

SCOPE OF WORK

1.0 Introduction:

Mormugao Port Authority (formerly known as Mormugao Port Trust) is one of the oldest ports on the West Coast of India located in the state of Goa, commissioned in 1885. This port is one among twelve major ports in India. This port is midway between ports of Mumbai and New Mangalore Port is blessed with a protected open type natural harbour. With its location at the mouth of the Zuari River, it is a crucial component in the flourishing export industry of the state of Goa.

2.0 General:

- a. The Mormugao Port Authority (MPA) seeks the services of a qualified Applicant for acting as an Expert Agency for implementation of "Green Port Initiative". The Terms of Reference (the "TOR") i.e., the scope of the Consultancy for this assignment are specified below.
- b. The "Green Port Initiative" mandates monitoring of the environment performance indicators (EPI's) of air quality, water quality, effluent's, noise level, waste management, sustainability, etc.
- c. The Expert Agency shall assist the Port, by furnishing clarifications as required for implementation of "Green Port Initiative", relevant regulations and documentations.
- d. The Expert Agency shall make available the Key Personnel to attend and participate in meetings, conferences and discussions with the Authority and shall otherwise advise on and assist the Authority on issues that may arise from time to time.

3.0 Scope of Work (TOR):

The scope of services to be provided by the Expert Agency, for the work of detailed engineering for the "Green Port Initiative" for Mormugao Port Authority shall be as follows.

3.1 Preparation & submission of a Pre-feasibility Report for the implementation of the MPA Green Port Policy based on the following:

- i. To conduct baseline study in respect of the EPIs listed at Appendix – I, II & III of the "Green port Initiative" which will also include action plan for achieving the targets laid down in the said Initiatives, so as to submit the report to MPA within 60 days.
- ii. To provide requirements/target/action plan for developing a monitoring system and hooking with the Ministry of Ports, Shipping and Water ways (MoPSW) server/portal/dashboard including submitting the real time and annual reports to MoPSW in reference of EPIs listed in Appendix – I, II & III
- iii. To provide requirements/action plan for installation of various additional real time online monitoring units for parameters listed at Appendix - I and hooking of the online digital dashboard of Continuous Ambient Air Quality Monitoring Stations (CAAQMS) of Mormugao Port and its terminal operators with the MoPSW server/portal/dashboard for real time monitoring and feedback.
- iv. To provide target/action plan for installation of various additional real time online monitoring units including Continuous Marine Water Quality Monitoring Stations (CMWQMS), Continuous Effluent Monitoring system (OCEMS) for monitoring effluent parameter listed at Appendix - I of

the Green Port Initiatives including noise level and DG set noise level and hooking online digital dashboard to the MoPSW server/portal/ dashboard for real time monitoring.

- v. To provide base line study in respect of EPI's as enlisted in Appendix III, using internationally / nationally accepted protocols/methods for:
 - GHG emission and carbon foot print. The fuel consumption is to be estimated for each piece of machinery i.e ships calling Port, harbor crafts, Port crafts, all cargo handling equipment and other equipment engaged in Port operations, trucks used for cargo transportation etc. and calculate the emissions using emission factor.
 - Total emissions of different air pollutants from Port related sources throughout the entire year to be estimated and annual emissions are then to be scaled to monthly averages and used to simulate the impact on air quality.
- vi. List of equipment's which are required to be examined for the EPIs are enclosed at Appendix IV. However the expert agency is required to make his own survey of all the equipment's available with the Port.
- vii. The expert agency shall comply with the applicable laws for pollution elements as listed in appendix V

3.2 Rendering Advisory Services

The expert agency shall provide such other advice and assistance as may be necessary and incidental to the Services and as may be requested by the Port in respect of the Project, including but not limited to attending meetings, conferences and discussions with the Port, and shall otherwise advise on and assist the Port in the diverse commercial issues that may arise from time to time.

3.3 Scope not exhaustive

The Scope of Services and Terms of Reference specified in this Clause 3.0 are not exhaustive and the expert agency shall undertake such other tasks as may be necessary to appraise the project .

4.0 DELIVERABLES

In pursuance of this TOR, the expert agency shall undertake/deliver the following deliverables (the "Deliverables") during the course of this service. Each deliverable shall include an executive summary, analyses, assumptions, results of computations, tables, charts, recommendations, and such other contents that generally comprise deliverables for similar services by way of best practices. 03 hard copies and soft copy of all the Reports mentioned herein below shall be submitted to the Port. The deliverables shall include:

Sr. No.	Activity	Time
1.	Collection of relevant data/information by conducting site survey & studies, preparation and submission of Draft Feasibility Report (DFR) to MPA.	Within 30 (Thirty) days from the 7 th day of the date of placement of LOA
2.	Submission of Detailed Project report (DPR) to MPA	Within 15 (Fifteen) days after incorporating suggestions/changes by MPA in the DFR.

5.0 TIME AND PAYMENT SCHEDULE

- a) Subject to the provisions of the TOR, the total duration for completion of the subject work shall be as per clause no. 4.0. "Deliverables" item no.2.
- b) Final Payment to be made to the expert agency upon completion of all services and handing over all the related documents and detailed project report to MPA.

Note: (1) Timelines for Deliverables excludes the time taken by the port in providing the requisite documents or in conveying its comments on the reports.

6.0 MEETINGS

- a) The Port may review with the expert agency, any or all of the documents and advice forming part of the services, in meetings and conferences which will be held in Goa at the Port's office.
- b) The Authority may, in its discretion, require the expert agency to participate in extended meetings and/or work from the offices of the Authority and the expert agency shall, on a best endeavor basis and without unreasonable delay, provide such services.

7.0 REPORTING

- a) The expert agency will work closely with the designated Nodal Officer nominated by the Port, who will be responsible for the overall coordination and project development. He will play a coordinating role.
- b) The expert agency may issue papers highlighting issues that could become critical for the timely completion of the project and that require attention from the Port.
- c) Regular communication with the designated Nodal Officer is required in addition to all key communications.
- d) The Deliverables to be submitted as per schedule provided in this document.

8.0 DOCUMENTS TO BE MADE AVAILABLE BY THE PORT

Available data as may be required by the expert agency will be provided by the Port on request. The Nodal Officer designated by the Port shall facilitate handing over of such information to the expert agency.

9.0 COMPLETION OF SERVICES

All the study outputs including primary data shall be compiled, classified and submitted by the expert agency to the Port in soft form apart from the reports indicated in the Deliverables (Clause no. 5.0.). The study output shall remain the property of the Port and shall not be used for any purpose other than that intended under these terms of reference without the permission of the Port. The services shall stand completed on acceptance by the Port of all the deliverables of the expert agency and issue of a certificate by the Port to that effect.

10.0 Minimum Eligibility Criteria

1. The bidder should have expertise in conducting base line study in respect of the EPI's listed at Appendix I, II and III. for "Green Port Initiative" at any Port / Government / PSU / Private organizations. The bidder shall submit at least 01 no. Satisfactory Completion Certificate of the above work issued by the Client.

2. The bidder should have accreditation from the National Accreditation Board for Certification Bodies (NABCB) to carry out base line study in respect of the EPI's listed as above. The work credentials of the same shall have to be furnished along with the offer, failing which, offer shall be liable for rejection.

**EXECUTIVE ENGINEER (E-P)
MORMUGAO PORT AUTHORITY**

SCHEDULE OF PRICES AND QUANTITIES

PRICE SCHEDULE

Sl. No.	Description of work	Unit	Qty.	Rate/Unit (Rs.)		GST %	Amount (Rs.)
				In figure	In words		
1	Providing Expert Agency services for implementation of Green Port Initiatives at MPA as per the scope of work indicated at Schedule A	LS	1				
Total Amount							

(In Words Rupees _____ only exclusive of all taxes and duties)

Note: The rates quoted shall be inclusive of transportation, lodging and boarding, out-of-pocket expenses (OPE) on conveyance, communication expenses, 3rd party expenses and subsistence expenses on site but exclusive of GST. Applicable GST shall be paid extra as applicable.

Date:

Signature:

Place:

Name:

Address:

Office Seal of firm