, subtidal 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 standards survey methods.
- (xxiv) Disaster Management Plan for the above terminal.
- (xxv) Layout plan of existing and proposed Greenbelt.
- (xxvi) Status of court case pending against the project.
- (xxvii) A tabular chart with index for point wise compliance of above TORs.
- (xxviii) Public hearing to be conducted and issues raised and commitments made by the project proponent on the same should be included in EIA/EMP Report in the form of tabular chart with financial budget for complying with the commitments made.

#### General Guidelines

- (i) The EIA document shall be printed on both sides, as far as possible.
- (ii) All documents should be properly indexed, page numbered.
- (iii) Period/date of data collection should be clearly indicated.
- (iv) Authenticated English translation of all material provided in Regional languages.
- (v) The letter/application for EC should quote the MoEF&CC File No. and also attach a copy of the letter prescribing the ToR.
- (vi) The copy of the letter received from the Ministry on the ToR prescribed for the project should be attached as an annexure to the final EIA-EMP Report.
- (vii) The final EIA-EMP report submitted to the Ministry must incorporate the issues mentioned in ToR and that raised in Public Hearing. The index of the final EIA-EMP report, must indicate the specific chapter and page no. of the EIA-EMP Report where the specific ToR prescribed by the Ministry and the issue raised in the Public Hearing have been incorporated. Questionnaire related to the project (posted on MoEF&CC website) with all sections duly filled in shall also be submitted at the time of applying for EC.
- (i) Grant of ToR does not mean grant of EC.

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- (ii) The status of accreditation of the EIA consultant with NABET/QCI shall be specifically mentioned. The consultant shall certify that his accreditation is for the sector for which this EIA is prepared.
- (iii) On the front page of EIA/EMP reports, the name of the consultant/consultancy firm along with their complete details including their accreditation, if any shall be indicated. The consultant while submitting the EIA/EMP report shall give an undertaking to the effect that the prescribed ToRs (ToR proposed by the project proponent and additional ToR given by the MoEF&CC) have been complied with and the data submitted is factually correct (Refer MoEF&CC Office memorandum dated 4<sup>th</sup> August, 2009).
- (iv) While submitting the EIA/EMP reports, the name of the experts associated with/involved in the preparation of these reports and the laboratories through which the samples have been got analysed should be stated in the report. It shall clearly be indicated whether these laboratories are approved under the Environment (Protection) Act, 1986 and the rules made there under (Please refer MoEF&CC Office Memorandum dated 4<sup>th</sup> August, 2009). The project leader of the EIA study shall also be mentioned.
- (v) All the ToR points as presented before the Expert Appraisal Committee (EAC) shall be covered.

5. The above ToR should be considered for the project 'Expansion of Outer Harbour Development of Hazira Port' (Gujarat) by M/s Adani Hazira Port Pvt. Ltd, in addition to all the relevant information as per the 'Generic Structure of EIA' given in Appendix III and IIIA in the EIA Notification, 2006.

6. The project proponent shall submit the detailed final EIA/EMP prepared as per ToR to the Ministry for considering the proposal for environmental clearance within 3 years as per the MoEF&CC O.M. No.J-11013/41/2006-IA-II(I) (P) dated 08.10.2014.

7. The consultants involved in preparation of EIA/EMP report after accreditation with Quality Council of India/National Accreditation Board of Education and Training (QCI/NABET) would need to include a certificate in this regard in the EIA/EMP reports prepared by them and data provided by other Organization(s)/ Laboratories including their status of approvals etc. vide Notification of the MoEF&CC dated 19.07.2013.

8. The prescribed ToR would be valid for a period of three years for submission of the EIA/EMP Reports.

  
(Kushal Vashist)  
Director

**Copy to:**

The Member Secretary, Gujarat Pollution Control Board, Paryavaran Bhavan, Sector-10A, Gandhinagar-382010, Gujarat, Phone: 079-2323 2152, Fax: (079) 2323 2156, 2322 2784, 2323 2161, Email: ms-gpcb@gujarat.gov.in.

**Annexure - I**

**7(e): STANDARD TERMS OF REFERENCE FOR CONDUCTING ENVIRONMENT IMPACT ASSESSMENT STUDY FOR PORTS, HARBOURS AND INFORMATION TO BE INCLUDED IN EIA/EMP REPORT**

- i. Reasons for selecting the site with details of alternate sites examined/rejected/selected on merit with comparative statement and reason/basis for selection. The examination should justify site suitability in terms of environmental angle, resources sustainability associated with selected site as compared to rejected sites. The analysis should include parameters considered along with weightage criteria for short-listing selected site.
- ii. Details of the land use break-up for the proposed project. Details of land use around 10 km radius of the project site. Examine and submit detail of land use around 10 km radius of the project site and map of the project area and 10 km area from boundary of the proposed/existing project area, delineating project areas notified under the wild life (Protection) Act, 1972/critically polluted areas as identified by the CPCB from time to time/notified eco-sensitive areas/interstate boundaries and international boundaries. Analysis should be made based on latest satellite imagery for land use with raw images.
- iii. Submit the present land use and permission required for any conversion such as forest, agriculture etc. land acquisition status, rehabilitation of communities/villages and present status of such activities.
- iv. Examine and submit the water bodies including the seasonal ones within the corridor of impacts along with their status, volumetric capacity, quality likely impacts on them due to the project.
- v. Submit a copy of the contour plan with slopes, drainage pattern of the site and surrounding area.
- vi. Submit the details of terrain, level with respect to MSL, filling required, source of filling materials and transportation details etc.
- vii. Examine road/rail connectivity to the project site and impact on the existing traffic network due to the proposed project/activities. A detailed traffic and transportation study should be made for existing and projected passenger and cargo traffic.
- viii. Submit details regarding R&R involved in the project.
- ix. Submit a copy of layout superimposed on the HTL/LTL map demarcated by an authorized agency on 1:4000 scale along with the recommendation of the SCZMA.
- x. Submit the status of shore line change at the project site
- xi. Details of the layout plan including details of channel, breakwaters, dredging, disposal and reclamation.
- xii. Details of handling of each cargo, storage, transport along with spillage control, dust preventive measures. In case of coal, mineral cargo, details of storage and closed conveyance, dust suppression and prevention filters.
- xiii. Submit the details of fishing activity and likely impacts on the fishing activity due to the project. Specific study on effects of construction activity and pile driving on marine life.
- xiv. Details of oil spill contingency plan.



- xv. Details of bathymetry study.
- xvi. Details of ship tranquillity study.
- xvii. Examine the details of water requirement, impact on competitive user, treatment details, use of treated waste water. Prepare a water balance chart.
- xviii. Details of rainwater harvesting and utilization of rain water.
- xix. Examine details of Solid waste generation treatment and its disposal.
- xx. Details of desalination plant and the study for outfall and intake.
- xxi. Examine baseline environmental quality along with projected incremental load due to the proposed project/activities.
- xxii. The air quality monitoring should be carried out according to the notification issued on 16<sup>th</sup> November, 2009.
- xxiii. Examine separately the details for construction and operation phases both for Environmental Management Plan and Environmental Monitoring Plan with cost and parameters.
- xxiv. Submit details of a comprehensive Risk Assessment and Disaster Management Plan including emergency evacuation during natural and man-made disasters
- xxv. Submit details of the trees to be cut including their species and whether it also involves any protected or endangered species. Measures taken to reduce the number of the trees to be removed should be explained in detail. Submit the details of compensatory plantation. Explore the possibilities of relocating the existing trees.
- xxvi. Examine the details of afforestation measures indicating land and financial outlay. Landscape plan, green belts and open spaces may be described. A thick green belt should be planned all around the nearest settlement to mitigate noise and vibrations. The identification of species/ plants should be made based on the botanical studies.
- xxvii. The Public Hearing should be conducted for the project in accordance with provisions of Environmental Impact Assessment Notification, 2006 and the issues raised by the public should be addressed in the Environmental Management Plan. The Public Hearing should be conducted based on the ToR letter issued by the Ministry and not on the basis of Minutes of the Meeting available on the web-site.
- xxviii. A detailed draft EIA/EMP report should be prepared in accordance with the above additional TOR and should be submitted to the Ministry in accordance with the Notification.
- xxix. Details of litigation pending against the project, if any, with direction /order passed by any Court of Law against the Project should be given.
- xxx. The cost of the Project (capital cost and recurring cost) as well as the cost towards implementation of EMP should be clearly spelt out.
- xxxi. Any further clarification on carrying out the above studies including anticipated impacts due to the project and mitigative measure, project proponent can refer to the model ToR available on Ministry website "<http://moef.nic.in/Manual/Port and harbour>".

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