



REPUBLIC OF MAURITIUS

---

**Ministry of Ocean Economy, Marine Resources,  
Fisheries & Shipping  
(Fisheries Protection Service)**

**MOF/EOI/03/2017**

**TECHNICAL REQUIREMENTS**  
**FOR**  
**REQUEST FOR EXPRESSION OF INTEREST FOR**  
**CONSULTANCY SERVICE TO UNDERTAKE AN**  
**ENVIRONMENTAL IMPACT ASSESSMENT FOR RE-**  
**OPENING OF BOATS PASSSAGES IN THE REGION OF**  
**MAHEBOURG**

**July 2017**

# TECHNICAL REQUIREMENTS

## TABLE OF CONTENTS

TECHNICAL REQUIREMENTS .....	ii
TABLE OF CONTENTS .....	ii
1 INTRODUCTION .....	1
2 BACKGROUND.....	1
3 PROJECT DESCRIPTION .....	1
4 AIM & OBJECTIVES.....	2
4.1 Aim.....	2
4.2 Objectives .....	2
5 SCOPE OF WORKS.....	4
6 EXPERIENCE REQUIREMENTS.....	5
6.1 General Experience Requirement .....	5
6.2 Specific/Particular Experience Requirement .....	5
7 TEAM COMPOSITION REQUIREMENTS.....	5
7.1 Professional Personnel .....	5
7.2 General Notes .....	5
8 REPORT & TIME SCHEDULE.....	6
9 DATA, LOCAL SERVICE & FACILITIES .....	7
10 FORMS & NOTES TO APPLICANTS.....	7
ANNEX A (Typical Forms) .....	8

## 1 INTRODUCTION

The Ministry of Ocean Economy, Marine Resources, Fisheries & Shipping (Fisheries Protection Service) intends to embark on the re-opening of three boat passages at Mahebourg namely in the lagoons of:

- Remy Ollier,
- Mare Chicose and
- In front of Mahebourg fisheries post leading to the lagoon from Remy Ollier.

## 2 BACKGROUND

Presently, there exist three boats channels in the region of Mahebourg as detailed below:

- **Passage A:** At Remy Ollier - channel starting near Bungalow Gaya which is approximately 360 metres long.
- **Passage B:** At Mare Chicose - channel starting from existing slipway and channel length is approximately 170 metres.
- **Passage C:** Channel starting near fisheries post intersecting with the passageway of Remy Ollier and channel length is approximately 210 metres.

Fishermen have been complaining of being unable to set out for fishing during low tides as the existing passages have become shallow and obstructed. It is to be noted that dredging for these passages were carried out around thirty years ago and no maintenance has been done since then. Consequently, these passages are currently obstructed by rocks, corals, sand and other sediments. As a result of obstructions, the existing passages have become impracticable. This present situation hinders the free movement of the fishing boats and Fisheries Protection Service patrol boats.

In view of the above situation, the Fisheries Protection Service - which the enforcement department & user section for the passages in the abovementioned region – has opted for undertaking a re-opening of those channels.

## 3 PROJECT DESCRIPTION

In order to facilitate movement of boats at the aforementioned regions, it is proposed to carry out a re-opening of the aforesaid passages. The passages A and B are generally used by fishing boats to move seaward and thus, enabling fishermen to carry out their daily fishing activities in and out of the lagoon. The passage at C is mainly utilised by Fisheries Protection Service patrol boats to access the sea for necessary interventions with regards to enforcement activities.

Based on the above need to re-open the channels by dredging works, the Ministry of Ocean Economy, Marine Resources, Fisheries & Shipping is in the process of procuring consultancy

services to undertake an Environment Impact Assessment (EIA) in line with the relevant laws and regulations in force in Mauritius.

## **4 AIM & OBJECTIVES**

### **4.1 Aim**

The Consultant shall prepare an Environmental Assessment Report and accordingly, an Environment Impact Assessment License or equivalent clearance has to be secured from the relevant authority / ministry through the Environment Impact Assessment report for the implementation of the project.

### **4.2 Objectives**

The consultant firm should carry out a comprehensive Environmental Impact Assessment with respect to re-opening of the abovementioned boat passages such that it meets the requirements laid down in Environmental Protection Act (by the Ministry of Environment, Sustainable Development, Disaster & Beach Management).

For this purpose, the Consultants shall address the following in the Environment Impact Assessment report, amongst others:

- A) Comprehensive recent marine ecological survey of full extent of site.
- B) Bathymetric survey of full extent of site.
- C) The study shall also address the following key areas:
  - Project natural/terrestrial environment
  - Current waves patterns.
  - Site geology
  - Tidal consideration
  - Regional climate details
  - Wind data and regime
  - Temperature influence
  - Rainfall regimes
  - Shore line Morphology
  - Topographical details of site
  - Chemical analysis and bacterial characteristic of the areas under study.
- D) Comprehensive coastal oceanography study of the site and its vicinities.
- E) Elaboration on the details of method of assessment (inclusive of data collection / surveys, analysis, etc.)
- F) Elaboration on details regarding issues of environmental impact associated with the whole project.
- G) Predicted environmental impacts (with clear illustration of nature and extent of the impacts).

- H) Impacts pertaining to social aspects (with respect to Socio-Cultural and Socio-Economic considerations)
- I) Pollution aspects and associated precautionary measures.
- J) Emphasis on the negative and positive impacts on the marine environment of the site.
- K) Look into the residual / unavoidable impacts directly & indirectly related to the whole dredging project.
- L) Relevant consultations with other institutions, authorities and other stakeholders so as to look into all the different issues which may arise with respect to the implementation of the project.
- M) Identification of enhancement opportunities.
- N) Monitoring and maintenance of boat passages.
- O) Environmental monitoring plan.
- P) Traffic impact analysis with specific emphasis on, amongst others:
  - Plan for hauling of dredged materials.
  - Movement plan for materials.
  - Need for traffic diversion plans (as approved by relevant authority).
- Q) Provide a detailed methodology for dredging works and associated site activities.
- R) List of plants & equipment to be used for dredging works.
- S) Proposal for disposal & end use of dredged materials.
- T) Granular analysis of materials to be dredged & provision of solutions for using the dredged materials for useful purpose.
- U) Quantity estimation (Expected amount of dredged materials)
- V) Cost estimation for the dredging project.
- W) Provision of engineering specifications and details of scope of work for implementation phase.
- X) Provide proposals for feasible mitigating measures to be applied for the dredging project.
- Y) Any other miscellaneous issues which are considered to be relevant for a successful reporting on Environmental Impact Assessment.

## 5 SCOPE OF WORKS

- A) Production of an inception report which shall elaborate on methodology for Environment Impact Assessment study, well defined activities for the study, associated time details, time frame, clearly label milestone, stages, etc.
- B) Production of a comprehensive Environment Impact Assessment report which shall be conducive to a successful Environment Impact Assessment Licence or equivalent from relevant Ministries / Authorities as per the local laws and regulations in force in Mauritius.
- C) The consulting firm should
  - Make recommendation on the proper way forward for installation of navigation line light and buoys along the passages.
  - Submit cost estimate for implementation of the project along with time estimate for implementation of same.
  - Make recommendation on mitigating measures that should be taken during the dredging works so as not to disturb the ecological flora and fauna of the site and its vicinity.
  - Undertake granular analysis of the bed stratum/ sub stratum for potential use of dredged materials, if any.
  - Make proposal for methods of stock piling of dredged materials for both temporary or permanent periods. Provide details of measures to be taken for safe stock piling of both wet & dry dredged materials. The consultant firm shall liaise with all relevant authorities for identification of proper temporary and permanent dumping sites.
  - Undertake any topographical survey of the area under consideration that may be required.
  - Provide any supplementary information or carry out modification that may be required by any relevant ministries or authorities. The Consultant firm shall attend meetings & site visits that may be required in relation to this study project. Due care should be taken by the Consultant in finalising the Environment Impact Assessment report for ultimately securing the Environmental Impact Assessment clearance.

## 6 EXPERIENCE REQUIREMENTS

### 6.1 General Experience Requirement

Firm / Lead firm of Consortium of Consultants shall have General experience at least 15 years of service in the field of civil engineering and construction. (Note: Firm/Lead firm shall submit details of experience).

### 6.2 Specific/Particular Experience Requirement

Firm / Lead Firm shall have undertaken and completed at least one Environment Impact Assessment study for civil engineering or construction works during the last ten (10) years .The Firm/ Consortium of Consultants shall clearly specify the Environment Impact Assessment study undertaken within the island of Mauritius.

## 7 TEAM COMPOSITION REQUIREMENTS

### 7.1 Professional Personnel

Firm / Consortium of Consultant shall have the following professional personnel:

- A) A Project Manager (15 years post registration experience, Post-Graduation Degree in Project Management, Bachelor's Degree in Civil Engineering, Registered Civil Engineer / equivalent).
- B) A Civil Engineer (10 years post registration experience, Bachelor's Degree in Civil Engineering, Registered Civil Engineer / equivalent).
- C) A Coastal / Marine Engineer or Specialist (10 years post registration experience, Bachelor's Degree in Coastal / Marine Engineering, Registered Coastal / Marine Engineer / equivalent).
- D) An Environment Specialist (Post-Graduation Degree in Environmental Science / Environmental Engineering, Experience and knowledge of conducting Feasibility Studies, Environment Impact Assessment and Social Impact Assessment )
- E) An Oceanographic Specialist / Oceanologist (10 years experience, Post-Graduation Degree and Bachelor's Degree in Oceanography / Marine Science / Coastal Science).
- F) A Geotechnical Expert / Specialist (10 years experience, Post-Graduation Degree in either geotechnical engineering / science or soil mechanics).
- G) A Quantity Surveyor (Registered with the Professional Quantity Surveyors Council of Mauritius or equivalent, at least 3 years' experience as a professional member of the Royal Institution of Chartered Surveyors (MRICS), UK or equivalent).
- H) A Sworn land Surveyor (10 years experience, Bachelor's Degree in Land Surveying/equivalent).
- I) A Draughtsman (5 years experience)

### 7.2 General Notes

The Firm / Consortium of Consultants are hereby informed that:

- A) The Project Manager should be present in Mauritius full time during the study project for liaising with the Client Ministry.
- B) The Civil Engineer should also act as a Deputy Project Manager, as and when required.
- C) Firm / Consortium of Consultants shall have a good understanding of local laws currently in force in Mauritius including rule, guidelines and regulations and code of conduct in force in professional practices required for successful Environment Impact Assessment reporting.
- D) All Professional Personnel to be fully conversant with English Language.

## 8 REPORT & TIME SCHEDULE

For each stage of this study project, the Firm / Consortium of Consultants shall:

- A) Submit draft report to the client. Thereafter, the views to be made will be communicated to Firm/ consortium of Consultants who shall expeditiously issue the final reports.
- B) The schedule of the submissions shall be as follows:

S/N	Stage	Submission and Sequence of Submission		No. of Copies
1	Inception Report (Methodology, Well-defined activities, time frame, etc.)	Draft	3 weeks after date of Notice to Commence the Services	5 hardcopies & 1 softcopy
		Allow for Client Views: Approximately 3 weeks		
		Final	6 weeks after the date of Notice to Commence the Services	5 hardcopies & 2 softcopies
2	Environmental Impact Assessment Report	Draft	6 months after date of Notice to Commence the Services	8 hardcopies & 2 softcopies
		Allow for Client Views: Approximately 3 months		
		Final	9 months after the date of Notice to Commence the Services	24 hardcopies & 2 softcopies
<p>Note:</p> <ol style="list-style-type: none"> <li>The Firm/Consortium of Consultants shall prepare and submit - in any format required by the Client - any other report when so requested by the Client.</li> <li>All reporting to be submitted in English Language.</li> <li>The Firm/Consortium of Consultants shall produce progress reports with clear indication of progress with respect to plan of works. Progress reports to be submitted <b>every month</b> after the date of Notice to Commence the Services.</li> <li>Geotechnical report / Geotechnical related reporting in the EIA report to be certified by an Engineer registered by the Council of Registered Professional Engineers or a specialist in soil mechanics.</li> </ol>				

- C) The consultant firm shall make necessary provisions at its end in order to:
- Provide additional information & inputs as may be required,
  - To clarify issues pertaining to the study project with any authority or stakeholders.
  - To undertake any modification to the study report as may be required by relevant authorities or ministries or stakeholders.
  - Use as guideline(s) any general guideline document issue by relevant authorities or ministries for successful reporting of Environmental Impact Assessment.



## 9 DATA, LOCAL SERVICE & FACILITIES

With regards to Data, Local Service & facilities to be provided to the client, the applicants are hereby informed of the following:

- A) The Fisheries Protection Service of the Ministry Of Economy, Marine Resources, Fisheries, Shipping & Outer Island may act as facilitator between Consultant Firm and fishermen community solely for communication purposes, if so formally requested by the consultancy firm. However, the Consultant Firm shall make the provision for communicating with all relevant stakeholders including the fisherman community.
- B) A site visit will be organised by the Fisheries Protection Service to indicate the general locations of the three channels.

### NOTE:

- The Consultant Firm should make its own necessary provision for being well informed with respect to all issues regarding early warnings in connection with weather condition as per daily weather forecast issued by the Meteorological service.
- A site visit will be organised by the client's Ministry to have an overview of the site locations.

## 10 FORMS & NOTES TO APPLICANTS

- A) Applicants are required to fill in the Applications Forms 1, 2, 3, 3A, 4, 5 and 5A (herewith enclosed at Annex A – Typical Forms).
- B) All costs incurred in the preparation of the Expression of Interest shall be borne by the firm and **shall not** be reimbursed.
- C) The Expressions of Interest together with the dully filled in Application Forms shall be submitted in original and two (2) copies in a sealed envelope.
- D) All correspondence related to this exercise shall be made in English. Any clarifications sought by any applicants in respect of the above shall be addressed in writing at least fourteen (14) days before deadline for submission of Expressions of Interest.

## **ANNEX A (Typical Forms)**

## APPLICATION FORM (1)

### GENERAL INFORMATION

All individual parties/firms and each partner of a joint venture/consortium applying for the Expression of Interest are requested to complete the information in this form. Nationality information should be provided for all owners or applicants who are partnerships or individually-owned firms.

1.	Name of firm	
2.	Head office address	
3.	Telephone	Contact
4.	Fax	E-mail
5.	Place of incorporation / registration	Year of incorporation / registration

<i>Nationality of owners<sup>1</sup></i>		
	<i>Name</i>	<i>Nationality</i>
1.		
2.		
3.		
4.		
5.		

---

<sup>1</sup> To be completed by all owners of partnerships or individually-owned firms.

APPLICATION FORM (2)

**BRIEF DESCRIPTION OF ORGANISATION**

Name of Applicant or partner of a joint venture/consortium
--

All individual parties/firms and each partner of a joint venture/consortium are requested to complete the information in this form. The information supplied should include the structure of the organization, the general staffing, logistics and support.

Use a separate sheet for each partner of a joint venture.

<i>STRUCTURE OF THE ORGANISATION</i>	<i>GENERAL STAFFING</i>	<i>LOGISTICS AND SUPPORT</i>

APPLICATION FORM (3)

**PARTICULAR EXPERIENCE RECORD**

Name of Applicant or partner of a joint venture/consortium
--

To enable evaluation and short-listing, the Applicant shall be required to fill in the form (3A)

On a separate page, using the format of Form (3A), the Applicant is requested to list all projects of a similar nature and complexity to the present assignment for which the Applicant wishes to be short-listed and undertaken **during the last 15 years.** The information is to be summarized, using Form (3A), for each consultancy contract completed or under execution, by the Applicant or by each partner of a joint venture.

APPLICATION FORM (3A)

## DETAILS OF ASSIGNMENTS/CONTRACTS OF SIMILAR NATURE AND COMPLEXITY

Name of Applicant or partner of a joint venture
---

Use a separate sheet for each contract.

1.	Number of contract	
	Name of contract	
	Country	
2.	Name of employer	
3.	Employer address	
4.	Nature of services and special features relevant to the contract for which the Applicant wishes to be short-listed	
5.	Contract role (check one)	
	<input type="checkbox"/> Sole party <input type="checkbox"/> Management Consultant <input type="checkbox"/> Sub consultant <input type="checkbox"/> Partner in a joint venture	
6.	Date of award	
7.	Date of completion	
8.	Contract/subcontract duration (years and months)	
	___ years	___ months
9.	Specified requirements <sup>2</sup>	

---

<sup>2</sup> The Applicant should insert any specific contractual criteria required for particular services.

## **SUMMARY SHEET: CURRENT CONTRACT COMMITMENTS / SERVICES IN PROGRESS**

Name of Applicant or partner of a joint venture
---

Applicants and each partner to an application should provide information on their current commitments on all contracts of **similar nature and complexity** that have been awarded, or for which a letter of intent or acceptance has been received, or for contracts approaching completion.

<i>Name of contract</i>	<i>Value (current US\$ equivalent)</i>	<i>Estimated completion date</i>
1.		
2.		
3.		
4.		
5.		
6.		

APPLICATION FORM (5)

**PERSONNEL CAPABILITIES**

Name of Applicant
-------------------

For specific positions **essential** to contract implementation, applicants should provide the name of a prime candidate qualified to meet the requirements for each position. The data on their experience should be supplied in separate sheets using one Form (5A) for each candidate.

1.	Title of position
	Name of prime candidate
2.	Title of position
	Name of prime candidate
3.	Title of position
	Name of prime candidate
4.	Title of position
	Name of prime candidate



APPLICATION FORM (5A)

**CANDIDATE SUMMARY**

Name of Applicant
-------------------

Position	Candidate <input type="checkbox"/> Prime	
<i>Candidate information</i>	1. Name of candidate	2. Date of birth
	3. Professional qualifications	
<i>Present employment</i>	4. Name of employer	
	Address of employer	
	Telephone	Contact (manager / personnel officer)
	Fax	E-mail
	Job title of candidate	Years with present employer

Summarize professional experience over at least the last 15 years, in reverse chronological order. Indicate particular technical and managerial experience relevant to the assignment and also provide relevant information as per list at Section 7.

<i>From</i>	<i>To</i>	<i>Company / Project / Position / Relevant technical and management experience</i>