**TERMS OF REFERENCE FOR INDIVIDUAL CONSULTANTS AND CONTRACTORS**

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| **Title**  **National Consultancy:** Provide construction services on WASH facilities including decentralized wastewater treatment solution (DWATS) for health care facilities | **Funding Code**  N/A | **Type of engagement**  Individual Consultant | **Duty Station**  Phnom Penh |
| **Purpose of Activity/Assignment:**  The purpose of the consultancy is to **provide construction services on decentralized wastewater treatment solution (DWATS), solar hot water heating systems and handwashing facilities in district referral hospitals and WASH facilities including small-scale wastewater treatment systems and solar hot water heating systems in health centers**:   * Three District Hospitals: NCU (Neonatal Care Units) of three referral hospitals in Kratie (Snuol referral hospital), Takeo (Kirivong referral hospital) and Rattanakiri (Borkeo referral hospital) * Five health centers in Kratie: 1. Damrei Phong, 2. Chroy Thmor, 3. Kanhchor, 4. Svay Chras, 5. Srechi   The consultancy will provide the construction services related to the following tasks (details see Work Assignments below):   1. Technical site assessment (site identification) 2. Development of Construction Documents for each specific site which includes the detailed architectural design with Bill of Quantity (BoQ), structural drawings and construction technical specifications 3. Site Inspection & Quality Assurance 4. Operation & Maintenance of facility and water quality monitoring | | | |
| **Scope of Work:**  The work assignment under this engineering consultancy includes the following tasks:   1. **Technical site assessment (site identification)**    * Conduct the desk review of the health care facilities’ information, which will be provided by UNICEF, in order to assess each health care facility’s characteristics for the possible design options    * Carry out the site assessment for the three referral hospitals (Snoul referral hospital, Kratie, Borkeo referral hospital, Ratanakiri and Kirivong referral hospital, Takeo) to evaluate the characteristics of each site including wastewater discharge system from NCU, handwashing facilities, environment and rooftop/place for solar hot water heating system for NCU, and submit a report of each health care facility with detailing recommendations and design concept note for new construction of DWATS, handwashing and solar hot water heating system installation    * Carry out the site assessment for five health centers (1. Damrei Phong, 2. Chroy Thmor, 3.Kanhchor, 4.Svay Chras, 5. Srechi) in Kratie to evaluate the characteristics of each site including environment, existing health care facility building, WASH facility situation, water quality testing of the existing water sources in health centers, and submit a report of each health center detailing recommendations for improvement of existing WASH facilities and water sources if the quality does not meet the national standard[[1]](#footnote-2), and detailed design concept note for new construction and/or rehabilitation of existing WASH facilities (including small scale wastewater treatment system and solar hot water heating system). The climate resilience of WASH facilities will also be considered as part of the design concept for all health centers    * Develop the ideal design for health care facility which will be used and adapted for each health care facility need for improvement based on the health care facility’s profile 2. **Development of Construction Documents:**   Referral Hospitals   * + Develop construction documents required for each referral hospital on DWATS detailed architectural and structural drawings, construction technical specifications, facility operation and maintenance, Bills of Quantity (BoQ), cost estimates and scope of work for construction work for each referral hospital. The construction documents will need to be certified as meeting appropriate technical guidelines and requirements by UNICEF   + Develop installation documents for each referral hospital on handwashing facilities and solar hot water heating system (in NCU) structural drawings, construction technical specifications, facility operation and maintenance, Bills of Quantity, cost estimates and scope of work for construction work   Health Centers   * + Develop construction documents required for each health center on WASH facilities (including small-scale wastewater treatment system) detailed architectural and structural drawings, construction technical specifications, facility operation and maintenance, Bills of Quantity (BoQ), cost estimates and scope of work for construction work for each health center. The construction documents will need to be certified as meeting appropriate technical guidelines and requirements by UNICEF   + Develop installation documents for each health center on solar hot water heating system (in delivery room), structural drawings, construction technical specifications, facility operation and maintenance, Bills of Quantity, cost estimates and scope of work for construction work  1. **Site Inspection & Quality Assurance:**   The Engineering Consultant will conduct site inspection to three district hospitals in Kratie (1), Ratanakiri (1), and Takeo (1) and three health centers in Kratie to ensure quality standards are met on every site including compliance of works with drawings and specifications requirements as stated in the technical construction documents. Ensure compliance with approved timeframe and budget and certify effective progress of works including defect list, certificates of partial, substantial and final completion, including those linked to works contract payment installments. Approve as-built drawings submitted by contractors upon completion of the construction work and advise UNICEF on any potential risks in respect to the project timeline, project budget and quality of the works. To achieve the tasks described, the consultancy company/institution needs to:   * + Regularly conduct site inspection and quality assurance to all construction sites at the critical stages (at the foundation, 50% completion, 80% completion and 100% completed)   + Prepare progress report of construction works including defect list, certificates of partial, substantial and 100% completion to UNICEF   + Conduct quality assurance check during six month-guaranteed periods (at least once) to all health care facilities and submit reports to UNICEF  1. **O & M of facility and water quality monitoring:**     * Develop guideline on operation and maintenance of the facility and provide the training to responsible person    * Ensure the quality of the newly constructed water source (for example, tube well) meets the national standard[[2]](#footnote-3), and the discharge of the wastewater from the small-scale wastewater treatment meets the national standard in sub-decree 235[[3]](#footnote-4). Conduct water quality testing at a certified laboratory including water sources used for drinking water and wastewater quality testing as scheduled below:  |  |  | | --- | --- | | **Water quality control of newly construction water source** | **Water quality control of wastewater effluent** | | Perform one test after construction work completion | Perform one test six month after putting in service | | | | |

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| **Child Safeguarding**  Is this project/assignment considered as “[Elevated Risk Role](https://unicef.sharepoint.com/sites/DHR-ChildSafeguarding/DocumentLibrary1/Guidance%20on%20Identifying%20Elevated%20Risk%20Roles_finalversion.pdf?CT=1590792470221&OR=ItemsView)” from a child safeguarding perspective?       YES       NO     If YES, check all that apply:    **Direct contact role** YES       NO   If yes, please indicate the number of hours/months of direct interpersonal contact with children, or work in their immediately physical proximity, with limited supervision by a more senior member of personnel:   |  | | --- | |  |   **Child data role** YES      NO   If yes, please indicate the number of hours/months of manipulating or transmitting personal-identifiable information of children (name, national ID, location data, photos):   |  | | --- | |  |   More information is available in the [Child Safeguarding SharePoint](https://unicef.sharepoint.com/sites/DHR-ChildSafeguarding/SitePages/Amendments-to-the-Recruitment-Guidance.aspx) and [Child Safeguarding FAQs and Updates](https://unicef.sharepoint.com/sites/DHR-ChildSafeguarding/DocumentLibrary1/Child%20Safeguarding%20FAQs%20and%20Updates%20Dec%202020.pdf) |

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| **Consultant sourcing:**  National  International  Both  **Competitive Selection:**  Advertisement  Low value contract- informal competitive process  Roster  **Single Source Selection**  (Emergency - Director’s approval) | | **Request for:**  New Individual Contract |
| **Supervisor:** | **Start Date:** | **End Date:** |
| Chaing Chanthea, WASH Officer | 24 August 2023 | 30 June 2024 |

| Deliverables/Outputs | Delivery deadline | Estimated Budget/ Percentage |
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| **Deliverable # 1:**  **Technical site assessment**   * Preliminary site assessment report and proposed design concepts on WASH facilities including DWATS, small-scale wastewater treatment and solar hot water heating system for each health care facility (3 district referral hospitals & 5 health centres) to be discussed with UNICEF * Site assessment report for each health care facility including risk assessment, and detailing design concepts on WASH facilities including DWATS, small-scale wastewater treatment and solar hot water heating system for each health care facility (3 district referral hospitals & 5 health centres) as agreed | End of Sept 2023 | 20% |
| **Deliverable # 2**:  **Develop Construction Documents**   * Drafted construction documents of each health care facility on DWATS (referral hospital) and WASH facilities including small-scale wastewater treatment system (health center): layout, detailed architectural, structural drawings, construction technical specifications, bills of quantity, cost estimates and projected scope of work for construction work for each health care facility (3 district referral hospitals & 5 health centres), especially timeframe. * Draft installation documents for each health care facility (3 district referral hospitals & 5 health centres) on handwashing facility and solar hot water heating system structural drawings, construction technical specifications, facility operation and maintenance, bills of quantity, cost estimates and scope of work for construction work. * Revise and finalize construction/installation documents of each health care facility (3 district referral hospitals & 5 health centres), including detailed architectural, structural drawings, construction technical specifications, bills of quantity, cost estimates and projected scope of work for construction work for each healthcare facility, especially timeframe, in accordance with the feedback from UNICEF and government counterparts. * Tendering documents using the UNICEF standard form of agreement for construction works, including evaluation criteria for work contractor, attending pre-biding meetings, evaluating bids following the criteria established in the bidding documents developed. | End of Oct 2023 | 30% |
| **Deliverable # 3**:  **Site supervision & quality assurance for 3 district referral hospital and 3 health centers & O & M guideline**   * Progress reports of site inspection of construction works of each health care facilities at the foundation, 50% completion, 80% completion, and 100% completion, including defect list, certificates of partial, and substantial completion report * Guideline on the operation and maintenance of facility, maintenance schedule to health care facilities staff * Water quality monitoring report for newly constructed water sources | End of Mar 2024 | 35% |
| **Deliverable # 4**: Q**uality assurance for 3 district referral hospital and 3 health centers for final completion**   * Quality assurance check and certification during six month-guaranteed periods (at least once) to all health care facilities and final completion reports submitted to UNICEF * Wastewater quality monitoring report (the wastewater from the DWATS and small-scale wastewater treatment system after six months in-services) | End of June 2024 | 15% |

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| **Minimum Qualifications required\*:** | **Knowledge/Expertise/Skills required \*:** |
| Bachelor’s  Masters’  PhD  Other  Enter Disciplines   * At least a Bachelor’s degree in Structural Engineering, or other relevant engineering majors. * At least 7 years’ professional experiences working in the construction industry or as an individual consultant working mainly on structural designs and development construction documents, site inspection and quality assurance for construction works, especially for DWATS and WASH facilities. Previous experience in developing construction documents and site inspection and quality assurance for construction works, especially for DWATS in health care facilities in Cambodia would be a plus. | Knowledge and Skills   * Excellent skills in using AutoCAD and/or other structural design software * Knowledge of WASH/WASH in health care facilities context in Cambodia * Good communication and presentation skills * Good designing and writing skills   Competencies   * Ability to deliver timely and high-quality products * Flexibility and openness to receiving feedbacks and taking them into accounts * Ability to work well with government partners and key stakeholders in the WASH sectors   Languages   * Good writing skills in English is required. |
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| **Evaluation Criteria (This will be used for the** [**Selection Report**](https://unicef.sharepoint.com/:x:/r/sites/DHR/_layouts/15/Doc.aspx?sourcedoc=%7B86E327DF-70C8-4D8F-AC97-D7616AC383E4%7D&file=Selection%20Report%20Template.xlsx&action=default&mobileredirect=true) **(for clarification see** [**Guidance)**](https://unicef.sharepoint.com/:w:/r/sites/DHR/_layouts/15/Doc.aspx?sourcedoc=%7BB3E3517A-8BBF-4368-90FE-7DBCD31544EA%7D&file=Guidance%20on%20Completing%20the%20Selection%20Matrix%20for%20Consultants%20and%20Individual%20Contractors.docx&action=default&mobileredirect=true)  A) Technical Evaluation (100 points): weight 70 %   * Degree Education in Structural Engineering or other relevant engineering majors (30 points) * Knowledge of AutoCAD or other similar design software (35 points) * Experience in designing a similar type of works, especially DWATS (35 points)  1. Financial Proposal (100 points): weight 30 %. Please refer to the financial proposal template in Annex 1 attached.   The maximum number of points shall be allotted to the lowest Financial Proposal that is opened /evaluated and compared among those technical qualified candidates who have attained a minimum 70 points score in the technical evaluation. Other Financial Proposals will receive points in inverse proportion to the lowest price.  The Contract shall be awarded to candidate obtaining the highest combined technical and financial scores, subject to the satisfactory result of the verification interview. | |

Costs indicated are estimated. Final rate shall follow the “best value for money” principle, i.e., achieving the desired outcome at the lowest possible fee. Consultants will be asked to stipulate all-inclusive fees, including lump sum travel and subsistence costs, as applicable.

Payment of professional fees will be based on submission of agreed deliverables. UNICEF reserves the right to withhold payment in case the deliverables submitted are not up to the required standard or in case of delays in submitting the deliverables on the part of the consultant

1. National Rural Drinking Water Quality Guidelines, Ministry of Rural Development, 2015 [↑](#footnote-ref-2)
2. National Rural Drinking Water Quality Guidelines, Ministry of Rural Development, 2022 [↑](#footnote-ref-3)
3. Sub-decree on the management of sewerage systems and wastewater treatment systems, Ministry of Interior, Ministry of Public Works and Transport, Ministry of Environment, 2017 [↑](#footnote-ref-4)