

Request for Proposal – Consultancy Services for formulation of design criteria and technical specifications for designing drainage and flood management systems in the Maldives using Sustainable Drainage System (SuDS) and Manage Aquifer Recharge (MAR) principles



**Ministry of Environment, Climate Change and Technology**  
Republic of Maldives

**REQUEST FOR PROPOSAL**

**Consultancy Services for formulation of design criteria and technical specifications for designing drainage and flood management systems in the Maldives using Sustainable Drainage System (SuDS) and Manage Aquifer Recharge (MAR) principles**

**“Supporting Vulnerable Communities in Maldives to Manage Climate Change-induced Water Shortages Project”**

**Issued on: 20<sup>th</sup> June 2021**

**Issued By:**

GCF Project Management Unit  
Water and Sanitation Department  
Ministry of Environment, Climate Change and Technology

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## 1 SCHEDULE OF CRITICAL DATES

ACTIVITY	ACTION DATE
Advertised Date	20 <sup>th</sup> June 2021
Registration Deadline	Before 1200hrs on 27 <sup>th</sup> June 2021
Bid Clarification Deadline	27 <sup>th</sup> June 2021 before 1400hrs
Deadline to submit proposals	1100hrs 30 <sup>th</sup> June 2021

## 2 SUBMISSION REQUIREMENTS

Interested parties **shall submit** all the Forms listed under **Sections 6 (TECHNICAL PROPOSAL - STANDARD FORMS)** and **Section 7 (FINANCIAL PROPOSAL - STANDARD FORMS)**.

Please CHECK in the BOXES to confirm the submission of the required Forms.

- 1. Proposal Submission Form, Consultant's Information form, and Joint Venture Information Form (Form Tech-1A, 1B & 1C)
- 2. Consultant's Organisation, summary of contract commitments of the firm, General Experience of the firm and Specific Experience of the firm (Form Tech -2A,2B, 2C & 2D)
- 3. Approach, Methodology and Work Plan (Form Tech -3)
- 4. Team Composition & Task Assignments (Form Tech -4)
- 5. Curriculum Vitae (CV) for proposed Professional Staff (Form Tech -5)
- 6. Work Schedule (Form Tech -6)
- 7. Financial Proposal Submission Form (Form Fin 1)
- 8. Financial Proposal Summary Form (Form Fin 2)
- 9. Financial Proposal Summary Form (Form Fin 3)
- 10. If more than one party wishes to show interest as a JV, Joint Venture or Association Agreement between the parties needs to be provided.

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Please CHECK in the BOXES to confirm the submission of the required related documents.

- 11. Company profile of the consultancy firm
- 12. Company registration certificate of the consultancy firm
- 13. Organization chart of the consultancy firm
- 14. Copy of the National Identity Card/Passport, Attested copies of Educational Certificates (if needed as per selection criteria in TOR) of Proposed members in Form Tech-5
- 15. Stamped/signed project completion letters for ALL the projects Listed under FORM TECH-2: Proponent’s Organization and Experience Form. (Cross refer to Project# in the Form)
- 16. GST Registration Certificate
- 17. Provide links or copies of the samples of relevant pieces completed to date (Cross refer to Project# in the FORM TECH-2: Proponent’s Organization and Experience Forms).

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### **3 LETTER OF INVITATION**

**Subjects: Consultancy Services for for formulation of design criteria and technical specifications for designing drainage and flood management systems in the Maldives using Sustainable Drainage System (SuDS) and Manage Aquifer Recharge (MAR) principles.**

The Government of Maldives represented by the Ministry of Environment (ME) has received funding from the Green Climate Fund (GCF) for the project “Supporting Vulnerable Communities in Maldives to Manage Climate Change-Induced Water Shortages” and intends to apply part of the proceeds towards procuring the services of a Consultancy Firm for the works of **“for formulation of design criteria and technical specifications for designing drainage and flood management systems in the Maldives using Sustainable Drainage System (SuDS) and Manage Aquifer Recharge (MAR) principles.”**

The main objective of the consultancy is to undertake in depth assessment of the groundwater quality and recharge rates and design managed aquifer recharge systems in order to ensure improved aquifer recharging and protection in the selected islands.

#### Specific Objectives

The specific objectives are to;

1. Required precipitation data including its duration, resolution, etc. Required design rainfall for flood mitigation aspects.
2. Required hydrogeological (e.g. soil characteristics, bore well data) and geographical (e.g. land use) data.
3. Establishing the requirements and potential of the groundwater recharge
4. Required topographic, geographic data collection standards.
5. Overview of the island land use planning with storm water management, aquifer recharge opportunities, etc., indicated in a spatially explicit manner. These should be in consultation with the island council and compatible with their spatial planning.
6. Guidance and requirements on detailed design of island specific SuDS. These should include guidance, specifications and standards on detailed drawings, detailed hydrologic and hydraulic calculations, BOQs, etc.
7. Guidance on hydraulic modelling results demonstrating (a) Drainage/flood management performance and (b) MAR performance and (c) other co-benefits.
8. Guidance on modelling the performance of the system under extreme rainfall with different return periods.

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9. Guidance on evaluating the performance of the system under (simple) future scenarios of rainfall (e.g. % increase of extreme rainfall) and land use (e.g. increase of built-up area) should be presented.
10. Guidance on required and recommended groundwater flow modelling.
11. Guidance on providing maintenance and renewal requirements of the systems
12. Guidance on economic analysis including cost-benefit and life cycle costing.

A detailed Terms of Reference (TOR) for each of the above components and Request for Proposal (RFP) for the consulting services will be attached to the gazette advertisement and also made downloadable on the Ministry's website [www.environment.gov.mv](http://www.environment.gov.mv). Interested consultation Firms may obtain further information via mail to [proc.gcfws@environment.gov.mv](mailto:proc.gcfws@environment.gov.mv).

The Bidder shall be registered to submit the proposal by submitting 'Bidders' Registration Form' to the email address [proc.gcfws@environment.gov.mv](mailto:proc.gcfws@environment.gov.mv) **Before 1200hrs on 27th June** . Only registered bidders will be qualified to submit a bid proposal. The form will be attached to this gazette advertisement.

Proposals shall be delivered in a sealed envelope, bearing the name of the project **"Consultancy Services formulation of design criteria and technical specifications for designing drainage and flood management systems in the Maldives using Sustainable Drainage System (SuDS) and Manage Aquifer Recharge (MAR) principles.**

Bid opening time and date, the address the bid is submitted to (as in the RFP), and the bidders company name, to the Ministry of Environment at the address specified in the RFP. Proposals shall be valid for a period of 90 days from the date of Opening. Electronic submissions are not allowed.

Bids should be submitted on **Maldivian time 1100hrs 30th June 2021** (Only bids submitted at this time will be eligible to proceed to evaluation). The bids will be opened at **Maldivian time 1100hrs 30th June 2021** . Any late bids will be rejected.

**GCF Project Management Unit  
Water and Sanitation Department  
Ministry of Environment, Climate Change and Technology  
Green Building, Handhuvaree Hingun,  
Maafannu, Male', 20392,  
Republic of Maldives  
Tel. (960)-3018-395  
Email: [proc.gcfws@environment.gov.mv](mailto:proc.gcfws@environment.gov.mv)**

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## INSTRUCTIONS TO CONSULTANTS

### 3.1 Introduction

- a) The Client named in the **Data Sheet** will select a Consultancy Firm from those Firms that submit their proposals for this request.
- b) Interested parties 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.
- c) The party as a Lead Consultancy firm can propose **1 (one) Associate Consultancy firms** to partner with for the consultancy. The Lead and Associate Consultants (if any) will be evaluated as according to evaluation criteria set in the **Data Sheet**.
- d) The Client will select a Consultancy Firm from those who show interest to this call for proposals, in accordance with the method of selection specified in the **Data Sheet**.
- e) As a direct response to this document, interested parties must provide their detailed proposals for the **“Consultancy Services for formulation of design criteria and technical specifications for designing drainage and flood management systems in the Maldives using Sustainable Drainage System (SuDS) and Manage Aquifer Recharge (MAR) principles”**. 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.
- f) The Applicants 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 Applicants.
- g) 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.

### 3.2 Conflict of interest

- a) 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

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stemming from this relationship has been resolved in a manner acceptable to the Government throughout the selection process and the execution of the Contract.

- b) 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.

### 3.3 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:

- a) defines, for the purposes of this provision, the terms set forth below as follows:
  - i. “corrupt practice” is the offering, giving, receiving or soliciting, directly or indirectly, of anything of value to influence improperly the actions of another party;
  - ii. “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;
  - iii. “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;
  - iv. “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.
  - v. “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.



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- b) will reject a proposal for award if it determines that the firm 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;
- c) 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
- d) 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.

### **3.4 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 Applicants could submit new staff in replacement, who would be considered in the final evaluation for contract award. Applicants who do not agree have the right to refuse to extend the validity of their Proposals.

Bid Security shall also be extended for a corresponding period. A Bidder may refuse the request without forfeiting its Bid Security. A Bidder granting the request shall not be required or permitted to modify its Bid.

In the case of fixed price contracts, if the award is delayed by a period exceeding ninety (90) days beyond the expiry of the initial Bid validity, the Contract price shall be adjusted as specified in the request for extension. Bid evaluation shall be based on the Bid Price without taking into consideration the above correction

### **3.5 Language of Proposal**

The proposal documents must be in written English.

### **3.6 Preparation of Proposals**

- a) The Proposal (see para. 1.2), as well as all related correspondence exchanged by the Consultants and the Client, shall be written in the language (s) specified in the RFP.

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- b) In preparing their Proposal, Applicants are expected to examine in detail the documents comprising the RFP. Material deficiencies in providing the information requested may result in rejection of the Proposal.
- c) Alternative professional staff shall not be proposed, and only one curriculum vitae (CV) may be submitted for each position.

### **3.7 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 (Section 6. Technical Proposal).

- a) A brief description of the Consultants' organization and an outline of recent experience of the firm, on assignments of a similar nature are required in FORM TECH 2A & 2B of Section 6. 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. Assignments completed by individual Professional staff working privately or through other organisations cannot be claimed as the experience of the Firm, 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.
- b) A description of the approach, methodology and work plan for performing the assignment covering the following subjects: technical approach and methodology, equipment that will be used, work plan, and organization and staffing schedule. Guidance on the content of this section of the Technical Proposals is provided under FORM TECH 3 Section 6. The work plan should be consistent with the Work Schedule (FORM TECH 6 of Section 6) which will show in the form of a bar chart depicting the timing proposed for each activity.
- c) 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 of Section 6).
- d) CV's of the professional staff signed by the staff themselves or by the authorized representative of the professional staff (FORM TECH-5 of Section 6).
- e) The Technical Proposal shall not include any financial information. A Technical Proposal containing financial information may be declared non-responsive.

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### **3.8 Financial Proposal Format and Content**

- a) Financial Proposal submitted shall include the total cost specified in the TOR (FORM FIN 1) and the total amount of financial proposal shall be inclusive of Goods and Service Tax (GST).
- b) Financial Proposal submitted shall include the breakdown of cost for each of the deliverables (FORM FIN 2)
- c) Failure to submit the FORM FIN 1&2 will lead to the disqualification of the proposal submitted by the Proponent.

### **3.9 Clarification and Amendment of RFP Documents**

- a) 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**. Requests for clarifications need to be submitted latest by the date and time provided in the **Data Sheet**.
- b) 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.

### **3.10 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.

### **3.11 Submission, Receipt, and Opening of Proposals**

- a) The original proposal (Technical Proposal and Financial Proposal) shall contain no interlineations or overwriting, except as necessary to correct errors made by the Applicants themselves. The person who signed the proposal must initial such corrections.
- b) An authorized representative of the Applicant 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 on behalf of the Firm.

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- c) Applicants shall submit a “Compliance Statement” stating that the offer is made in accordance with the Request for Proposal. Applicants who offer additional or alternative conditions *if applicable* shall clearly state those in their proposals.
- d) The technical proposal and financial proposal must be submitted in a single sealed envelope with one (1) printed copy to the address indicated in the Data Sheet. The proposal shall be placed in a sealed envelope which 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.
- e) 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.

### 3.12 Evaluation of proposals

- a) From the time the Proposals are opened to the time the Contract is awarded, the Applicants should not contact the Client on any matter related to its Technical and/or Financial Proposal. Any effort by Applicants 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.
- b) The Proposals shall be opened publicly in the presence of the Consultants’ representatives who choose to attend. These Financial Proposals shall be then referred, and the total prices read aloud and recorded. Copy of the record shall be sent to all submitted firms.
- c) 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**.
- d) To be eligible for this assignment the consultants must clearly show their capacity to accomplish the work in the required time frame with the proposed project team by showing the adequacy of staff selected and their current workload.

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- e) After the technical evaluation is completed, the bidders who are not qualified for technical evaluation will be disqualified for the financial evaluation.
- f) The Applicant is **REQUIRED** to submit Financial Proposal for the bid, using for this purpose the Financial Proposal Submission FORM FIN 1&2.
- g) 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.
- h) The **highest** evaluated Financial Proposal (Fm) 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 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:  $S = St \times T\% + Sf \times P\%$ . The Party achieving the highest combined technical and financial score for the Proposal will be invited for negotiations.

### 3.13 Damages

- a) The Client may claim damages in respect of any direct loss that can be reasonably attributed to delays, defects or other breaches of contract on the part of the Consultant, unless the Consultant demonstrates that the Consultant did not cause the breach of contract or the reason for the breach of contract.
- b) Liquidated damages shall be the only damages due from the Consultant for such default, other than in the event of termination by Employer under the contract prior to completion of the works. These damages shall not relieve the consultant from their obligation to complete the works, or from any other duties, obligations or responsibilities which they may have under the Contract.
- c) If the agreed delivery date or other time limit in the delivery schedule in respect of which the parties have stipulated is not complied with, and this is not caused by force majeure or circumstances related to the Client, there is a delay on the part of the Consultant that triggers liquidated damages.
- d) The liquidated damages shall accumulate automatically. The liquidated damages amount and the maximum delay damages will be calculated on the basis specified in the **Data Sheet**.

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- e) The Client shall not have the right to terminate the Agreement for breach for as long as the liquidated damages continue to accumulate. However, this time restriction shall not apply in the case of wilful misconduct or gross negligence on the part of the Consultant or anyone for whom it is responsible.
- f) If only parts of the agreed deliverables are delayed, the Consultant may request a reduction in the liquidated damages proportional to the ability of the Client to utilise the part of the deliverables that has been delivered.

#### 4 DATA SHEET

5.1.a	<p><b>Name of the Client:</b></p> <p><b>Ministry of Environment, Climate Change and Technology</b> Green Building, Handhuvaree hingun, Maafannu, Male’, 20392, Republic of Maldives</p>
5.1.b	<p><b><i>Financial Proposal to be submitted together with Technical Proposal in a single envelope on the same day and time specified.</i></b></p> <p><i>Please write name of the Consultancy assignment and other required details as per clause 4.11 on the envelopes.</i></p> <p>Name of the assignment is: “<b>Consultancy Services for formulation of design criteria and technical specifications for designing drainage and flood management systems in the Maldives using Sustainable Drainage System (SuDS) and Manage Aquifer Recharge (MAR) principles</b>”</p>
5.2 Validity	Proposals must remain valid up to 90 days after the submission date.
5.3 Clarifications of RFP Documents	<p>Interested consultants may obtain further information/clarifications no later than <b>27<sup>th</sup> June 2021, 1400hrs</b> before the submission date.</p> <p>GCF Project Management Unit Water and Sanitation Department Ministry of Environment, Climate Change and Technology</p>

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	<p>Green Building, Handhuvaree Hingun, Maafannu, Male', 20392, Republic of Maldives. Tel. (960)-3018-395 Email: proc.gcfws@environment.gov.mv</p>				
<p><b>5.5 Submission, Receipt, and Opening of Proposals</b></p>	<p>The Proposal submission address is:</p> <p>GCF Project Management Unit Water and Sanitation Department Ministry of Environment, Climate Change and Technology Green Building, Handhuvaree Hingun, Maafannu, Male', 20392, Republic of Maldives.</p> <p>The proposals are expected to be submitted to the address on local time <b>1100hrs 30th June 2021</b> . Only bids submitted at this time will be eligible to proceed to evaluation and <b>Late bids will be rejected.</b></p> <p><b>Interested parties should register their interest by email no later than Before 1200hrs on 27th June 2021. Only those parties who register their interest will be allowed to participate in the bid.</b></p> <p><b>Proposal of additional or alternative conditions to RFP is not allowable</b></p>				
<p><b>5.6 Evaluation of Proposals</b></p>	<p><b>Preliminary Evaluation:</b></p> <p>The following criteria's will be evaluated to confirm pass or fail for further technical and financial evaluation of the proposal</p> <ul style="list-style-type: none"> <li>a) Firms shall not propose Key Team Members with any ongoing assignments with the Ministry of Environment.</li> <li>b) Bid Security</li> </ul> <p>Criteria, sub-criteria, and point system for the evaluation of Full Technical Proposals are:</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 80%;"><b>(A) Company Profile:</b></td> <td style="text-align: right;"><u>Points</u></td> </tr> <tr> <td></td> <td style="text-align: right;"><b>[90]</b></td> </tr> </table>	<b>(A) Company Profile:</b>	<u>Points</u>		<b>[90]</b>
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	<p>1. No. of similar projects- General Experience [50]</p> <p>2. No. of similar projects- Specific Experience [40]</p> <p style="text-align: right;">Total A = [ ]</p> <p>The number of points to be assigned to each of the above components shall be determined considering the following four sub-criteria</p> <p><b>General Experience</b>          Consultancy experience of the Firm/JV in the involving multi-disciplinary expert teams with 10 points per project with a maximum of 50 points (only successfully completed projects with reference letters will be counted).</p> <p><b>Specific Experience</b>          Consultancy experience of the Firm/JV which are related to the scope of works of water, sewerage, road and flood mitigation consultancy works 10 points per project with a maximum of 40 points (only successfully completed projects with reference letters will be counted).</p>
	<p><b>(B) Project Team [200]</b></p> <p>1. Lead SuDS Expert [100]</p> <p>2. Local Environmental Expert [100]</p> <p style="text-align: right;">Total B = [ ]</p> <p>The number of points to be assigned to each of the above positions or disciplines shall be determined in the TOR.</p>
	<p><b>(C) Approach, Methodology &amp; Work plan [40]</b></p> <p>1. Approach &amp; Methodology [20]</p> <p>2. Work plan of the Assignment [20]</p> <p style="text-align: right;">Total C = [ ]</p> <p>The marks of this section will be based on conformity of the FORM 3&amp;6 to the Scope of Works and Deliverables as in the TOR.</p>



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	<p>Technical Score (St) = <math>A/90*[W1] + B/200*[W2] + C/40*[W3]</math></p> <p>Weights Distribution</p> <table data-bbox="443 434 1358 562"> <tr> <td>W1</td> <td>Company Profile</td> <td><b>[20]</b></td> </tr> <tr> <td>W2</td> <td>Project Team</td> <td><b>[70]</b></td> </tr> <tr> <td>W3</td> <td>Approach &amp; Methodology</td> <td><b>[10]</b></td> </tr> </table> <p>The minimum technical score (St) required to pass is: <b>65</b> Points</p> <p>The bidder who acquires the minimum technical score will not be subjected to disqualification due to non-compliance of any major/sub criteria of evaluation. In case of such occurrence, clarification will be made to the respective bidder and the proposal will be evaluated based on additional information.</p> <p>The formula for determining the financial scores is the following:  <math>S_f = 100 \times F_m / F</math>, in where <math>S_f</math> is the financial score, <math>F_m</math> is the <u>lowest price</u> and <math>F</math> the price of the proposal under consideration.</p> <p>The weights given to the Technical and Financial Proposals are:  <math>T = [0.6]</math>, and  <math>P = [0.4]</math></p>	W1	Company Profile	<b>[20]</b>	W2	Project Team	<b>[70]</b>	W3	Approach & Methodology	<b>[10]</b>
W1	Company Profile	<b>[20]</b>								
W2	Project Team	<b>[70]</b>								
W3	Approach & Methodology	<b>[10]</b>								
<p><b>5.7 Retention</b></p>	<p>A retention will be deducted from the interim certificates, the amount of retention and the repayment of retention will be calculated on the basis of clause 10.68 of the Public Finance Act published by the Ministry of Finance</p>									

Request for Proposal – Consultancy Services for formulation of design criteria and technical specifications for designing drainage and flood management systems in the Maldives using Sustainable Drainage System (SuDS) and Manage Aquifer Recharge (MAR) principles

## 5 TECHNICAL PROPOSAL - STANDARD FORMS

### 5.1 FORM TECH-1: Proposal Submission Form

[Location, Date]

To: [Name and address of Client]

Dear Madam/Sir:

We, the undersigned, offer to provide the consultancy service for **Consultancy Services for formulation of design criteria and technical specifications for designing drainage and flood management systems in the Maldives using Sustainable Drainage System (SuDS) and Manage Aquifer Recharge (MAR) principles** in accordance with your Request for Proposal dated [xxx] and our Proposal. We are hereby submitting our Proposal, which includes all required documents as per Request for Proposal.

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: \_

Request for Proposal – Consultancy Services for formulation of design criteria and technical specifications for designing drainage and flood management systems in the Maldives using Sustainable Drainage System (SuDS) and Manage Aquifer Recharge (MAR) principles

### 1B - Consultant's Information Form

*[The Consultant shall fill in this Form in accordance with the instructions indicated below. No alterations to its format shall be permitted and no substitutions shall be accepted.]*

Date: *[insert date (as day, month and year) of Proposal Submission]*

Procurement Reference No.: *[insert reference number]*

Page \_\_\_\_\_ of \_\_\_\_\_ pages

1. Bidder's Legal Name	<i>{insert Bidder's legal name}</i>
2. In case of JV, legal name of each party:	<i>{insert legal name of each party in JV}</i>
3. Bidder's actual or intended Country of Registration:	<i>{insert actual or intended Country of Registration}</i>
4. Bidder's Year of Registration:	<i>{insert Bidder's year of registration}</i>
5. Bidder's Legal Address in Country of Registration:	<i>{insert Bidder's legal address in country of registration}</i>
6. Bidder's Authorized Representative Information	
Name:	<i>{insert Authorized Representative's name}</i>
Address:	<i>{insert Authorized Representative's Address}</i>
Telephone/Fax numbers:	<i>{insert Authorized Representative's telephone/fax numbers}</i>
Email Address:	<i>{insert Authorized Representative's email address}</i>
7. Attached are copies of original documents of: <i>{check the box(es) of the attached original documents}</i>	
<input type="checkbox"/> Articles of Incorporation or Registration of firm named in 1, above.	
<input type="checkbox"/> In case of JV, letter of intent to form JV or JV agreement.	

Request for Proposal – Consultancy Services for formulation of design criteria and technical specifications for designing drainage and flood management systems in the Maldives using Sustainable Drainage System (SuDS) and Manage Aquifer Recharge (MAR) principles

- In case of government owned entity from the Republic of Maldives, documents establishing legal and financial autonomy and compliance with commercial law, in accordance with ITB Sub-Clause 4.5.

Request for Proposal – Consultancy Services for formulation of design criteria and technical specifications for designing drainage and flood management systems in the Maldives using Sustainable Drainage System (SuDS) and Manage Aquifer Recharge (MAR) principles

### 1C - Joint Venture Partner Information Form

*[The Bidder shall fill in this Form in accordance with the instructions indicated below].*

Date: *[insert date (as day, month and year) of Bid Submission]*

Procurement Reference No.: *[insert reference]*

Page \_\_\_ of \_\_\_ pages

1. Bidder's Legal Name:	<i>{insert Bidder's legal name}</i>
2. JV's Party legal name:	<i>{insert JV's Party legal name}</i>
3. JV's Party Country of Registration:	<i>{insert JV's Party country of registration}</i>
4. JV's Party Year of Registration:	<i>{insert JV's Part year of registration}</i>
5. JV's Party Legal Address in Country of Registration:	<i>{insert JV's Party legal address in country of registration}</i>
6. JV's Party Authorized Representative Information	
Name:	<i>{insert name of JV's Party authorized representative}</i>
Address:	<i>{insert address of JV's Party authorized representative}</i>
Telephone/Fax numbers:	<i>{insert telephone/fax numbers of JV's Party authorized representative}</i>
Email Address:	<i>{insert email address of JV's Party authorized representative}</i>
7. Attached are copies of original documents of: <i>{check the box(es) of the attached original documents}</i>	
<input type="checkbox"/> Articles of Incorporation or Registration of firm named in 2, above.	
<input type="checkbox"/> In case of government owned entity from the Republic of Maldives, documents establishing legal and financial autonomy and compliance with commercial law.	

## **5.2 FORM TECH-2: Consultant's Organization and Experience**

### **2A – Proponent's Organization**

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

---

## 2B – Summary of contract commitments of the firm

*[All Bidders and partners of a joint venture Bidder should provide information on their current commitments on all contracts that have been awarded, or for which a letter of intent or acceptance has been received, for contracts approaching completion, but for which an unqualified, full completion certificate has yet to be issued.]*

Name (& description) of Contract	Value of outstanding work	Estimated completion date
1		
2		
3		
4		
5		
6		
7		

Note: Please include the works form Firm and JV.

---

## 2C – Experience of the firm (General 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 programmes as needed in TOR and Selection criteria**..] Each project should be accompanied by reference letters from the client to be counted as a valid experience.*

Project Reference Number:	
Contract/Activity Name:	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 MVR):
Start date (month/year): Completion date (month/year):	NO of professional staff-months and Value of the services 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:	
Description of institutions dealt with and nature and frequency of interaction:	

Firm's Name: \_\_\_\_\_

---

## 2D – Experience of the firm (Specific Experience)

*[Using the format below, provide information on each contract/assignment which the Lead Consultant and/or Associate Consultant has undertaken, which can be considered as “Specific Experience” as per the evaluation criteria stated in the **Data Sheet**. Use up to 10 Projects. Each project should be accompanied by reference letters from the client]*

Project # \_\_\_\_\_

Contract/Project Title:	Contract value of the contract (in MVR):
Country: Location within country:	Duration of assignment/activity (months):
Name of Client:	Total NO. of calendar-months of the assignment:
Address:	Approx. value of the services provided by your firm under the contract (in MVR):
Start date (month/year): Completion date (month/year):	NO. of calendar-months provided by associated Proponents:
Name of associated Parties, if any:	Name of 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:	

Organisation/entity's Name: \_\_\_\_\_

*NOTE: Project Completion Letters (signed by the Client) must be submitted for each of the above individual projects*

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### 5.3 FORM TECH-3: Methodology and Work plan

*Technical approach, methodology and work plan are key components of this Proposal. You are suggested to submit your Proposal with the following areas clearly described:*

- a) Methodology for each activity,*
- b) Work Plan*
- c) Organization and Staffing,*

*a) Technical Approach and Methodology. In this chapter you should explain your understanding of the objectives of the assignment, approach to the services, methodology for carrying out the activities and obtaining the expected output, and the degree of detail of such 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 highlight the main activities and sub-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.*

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

5.4.1	5.4.2 Professional Staff				
Designation	Name of Staff	Organisation	Area of Expertise	Position Assigned	Task Assigned
Lead SuDS Expert					
Environmental Expert					

**Note:** Evaluation will be conducted to the teams proposed and indicated in the table above.

---

**5.5 FORM TECH-5: Curriculum Vitae (CV) for proposed team**

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. **Experience/ Employment Record** (pertaining to general experience clause in the evaluation criteria set in the TOR, check separately for all staff) [*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 [Month/Year]: To [Month/Year]: \_\_\_\_  
  
Employer: \_\_\_\_\_

---

Positions held: \_\_\_\_\_

Summary of Projects Undertaken/Role: \_\_\_\_\_

**11. General Experience** any specific requirement (Assignments/projects) mentioned in TOR *Starting with latest assignment, list in reverse order (see format here below):*

From [Month/Year]: To [Month/Year]: \_\_\_\_\_

Assignment Title: \_\_\_\_\_

Client: \_\_\_\_\_

Positions held: \_\_\_\_\_

Summary of assignment/Role by the professional: \_

**12. Specific Experience** Any specific requirement (Assignments/projects) mentioned in TOR *Starting with latest assignment, list in reverse order (see format here below):*

From [Month/Year]: To [Month/Year]: \_\_\_\_\_

Assignment Title: \_\_\_\_\_

Client: \_\_\_\_\_

Positions held: \_\_\_\_\_

Summary of assignment/Role by the professional: \_

**13. Current commitments in Ongoing Projects with the Ministry of Environment**

Name of the Contract/Project: \_\_\_\_\_

From [Month/Year]: \_\_\_\_\_ To [Month/Year]: \_\_\_\_\_

Positions held: \_\_\_\_\_

Summary of Role: \_\_\_\_\_

*A copy of the National Identity Card/Passport and Academic Certificate needs to be attached for each individual*

**Note: Add as separate section if 2 different areas of specific experience is required in TOR**

6.6 FORM TECH-6: Work Schedule

Consultancy Services for formulation of design criteria and technical specifications for designing drainage and flood management systems in the Maldives using Sustainable Drainage System (SuDS) and Manage Aquifer Recharge (MAR) principles

<b>Activity/Deliverable</b>  <i>Note: Pls Update Sub-activities as relevant</i>	<b>Dead line</b>	<b>july 21</b>		<b>Aug 21</b>		<b>sept 21</b>	
Deliverable 01 Inception Report with a detailed methodology and consultancy implementation plan. This will be based on prior consultation with the PMU and other key stakeholders	14 calendar days from contract signature, upon client review and approval						
Client review of deliverable 01, 07 calendar days from the date of submission							
Revised submission of deliverable 01, from consultant after incorporating client comment	07 calendar days from receiving comments from client						
Deliverable 02 Technical specifications for design of flood mitigation and groundwater recharge	90 calendar days from contract signature, upon client review and approval						
Client review of deliverable 02, 21 calendar days from the date of submission							
Revised submission of deliverable 02, from consultant after incorporating client comment	07 calendar days from receiving comments from client						

The Firm/JV shall update this table with the Sub-activities that are proposed for each Deliverable. Note that the Work Schedule must adhere to the period of key Deliverable.

Request for Proposals: Consultancy Services for formulation of design criteria and technical specifications for designing drainage and flood management systems in the Maldives using Sustainable Drainage System (SuDS) and Manage Aquifer Recharge (MAR) principles

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## 7. FINANCIAL PROPOSAL - STANDARD FORMS

### 7.1 FORM FIN-1: Financial Proposal Submission Form

[Location, Date]

To: [Name and address of Client]

Dear Madam/ Sir:

We, the undersigned, offer to provide “**Consultancy Services for formulation of design criteria and technical specifications for designing drainage and flood management systems in the Maldives using Sustainable Drainage System (SuDS) and Manage Aquifer Recharge (MAR) principles. (GCF Project)**” in accordance with your Request for Proposal dated [xxx] and our Technical Proposal. Our attached Financial Proposal is for the sum of [Insert amount(s) in words and figures<sup>1</sup>]. This amount is inclusive of the all 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



Request for Proposals: Consultancy Services for formulation of design criteria and technical specifications for designing drainage and flood management systems in the Maldives using Sustainable Drainage System (SuDS) and Manage Aquifer Recharge (MAR) principles

## 7.2 FORM FIN-2: Financial Proposal Summary

**Summary of Costs: Consultancy Services for formulation of design criteria and technical specifications for designing drainage and flood management systems in the Maldives using Sustainable Drainage System (SuDS) and Manage Aquifer Recharge (MAR) principles (GCF Project)”**

Costs		Amount (in MVR)
Deliverable 01 Inception Report	10%	_____
Deliverable 02 Technical specifications for design of flood mitigation and groundwater recharge	90%	_____
Subtotal		_____
Taxes Applicable (please detail separately all taxes applicable)		_____
<b>Total Amount of Financial Proposal</b>		_____

**Note:**

- *The consultancy firm is to submit copy of the GST registration certificate along with the financial proposal.*
- *All Consultancy firms shall express the price of their services in Maldivian currency*
- *Bidder is liable to clarify (and present necessary documentary evidence) and include all relevant tax for the assignment.*
- *If the firm is subject to GST/BPT as per MIRA Regulations and Guidelines the GST/BPT Registration Certificate and GST quote in the financial proposal need to be included*

Request for Proposals: Consultancy Services for formulation of design criteria and technical specifications for designing drainage and flood management systems in the Maldives using Sustainable Drainage System (SuDS) and Manage Aquifer Recharge (MAR) principles

### 7.3 FORM FIN-3: Financial Summary – Breakdowns

FIN FORM REFERENCE - BREAKDOWN OF REMUNERATION						
Name of assignment						
<b>Deliverable 1</b>						
Sr. No	Name	Position	Currency(ies)	Input (Man-months)	Remuneration (Currency) Rate MVR	Amount in MVR
1		Lead SuDS Expert				
2		Environmental expert				
Subtotal						
<b>Deliverable 2</b>						
Sr. No	Name	Position	Currency(ies)	Input (Man-months)	Remuneration (Currency) Rate MVR	Amount in MVR
1		Lead SuDS Expert				
2		Environmental expert				
Subtotal						
<b>Grand total in MVR</b>						

Request for Proposals: Consultancy Services for formulation of design criteria and technical specifications for designing drainage and flood management systems in the Maldives using Sustainable Drainage System (SuDS) and Manage Aquifer Recharge (MAR) principles

FIN FORM REFERENCE - REIMBURSABLES						
Name of Assignment						
Deliverable 1						
Sr. No	Description	unit	Currency (ies)	Quantity	Unit price	Amount in MVR
1	International Flights	Round trip				
2	Local Flights	Round trip				
3	Accommodation and food expenses	lumpsum				
4	Inter island sea travel	lumpsum				
5	Male support office, logistics, production and printing	per month				
6	Work permit costs	lumpsum				
Sub total						
Deliverable 2						
Sr. No	Description	unit	Currency (ies)	Quantity	Unit price	Amount in MVR
1	International Flights	Round trip				
2	Local Flights	Round trip				
3	Accommodation and food expenses	lumpsum				
4	Inter island sea travel	lumpsum				
5	Male support office, logistics, production and printing	per month				
6	Work permit costs	lumpsum				
Sub total						

*Note: Fill the form fin 3 accordingly, if it is not related write NA where applicable*

## **8.0 TERMS OF REFERENCE**

### **Terms of Reference for formulation of design criteria and technical specifications for designing drainage and flood management systems in the Maldives using Sustainable Drainage System (SuDS) and Manage Aquifer Recharge (MAR) principles**

#### **1. Background and Context**

The Republic of Maldives is a low lying, atoll based, archipelagic nation in the central Indian Ocean. It comprises 1,190 islands grouped into 26 atolls that together occupy a land area of 298 km<sup>2</sup> and form a chain over 820 km in length, spread over an area of around 90,000 sq km. With a total population of 341,256, it is the smallest Asian country in terms of area and population. The country has an average elevation of 1.5 meters above sea- level. The two most important sectors of the economy are tourism and fisheries which contribute nearly 80% of the country's Gross Domestic Product (GDP). Maldives is among the most susceptible and vulnerable to climate change.

##### **1.1 Project description**

The Government of Maldives has received funding from the Green Climate Fund (GCF) for the project “Supporting Vulnerable Communities in Maldives to Manage Climate Change-Induced Water Shortages”.

The outer islands of the Maldives experiences drinking water shortages during the dry season. These shortages have had significant adverse human, environmental and social impacts on the outer island. The key problems pertaining to freshwater security relate to the increasingly variable rainfall patterns induced by climate change and sea-level rise induced salinity of groundwater. The Government faces constraints in responding to the challenge at hand without assistance, especially in the context of anticipated impacts of climate change.

In response to this climate challenge, the 5-year GCF funded project has the objective to deliver safe and secure freshwater to 105,000 people in the islands of Maldives in the face of climate change risks. This will be achieved by delivering the following results:

- a. Scaling up integrated water supply system to provide safe water to vulnerable households (at least 32,000 people, including 15,000 women);
- b. Decentralized and cost-effective dry season water supply system introduced benefiting 73,000 people across 7 Northern Atolls;

- c. Groundwater quality improved to secure freshwater reserves for long term resilience on 49 islands;

The Government intends to apply part of the proceeds towards procuring the services of Consultancy Firm for the works of “Formulation of design criteria and technical specifications for designing drainage and flood management systems in the Maldives using SuDS and MAR principles”

## **1.2 Vulnerability of Maldives**

The Maldivian islands are regularly exposed to multiple natural hazards and the disaster risk scenario for the country can be described as “moderate” due to a low probability of hazard occurrence and high vulnerability from exposure to geographical, topographical and socio-economic factors. Its unique geography makes this archipelagic small-islands nation particularly vulnerable to projected adverse consequences of climate change, including sea-level rise, as well as increases in sea surface temperature, ocean acidification and frequency/intensity of droughts and storms. For example, sea levels are projected to rise within the range of 10 to 100 centimeters by year 2100, threatening submergence of the entire country in the worst-case scenario. Extreme rainfall events are likely to occur at twice the current frequency by 2050. Higher ocean temperatures increase the rate of coral bleaching and increase the risk of massive coral die-off during the local ocean temperature spikes that occur during El Niño events. Within the archipelago some islands are naturally more vulnerable when compared to other islands. Moreover, various human factors have had a compounded effect on making some of the islands more vulnerable.

## **1.3 Groundwater in Maldives**

The freshwater lens underlying each island has historically been the most important water source for islands. The thickness of the freshwater lens, which typically floats atop the denser sea water, is controlled by a number of factors including island width, rainfall rates and associated infiltration and recharge. Knowledge regarding quantity of groundwater of the Maldives during average annual climatic variations is lacking, but recent modelling results indicate that many of the islands are expected to have a measurable freshwater lens although significant decreases in thickness can occur during the dry season months. For smaller islands complete depletion of the lens is likely to occur during the dry season or after successive years of low annual rainfall. The freshwater lens is thicker for islands in the South of the country due to higher rainfall levels than the Central and Northern regions, with the North being particularly

dry. Furthermore, excessive groundwater extraction in relation to recharge has led to salt water intrusion and up-coning of saline water together with the preferential flow paths and reduction of the efficiency of natural recharge processes. Thus, the concern is that during droughts, over-pumping can alter the size of the aquifer and limit recovery to its former size. Observation and anecdotal evidence points to ponding due to soil compaction and reduced infiltration capacity in areas of roads and built up areas, leading to evaporation losses.

When considering factors that affect the quality of groundwater in the outer islands, population growth will mean that sewage discharges will increase by approximately the same rate, and the rate of urbanization (4.2%) will result in higher density communities with knock-on impacts on pollution from waste disposal, particularly given the fragility of the freshwater lenses. Furthermore, higher urbanization will preclude the rainwater to permeate into the underground lenses unless a deliberative protection of catchment areas takes place.

Groundwater is highly vulnerable to the impacts of climate change. Rising global temperatures may result in greater heat stress for people and ecosystems, thus, increasing water withdrawal. In addition, sea-level rise, increased wave energy at the coast and increased frequency of tidal surges will increase island-overtopping events and coastal erosion which will increase saline intrusion into freshwater lenses. Two drought issues are especially risky for Maldives: i) extended dry seasons during which harvested rainwater runs out; and ii) reduced overall recharge during the wet season, affecting the availability of groundwater. Thus, the patterns of rainfall are as important as average annual changes.

Due to the hydrogeology of the island, the interrelated issues of groundwater quality and quantity can, among others, be majorly addressed by management approaches that encompass the entire recharge / catchment area. One of the project results is ensure groundwater quality is improved to secure freshwater reserves for long term resilience. In line with this project objective, it is planned to design criteria and technical specifications (DC&TS hereafter) for the future designs drainage and flood management systems in the Maldives using SuDS and managed aquifer recharge principles.

## **2. Objectives of the Consultancy**

Development of Design criteria and technical specifications for integrated and sustainable management of storm drainage, flood mitigation and groundwater recharge (hereafter referred to as “Sustainable Drainage Systems” or SuDS).

### **3. Scope of Work**

The envisaged and planned scope of work for respective deliverables includes but not limited to the following;

The consultant shall develop design criteria and technical specifications (DC&TS hereafter) for the future designs drainage and flood management systems in the Maldives using SuDS principles. The intention is for these to be used by the government as a basis of approving future SuDS proposals. In addition to the expertise of the consultant and relevant literature study on the topic, it is expected that the consultant will ensure that the DC&TS are appropriate for the particular context of the Maldives.

DC&TS should include (but not limited to) the guidance and standards for the following:

13. Required precipitation data including its duration, resolution, etc. Required design rainfall for flood mitigation aspects.
14. Required hydrogeological (e.g. soil characteristics, bore well data) and geographical (e.g. land use) data.
15. Establishing the requirements and potential of the groundwater recharge
16. Required topographic, geographic data collection standards.
17. Overview of the island land use planning with storm water management, aquifer recharge opportunities, etc., indicated in a spatially explicit manner. These should be in consultation with the island council and compatible with their spatial planning.
18. Guidance and requirements on detailed design of island specific SuDS. These should include guidance, specifications and standards on detailed drawings, detailed hydrologic and hydraulic calculations, BOQs, etc.
19. Guidance on hydraulic modelling results demonstrating (a) Drainage/flood management performance and (b) MAR performance and (c) other co-benefits.
20. Guidance on modelling the performance of the system under extreme rainfall with different return periods.
21. Guidance on evaluating the performance of the system under (simple) future scenarios of rainfall (e.g. % increase of extreme rainfall) and land use (e.g. increase of built-up area) should be presented.
22. Guidance on required and recommended groundwater flow modelling.
23. Guidance on providing maintenance and renewal requirements of the systems

24. Guidance on economic analysis including cost-benefit and life cycle costing.

When preparing DC&TS, the consultant should provide specific, in-detail information on the recommended data, approaches and methodologies that are needed and recommended.

#### 4. Expected outputs and Deliverables

1. Inception report
2. Technical specifications for design of flood mitigation and groundwater recharge

Note:

- Electronic copies of the all deliverables shall be provided to the client in the following formats (where applicable)
  - All the engineering designs should be in CAD formats (e.g. AutoCAD)
  - Documents in editable formats (e.g. Microsoft Word). Final versions should be provided both in editable and PDF formats.
- For all deliverables, 3 weeks shall be given for client review and comments.

#### 5. Duration and Payments Schedule

The consultancy will be undertaken with a period of 118 Days and is expected to start from June 2021. The consultancy contract will be based on lump sum modality and all payments based on realization of respective deliverables as set out in the table below;

Activity / Deliverable	Due date and remarks	Instalment for Payment upon client acceptance and approval of deliverable
Inception Report with a detailed methodology and consultancy implementation plan. This will be based on prior consultation with the PMU and other key stakeholders	14 days from contract signing, upon client review and approval	10% of contract amount



Technical specifications for design of flood mitigation and groundwater recharge	90 days from contract signing, upon client review and approval	90% of contract amount
--	--	------------------------

## 6. Qualifications of the Consultant

The Consultants should submit full CV highlighting the criteria given below.

	Lead SuDS expert		Sub- Category	Total Score	Sub-Score
<b>Education &amp; Qualification</b>	Bachelors degree in hydrology, hydrogeology, civil engineering, water resources or related field			<b>30</b>	<b>15</b>
	Masters degree in hydrology, hydrogeology, civil engineering, water resources or related field				<b>15</b>
<b>General Experience</b>	Experience in designing drainage or road networks, small-scale flood management solutions and SuDS.	(a)	01 – 05 assignments	<b>30</b>	<b>15</b>
		(b)	06 – 10 assignments		<b>30</b>
<b>Specific Experience</b>	Proven experience on drafting guidelines, technical specifications related to the whole or parts of the assignment.	(a)	01-05 assignments	<b>40</b>	<b>20</b>
		(b)	06-10 assignments		<b>40</b>

	Environmental expert (Must be a Maldivian National)		Sub- Category	Total Score	Sub-Score
<b>Education &amp; Qualification</b>	Bachelors degree in environmental science, environmental management, water resource, hydrology, hydrogeology or related field.			<b>30</b>	<b>15</b>
	Masters degree in environmental science, environmental management,				<b>15</b>

	water resource, hydrology, hydrogeology or related field.				
<b>Experience</b>	Experience in undertaking environmental assessments (EIAs) and environmental management plans in the Maldives	(a)	01–05 assignments	<b>60</b>	<b>20</b>
		(b)	06–10 assignments		<b>40</b>
		(b)	11–15 assignments		<b>60</b>
<b>Added advantage</b>	Experience in undertaking environmental assessments (EIAs) and environmental management plans for water, sewerage, drainage, road network, small-scale flood management solutions and SuDS projects Maldives	(a)	01-05 assignments	<b>10</b>	<b>05</b>
		(b)	06-10 assignments		<b>10</b>

**The Consultant for this assignment SHOULD NOT be working in any project assignment in the Ministry of Environment, Climate Change and Technology.**

## 7. Reporting Requirements

The consultants should submit the deliverables as follows

Activity / Deliverable	Due date and remarks	Instalment for Payment upon client acceptance and approval of deliverable
Inception Report with a detailed methodology and consultancy implementation plan. This will be based on prior consultation with the PMU and other key stakeholders	14 days from contract signing, upon client review and approval	10% of contract amount
Technical specifications for design of flood mitigation and groundwater recharge	90 days from contract signing, upon client review and approval	90% of contract amount

The consultant shall have weekly meeting with the client regarding the progress of the works.

### 7.1 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 an assignment with a minimum contract value of MVR 100,000.00.

## 8. 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, computing and secretarial provision 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 their teams. The Consultants will provide their own office space for their Project team.

