

ACTIVITY 7 (e)- PORTS AND HARBOURS

STANDARD TERMS OF REFERENCE FOR CONDUCTING ENVIRONMENT IMPACT ASSESSMENT STUDY FOR PORTS, HARBOURS AND INFORMATION TO BE INCLUDED IN EIA/EMP REPORT

I. Project details

- i. Reasons for selecting the site with details of alternate sites examined/rejected/selected on merit with comparative statement and reason/basis for selection.
- ii. The examination should justify site suitability in terms of environmental angle, resources sustainability associated with selected site as compared to rejected sites.
- iii. The analysis should include parameters considered along with weightage criteria for short-listing selected site.
- iv. Submit the status of shore line change at the project site
- v. 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.
- vi. The cost of the Project (capital cost and recurring cost) as well as the cost towards implementation of EMP should be clearly spelt out.
- vii. 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.

II. Land use, Land Acquisition and R&R

- viii. Details of the land use break-up for the proposed project. Details of land use around 10 km radius of the project site.
- ix. Submit details regarding R&R involved in the project

III. ESZ, CRZ, International Boundary and Acts

- x. 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.
- xi. Erosion and accretion study at the mouth of the creek which is adjacent to the proposed site be carried out and submitted
- xii. Detailed modelling studies to understand whether the selected site can withstand severe cyclones and develop design in accordance to due safety measures.
- xiii. Submit superimposing of latest CZMP as per CRZ Notification (2011) on the CRZ map. And also submit a copy of layout superimposed on the HTL/LTL map demarcated by an authorized agency on 1:4000 scales.
- xiv. Submit a complete set of documents required as per para 4.2 (i) of CRZ Notification, 2011.
- xv. Hydrodynamics study on impact of dredging on flow characteristics shall be carried out.

- xvi. A detailed study on the impact of proposed activity on marine ecology and marine biodiversity with specific focus on the corals, mangroves and Mud flats in the proximity of the site should be conducted and required mitigation plan be submitted.
- xvii. A management plan for the area under which mangroves are or likely to be removed and compensatory mangrove plantation plan be submitted.

IV. Remote Sensing & GIS

- xviii. Analysis should be made based on latest satellite imagery for land use with raw images.

V. Forest and Wildlife

- xix. Submit the present land use and permission required for any conversion such as forest, agriculture etc.
- xx. land acquisition status, rehabilitation of communities/ villages and present status of acquiring Forest and Agricultural activities.

VI. Water Environment/Quality Analysis/ Hydrology and Water Bodies

- xxi. Examine the details of water requirement, impact on competitive user, treatment details, use of treated waste water. Prepare a water balance chart.
- xxii. Examine and submit the water bodies including the seasonal ones within the corridor of impact along with their status, volumetric capacity, quality likely impacts on them due to the project.
- xxiii. Submit the details of fishing activity and likely impacts on the fishing activity due to the project.
- xxiv. Specific study on effects of construction activity and pile driving on marine life

VII. Waste Management, Drainage and STPs

- xxv. Submit a copy of the contour plan with slopes, drainage pattern of the site and surrounding area
- xxvi. Examine details of Solid waste generation treatment and its disposal.
- xxvii. Details of oil spill contingency plan.
- xxviii. Details of the layout plan including details of channel, breakwaters, dredging, disposal and reclamation.

VIII. Terrain and Topography

- xxix. Submit the details of terrain, level with respect to MSL, filling required, source of filling materials and transportation details etc.
- xxx. 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.
- xxxi. Details of bathymetry study.
- xxxii. Details of ship tranquillity study.
- xxxiii. The ecologically fragile area including CRZ 1A area etc. shall be demarcated and superimposed on the layout plan and submitted.

IX. Road/Transport Connectivity and Traffic measures

- xxxiv. Examine road/rail connectivity to the project site and impact on the existing traffic network due to the proposed project/activities.
- xxxv. A detailed traffic and transportation study should be made for existing and projected passenger and cargo traffic.
- xxxvi. Details of handling of each cargo, storage, transport along with spillage control, dust preventive measures.
- xxxvii. In case of coal, mineral cargo, details of storage and closed conveyance, dust suppression and prevention filters.
- xxxviii. An assessment of the cumulative impact of all development and increased inhabitation being carried out or proposed to be carried out by the project or other agencies in the core area, shall be made for traffic densities and parking capabilities in a 05 kms radius from the site. A detailed traffic management and a traffic decongestion plan drawn up through an organization of repute and specializing in Transport Planning shall be submitted with the EIA.

X. Rain Water Harvesting

- xxxix. Details of rainwater harvesting and utilization of rain water.

XI. Baseline data

- xl. Examine baseline environmental quality along with projected incremental load due to the proposed project/activities.

XII. Air Environment

- xli. The air quality monitoring should be carried out according to the notification issued on 16th November, 2009.

XIII. Environment Management/ Monitoring, Mitigative Measures and Risk Assessment details

- xlii. Examine separately the details for construction and operation phases both for Environmental Management Plan and Environmental Monitoring Plan with cost and parameters.
- xlili. Submit details of a comprehensive Risk Assessment and Disaster Management Plan including emergency evacuation during natural and man-made disasters.
- xliv. Details of desalination plant and the study for outfall and intake

XIV. Forest and Wildlife

- xlv. Submit details of the trees to be cut including their species and whether it also involves any protected or endangered species.
- xlvi. Measures taken to reduce the number of the trees to be removed should be explained in detail.
- xlvii. Submit the details of compensatory plantation.
- xlviii. Explore the possibilities of relocating the existing trees.

- xlix. Examine the details of afforestation measures indicating land and financial outlay.
 - l. 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.
 - li. The identification of species/ plants should be made based on the botanical studies.

XV. Court/ Litigation records

- lii. Details of litigation pending against the project, if any, with direction /order passed by any Court of Law against the Project should be given.

XVI. Environment Responsibility

- liii. As per the Ministry's Office Memorandum F. No. 22-65/2017-IA.III dated 30th September, 2020, the project proponent, based on the commitments made during the public hearing, specific studies shall include all the activities required to be taken to fulfill these commitments in the Environment Management Plan along with cost estimates of these activities, in addition to the activities proposed as per recommendations of EIA Studies and the same shall be submitted to the ministry as part of the EIA Report. The EMP shall be implemented at the project cost or any other funding source available with the project proponent.