

**TERMS OF REFERENCE FOR THE CONSULTANCY SERVICES for the
CONSULTANCY SERVICES FOR THE CONDUCT OF FEASIBILITY STUDIES AND
FORMULATION OF MASTER PLANS FOR SELECTED PORTS IN SOUTHERN
MINDANAO**

1. INTRODUCTION

- 1.1. The Philippine Ports Authority wishes to engage the services of a consulting firm to Conduct Feasibility Studies and Formulate Master Plans for selected ports accordance with the Guidelines on the Procurement of Consulting Services for Government Projects, and following the provisions of Republic Act No. 9184.
- 1.2. The proposed undertaking has been prioritized for urgent implementation under PPA's CY 2022 and contained in its Medium-Term Public Investment Program (MTPIP CY 2021-2025).
- 1.3. These Terms of Reference are intended to convey the Scope of Services required of the Consultant.
- 1.4. This undertaking shall cover the following ports:
 1. Malalag, Davao del Sur
 2. Tagpopongan, Davao del Norte
 3. Mati, Davao Oriental
 4. Babak, Davao del Norte
 5. Baganga, Davao Oriental

2. OBJECTIVES OF THE STUDY

- 2.1 The general objective of this package of feasibility studies and master plans is to meet the increasing port services required for various regions agri-industrial development and tourism enhancement and to determine the long-term directions in the development of the selected ports and to evaluate the technical soundness, operational and economic feasibility and financial viability of any proposed short-term improvements at and/or expansion of these selected ports as well as to undertake Initial Environmental Examinations (IEE) and to recommend the conduct of full-blown Environmental Impact Assessments (EIA), if and where warranted.
- 2.2 The specific objectives are as follows:
 1. To determine the future traffic and to analyze the present technical and operational conditions of the ports including the surrounding environmental conditions and to present an actual port orientation relative to the prevailing current, wind, tidal monsoon conditions/history, and current flow;

2. To determine the required improvements and/or additional port facilities and equipment to be provided, if any, to handle the future traffic and the manner by which the ports should be operated and managed;
3. To assess the strategic importance of the port;
4. To determine the effect of climate change in the port;
5. To determine if inclusion of the port in the Road RO-RO Transport System (RRTS), and in the Major RORO Routes is feasible and to make appropriate recommendations thereon;
6. To determine the economic feasibility of the proposed projects, that is, from the viewpoint of the national economy;
7. To determine the financial viability of the proposed projects if private operators were to undertake the financing, construction, maintenance, operation and management of the Port;
8. To determine the financial viability of the proposed projects if PPA were to undertake the financing, construction, maintenance, operation and management of the Port;
9. To determine if a joint venture between PPA and private sector is financially viable and doable;
10. To determine the impact of the proposed projects on the overall and long-term financial viability of the PPA under the three scenarios (by private port operators, by PPA itself and PPA-Private Sector joint venture);
11. To conduct IEEs of the proposed presets with regards to their respective surrounding areas and to define the courses of action to be undertaken to mitigate such impact and, if and where warranted, to recommend the conduct of full-blown EIAs.

12. To assess the port in terms of its requirements for computerization and in compliance under the International Ship and Port Facility Security (ISPS) Code.

3. SCOPE OF WORK

The Consultant shall render all the required and necessary services to achieve the abovementioned objectives in accordance with internationally accepted standards, conventions and practices for the conduct of Port Feasibility Studies and Master Plans. The Scope of Services to be undertaken by the Consultant shall include but shall not be limited to the following:

3.1. PREVIOUS STUDIES AND INVESTIGATIONS

1. The Consultant shall review previous studies, if any, related to the projects. The Consultant shall also review past investigations made within the project sites such as surveys and investigations and determine the adequacy of available data and information in relation to the requirements of this Study.
2. Within one (1) month from the start of the Study, the Consultant shall submit an Inception Report incorporating among others its findings on the previous studies and reports and recommend additional surveys and investigations that may be required. If such are to be undertaken by subcontract, the Consultant shall submit with the Inception Report the Terms of Reference and draft contract for such sub-contract for the review and concurrence of PPA.
3. The Consultant shall supervise the undertaking of the sub-contractor/s, shall interpret the data information gathered and shall be responsible for the work of its sub-contractor/s.

3.2. EXISTING CONDITIONS AND DEMAND

1. The Consultant shall review and analyze past and present oceanographic, meteorological, seismic and other data relating to the physical and natural conditions likely to affect the planning, design orientation and operation of the selected ports with the implementation of the respective proposed projects. The Consultant shall also analyze the situation condition of the port as one of the factors to be considered in the design and orientation of the port.
2. The Consultant shall investigate the existing facilities to determine their physical conditions with the end in view of recommending any repairs and/or rehabilitation works to be undertaken. Within two (2) months from the start of the Study, the

Consultant shall submit a separate Technical Paper on Existing Facilities, for each study port.

3. The Consultant shall define and analyze the present system of port operations to include the handling systems and procedures, adequacy of cargo handling equipment, open and closed storage areas, port labor force, utilization of the port facilities, productivity as well as determine the capacity of the various existing port facilities. The Consultant shall analyze also the waiting and service times of vessels, berth throughput and berth occupancy.
4. The Consultant shall analyze the adequacy of cargo handling services, ancillary services like pilotage, safety and security within the Port and its harbor, equipment maintenance facilities, garbage/waste disposal, etc. The Consultant shall also analyze the adequacy of the land and water access to the ports.
5. Based on the analysis of port operations, physical and natural conditions and other factors, the Consultant shall analyze the present productivity and capacity of the selected ports and, if warranted, analyze and recommend achievable productivities and capacities of the ports. Within three (3) months from the start of the Study, the Consultant shall submit a separate Technical Paper on the Existing Operational System for each study port.
6. The Consultant shall review and analyze past data on cargo, vessel and passenger traffic. The analyses of the cargo traffic shall be segregated into foreign and domestic cargo. Inward and outward as well as containerized (lift-on/lift-off, roll-on/roll-off or other type of handling), bulk, break-bulk and other non-containerized cargo. The various commodity types shall be analyzed as to volume, level of containerization and other characteristics. The particulars of vessels in terms of length overall (LOA), CRT, DWT, required water depth, etc., shall also be looked into. The passenger traffic shall be categorized into arriving and departing passengers.
7. The Consultant shall prepare forecasts of cargo, vessel and passenger traffic, with details of the methods and parameters used in the projection. The projections must show in detail the source and segregation of foreign and domestic cargo, inward and outward cargo and passengers, containerized (volume and TEUs/Boxes) and non-containerized cargo. In the forecasts of containerized cargo, the Consultant shall analyze the type of commodities and determine the future level of container usage. The forecasts of vessel traffic must indicate the projected average shipload, number of ship-calls and other particulars that are required for the proposed developments.

The traffic forecasts should not be limited only to the normal traffic, but the Consultant shall assess and take into account relevant economic activities and development within the influence area of the port that may generate additional traffic, if any.

Likewise, the Consultant shall take into consideration existing and planned development or expansion of nearby ports which may affect the forecasting of port traffic. The Consultant shall assess probable diversion of traffic taking into consideration travel time and transport costs, among others. If such diverted traffic is likely, the projection should show separately the normal from the generated/induced and/or diverted traffic.

8. The projection of traffic shall be on a yearly basis for the next ten years (2022 to 2032) and every five years thence for the next fifteen years for a total of 25 years.
9. The Consultant shall ensure that all traffic forecasts are determined impartially, fairly and as a result of extensive consultations, if necessary, through public hearings, with all stakeholders. Within Three and a half (3.5) months from the start of the Study, the Consultant shall submit a separate Technical Paper on Traffic Forecasts for each study port describing the methodology, assumptions and parameters used in preparing the forecasts.
10. The Consultant shall formulate a Master Plan for each of the selected ports based on 25-year forecasts. As much as possible, the Consultant shall prepare the short, medium and long term plan and at least three alternative schemes of the Master Plan taking into consideration the physical and natural conditions, among others. The advantages and disadvantages for each alternative shall be presented together with the recommended option.

Where there are limitations on the existing location of the Port in terms of its future expansion, and/or limitation in terms of land- and water-side access to the existing Port, the Consultant shall assess other sites for the port expansion and recommend a suitable port site. Such recommendation shall be incorporated in the Master Plan.

The Consultant shall also analyze the existing and future road access to the port to prevent a situation where usage of modern facilities will be hindered due to poor road access.

11. On the basis of the projections (demand) and the capacity of the port (supply), the Consultant shall determine the need to improve and/or expand the port facilities using the projected traffic of 2032 as the design traffic. Within four and a half (4.5) months from the start of Study, the Consultant shall submit a separate Technical Paper on the Port Master Plan for each study port.

3.3. PROPOSED DEVELOPMENT AND OPERATION

1. Taking into consideration the comments of various stakeholders on the Consultant's initial traffic forecasts, the Consultant shall refine the traffic forecasts as well as the Master Plan that PPA will adopt.

2. On the basis of the design traffic year of 2032, the Consultant shall determine the port facilities required and define the improvements, additional port facilities and/or expansion to handle the traffic in the design year.
3. The Consultant shall determine the types of berths, the optimum number of such berths, the berth lengths, storage areas and other port facilities required both on the landside and waterside as well as the preliminary design of the structures and estimated costs of such facilities within a $\pm 15\%$ level of accuracy. The Consultant shall also undertake the preliminary design and prepare cost estimates for any repair/rehabilitation work on the existing facilities, if any. The estimated costs shall be prepared based on a pay-item basis.
4. The Consultant shall define the appropriate cargo handling systems and procedures, the type and number of equipment appropriate for the proposed physical development, organizational structure and staffing for the private operators, including the determination of the investment repair/maintenance and operating costs. Such investment and operating costs shall be segregated between that of PPA, if any, and the private operator.
5. The Consultant shall prepare the preliminary design criteria for both the physical structures and the proposed cargo handling equipment.
6. The Consultant shall prepare the detailed port layout plans including details of major items and dimensions of the same in metric units as well as the implementation schedules.
7. Within Five and a half (5.5) months from the start of the Study, the Consultant shall submit a Technical Report on the Preliminary Engineering and Port Development Plan, to include cost estimates of the recommended development project in each study port.
8. Within Six and a half (6.5) months from the start of the Study, the Consultant shall submit an Interim Report showing all their findings based on the Scope of Work of Items 3.1, 3.2 and 3.3 above and as contained in the Technical Papers previously submitted incorporating all the comments and suggestions of all stakeholders.

3.4. ECONOMIC EVALUATION

1. The Consultant shall prepare the conceptual framework for the economic evaluation explaining criteria to be used for the evaluation of economic benefits, the concepts to be used in the analysis of the project costs into its economic and financial values,

treatment for the shadow pricing to arrive at the economic costs and benefits and the discount rate to be used, among others.

1. The Consultant shall identify, explain and identify the quantifiable economic benefits and economic costs.
2. The Consultant shall then determine the economic feasibility of each of the projects based on the calculated stream of economic benefits and costs. The period of economic evaluation shall be for 25 years.
3. The Consultant shall undertake sensitivity analyses on the economic evaluation.

3.5. FINANCIAL EVALUATION

1. The Consultant shall prepare the conceptual framework for the financial evaluation explaining the criteria to be used for evaluating financial costs and revenues.
1. The Consultant shall identify and quantify all relevant financial costs and financial revenues.
2. The Consultant shall determine the financial viability of each of the projects under various development and tariff scenarios involving private sector participation under the 60T scheme and involving development solely by PPA. Should the Project be not financially viable using the existing tariff, the Consultant shall determine the tariff scenarios that would yield Financial Internal Rates of Return of 10 percent 15 percent and 20 percent.
3. The Consultant shall undertake sensitivity analyses on the financial evaluation.
4. Within Seven and a half (7.5) months from the start of the Study, the Consultant shall submit a Draft Final Report of the master plans and feasibility studies for the review of PPA. The report shall contain all the findings, analyses, calculations, plans, drawings and recommendations. The Final Report shall be submitted by the Consultant within one month from the receipt of the comments of PPA incorporating said comments in the Report. The Project duration is **eight (8) months**

3-6. INITIAL ENVIRONMENTAL EXAMINATION

1. The Consultant shall undertake Initial Environmental Examinations on the impact of the proposed projects to include but not be limited to
 - Impact relating to the project location
 - Impact during construction
 - Impact during port operation

2. Such IEEs shall be undertaken in preparation. If and were warranted, for any recommended full-blown Environmental Impact Assessment (EIA) required under Philippine laws, policies, rules and regulations of the Department of Environment and Natural Resources (DENR) and other concerned government agencies. Within Seven and a half (7.5) months from the start of the Study, if an EIA is recommended and justified for a particular study port the Consultant shall prepare and submit appropriate Terms of Reference (TOR) to the PPA which will be bid out under a separate consultancy contract.
3. The results of such IEEs shall be included in the Draft Final Report.

3.7. TERMS OF REFERENCE FOR DETAILED ENGINEERING

1. In the event that PPA shall undertake the projects itself, the Consultant shall prepare the Terms of Reference for the procurement of detailed engineering consultancy services similar in format to these TOR. This shall be in a separate cover and submitted together with the Draft Final Report of the feasibility studies.

4. OTHER RELATED TASK

The Consultant shall be called upon by PPA to provide pertinent information on any queries, appear before commissions, boards or other judicial bodies to give evidence or otherwise submit professional opinions related to the Study, as necessary.

5. REQUIRED EXPERTISE, PROPOSALS. REPORTS. FACILITIES AND EQUIPMENT

The proposed consulting services shall be carried out by experienced consultants with the following minimum specialization which is anticipated to be required in this package of studies:

- Project Manager/Port Planner
- Deputy Project Manager/Port Engineer
- Civil/Structural Engineer
- Electrical Engineer
- Port Operation Specialist
- Economist
- Financial Analyst
- Cost Engineer
- Transport Economist
- Geotechnical Engineer
- Geodetic Engineer
- Drainage/Water Supply Engineer
- Environmental Specialist

The above personnel shall have a Bachelor's degree (or equivalent) as a minimum qualification and five (5) years **relevant experience** as a minimum. All of the Consultant's personnel assigned and committed to the Study are expected to be physically fit. Any key staff or support staff may be called upon to report to the PPA Project Manager and assist the PPA staff in project development activities during the period of the Study.

The reports to be submitted are those as specified above. Also, the Consultant may be required to submit monthly progress and special reports to be submitted on or before the 10th day of the month. The number of copies of the reports shall be as follows:

1. Inception Report 5 copies
2. Technical Paper on Existing Facilities 3 copies per port
3. Technical Paper on Existing Operational System 3 copies per port
4. Technical Paper on Traffic Forecasts 3 copies per port
5. Technical Paper on Port Master Plan 3 copies per port
6. Technical Paper on Preliminary Engineering
& Port Development Plan 3 copies per port
7. Interim Report 3 copies per port
8. Draft Final Report 3 copies per port
9. Final Report
(with separate Executive Summary per port) 5 copies per port
10. Initial Environmental Examination Report
(with TOR for EIA if recommended, per port) 2 copies
11. Monthly Progress Reports 5 copies
12. Special Reports as needed
13. TOR for Detailed Engineering 2 copies per port

In addition to paper-printed copies, the Consultant shall submit the following in electronic media (floppy disks, zip disks, CD-R disks and/or CD-RW disks) in a format and form replicating the paper-print copies:

1. Inception Report
2. Technical Paper on Existing Facilities
3. Technical Paper on Existing Operational System
4. Technical Paper on Traffic Forecasts
5. Technical Paper on Port Master Plan
6. Technical Paper on Preliminary Engineering & Port Development Plan
7. Interim Report
8. Draft Final Report
9. Final Report
10. IEE Report or TOR for EIA if recommended
11. Monthly Progress Reports
12. Special Reports
13. TOR for Detailed Engineering

The following may be transmitted by electronic mail, in addition to paper-print copies to a specified official e-mail address:

1. Inception Report
2. Technical Paper on Existing Facilities
3. Technical Paper on Existing Operational System
4. Technical Paper on Traffic Forecasts
5. Technical Paper on Port Master Plan
6. Technical Paper on Preliminary Engineering & Port Development Plan
7. Interim Report
6. Draft Final Report
9. Final Report
10. IEE Report or TOR for EIA if recommended
11. TOR for Detailed Engineering
12. Monthly Progress Reports
13. Special Reports

Since remuneration rates are quoted on a monthly basis while the milestone or deliverable will follow an agreed schedule (not necessarily monthly), claims for the payment of a deliverable should reflect a breakdown of the value of person-days (or person-hours whichever is agreed upon) served by each of the consultancy firm's personnel allocated to the completion of that deliverable.

The Consultant shall also include in their consultancy proposal the costs for the provisions of transportation expenses, office space, furniture, computer/laptop (Including software), printers and other office equipment that may be required by the Study, which shall be turned over to PPA upon completion of the Study.

6. RESPONSIBILITIES OF PPA

- a. The PPA will provide all previous studies, available reports, documents, drawings, maps, photographs, statistics and other Information related to the Protect as needed. However, the Consultant is still responsible for the accuracy and adequacy of all data.
- b. The PPA may provide counterpart staff. The counterpart staff. If provided, shall remain employees of PPA. The PPA staff will be headed by a Project Manager.

7. SURETY OR WARRANTY BOND FOR THE STUDY

PPA may require the posting of a surety or warranty bond by the Consultant to defray any costs to rectify any defects or deficiencies in the Study.

8. LIQUIDATED DAMAGES FOR DELAY

If the Consultant tells to deliver any *or* all of the Services within the period(s) specified in this Contract, the Philippine Ports Authority shall, without prejudice to its other remedies under this Contract and other the Applicable Law, deduct from the contract price, as liquidated damages,

as sum equivalent to one-tenth of one percent of the price of the unperformed portion of the Services for each day of delay based on the approved contract schedule up to a maximum deduction of ten percent (10%) of the contract price. Once the maximum is reached, the Philippine Ports Authority may consider termination of this Contract pursuant to GCC Clause 27.

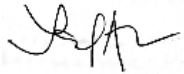
9. APPROVED BUDGET FOR THE CONTRACT

The Approved Budget for the Contract (ABC) is **Php17,500,904.00**.

10. SELECTION CRITERIA FOR PROPOSAL

The shortlisted Consultants shall be evaluated using the Quality-Cost Based Evaluation (QCBE) procedure under RA 9184 and its Revised IRR at eighty percent (80%) for the Technical Proposal (with a Minimum Qualifying Mark of 70%) and *twenty* percent (20%) for the Financial Proposal.

Prepared by:



LARA SIMONE L. ABA
Principal Engineer A

Recommending Approval by:



ASTERIO C. GALLARDO, JR.
ESD Manager

Approved by:



ANALEE G. AGUILA
Port Manager