

Terms of Reference

Technical Consultant for the Rehabilitation of an Early Warning System (Individual Contractor)

A. Project Title

Engagement Facility (CPD 2019-2023)

B. Project Description

UNDP, in partnership with the Government of Australia, implemented the Resilience and Preparedness toward Inclusive Development (RAPID) Program, an expansion of the Project Climate Twin Phoenix (PCTP) that supported the long-term recovery of local government units (LGUs) and communities in Typhoon Yolanda-affected areas. It aimed to raise the awareness and competencies of decision-makers and communities in target areas on the impacts of natural hazards on lives, properties, and the economy, and that the changing climate brings extreme weather events that can trigger and exacerbate the impacts of future hazard events. The RAPID Program ran from 2014 to 2019 with USD 9.3 million funding.

Among its key outputs included the installation of a multi-hazard early warning system (MHEWS) composed of a network of distributed monitoring stations for floods, rain-induced landslides, and storm surges that will enable local government units to prepare better for the impacts of these hazards, in partnership with Philippine Atmospheric, Geophysical and Astronomical Services Administration (PAGASA) and the Provincial Government of Leyte.

A total of 33 sites across the municipalities of Palo, Dulag, Mayorga, La Paz, Julita, Burauen, and MacArthur have been planned to contain stations that comprise the MHEWS. To date, 24 are in place, however per the latest assessments, the stations have been found to need repair and rehabilitation. Specifically, the remote terminal units, among other damaged and non-operational hardware (e.g. sensors) need replacement. In addition, a reconfiguration and repair of the network and software is also needed to restore the system to full functionality (i.e. data acquisition and control). For this purpose, UNDP seeks to engage an Individual Contractor to act as a technical consultant for the rehabilitation of the existing MHEWS.

C. Objectives and Scope of Work

The Consultant shall prepare the Bill of Quantities (BOQ) for a firm that will supply, deliver, and install the needed materials and good and render the services needed (e.g. repair, reconfiguration, replacement, reinstallation, testing, commissioning, etc.) for the completion of the existing MHEWS. Referring to available materials (e.g. assessment reports, Terms of Reference (TOR) and Bill of Materials/Specifications as designed, etc. to be provided by UNDP), the Consultant will synthesize and identify which repairs are needed and if possible, the benchmark costs, for the needed materials/parts and other inputs to repair the MHEWS. The Consultant shall also act as a resource person in the evaluation and possible negotiations on the proposals/designs received by UNDP based on the TOR.

The Consultant will also be tasked to conduct quality assurance activities throughout the implementation of the repair work until completion (e.g. commissioning and testing) and confirm to UNDP officials prior to accepting and signing off on deliverables if there is any issue with the restoration of the MHEWS.

The selected contractor's payment for rectification work will be subject to confirmation by the Consultant, therefore it is important to note that there should be no conflict of interest between this consultant (as part of the UNDP procurement and evaluation process) and the potential firm bidding for the actual rectification works.

- Input into the design of a Terms of Reference, incorporating the following;
 - Existing design and specifications of the MHEWS;
 - Available information/literature on the status/condition of the MHEWS;
 - Site assessment in Leyte for a sample of 5 sites (Palo PDRRMO station, Mayorga MDRRMO, Hibuga Bridge Station, Burauen MDRRMO, Daguitan Bridge);
 - Recommendations on the actual need, applicability, availability, and cost for parts/materials and their specifications to repair the MHEWS in the form of a recommended Bill of Quantities;
 - Expert opinion/technical assessment on recommendations to improvement of existing design;
 - Estimate of total cost and timeline for the complete repair and rehabilitation of the system.
- Participate in the evaluation of the proposals received by UNDP based on the published TOR and provide technical clarifications/suggestions to the UNDP evaluation panel.
- As technical consultant to the UNDP, review, advise, and confirm the satisfactory completion of deliverables prior to UNDP acceptance and signing off.

D. Expected Outputs and Deliverables

Deliverable/Output	Target Due Dates	Tranche %
One (1) Bill of Quantities (BOQ) for the repair and rehabilitation of the MHEWS	12 August 2022	30%
Evaluation report on the submitted bids by Contractors for the MHEWS	19 August 2022	30%
Review and Confirmation of the completed rectification works (quality assurance of deliverables)	30 August 2022	40%
TOTAL		100%

E. Institutional Arrangements

- The Consultant shall be directly supervised by the Climate Action Programme Team, with whom all outputs shall be submitted and through whom all communications shall be coursed or copied.
- The Consultant is also expected to coordinate with and seek external opinion/insight from relevant government agencies such as the Philippine Atmospheric, Geophysical, Astronomical Services Administration (PAGASA), Office of Civil Defense (OCD), etc.
- The Consultant is expected to provide his/her own laptop for the work requirement.
- The Consultant shall consider at least three (3) working days lead time for UNDP to review outputs, give comments, certify approval/acceptance of outputs, etc.

F. Duration of Work and Duty Station

Duty station is home-based, with travel to Leyte (2 trips, 2 days each). The expected duration of the assignment is **thirty (30) person-days** between 8 August 2022 and 30 September 2022, unless revised in a mutually agreed upon timetable between the Consultant and UNDP.

In light of the COVID-19 pandemic and declaration of State of Public Health Emergency in the Philippines, all work and travel of the consultant shall be done within the guidelines and protocols set by the local and national government. Field work, trainings, meetings, and coordination shall be done in compliance with community quarantine policies.

G. Qualifications of the Successful Individual Contractor

The successful Individual Contractor should meet the following minimum qualifications:

Education

- A bachelor's degree in electronics, communications, or engineering, or a closely related field.

Experience

- At least 5 years of professional experience working on design and development of environment monitoring systems, early warning systems, radio/Internet Protocol (IP)radio-over-IP systems, distributed network systems (SCADA, etc.), or similar systems in environmental or disaster preparedness/management applications
- At least 5 years of market experience in sourcing materials and parts, identifying potential suppliers, and drafting project proposals and cost estimates

H. Scope of Price Proposal and Schedule of Payments

- The Consultant should send the financial proposal based on a lump-sum amount for the delivery of the outputs identified below. The total amount quoted shall be "all inclusive" (professional daily fees X number of days, communications, travel to Leyte and land travel, indicating number of trips, days, etc.) and all costs that could possibly be incurred by the Contractor should be factored into the final amount submitted in the proposal.
- Any travel outside the duty station beyond what is stipulated in the TOR, as deemed relevant by UNDP and compliant with government guidelines on community quarantine, will be arranged and paid for by UNDP with prior agreement with the Consultant.
- **Medical/health insurance must be purchased by the individual at his/her own expense, and upon award of contract, the Contractor must be ready to submit proof of insurance valid during contract duration**
- The contract price will be fixed **output-based price**. Any deviations from the output and timeline will be agreed upon between the Consultant and UNDP.
- Payments will be done upon satisfactory completion of the delivery by target due dates.

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I. Recommended Presentation of Offer

- Duly accomplished **Letter of Confirmation of Interest and Availability** using the template provided by UNDP;
- **UNDP Personal History Form (P11) or Curriculum Vitae** (following the template attached) indicating all past experiences from similar projects or requirements, as well as the contact details (email and telephone number) of the Candidate and at least three (3) professional references;
- **Financial Proposal** that indicates the all-inclusive fixed total contract price, supported by a breakdown of costs, as per template provided, and clearly stating the payment percentage as indicated in this TOR. If an Offeror is employed by an organization/company/institution, and he/she expects his/her employer to charge a management fee in the process of releasing him/her to UNDP under Reimbursable Loan Agreement (RLA), the Offeror must indicate at this point, and ensure that all such costs are duly incorporated in the financial proposal submitted to UNDP.
- **At least 1 sample work (previous design proposal with specifications/Bill of Materials, or similar)**

J. Criteria for Selection of Best Offer

The Offers received will be evaluated using a combined scoring method - where technical proposal will be weighted 70 points and combined with the price offer which will be weighted 30 points.

The review of technical proposal will be as follows:

Technical qualifications per CV	70
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The **CV** will be reviewed using the criteria in the table below. **Only offerors who will obtain a minimum of 70% or 49 out of 70 obtainable points will be shortlisted.**

Criteria	Points Obtainable (70pts)
Education	
A bachelor's degree in electronics, communications, or engineering, or a closely related field. <i>(7 points for bachelor's degree, additional 1 point for additional/higher qualification.)</i>	10 points
Experience	
At least 5 years of professional experience working on design and development of environment monitoring systems, early warning systems, radio/Internet Protocol	30 points

(IP)radio-over-IP systems, distributed network systems (SCADA, etc.), or similar systems in environmental or disaster preparedness/management applications <i>(21 points for 10 years of experience, additional 1 point for each additional year.)</i>	
At least 5 years of market experience in sourcing materials and parts, identifying potential suppliers, and drafting project proposals and cost estimates <i>(21 points for 5 years of experience, additional 1 point for each additional year.)</i>	30 points
TOTAL	70 pts