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#### Republic of Maldives

#### Tender Evaluation Section

#### Ministry of Finance and Treasury

#### On behalf of

#### Ministry of Environment and Energy

REQUEST FOR PROPOSALS

***Consultancy Services for Design and Supervision of Water Supply Facilities in R.Maduvvaree, Sh.Foakaidhoo, B.Dharavandhoo and Hdh.Nolhivaranfaru Maldives***

**May 2016**

**Issued By:**

Tender Evaluation Section

Ministry of Finance and Treasury

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# **LETTER OF INVITATION**

**Subjects: Consultancy Services for Design and Supervision of Water Supply Facilities in R.Maduvvaree, Sh.Foakaidhoo, B.Dharavandhoo and Hdh.Nolhivaranfaru, Maldives**

1. 1. The Government of the Republic of Maldives has allocated funds through Green Climate Fund (GCF) for the development of water supply system in the islands of R.Maduvvaree, Sh.Foakaidhoo, B.Dharavandhoo and Hdh.Nolhivaranfaru and intends to apply part of the proceeds towards procuring the services of Design and Supervision consultancy of these projects.

2. The services include Preparation of Preliminary and Detailed Design, Environment Impact Assessment (EIA), Preparation of Tender Documents, Bill of Quantities (BoQ), Evaluation, Contract Negotiation, Preparation of Contract Agreement, Contract Management and Supervision works for the Provision of Water Supply Facilities in R.Maduvvaree, Sh.Foakaidhoo, B.Dharavandhoo and Hdh.Nolhivaranfaru Maldives.

3. The Government of Maldives, represented by Ministry of Finance and Treasury, now invites interested eligible consultants to submit their proposals according to the Request for Proposals (RFP). Interested parties must provide information indicating that they are qualified to perform the services (brochures, description of similar assignment, experience in similar conditions, availability of appropriate skills among staff, etc.). Parties may associate to enhance their qualifications.

4. The RFP document, in the English language maybe available by interested bidders on the submission of a written application to the Address below, during normal office hours on all working days from 0830hrs and 1330hrs Maldives Time (1000hrs and 1330hrs Maldives Time during the Month of Ramadan) on all working days from **26th May 2016 till 08th June 2016**..

5. Interested consultants may obtain further information on request by writing to the address below no later than 1400 hrs. 08 June 2016, Wednesday.

6. The proposals are expected to be submitted to the address by no later than 1200 hours local time on 26th June 2016, Sunday.

Mr. Ahmed Mujuthaba

Director General

Tender Evaluation Section

Ministry of Finance and Treasury

Ameenee Magu, Male’

Republic of Maldives

Tel: (960)3349266, (960)3349102

Fax: (960)3332706

E-mail: [tender@finance.gov.mv](mailto:tender@finance.gov.mv)

# **INSTRUCTIONS TO CONSULTANTS**

## Introduction

1. The Client named in the **Data Sheet** will select a consultancy firm from those issued with the Letter of Invitation.
2. The Consultants are invited to submit Technical Proposal and a Financial Proposal for the contract named in the **Data Sheet**. The Proposal will be the basis for contract negotiations and ultimately for a signed Contract with the selected Party.
3. The Client will select a consultancy firm (the Consultants) from those who show interest to this call for proposals, in accordance with the method of selection specified in the **Data Sheet**.
4. As a direct response to this document, interested parties must provide their detailed proposals for the **“*Consultancy Services for Design and Supervision of Water Supply Facilities in R.Maduvvaree,* Sh.Foakaidhoo, B.Dharavandhoo and Hdh.Nolhivaranfaru *Maldives ".*** The standards and other statements on such provision and legislative compliance made by the parties as part of their proposals will form a binding part of the final contract document.
5. The Consultants shall bear all costs associated with the preparation and submission of their proposals and contract negotiation. The Client is not bound to accept any proposal, and reserves the right to annul the selection process at any time prior to Contract award, without thereby incurring any liability to the Consultants
6. The Client reserves the right to accept or reject any Proposal and to terminate the tendering process without awarding a contract. The parties should be aware that it is unlikely that the Client will be in a position to go forward with any proposals that fails to meet the statutory and essential requirements, set out in the Terms of Reference.

## Conflict of interest

1. A Party (including its Personnel) that has a business or family relationship with a member of the Client’s staff who is directly or indirectly involved in any part of (i) the preparation of the Schedule of requirements, (ii) the selection process, or (iii) supervision of the Contract, may not be awarded a Contract, unless the conflict stemming from this relationship has been resolved in a manner acceptable to the Government throughout the selection process and the execution of the Contract.
2. The Consultants have an obligation to disclose any situation of actual or potential conflict that impacts their capacity to serve the best interest of their Client, or that may reasonably be perceived as having this effect. Failure to disclose said situations may lead to the disqualification of the Consultants or the termination of its Contract.

## Fraud and Corruption

The Client requires that all parties including Consultants and their agents (whether declared or not), personnel, sub-contractors, sub-Consultants, service providers and suppliers, observe the highest standard of ethics during the selection and execution its contracts. In pursuance of this policy, the Client:

1. defines, for the purposes of this provision, the terms set forth below as follows:
2. “corrupt practice” is the offering, giving, receiving or soliciting, directly or indirectly, of anything of value to influence improperly the actions of another party;
3. “fraudulent practice” is any act or omission, including misrepresentation, that knowingly or recklessly misleads, or attempts to mislead, a party to obtain financial or other benefit or to avoid an obligation;
4. “collusive practices” is an arrangement between two or more parties designed to achieve an improper purpose, including to influence improperly the actions of another party;
5. “coercive practices” is impairing or harming, or threatening to impair or harm, directly or indirectly, any party or the property of the party to influence improperly the actions of a party.
6. “obstructive practice” is

* deliberately destroying, falsifying, altering or concealing of evidence material to the investigation or making false statements to investigators in order to materially impede an investigation into allegations of a corrupt, fraudulent, coercive, or collusive practice; and/or threatening, harassing, or intimidating any party to prevent it from disclosing its knowledge of matters relevant to the investigation or from pursuing the investigation, or
* acts intended to materially impede the exercise of the relevant government authorities’ inspection and audit rights.

1. will reject a proposal for award if it determines that the recommended for award has, directly or through an agent, engaged in corrupt, fraudulent, collusive, coercive, or obstructive practices in competing for the contract in question;
2. will cancel the portion of the contract if it determines at any time that representatives of the Client or of a beneficiary were engaged in corrupt, fraudulent, collusive, or coercive practices during the selection process or the execution of that contract, without the Consultants having taken timely and appropriate action satisfactory to the Client to address such practices when they occur; and
3. will take action against any Party or an individual at any time, in accordance with rules and regulations including by publicly declaring such Parties or individual ineligible, either indefinitely or for a stated period of time.

## Proposal Validity

The Data Sheet indicates how long the Proposals must remain valid after the submission date. The Client will make its best effort to complete negotiations within this period. Should the need arise; however, the Client may request to extend the validity period of proposals. The Parties who agree to such extension shall confirm that they maintain the availability of the Professional staff nominated in the Proposal, or in their confirmation of extension of validity of the Proposal, The Consultants could submit new staff in replacement, who would be considered in the final evaluation for contract award. Consultants who do not agree have the right to refuse to extend the validity of their Proposals.

## Language of Proposal

The proposal documents must be in written English.

## Preparation of Proposals

1. The Proposal, as well as all related correspondence exchanged by the Consultants and the Client, shall be written in the language (s) specified in the RFP.
2. In preparing their Proposal, Consultants are expected to examine in detail the documents comprising the RFP. Material deficiencies in providing the information requested may result in rejection of a Proposal.
3. Alternative professional staff shall not be proposed, and only one curriculum vitae (CV) may be submitted for each position.

## Technical Proposal Format and Content

The Technical Proposal shall provide the information indicated in the following paras from (a) to (f) using the attached Standard Forms (4. Technical Proposal).

1. A brief description of the Consultants’ organization and an outline of recent experience of the Consultants and, in the case of joint venture, for each partner, on assignments of a similar nature are required in Form TECH-2. For each assignment, the outline should indicate the names of Sub-Consultants/ Professional staff who participated, duration of the assignment, contract amount, and Consultant’s involvement. Information should be provided only for those assignments for which the Consultants was legally contracted by the client as a corporation or as one of the major consultancy firm/organization within a joint venture. Assignments completed by individual Professional staff working privately or through other organisations cannot be claimed as the experience of the Consultants, or that of the Consultant’s associates, but can be claimed by the Professional staff themselves in their CVs. Consultants should be prepared to substantiate the claimed experience if so requested by the Client.
2. Comments and suggestions on the Terms of Reference including workable suggestions that could improve the quality/effectiveness of the assignment.
3. A description of the approach, methodology and work plan for performing the assignment covering the following subjects: technical approach and methodology, work plan, and organization and staffing schedule. Guidance on the content of this section of the Technical Proposals is provided under Form TECH-3. The work plan should be consistent with the Work Schedule (Form TECH-6) which will show in the form of a bar chart the timing proposed for each activity.
4. The list of the proposed professional staff team by area of expertise, the position that would be assigned to each staff team member, and their tasks (Form TECH-4).
5. CV’s of the professional staff signed by the staff themselves or by the authorized representative of the professional staff (Form TECH-5).
6. The Technical Proposal shall not include any financial information. A Technical Proposal containing financial information may be declared non responsive.

## Clarification and Amendment of RFP Documents

1. During the RFP process, questions or clarifications regarding this RFP document must be requested in writing to the person and address stated in the **Data Sheet.**
2. Any additional documentation issued by the Client during the tender process shall be deemed to form part of this RFP and shall supersede any part of the RFP where indicated. The Client may also exercise the option to extend the tendering period and/or postpone the proposal submission date in the event that subsequent documentation is issued.

## Communications

Except as provided in the preceding section relating to questions about this RFP, No parties shall contact any officers, employees, or team members of Client with respect to this RFP. Any oral communication with a Client employee concerning this RFP is not binding on the Client and shall in no way alter any specifications, term or condition of this RFP or any contract documents.

## Submission, Receipt, and Opening of Proposals

1. The original proposal (Technical Proposal and Financial Proposal) shall contain no interlineations or overwriting, except as necessary to correct errors made by the Consultants themselves. The person who signed the proposal must initial such corrections.
2. An authorized representative of the Consultants shall initial all pages of the original Technical and Financial Proposals. The authorization shall be in the form of a written power of attorney accompanying the Proposal or in any other form demonstrating that the representative has been duly authorized to sign. The signed Technical and Financial Proposals shall be marked “Original”.
3. Consultants shall submit a “Compliance Statement” stating that the offer is made in accordance with the Request for Proposal. Consultants who offer additional or alternative conditions shall clearly state those in their proposals.
4. The technical proposal and financial proposal must be submitted in two separate sealed envelopes to the address indicated in the **Data Sheet**. The original and all copies of the Technical Proposal shall be placed in a sealed envelope clearly marked “Technical Proposal” Similarly, the original Financial Proposal shall be placed in a sealed envelope clearly marked “Financial Proposal” followed by the name of the assignment, and with a warning “Do Not Open With The Technical Proposal.” The envelopes containing the Technical and Financial Proposals shall be placed into an outer envelope and sealed. This outer envelope shall bear the submission address, reference number and be clearly marked “Do Not Open, except in the Presence of the Official Appointed”. The Client shall not be responsible for misplacement, losing or premature opening if the outer envelope is not sealed and/or marked as stipulated. This circumstance may be case for Proposal rejection. If the Financial Proposal is not submitted in a separate sealed envelope duly marked as indicated above, this will constitute grounds for declaring the Proposal non-responsive
5. The Proposals must be sent to the address indicated in the **Data Sheet** and received by the Client no later than the date specified in the **Data Sheet**, or any extension to this date. Any proposal received by the Client after the deadline for submission shall be returned unopened.
6. The Client shall open the Technical Proposal immediately after the deadline for their submission. The envelopes with the Financial Proposal shall remain sealed and securely stored.

## Evaluation of proposals

1. From the time the Proposals are opened to the time the Contract is awarded, the Consultants should not contact the Client on any matter related to its Technical and/or Financial Proposal. Any effort by Consultants to influence the Client in the examination, evaluation, ranking of Proposals, and recommendation for award of Contract may result in the rejection of the Consultants’ Proposal.
2. The evaluation committee shall evaluate the Technical Proposals on the basis of their responsiveness to the Technical Requirements, applying the evaluation criteria, sub-criteria, and point system specified in the **Data Sheet**. Each responsive Proposal will be given a technical score (St). A Proposal shall be rejected at this stage if it does not respond to important aspects of the RFP, and particularly the Technical Requirements or if it fails to achieve the minimum technical score indicated in the evaluation criteria specified in the **Data Sheet**.
3. After the technical evaluation is completed, the Client shall inform the Consultants who have submitted proposals the technical scores obtained by their Technical Proposals, and shall notify those Consultants whose Proposals did not meet the minimum qualifying mark or were considered non responsive to the RFP and Schedule of Requirements, that their Financial Proposals will be returned unopened after completing the selection process. The Client shall simultaneously notify in writing Consultants that have secured the minimum qualifying mark, the date, time and location for opening the Financial Proposals. The opening date should allow Consultants sufficient time to make arrangements for attending the opening. Consultants’ attendance at the opening of Financial Proposals is optional.
4. Financial Proposals shall be opened publicly in the presence of the Consultants’ representatives who choose to attend. The name of the Consultants and the technical scores of the Consultants shall be read aloud. The Client shall prepare a record of the opening of Price Proposals that shall include, as a minimum: the name of the Bidder, the Price Proposal, any discounts, and alternative offers. The Financial Proposal of the Consultants who met the minimum qualifying mark will then be inspected to confirm that they have remained sealed and unopened. These Financial Proposals shall be then opened, and the total prices read aloud and recorded. Copy of the record shall be sent to all Consultants.
5. The Evaluation Committee will correct any computational errors. When correcting computational errors, in case of discrepancy between a partial amount and the total amount, or between word and figures the formers will prevail.
6. The **highest** evaluated Financial Proposal (Fm) for each LOT will be given the maximum financial score (Sf) of 100 points. The financial scores (Sf) of the other Financial Proposals will be computed as indicated in the **Data Sheet**. Proposals will be ranked for each LOT according to their combined technical (St) and financial (Sf) scores using the weights (T = the weight given to the Technical Proposal; P = the weight given to the Financial Proposal; T + P = 1) indicated in the Evaluation Criteria: S = St x T% + Sf x P%. The Party achieving the highest combined technical and financial score for each LOT will be invited for negotiations.

# **DATA SHEET**

|  |  |
| --- | --- |
| **2.1.a** | Name of the Client:  Ministry of Environment and Energy  Green Building, Handhuvaree Hingun,  Maafannu, Male’, 20392,  Republic of Maldives  www.environment.gov.mv |
| **2.1.b** | Financial Proposal to be submitted together with Technical Proposal in two different envelopes on the same day and time specified.  *Please write name of the Consultancy assignment and indicate whether it is Financial Proposal or Technical Proposal on the envelopes.*  Name of the assignment is: **“Consultancy Services for Design and Supervision of Water Supply Facilities in R.Maduvvaree, Sh.Foakaidhoo, B.Dharavandhoo and Hdh.Nolhivaranfaru, Maldives”** |
| **2.1.c** | The method of selection would be in accordance to the procedures set out in the National Procurement Regulations issued by the Ministry of Finance and Treasury |
| **2.4**  **Validity** | Proposals must remain valid up to 91 days after the submission date. |
| **3.8**  **Clarifications and Amendments of RFP Documents** | Interested consultants may obtain further information on request by writing to the address below no later than 1400 hours local time on 08th June 2015, Wednesday.  Tender Evaluation Section  Ministry of Finance and Treasury  Ameenee Magu, Male’  Republic of Maldives  Tel: (960) 3349266, (960) 3349102  Fax: (960) 3332706  [tender@finance.gov.mv](mailto:tender@finance.gov.mv) [shazleena.ibrahim@finance.gov.mv](mailto:shazleena.ibrahim@finance.gov.mv); |
| **3.10**  **Submission, Receipt, and Opening of Proposals** | The proposals are expected to be submitted to the address by **1200** hours local time on **26th June 2015, Sunday.**  Tender Evaluation Section  Ministry of Finance and Treasury  Ameenee Magu, Male’  Republic of Maldives  Tel: (960) 3349266, (960) 3349191  Fax: (960) 3332706  tender@finance.gov.mv |
| **3.11**  **Evaluation of Proposals** | Criteria, sub-criteria, and point system for the evaluation of Full Technical Proposals are:  Points   |  |  | | --- | --- | | **(A) Company Profile:** | **[50]** | | 1. No. of similar projects | [20] | | 1. Value of previous assignments | [20] | | 1. Organisational structure | [10] |     Total A = [ ]     |  |  | | --- | --- | | **(B) DESIGN TEAM** | **[100]** | | 1. Project Manager | [35] | | 1. Civil engineer | [25] | | 1. Electro-Mechanical Engineer | [10] | | 1. EIA Specialist | [15] | | 1. Surveyor | [15] | | Total B = [ ] | | |  |  | | **(C) SUPERVISION TEAM** | **[100]** | | 1. Senior Engineer | [60] | | 1. Field Engineer | [40] |     Total C = [ ]  The number of points to be assigned to each of the above positions or disciplines shall be determined considering the following three sub-criteria and relevant percentage weights:   |  |  | | --- | --- | | 1. Education and qualifications | [*25*%] | | 1. Experience | [*65*%] | | 1. Experience in the region and language | [10%] |      |  |  | | --- | --- | | **(D) APPROACH &WORK PLAN** | **[20]** | | 1. Approach & work plan of the Assignment | [20] |     Total D = [ ]    Technical Score (St) = A/50\*[W1] + B/100\*[W2] + C/100\*[W3] + D/20\*[W4]  Weights Distribution   |  |  |  | | --- | --- | --- | | W1 | Company Profile | **[20%]** | | W2 | Design Team | **[40%]** | | W3 | Supervision Team | **[20%]** | | W4 | Approach & Methodology | **[20%]** |   The minimum technical score (St) required to pass is: **70** Points  The formula for determining the financial scores is the following:  Sf = 100 x Fm / F, in which Sf is the financial score, Fm is the lowest price and F the price of the proposal under consideration.  The weights given to the Technical and Financial Proposals are:  T = *[0.6]*, and  P = *[0.4]*  The formula for determining the financial scores is the following:  Sf = 100 x Fm / F, in which Sf is the financial score, Fm is the lowest price and F the price of the proposal under consideration.  The weights given to the Technical and Financial Proposals are:  T = [*0.6*], and  P = [*0.4*] |

# 

# **Technical Proposal - Standard Forms**

## FORM TECH-1: Technical Proposal Submission Form

[*Location, Date*]

To: [*Name and address of Client*]

Dear Sirs:

We, the undersigned, offer to provide the consultancy service for **“*Consultancy Services for Design and Supervision of Water Supply Facilities in R.Maduvvaree, Sh.Foakaidhoo, B.Dharavandhoo and Hdh.Nolhivaranfaru Maldives*”** in accordance with your Request for Proposal dated [*Insert Date*] and our Proposal. We hereby submit our Proposal, which includes this Technical Proposal, and our Financial Proposal sealed under a separate envelope.

We hereby declare that all the information and statements made in this Proposal are true and accept that any misinterpretation contained in it may lead to our disqualification.

If negotiations are held during the period of validity of the Proposal, we undertake to negotiate on the basis of the proposed staff. Our Proposal is binding upon us and subject to the modifications resulting from Contract negotiations.

We undertake, if our Proposal is accepted, to initiate the services and fulfill the terms and conditions related this contract.

We understand you are not bound to accept any Proposal you receive.

We remain,

Yours sincerely,

Authorized Signature [*In full and initials*]:

Name and Title of Signatory:

Name of Firm:

Address:

## FORM TECH-2: Consultant’s Organization and Experience

#### A - Consultant’s Organization

[*Provide here a brief description/background (Include Organizational chart) of your organization and each associate for this assignment.*]

#### B - Consultant’s Experience

*[Using the format below, provide information on each contract/assignment for which your Organisation, individually as a corporate entity or as one of the major companies within an association, for carrying out* ***similar consultancy Services****.]*

|  |  |
| --- | --- |
| Contract/Activity Name: | Approx. If a contract, value of the contract (in MVR): |
| Country:  Location within country: | Duration of assignment/activity (months): |
| Name of Client: | Total NO of staff-months of the assignment: |
| Address: | Approx. value of the services provided by your firm under the contract (in currency US$ or Euro): |
| Start date (month/year):  Completion date (month/year): | NO of professional staff-months provided by associated Proponents: |
| Name of associated Parties, if any: | Name of senior professional staff of your firm involved and functions performed: |
| Narrative description of Activities/Project: | |
| Description of actual services provided by your staff within the Activities: | |

Firm’s Name:

## FORM TECH-3: Description of Approach, Methodology and Work plan for performing the Assignment

[*Technical approach, methodology and work plan are key components of the Technical Proposal. You are suggested to present your Technical Proposal divided into the following three chapters:*

1. *Technical Approach and Methodology,*
2. *Work Plan, and*
3. *Organization and Staffing,*

*a) Technical Approach and Methodology. In this chapter you should explain your understanding of the objectives of the assignment, approach to carry out the design services for the two islands and obtaining the expected output. You should highlight the problems being addressed and their importance, and explain the technical approach you would adopt to address them. You should also explain the methodologies you propose to adopt and highlight the compatibility of those methodologies with the proposed approach.*

*b) Work Plan. In this chapter you should propose the main activities of the assignment, their content and duration, phasing and interrelations, milestones (including interim approvals by the Client), and delivery dates of the reports. The proposed work plan should be consistent with the technical approach and methodology, showing understanding of the TOR and ability to translate them into a feasible working plan.*

*c) Organization and Staffing. In this chapter you should propose the structure and composition of your team. You should list the main disciplines of the assignment, the key expert responsible, and proposed technical and support staff.*]

## FORM TECH-4: Team Composition and Task Assignment

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Professional Staff | | | | |
| Name of Staff | Organisation | Area of Expertise | Position Assigned | Task Assigned |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |

## FORM TECH-5: Curriculum Vitae (CV) for proposed Professional Staff

**1. Proposed Position** [*only one candidate shall be nominated for each position*]:

**2. Name of Firm** [*Insert name of firm proposing the staff*]:

**3. Name of Staff** [*Insert full name*]:

**4. Date of Birth**: **Nationality**:

**5. Education** [*Indicate college/university and other specialized education of staff member, giving names of institutions, degrees obtained, and dates of obtainment*]:

**6. Membership of Professional Associations**:

**7. Other Training** [*Indicate significant trainings since degrees under 5 - Education were obtained*]:

**8. Countries of Work Experience**: [*List countries where staff has worked in the last ten years*]:

**9. Languages** [*For each language indicate proficiency: good, fair, or poor in speaking, reading, and writing*]:

**10. Employment Record** [*Starting with present position, list in reverse order every employment held by staff member since graduation, giving for each employment (see format here below): dates of employment, name of employing organization, positions held.*]:

From [*Year*]: To [*Year*]:

Employer:

Positions held:

## FORM TECH-6: Work Schedule

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | | | | | | | | | | | | |
|  | 1st | 2nd | 3rd | 4th | 5th | 6th | 7th | 8th | 9th | 10th | 11th | 12th | … |
| Activity (Work) |  |  |  |  |  |  |  |  |  |  |  |  |  |
| \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |  |  |  |  |  |  |  |  |  |  |  |  |  |
| \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |  |  |  |  |  |  |  |  |  |  |  |  |  |
| \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |  |  |  |  |  |  |  |  |  |  |  |  |  |

# **Financial Proposal - Standard Forms**

## FORM FIN-1: Financial Proposal submission Form

[*Location, Date*]

To: [*Name and address of Client*]

Dear Sirs,

We, the undersigned, offer to provide consultancy services for **“*Consultancy Services for Design and Supervision of Water Supply Facilities in R.Maduvvaree, Sh.Foakaidhoo, B.Dharavandhoo and Hdh.Nolhivaranfaru, Maldives* "** in accordance with your Request for Proposal dated [*Insert Date*] and our Technical Proposal. Our attached Financial Proposal is for the sum of [*Insert amount(s) in words and figures*1] which is inclusive of the local taxes.

Our Financial Proposal shall be binding upon us subject to the modifications resulting from Contract negotiations, up to expiration of the validity period of the Proposal.

We understand you are not bound to accept any Proposal you receive.

We remain,

Yours sincerely,

Authorized Signature [*In full and initials*]:

Name and Title of Signatory:

Name of Firm:

Address:

1 Amounts must coincide with the ones indicated under financial proposal in Form FIN-2.

**FORM FIN-2: Financial Proposal**

|  |  |  |
| --- | --- | --- |
| Costs | Currency(ies) | Amount(s) |
| Subtotal  Local Taxes  Total Amount of Financial Proposal |  | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |

* *The consultancy firm may provide a more detailed proposal elaborating the different components.*
* *The consultancy firm is to submit copy of the GST registration certificate along with the financial proposal.*

**(To be added) Breakdown of Price per Activity**

|  |  |  |
| --- | --- | --- |
| Activity No.:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | Activity No.:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | Description:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| Price Component | Currency(ies) | Amount(s) |
| Remuneration  Reimbursables  Subtotal |  | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |

**(to be added) Breakdown of Remuneration**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Activity No.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | | | Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | |
| Names | Position | Input[[1]](#footnote-2) | Remuneration  Currency(ies) Rate | Amount |
| Regular staff  Local staff  Consultants  Grand Total |  |  |  | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |

**(to be added) Reimbursables**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Activity No:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | | | | Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | |
| No. | Description | Unit | Quantity | Unit Price In | Total Amount In |
| 1.  2.  3.  4.  5.  6.  7.  8.  9. | International flights \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Miscellaneous travel expenses  Subsistence allowance  Local transportation costs[[2]](#footnote-3)  Office rent/accommodation/  clerical assistance  Communication costs between  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_and  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  (telephone, telegram, telex)  Drafting, reproduction of reports  Equipment: vehicles, computers, etc.  Software | Trip  Trip  Day |  |  |  |
|  | Grand Total |  |  |  | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |

Indicate the total cost with detail cost to be paid in Maldivian Rufiyaa (MVR).

Note:

* *The consultancy firm is to submit copy of the GST registration certificate along with the financial proposal.*

# **TERMS OF REFERENCE**

TERMS OF REFERENCE

**Consultancy Services for Design and Supervision of Water Supply Facilities in R.Maduvvaree, Sh.Foakaidhoo, B.Dharavandhoo and Hdh.Nolhivaranfaru, Maldives**

# Introduction

The Government of Republic of Maldives has allocated funds for the development of water supply systems in the islands of R.Maduvvaree, Sh.Foakaidhoo, B.Dharavandhoo and Hdh.Nolhivaranfaru and intends to apply part of the proceeds towards procuring the services of Design and Supervision works for provision of water supply facilities in 04 islands.

# Background

The Maldives consist of 1190 low-lying coral islands spread over an area of 90,000km2 in the Indian Ocean. Nearly 200 islands are inhabited, around 90 islands are resorts, and the rest are uninhabited. There are 26 geographical atolls which are grouped into 20 administrative atolls.

A large part of the population in the Republic of Maldives lacks the access to safe drinking water and improved sanitation facilities. Rainwater is the main source of potable water in the inhabited islands but it is available only during rainy months of the year. This causes the island population to rely on groundwater for drinking and cooking during dry period, mainly through domestic wells.

Wastewater disposal systems in most of the islands are developed within the plot known as onsite disposal systems (septic tank and soak pits), with rare cases of offsite disposals (near shore outfalls). In densely populated island environments, the construction, operation and maintenance of these systems is complex, mainly due to the short distance between domestic wells and septic tanks/soak pits, and often suffer from poor performance due to various reasons which include the absence of or limited desludging. Some small bore sewer systems (SBSS) have been introduced, but they often malfunction, and usually convey raw sewage directly into the near shore lagoon.

Sanitation facilities are poorly designed and constructed, which results in the contamination of groundwater and lagoon with the sewage effluent.

The island communities have therefore been facing the problem of groundwater contamination due to improper sanitation and over-extraction of groundwater. For a number of years, population and development pressures have led to increasing groundwater extraction, resulting in the depletion of the freshwater lens in many densely populated islands, which in turn has led saline intrusion into the groundwater aquifer. Groundwater resources have also been at risk of bacterial contamination caused by effluent leakage and pollution migration from poorly constructed and maintained septic tanks.



**2.1 R.Maduvaree**

The island of Maduvaree is situated in the North Maalhosmadulu Atoll. The island has an area of 22.6 hectare. The island has a population of 2256 people with a density of more than 99 people per hectar.



**2.2 Sh.Foakaidhoo**

The island of Foakaidhoo is situated in the North Miladhunmadulu Atoll. The island has an area of approximately 70.9 hectare. The island has a population of 1623 people with a density of more than 23 people per hectar.



**2.3 B.Dharavandhoo**

The island of B.Dharavandhoo is situated in the North Maalhosmadulu Atoll. The island has an area of approximately 56.1 hectare. The island has a population of 1050 people with a density of more than 45.6 people per hectar.

**2.4 Hdh.Nolhivaranfaru**

The island of Hdh.Nolhivaranfaru is situated in the South Thiladhunmathi Atoll. The island has an area of approximately 172 hectare. The island has a population of 1788 people with a density of more than 10.4 people per hectar.

# SCOPE OF WORKS

**Phase IA: Data collection – Complementary Diagnosis**

The following data and assessments are required for the pre-design phases:

* Collect socio-economic data pertaining to population, age, sex, population growth, number of households, per capita water demand of the Islands, including institutional/commercial/industrial demands. As part of this work, undertake a willingness to pay and affordability survey.
* Current water status of R.Maduvaree, Sh.Foakaidhoo, B.Dharavandhoo and Hdh.Nolhivaranfaru : this will require the collection of data on the existing water supply systems, water quantities and quality for both surface and groundwater, water shortage issues, per capita water consumptions patterns, water requirements in the islands, relevant storages;;
* Undertake an assessment of water budget for R.Maduvaree, Sh.Foakaidhoo, B.Dharavandhoo and Hdh.Nolhivaranfaru to establish the current and projected water deficit considering rainfall projections and population growth rates;
* Undertake an assessment of rainwater harvesting potential. This will include accessing data meteorological data showing historical trend of rainfall amount and distribution (at least at atoll level), assess any trends in the rainfall projections. This data should then be assessed against the socio economic data;
* Collect information about available public and private roof catchment areas and condition of roof catchments. Undertake a rainwater harvesting quantity and quality assessment (e.g. types of roof material, slope or flat etc) to maximize availability and quality of collected rainwater.
* Assess available water storage capacity of both Public and Private buildings
* Determine the number of community tap-bay points required for R.Maduvaree, Sh.Foakaidhoo, B.Dharavandhoo and Hdh.Nolhivaranfaru in consultation with the respective Island Council;
* Assess the condition of groundwater lenses on R.Maduvaree, Sh.Foakaidhoo, B.Dharavandhoo and Hdh.Nolhivaranfaru, including the current use and potential for natural replenishment and artificial recharge from the water system overflows, numbers of wells, undertake a pump test;
* Based on water budget assessment (see above), establish a desired water production capacity that includes the combination of all sources of water to lead to integrated water production and management practice;
* Based on the review of previous RO and other water collection and production technologies in Maldives, identify the scalable options, and minimize the number of equipment vendors (standardize) to ensure limited spare parts requirements;
* Establish energy input options, focusing on both off-grid and on-grid options, energy efficient and renewable options (to offset high energy costs), including the back-up supplies;
* Assess the potential for solar power options to provide power to the RO plants;
* Identify the SOP and training requirements, including piping, valving, cleanout procedures;
* Prepare O&M plan with clear roles and responsibilities, spare parts, services and associated costs for at least next 5 years;
* Undertake a rapid environmental and social site assessment of any sensitive receptors in areas proposed for the RO plants to ensure the location of the infrastructure is appropriately located; This will include marine investigations for the siting of the brine outfall structures so that the final location prevents any adverse environmental impact; .
* Carryout the geotechnical investigations pertaining to detailed design of the facilities. ~~if required~~.
* Investigate current water supply and sewerage infrastructure and assess asset condition and capacity.
* Identify suitable locations for the integrated water supply facilities in collaboration with the respective island council. Ensure that facilities are design resilient to climate change resultant weather patterns – consideration should be given to the location, orientation of the facilities to avoid exposure to strong winds and storms;.
* Defining the construction methods to be used island by island, depending on transport and access.

The Consultants will collect existing data and carry out the necessary investigations to ensure that sufficient information is available to clarify uncertainty regarding the technical choices to be made. In his methodology, the consultant will define data acquisition methods utilized:

* area covered by the investigations;
* duration and degree of accuracy of the measurements to be carried out;
* members of staff in charge of interpreting the data collected.

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| **Outputs of Phase IA**  Inception Report will include at least :   1. List of data collected and summary of relevant items enabling the solutions for the collection and treatment of water 2. Description of measurements / investigations / analysis carried out in order to define the technical solutions and compare them 3. Technical and economic comparison of solutions ~~technically~~ based at feasibility level; 4. Topographic and geotechnical limiting factors affecting the construction of the planned facilities. 5. Other Potential Constraints, such as land limitations, environmental and social risks and any other relevant issue. |

**Phase IB: Preliminary Design**

Based on the initial data collected and presented in the Phase 1A work, the consultant shall prepare a preliminary design report including the findings and submit this to MEE for approval. The report shall address the following, but not limited to:

* Integrated Water Supply System designed in a way that each component can be constructed separately with integration of the whole system at the final stage. i.e.; Rainwater Harvesting System, Reverse Osmosis Plant and Water Supply Network including house connections.
* evaluation and comparison of different proposed options for water supply facility taking into consideration the following aspects:
  1. treatment efficiency
  2. durability
  3. capital costs
  4. operation and maintenance Costs
  5. required land area
  6. expertise required for Operation and Maintenance/Ease of Operation and maintenance
  7. environmental and social aspects
  8. potential for integrating rainwater (it is recommended that minimum 25% of the water demand should be catered from rainwater)

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| **Output of Phase IB**  Preliminary Design Report will include at least :  a. Preliminary Design Report (including the list of data collected and summary of relevant items enabling the solutions for choosing the initial component to be established (Determine whether Rainwater Harvesting component is enough to cater the demand for the dry period for each island or Reverse Osmosis plant is required) – design has to also consider that R.Maduvaree, Sh.Foakaidhoo, B.Dharavandhoo and Hdh.Nolhivaranfaru island will also support (distribution point) nearby atolls and other smaller islands during emergency dry weather situations |

**Phase IC: Environmental and Social Impact Assessment (EIA)**

The consultants shall undertake an environmental and social impact assessment of all solutions to the satisfaction of EPA, including but not necessarily limited to the following tasks:

* Discussions in association with MEE and EPA to confirm the scope of the environmental and social issues and studies for this package.
* Environmental and social studies (desk and additional field investigations and community consultation as required) to collect the necessary baseline data that will provide the basis of identifying anticipated environmental and social impacts of the project (it is anticipated that appropriate modelling will be required as part of this work).
* identification of potential avoidance and mitigation measures and discussion of these with MEE,
* finalization of recommended avoidance and mitigation measures required during design, construction and operation of the project,
* developing cost estimates of the mitigation measures
* preparing a project-specific Environmental and Social Management Plan / avoidance / mitigation management action

This task will lead to a specific report to be submitted to EPA.

The other phases of this consultancy shall account for the recommended avoidance and mitigation measures identified in the relevant documentation and specifically, the Environmental and Social Management Plan.

Without prejudging the full scope of issues, the EIA for this project shall address at least the following issues:

* all effects of construction and operation on terrestrial and marine environment;
* effects of water treatment plant brine management and intake locations;
* effects of land disturbance associated with any earthworks, pipelines, landslip protection;
* effects from the use of chemicals etc used in the RO process;
* effects of noise on local populations;
* production of waste from the project; and
* any contamination of groundwater aquifers.

To prepare the work, the Consultants will use the EIA guidelines. The analysis of the environmental and social aspects of the various solutions will be integrated in the technical and economic comparison so that MEE is able to select works programmes that are suitable for each island.

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| **Output of Phase IC** :Report on Environmental and Social Impact Assessment (EIA) acceptable to EPA |

**Phase II: Detailed Design**

The second stage will concern detailed design of the integrated water supply network ~~for each island~~

The Consultants will take into account the Environmental Impact Study in his detailed design and will plan for the implementation of the mitigation measures as stated in the EIA and recommended by EPA.

The Detailed Design Report will contain three parts:

**Part 1 (Main report)** will include:

* basic data and interpretation of these data regarding the detailed design;
* Brief Description of the formulae, methods and models used for any calculations
* general justification and description of the proposed rehabilitated or new structures;
* Calculation notes section including all hydraulic and structural calculations
* Identification of different construction lots (civil works, electromechanical works etc.);
* works schedule (indication of the timing of each task, links with other tasks, key dates, contractual dates), introduction to nature and quality of materials quality and construction methods (including for maintaining the water production service)

***The detail design report should be in accordance with EPA guidelines. (Design criteria and technical specification for Water treatment and Supply system***

**Part 2 (Bill of Quantities and Cost Estimate)** will include a Bill of Quantities for each structure and then by type of works (earth, concrete, mechanical, electrical). The Consultants will ~~here~~ explain the unit costs as well as the percentage considered for miscellaneous and contingencies. Finally, cost estimation will be carried out on the basis of quantities and unit costs. The Consultants will keep this cost estimate confidential.

The capital costs shall be derived from the Bill of Quantities and unit rates developed from recent tender for works in the MEE, using either unit prices or cost curves and indexed to inflation. The minor items will be estimated using historic current rates and prices prevailing in the Maldives islands.

For the mechanical and electrical equipment, cost estimates will be prepared based on recent experience of the cost of similar work and / or quotations from internationally recognized manufacturers and suppliers. The cost estimates will allow for transportation and erection on site, all out-site costs and off-site overheads. Costs estimates will be sufficiently detailed to ensure a +/- 10% (?) value from construction bids received.

**Part 3 (Technical Report)** will include:

A drawings section that will include a first sub-section related to the existing structures (‘reference drawings’) and a second sub-section related to rehabilitate or new structures (including general layouts, civil structures and electromechanical equipment’s).

|  |
| --- |
| **Outputs of Phase II:**  Report II will include the detailed design of the ‘selected solution for the island including:   * the Main Report; * the Bill of Quantities and Cost Estimate; * Technical Report (Detailed Drawings) |

Final version of the Detailed Design will support preparation of the Tender Documents for the selection of contractors.

**Phase III: Tender Documents & Selection of Contractors**

***Tender Documents***

The Consultants will prepare tender documents accordingly including the following. The Consultant shall also prepare Prequalification Documents if required by the Client

**Volume 1: Tender and Administrative Documents**

**Volume 2: Technical Specifications and Schedules**

**Volume 3: Drawings and Layouts**

**Volume 1** will include at least the following:

* **Invitation to Tender;**
* **Description of the Works and Quantities;**
* **Instructions to Bidders;**
* **Conditions of Contract, Form of Tender (and Appendix);**
* **Bill of Quantities and Schedules;**
* **Form of Contract Agreement, Form of Tender Security, Form of Performance Security, Form of Guarantee for advance payment**

**Conditions of Contract** will be incorporated as the final legal agreement to be drawn up between the Contractor and the Client. The Conditions of Contract would be drawn up in close co-operation with the Client and would incorporate such special clauses as may be required.

Typically the Conditions of Contract will be based on the following:

* For Civil Engineering works: FIDIC Conditions of Contract for Construction (MDB Harmonized Edition), For Building and Engineering Works Designed by the Employer.

The **Bill of Quantities and Schedules** will be prepared for all the tender packages as a basis for tendering and for payment under the Contract. Civil Engineering Standard method of measurement shall be recommended wherever possible.

**Volume 2** will include Technical Specifications and Schedules. Technical Specification will be prepared for all items to be constructed, supplied or erected. Materials and work specifications will cover all aspects of materials and equipment to be provided. Requirements for operating /maintenance and training manuals that include equipment cut sheets, SOPS, and 5 year spare parts lists shall be incorporated into the specifications.

The Consultants will use local or national standards where possible. Where no suitable local or national standards exist then international standards such as BS, ASTM, ISO etc. will be used.

Where possible, the specification of materials (locally produced or imported) will be specified. Construction Schedules will be issued in details.

**Volume 3** will be based on part 3 of the detailed design. All drawings will show clearly defined contract limits relating to the various divisions of works. Drawings will include general arrangement drawings, sections, elevation, typical details and typical reinforcement detailed. In addition detailed reinforcement drawings and bar schedules will be included in the tender documents. Drawings for mechanical and electrical equipment will show facility piping layouts, main outlines and leading dimensions in sufficient details for the manufacturers to design the adequate equipment. Electrical drawings to include appropriate power distribution single lines, lighting systems, grounding systems, specific equipment control schematics, etc. to ensure sufficient detail is provided to operate and maintain equipment. In addition include process flow and Process/Instrumentation diagram for RO systems. Ensure systematic labeling of equipment and related wiring is provided in sufficient detail to support troubleshooting and maintenance.

The Consultants will assist the MEE (acting as the “Employer” in FIDIC terminology) in the selection of the Contractors. This assistance will be effective during the three principal stages of the Contract Procurement process. These stages are:

a) The site visit and the pre-bid meeting

The site visit for Contractors shall be organized not later than two to three weeks after the invitation to tender is issued, in order to speed up the tendering process, and to involve rapidly the Contractors interested in the preparation of tenders.

A pre-bid meeting shall be organized immediately after or before the site visit. Questions raised by the bidders could be then answered either immediately or later through additional documentation. The Consultants will assist in the preparation of pre-bid meeting and in the preparation of replies to questions.

b) The evaluation of tenders:

The evaluation of bids will be based on the tender documents and on predetermined criteria and will be conducted jointly by the MEE’s Engineer (acting as Engineer in FIDIC terminology) and the Consultants (acting as “Engineer’s Representative” in FIDIC terminology). After verification of conformity of the Bids to the tender documents, these Bids will be the subject to a technical and economic analysis, enabling them to be evaluated and ranked.

The Consultants will then compile all findings of the analysis in an evaluation report

c) The award of contracts

The objective is to assist the MEE in the award of the contracts, preparation of confirmed copies of contracts and determination of contracts' effective dates.

**Outputs of Phase III:**

Report III including the tender documents including:

• Volume 1: Administrative and tender documents;

• Volume 2: Technical specifications and schedule;

• Volume 3: Construction Drawings and layouts

The evaluation report for selection of contractors Appropriate Contractors have been selected

**Phase IV: Works Design, Coordination and Supervision**

***Construction Design***

The purpose of this task is to finalize without any ambiguity the permanent works to be executed. The Consultant will prepare the Construction Design on the basis of the Detailed Design and tender documents, his own experience and international standards and practice. The Consultant will prepare construction drawings as the Contractual Documents which define the works to be carried out by the Contractor. They will include:

* Construction drawings for structural works: they will include the foundation drawings for permanent works.
* Layout drawings related to the electromechanical equipment to be incorporated into the structures: they will be the basis of the coordination of all equipment components up to their location and the design of circuits such as cables and pipes.

When the Contractor may propose a construction solution (or transfer documents from suppliers for equipment), the Consultant will examine and verify the related drawings and calculation notes, giving particular attention to the compliance with Specifications and design criteria. All responses to official exchanges between the Consultant and the Contractors should be issued within one week within reception of the documents.

***Construction Supervision***

The construction supervision phase of the project will be carried out during project implementation. Expected duration of the phase is 24 months.

The Consultants will implement Construction Supervision including:

a. **Coordination of works:** the Consultant will organize and direct execution of the works, by defining compliance with programmes and relations between stakeholders (MEE, Engineer, Contractors, Suppliers and third parties). Coordination will be ensured mainly by holding regular site meetings and general monthly meetings, with managers of the Contractors and Manufacturers, the MEE and the Engineer.

**b. Supervision of field surveys:** the Consultants will supervise the Contractors who should carry out field surveys such as topographic, hydro-geological and geological surveys. The Consultants will prepare technical reports on all measurements made by the Contractor and will submit them to the Engineer.

**c. Identifying Special Studies:** in case the Consultants during progress of work come to the conclusion that special studies would be required to assist the Project Management Unit (PMU) in specific problems unforeseeable before conclusion of consulting contract, he will inform the Engineer immediately and early enough to allow the Employer to arrange for such expertise.

**d. A Quality Control and Quality Assurance Plan** will be developed by the Consultants to ensure that the structures are built and equipment installed in conformity with the Contractual Specifications, approved drawings, standards, good engineering practice and State-of-the-Art.

**e. A Plan for Project Cost Control** will be developed on the basis of the field survey control and quantity survey required for determination of actual quantities of work accomplished by the Contractor(s) and Supplier(s) under direct guidance of the Project Manager and Director, the Consultant will approve or reject the quantities of materials delivered, equipment erected, and works performed by the Contractor(s) and Manufacturer(s).

**f. Plan for Project Progress Control:** using the same basic data as those established for project cost control, a progress chart will be maintained and updated in the Consultant(s) office. The work progress will be followed by the Consultant especially during the weekly works meetings on sites. A monthly report of weekly meetings will be established by the Consultant.

**e. Representing the Engineer:** the Consultants shall be the Engineer’s representative on site and shall perform all duties delegated by the Engineer in writing in accordance with FIDIC. The Engineer for the project will be appointed by the MEE in writing.

**f. General Reporting** to Government. The Consultants will assist the MEE in supplying information related to the design and works progress to Government.

***Works commissioning***

The Consultants will implement Works commissioning including:

i. Supervising the acceptance tests and preparing the Completion Certificate and the Temporary Acceptance Certificate.

j. Preparing the **Completion Report** which will be based on the record maintained during construction design and work supervision phases. It will include the environmental completion report which will be submitted to MEE for compliance with initial recommendations.

**k. Implement Shop Inspection of Electromechanical Equipment:** the Consultants will check the manufacturing of equipment and will attend tests of main items for acceptance as and when necessary. These tests concern mechanical tests and chemical analyses, routing tests and standard tests, dimensional checks and Non-destructive tests.

**l. Prepare ‘As-Built Drawings’.** The Consultants will prepare ‘As-Built Drawings’ during construction of works. On completion of the Project, the Consultants will submit to the Employer two (2) complete sets of all detailed drawings and computations in accordance with revisions made during the construction.

**m. Prepare Operation and Maintenance Manuals:** Based on the information and booklets received from the Contractors, Manufacturers, Suppliers and his own experience, the Consultants will prepare the Operation and Maintenance Manuals. He will complete the Manuals with the O&M recommendations identified in Phase I.

**Outputs of Phase IV:**

• Construction drawings are issued as per the Construction Schedule.

• Contractors and Suppliers are properly supervised and coordinated.

• Quality Control and Quality Assurance Plans are issued.

• Various authorizations and instructions to the Contractor(s) and/or Manufacturer(s) being issued regularly.

• Plan for Project Cost Control update delivered monthly

• Plan for Project Progress Control update delivered monthly

• Works are temporarily commissioned, ‘As Built Drawings’ delivered and Operation & Maintenance Manuals issued.

# Phase V: Capacity Building and Performance Control over Defect Liability Period

# *Capacity Building*

The Consultant will provide on-the job training to the counterpart staff on all aspects of the work carried out. Selected counterpart staff from each island will be attached to the Consultant’s team for on-the-job-training in surveying, detailed design and construction supervision. During construction stage the contractor will provide on-the-job training to the selected counterpart staff from the beginning of construction works.

After commissioning, the Consultant will organize a formal two weeks training for the operation and maintenance of the works rehabilitated or newly installed, followed by two weeks of practical exercises on sites.

***Defect Liability of Contractors***

The Consultant will carry out quarterly inspections during the one year defects liability period and instruct accordingly the contractors with regard to outstanding works and defects. After this period and satisfactory inspections, the Final Acceptance Certificate will be issued.

***Defect Liability of the Consultants***

The Engineer 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)

**Outputs of Phase V:**

• Key MEE staff are trained on the job and formerly;

• Defect liability of contractors has been controlled

## 3.1General Requirements

*Coordination of works*

The Consultant will monitor and report on the progress of the works liaising with MEE and the Contractors. Coordination will be ensured by holding regular site meetings and general monthly meetings, with managers of the Contractors and the MEE.

The Consultant shall establish a field office at each location for the adequate operation and management of the tasks specified.

The Consultants will supervise the Contractors throughout the design phase and completion of preliminary field surveys. The Consultants will prepare technical reports on all designs made by the Contractor and will submit them to the MEE.

Quality Control and Quality Assurance monitoring will be carried out by the Consultant to ensure that the structures are built and equipment installed in conformity with the Contractual Specifications, approved drawings, standards and good engineering practice.

A Plan for Project Cost Control will be developed on the basis of the field survey control and quantity survey required for determination of actual quantities of work accomplished by the Contractor. The Consultant will approve or reject the quantities of materials delivered, equipment erected, and works performed by the Contractor.

A progress chart will be maintained and updated in the Consultants’ office. The work progress will be followed by the Consultant especially during the weekly works meetings on sites. A monthly report of weekly meetings will be established by the Consultant and forwarded to the

MEE.

The Consultant shall be the Employers Representative on site and shall perform all duties delegated by the Employer in writing in accordance with FIDIC Conditions of Contract for Plant and Design-Build, First Edition, 1999.

The Consultants will assist the MEE in supplying information related to the design and works progress to Government and Green Climate Fund.

# Project Team

A total of 16 staff will be required and situated in the locations specified below;

|  |  |  |
| --- | --- | --- |
| # | **Post** | **No** |
| 1 | Project Manager (Team leader) | 1 |
| 2 | Sewerage / Water / Civil engineer | 2 |
| 3 | Electro-Mechanical Engineer | 2 |
| 4 | EIA Specialist | 1 |
| 5 | Surveyor | 2 |
| 6 | Senior Engineer | 4 |
| 7 | Field Engineer | 4 |

## Similar Assignments

To be eligible for this assignment, the consultancy firm must demonstrate past experience in performing the services (description of similar assignments, Value of such assignments). The Firm shall have carried out a minimum of Four (4) similar assignments with a minimum contract value of MVR 1000,000.00 each within the last 5 years.

## Qualifications of the Design and Consultancy team

The Consultant should submit full CV’s for each of the proposed staff members highlighting the criteria given below.

1. ***Project Manager***

Bachelor’s degree in Project Management or Environmental Management/Science or in a related field with minimum 10 years’ experience in project management, along with specific experience in the field of Water and Sewerage projects. Tertiary certification will be an added advantage.

1. ***Civil Engineer***

Bachelor’s degree in Civil/Environmental Engineering with minimum 05 years’ experience along with Specific experiences in designing sewerage systems. Tertiary certification will be an added advantage.

1. ***Electro-Mechanical Engineer***

Bachelor’s Degree in Electrical/Mechanical Engineering with minimum 05 years’ experience along with specific experience in designing Electro-Mechanical components of Water/Sewerage Facilities. Tertiary certification will be an added advantage.

1. ***EIA Specialist***

Bachelor’s Degree in Environmental Science/Environmental Management with minimum 5 years’ experience in conducting Environmental Impact Assessment (EIA). Experience in conducting EIA for RO and other water infrastructure will be given preference. Post graduate qualifications will be an added advantage.

1. ***Surveyor***

Diploma in Surveying with minimum 05 years’ experience in conducting land surveys

1. ***Senior engineer***

The Senior Engineer shall have a Bachelor of Engineering or higher with a minimum of 10 years’ experience in Construction Site Management and specifically 3 years as a senior project manager working on Sewerage Construction projects. The Senior Engineer should also have demonstrated experience in the use of dewatering techniques for construction in areas with high water tables and an understanding of the difficulties limitations and mitigation methods required to minimize the impacts of dewatering. The Senior Engineer shall be fluent in both written and spoken English with Divehi an advantage.

1. ***Field Engineer***

The technical field Officer shall have a Bachelor of Engineering or similar degree with a minimum of 3 years’ experience in Construction Site Management with at least 1 year experience in the construction of sewerage infrastructure projects. The Field Engineer shall be fluent in both written and spoken English with Divehi an advantage.

# Reporting Requirements

The consultants should submit a Monthly report at the end of each month in a format agreed with the MEE representative. At the end of each quarter a consolidated report summarizing the events of the months preceding shall be submitted in place of the monthly report.

A final report shall be produced 30 days following the issuance of the Performance Certificate to the Contractor engaged under the Design and Consultancy Contract.

# Equipment, logistics and facilities

The Consultants shall ensure that experts are adequately supported and equipped. In particular he/she shall ensure that there are sufficient administrative, technology, computing and secretarial provisions to enable experts to concentrate on their primary responsibilities. The Consultant shall meet the full costs for the supply of the teams including all travels, remuneration, insurance, emergency medical aid, facilities and all else necessary for the competent operation of the teams. The Consultants will provide their own office space for the Project team.

During works supervision, the Contractors will provide the Consultant with necessary transportation to all sites and office space with furniture, equipment and facilities (electricity, telephone etc.) for the execution of supervision activities as well as accommodation for Consultant’s personnel. These facilities will be made available by the contractor to whom the works will be awarded. Such requirements shall be detailed in the bidding documents and then reflected in the civil works contract

# Remuneration

Remuneration will be in accordance with the schedule specified below.

|  |  |  |
| --- | --- | --- |
| **DESCRIPTION** | **ALLOCATION** | **REQUIREMENT** |
| Advance Payment | 10% | Advance Payment Bank Guarantee - submitted within 30 days of receiving the Letter of Acceptance (10% of the value of the agreed Contract Price). |
| The Consultant shall submit to the Client itemized statements, according to the progress of Services, as follows:  Phase I, II and III: (40% of contract amount)  Payments for these phases will be according to the progress of Services. The total amount for these phases will be paid as follows: | | |
| Payment upon Submission of final Inception Report | 05% |  |
| Payment upon Submission of final Concept Design Report | 10% |  |
| Payment upon approval of EIA report and approval of Detailed Design Reports | 10% |  |
| Payment upon approval of final Tender Documents | 10% |  |
| Payment upon approval of Tender Evaluation Report | 05% |  |
| **Total Payment for Design** | **40%** |  |
| **Phase IV: (60% of contract amount)**  The payments for this phase will be effected on a monthly basis, according to actual time input, and actual amounts spent. | | |
| **Total Payment for Supervision** | **60%** |  |
| Amortization of 20% will be deducted from each monthly invoice to recoup the advance payment  Advance Payment will be paid upon Submission of Advance Payment Bank Guarantee | | |

# Deliverables

The consultants shall submit the following reports

* Detail map showing all survey results in AutoCAD format (if not available)
* Concept Design and Report
* Preliminary Design Report (2 hard copies + Soft copy)
* EIA report (Hard copies + Soft copy as per EPA requirement)
* Detailed Design Report (3 hard Copies + 1 soft copy) as per Design guidelines of EPA.
* Bill of quantities and Technical specifications (2 hard copies + 1 soft copy)
* Complete bid document (2 hard copies + 1 soft copy)
* Monthly report
* Quarterly report
* Final report

# Technology Transfer

The Consultant shall consider the information and technology transfer as an important aspect of this project. The Consultant shall provide client staff the opportunity to be involved in the working team of Consultants during the design phase of the project for their capacity development wherever possible. If requested by Clients staff, the Consultant shall brief, explain design assumptions and demonstrate the survey and design procedures.

# Duration of the Assignment

All surveying, preparation and submission of design documents should be completed within 06 months. Tender assistance should be given to Client and NTB during tender, evaluation and award stage.

The period of total engagement will be 18 months commencing upon the signing of the contract agreement with the selected Consultant for the Design and Consultancy Works. Tentative schedule showing the engagement is shown below.

1. Staff months, days, or hours as appropriate. [↑](#footnote-ref-2)
2. Local transportation costs are not included if local transportation is being made available by the Client. Similarly, in the project site, office rent/accommodations/clerical assistance costs are not to be included if being made available by the Client. [↑](#footnote-ref-3)