

Terms of Reference

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Ministry of Fisheries, Marine Resources, and Agriculture
Male', Republic of Maldives

Terms of Reference

Consultancy services for construction supervision of cold storage and associated ancillary facilities

Introduction

The Government of the Republic of Maldives has received financing from the Saudi Fund for Development (SFD) for the development of the fisheries sector of the Maldives and intends to apply part of the proceeds for the *Consultancy Services for the Construction Supervision of cold storage and ancillary facilities*.

Background

To address the difficulties in the purchase of fish from the fishers during peak fishing season the Government of the Maldives is in the process of developing cold storage, fish freezing, and associated ancillary facilities in four islands of the Maldives. The main beneficiary of these projects funded through the SFD is Maldives Industrial Fisheries Company Ltd (MIFCO).

The project is in the process of tendering for the construction of the cold storage and ancillary facilities on 3 islands. Two of those islands are established operational centers Kooddoo Fisheries Complex (KFC) and Kandu Oiy Giri Fisheries Village (KFV) where additional cold storage capacity (and ancillary facilities) will be developed through the project. The other island is new fish purchase center that will be established in M. Mullah.

Project details

Kooddoo Fisheries Complex (KFC) currently has a 2000 tons cold storage facility, 240 tons of brine freezing capacity, an ice plant to provide ice for the fishers, a fisheries harbor, and a deep-water berthing facility for ocean-going liners. The facility is powered by independent electricity generators established at the facility and the government of the Maldives intends to establish 4000 tons of additional cold storage capacity at KFC. The additional cold stores may be integrated with existing cold storage or may be installed as separate cold stores but served from the existing brine freezing system. This project will also include upgrading the electricity generating capacity at KFC to match the new demand.

Kandu Oiy Giri Fisheries Village (KFV) is a fresh fish processing facility, mainly for the export of fresh tuna loins. A new cold storage facility comprising of a cold store and a cold air blast freezing system to improve fish purchase and processing is required at KFV.

Two new Cold store and brine facility is needed to be established in the Mulah island in Meemu Atoll.

Mulah is also an inhabited island in Mulaku Atoll (Meemu Atoll), where the main occupation of the islanders is fishing.

The whole project includes a total of 3 components, namely:

1. Development of 4000-ton cold storage capacity and related facilities in Ga.Kooddoo
2. Development of a 200-ton cold storage and air blast freezing system to blast freeze 10 tons of fresh tuna in an 8-hour shift to operate for 2 shifts per day
3. Building cold storage with a holding capacity of 500 tons for frozen tuna and a brine freezing system to freeze 50 tons of fresh tuna per 8 hours to operate 2 shifts per day and other associated facilities such as power generation in M. Mulah.

Scope of works

The Consultant shall be the project beneficiaries' (MIFCO) representative on-site and shall perform all duties specified in this document and any other duties agreed by both parties and delegated by the beneficiary in writing in accordance with the MDB's Harmonized Edition of the Conditions of Contract for Construction prepared and copyrighted by the International Federation of Consulting Engineers Fédération International des Ingenious-Conseils, or FIDIC), FIDIC 2010 which is available at www.fidic.org, and all the requirement covered in the scope of works and the agreement signed between the parties. The scope of work among other things includes.

1. Review and approval of construction designs

The consultant will review and approve final drawing, electrical drawings, and any other required drawings from the selected contractor before the construction phase is commenced. The consultant will also be responsible to ensure that all necessary permits are obtained at this stage as required.

2. Construction supervision

Phase I

- a. **Material Approval:** The consultant will approve all the materials required for the works against the specifications given in the proposals and design requirements and approve in a predefined clear process. Records must be maintained in a proper manner and shared with the beneficiary. All approvals shall be arranged in a way not causing any delays to the Contractors works.
- b. **Day to Day supervision:** The consultant shall monitor day to day work progress of the Contractor and keep a log of activities done each day. The consultant shall ensure that the structures are built, and equipment installed in conformity with the Contractual specifications, approved drawings, standards, and good engineering practices. During supervision, if the consultant finds any defective work or work that does not conform to contract drawings and specifications, the work shall be rectified immediately. The consultant should check if all the necessary approvals and permits to carry out the works are obtained and kept updated by the contractor.
- c. **Coordination of works:** The Consultant will organize and direct the execution of the works, by defining compliance with programs and relations between stakeholders (MIFCO/MoFMRA and contractors). Coordination will be ensured mainly by holding

regular meetings and general monthly meetings, with managers of the Contractors and MIFCO, and MOFMRA. In arranging these meetings, the Consultant is expected to maintain and circulate the minutes of such meetings.

- d. **Daily records:** The Consultant shall keep daily records of weather, Contractor's staff on-site, equipment available on site, the material available on-site, and material brought to the site.
- e. **Representing MIFCO/MoFMRA:** The Consultants shall be the MIFCO/MoFMRA representative on-site and shall perform all duties delegated by the MIFCO/MoFMRA in writing. The Project Coordinator (PC) for the project will be appointed by the MIFCO/MoFMRA in writing.
- f. **Reviewing contractor reports and payment claims:** The consultants will review the contractors reports and review and sign-off any payment claims from the contractors against the contract. The Consultants will also review requests for variations as required.
- g. **General Reporting to MIFCO/MoFMRA:** The Consultants will assist the MIFCO and MoFMRA in supplying information related to the design and works progress of the beneficiary and the government.
- h. **Review the 'As-Built Drawings':** The Consultants will review the 'As-Built Drawings' during the construction of works prepared by the Contractor
- i. Consider and evaluate the Contractor's suggestions for modifications in drawings or specifications and report them to the Employer with recommendations
- j. Examine the Contractor's proposals for changes and provide recommendations to the Employer for approval when changes incur costs. Change which does not have any costs or quality may be approved on-site and recorded in the monthly progress reports. Such changes shall be effected by written orders issued by Consultant
- k. Certifying the completion of the works and issuance of Taking Over certificates
- l. Submission of a monthly report during the project implementation period. This report should be submitted within 3 working days of the end of each month, in a format agreed with the Employer. At the end of the consultancy service, a consolidated report summarizing the events shall be submitted.

Phase II

- a. **Supervision during the Defect Liability Period of the contract:** the Consultant will carry out regular inspections (one inspection at least every 60 days) during the defects liability period and instruct accordingly the contractors with regard to outstanding works

and defects. After this period and satisfactory inspections, the final completion certificate will be issued.

- b. **Defect Liability of the Consultants:** MIFCO will be in charge of validating the result of the work of the Consultants against the targeted objectives. Any additional consultancy needed for corrective actions that may occur for reaching the objectives will be under the responsibility of the Consultant (unless these measures could not be identified at the detailed design stage or are not under the responsibility of the Consultants).

Project Sites

The project sites are,

- Kooddoo Fisheries Complex (KFC)
- Kandu Oiy Giri Fisheries Village (KFV)
- M. Mulah

Project Consultancy Team

The following table provides the qualification criteria of the team members of the Consulting Firm. The Consulting Firm shall provide CVs and commitment letters of proposed team member(s) meeting the following requirements.

<p>Team Leader/Project Manager</p>	<p>Qualifications.</p> <ul style="list-style-type: none"> a. The team leader should be graduated at the university level in the civil/structure or project management disciplines and have at least 10 years of working experience after graduation. Experience in establishment of cold storage/ food processing plant will be an advantage. b. The Team Leader shall have extensive knowledge and experience in planning, administration, detailed design, and tender documents for the construction of <ul style="list-style-type: none"> i. Refrigeration Complex c. Must have at least 5 years of experience in projects in EPC Project management.
	<p>His/her responsibilities shall include but not be limited to:</p>

	<ul style="list-style-type: none"> a. Overall coordination of the Consultant’s team of experts and any other matters related to the smooth execution of the consulting services contract. b. Overall responsibility for the management and the project liaison with the Client, and all authorities concerned with matters relevant to the physical implementation of the project, reporting of project progress, financial control, and coordination of work carried out. c. Responsible for review of Detailed Design and any other information necessary, assessing the requirements, organization of personnel review of surveys, and obtaining Client’s approval. d. Responsible for construction monitoring and supervision. e. Responsible for all progress reporting, financial control, approval of all contract documentation, and advice to the Client on all measures to improve efficiency;
Architect	<p>Qualifications.</p> <ul style="list-style-type: none"> a. University degree in Architecture b. Minimum 7 years of experience <p>More than 4 years as the Lead Architect (or equivalent) in civil works projects.</p> <p>His/her responsibilities shall include but not be limited to:</p> <ul style="list-style-type: none"> a. Responsible for review and approval of Detailed Design and making recommendations to improve design features, providing any other information/recommendations necessary during construction, assessing the design, and obtaining the Client’s approval. b. Responsible for construction supervision. <p>Responsible for approval of materials and approval of “As-Built” drawings as required.</p>
Structural Engineer	<p>Qualifications.</p> <ul style="list-style-type: none"> a. University degree in structural engineering discipline b. Minimum 7 years of experience in structural design <p>At least 4 years of experience as the lead Structural Engineer in civil works project.</p> <p>His/her responsibilities shall include but not be limited to:</p> <ul style="list-style-type: none"> a. Responsible for review and approval of Detailed Design and making recommendations for improvement, providing any other information/recommendations necessary during the construction period, assessing the design, and obtaining the Client’s approval.

	<ul style="list-style-type: none"> b. Responsible for construction supervision. c. Responsible for approval of materials and approval of “As-Built” drawings. d. Durability assessment and advice on the use of appropriate structural steel grades and specifications for corrosion protection. e. Durability assessment and advice on the use of appropriate concrete grades and specifications for the same.
Refrigeration System Design Engineer	<p>Qualifications.</p> <ul style="list-style-type: none"> a. University degree (B. Mechanical Engineering) specializing in Heating Ventilation and Air Conditioning Engineering or equivalent. b. Minimum 5 years of experience working in Refrigeration Complex projects <p>At least 3 years of experience as the lead Refrigeration Engineering System Design in Food processing plant projects.</p>
	<p>His/her responsibilities shall include but not be limited to:</p> <ul style="list-style-type: none"> a. Responsible for review and approval of Detailed Design of refrigeration system and making recommendations for improvement of refrigeration system, providing any other information/recommendations necessary during the construction period, assessing the design, and obtaining Client’s approval. b. Responsible for supervision of installation of the refrigeration system. c. Responsible for approval of machinery, equipment, and material of the refrigeration system <p>Responsible for approval of “As-Built” drawings of the refrigeration system.</p>
Site Civil Engineer (x3) for Kanduo’oigiri, Mulah, Kooddoo,	<p>Qualifications.</p> <ul style="list-style-type: none"> a. University degree in civil engineering discipline b. Minimum 5 years of experience <p>At least 3 years of experience in civil work projects.</p>
	<p>His/her responsibilities shall include but not be limited to:</p> <ul style="list-style-type: none"> a. Review and approve of shop drawings for civil works. <p>Supervision of all civil works;</p>
Power Systems, Communications, Controls, and Instrumentation Design Engineer	<p>Qualifications.</p> <ul style="list-style-type: none"> a. University degree (B.E or B-TECH) in Electrical and Electronics Engineering or equivalent b. Minimum 5 years of experience

	<p>c. At least 3 years of experience as the lead Electrical Engineer in civil work projects. At least 3 years of experience as the lead civil work projects.</p> <p>His/her responsibilities shall include but not be limited to:</p> <p>d. Responsible for review and approval of Detailed Design and making recommendations to improve, providing any other information/recommendations necessary during the construction period, assessing the design, and obtaining the Client’s approval.</p> <p>e. Responsible for construction supervision. Responsible for approval of materials and approval of “As-Built” drawings.</p>
<p>Mechanical Systems and Services Design Engineer</p>	<p>Qualifications.</p> <p>a. University degree (B.E or B-TECH) in Mechanical Engineering b. Minimum 5 years of experience More than 3 years as the lead engineer (or equivalent).</p> <p>His/her responsibilities shall include but not be limited to:</p> <p>a. Responsible for review and approval of Detailed Design and making recommendations to improve, providing any other information/recommendations necessary during the construction period, assessing the design, and obtaining the Client’s approval. Construction supervision and review of shop drawings for integration of all services.</p>
<p>Geotechnical Engineer</p>	<p>Qualifications.</p> <p>a. University degree in geotechnical or civil engineering discipline b. Minimum 5 years of experience c. More than 3 years as the Lead Geotechnical Engineer (or equivalent). d. Must have at least 5 years of experience in projects in similar environments.</p> <p>His/her responsibilities shall include but not be limited to:</p> <p>a. Review and assessment of all available data and information related to the subsoil condition, foundation, and quay wall designs to provide the input during the construction phase. b. Responsible for review and approval of Detailed Design and making recommendations to improve, providing any other</p>

	<p>information/recommendations necessary during the construction period, assessing the design, and obtaining the Client’s approval. Provide relevant input during the construction phase.</p>
Quantity Surveyor	<p>Qualifications.</p> <p>a. University degree in Quantity Surveying b. Minimum 5 years of experience Experience in building construction and road works.</p>
	<p>His/her responsibilities shall include but not be limited to:</p> <p>a. Cost estimation, preparation of certificates for payments, and preparation of financial statements for the Employer. Review of claims and preparation of counterclaims.</p>
Water Resources and Drainage Specialist (non-resident)	<p>Qualifications.</p> <p>a. University Degree in Water resources engineering or similar field b. Minimum 5 years of experience More than 3 years of experience in civil work projects</p>
	<p>His/her responsibilities shall include but not be limited to:</p> <p>Responsible for review and approval of Detailed Design, and technical specification and making recommendations to improve, providing any other information/recommendations necessary during the construction period, assessing the design, and obtaining the Client’s approval.</p>

Consultant shall submit an organizational structure for the PMC with the bid document, identifying the roles and responsibilities of all staff involved (specifically identifying the resident team and head office team). Lead discipline managers shall be stationed on-site during the construction period.

If the proposed personnel for the position of Environmental engineers are not Maldivian engineers, the company should enter into a consultancy agreement with a Maldivian party regarding environmental engineering matters. However, if the proposed environmental engineers are Maldivian engineers, such an arrangement will not be required. This requirement is in place to mitigate the issues that may arise due to the lack of knowledge of the existing local conditions by foreign engineers.

The project manager shall be based in Male’ and should set up an office in Male’. A civil engineer and refrigeration engineer (WHEN REQUIRED) should be always based in all three sites from the commencement of the construction phase and should be available continuously for on-site construction supervision of the project.

If the Consultancy firm is a foreign entity, the firm shall have an association with a local partner to facilitate all local requirements and logistics. The details of this party shall be provided with the proposal and association agreement. The consultant should not be involved as a lead partner or sub-consultant in the construction of the specified projects in the packages. If such a case arises, it would lead to the disqualification of the consultant from this consultancy.

Reporting Requirements and Time Schedule for Deliverables

The Consultant will report to and advise the designated official on behalf of the Employer, on all aspects of Project Implementation throughout the duration of the contract. All documents produced including but not limited to; should be submitted in soft and hard copies. The Consultant shall ensure that all the required reports for the project are prepared on time in accordance with the requirements of Employer.

The monthly progress report that the consultant prepare shall include:

- A brief description of work completed including versus planned progress; problems encountered and resolutions; and comments on the quality of work and Contractor performance. The reports shall include diagram or photograph of the information showing physical progress completed work and on the ongoing construction work undertaken during the relevant reporting period, and data regarding the estimated total cost of completion based on an up-to-date appraisal of actual versus estimated quantities.
- A section devoted entirely to an assessment of the impact of accumulated delays, if any, in the execution of initial rehabilitation works and a projected date for compliance with required service levels if this has not already been achieved. In the event that the projected date is later than a revised date which will result from approved time extensions, the report will include an evaluation of a contractor-proposed plan for corrective measures to be implemented to increase the rate of progress and meet the required targets. In addition, the effect of delays on the cost and timing of the Consultant's activities should also be assessed.
- A section devoted to reporting the status of Emergency Works and Work Orders issued to the Contractor, detailing the dates of notification and subsequent actions and the time and cost effects as assessed, where appropriate.
- Discussion on the compliance or otherwise with Service Quality Criteria and the penalties that may have been applied on the Contractor's certificate for the month.

Duration of the Assignment

The period of total engagement is expected to be **30 months** from the date of signing the consultancy agreement. Commencement of Consultancy work will start only upon receipt of suitable bids.

All costs associated with domestic logistics and travel within the Maldives for the purposes of the consultancy assignment shall be borne by the Consultant.

Outputs and Deliverables, Schedule of Delivery and Payment

Note that payments will be based on actual time invested. All payments will be linked to successful delivery of services and outputs. The outputs to be delivered by the Consultant include, inter alia, the following:

Stage	Deliverables	Time (from the Date of Start)	Payment Terms
Total 30 months	Monthly Reports describing delivery of successful supervision services and progress of works, covered in ToR	Each month, starting from the 4 th week; and ending in 30 th month	Payment based on monthly claims, subject to a ceiling of 90% of the Contracted Amount
	Final Implementation Supervision Report, covering all responsibilities during the defects liability period especially as described in ToR	30 months	10% of the Contracted Amount

Data, Services and Facilities to be provided by the Employer

1. The Employer would provide all available data and information that would be relevant to this current assignment. Note that Consultants will be responsible for any needed translation of documents and processing of data. Employer will also provide all necessary and reasonable support to Consultant in collecting secondary data, such as issuing authorization letters. The contractors at each site, respectively, will provide reasonable accommodation for the Site Supervision Engineer and any other personnel of the Consultant on site visit.
2. No other support or facilities will be provided by the Employers. Consultants will be responsible for all transport, accommodation, office spaces of their team outside the work sites, and for any other expenditure needed to take part in progress review meetings or management meetings. Consultants shall include all such costs in their financial proposal

Reporting Requirements and Time Schedule for Deliverables

1. The Consultant will report to and advise designate official on behalf of the Employer, on all aspects of Project Implementation throughout the duration of the contract.
2. All documents produced including but not limited to; should be submitted in soft and hard copies where the latter should not be less than two sets.
3. The Consultant shall ensure that all the required reports for the project are prepared on time in accordance with the requirements of Employer.

Duration of the Consultancy

1. The duration of the consultancy shall be 30 months from the date of signature
2. Extensions to the consultancy should be sought from the Employer based on the real time work progress of the design and construction of the project