

REQUEST FOR QUOTATION (RFQ)
SUPPLY, DELIVERY, AND INSTALLATION
MMSU SOLAR POWERED AQUATIC LIFE SUPPORT SYSTEM

RFQ Reference: RFQ-045-PHL-2022	Date: 24 May 2022
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SECTION 1: REQUEST FOR QUOTATION (RFQ)

UNDP kindly requests your quotation for the provision of goods, works and/or services as detailed in Annex 1 of this RFQ.

This Request for Quotation comprises the following documents:

Section 1: This request letter

Section 2: RFQ Instructions and Data

Annex 1 : Schedule of Requirements

Annex 2: Quotation Submission Form

Annex 3: Technical and Financial Offer

When preparing your quotation, please be guided by the RFQ Instructions and Data. Please note that quotations must be submitted using Annex 2: Quotation Submission Form and Annex 3 Technical and Financial Offer, by the method and by the date and time indicated in Section 2. It is your responsibility to ensure that your quotation is submitted on or before the deadline. Quotations received after the submission deadline, for whatever reason, will not be considered for evaluation.

Thank you and we look forward to receiving your quotations.

Issued by:

Signature: _____

Name: Samantha Gunasekera

Title: Deputy Resident Representative

Date: 24 May 2022

SECTION 2: RFQ INSTRUCTIONS AND DATA

Introduction	<p>Bidders shall adhere to all the requirements of this RFQ, including any amendments made in writing by UNDP. This RFQ is conducted in accordance with the UNDP Programme and Operations Policies and Procedures (POPP) on Contracts and Procurement</p> <p>Any Bid submitted will be regarded as an offer by the Bidder and does not constitute or imply the acceptance of the Bid by UNDP. UNDP is under no obligation to award a contract to any Bidder as a result of this RFQ.</p> <p>UNDP reserves the right to cancel the procurement process at any stage without any liability of any kind for UNDP, upon notice to the bidders or publication of cancellation notice on UNDP website.</p>
Deadline for the Submission of Quotation	<p>June 8, 2022, 5:00 P.M. Philippine Time</p> <p>If any doubt exists as to the time zone in which the quotation should be submitted, refer to http://www.timeanddate.com/worldclock/.</p> <p>For eTendering submission - as indicated in eTendering system. Note that system time zone is in EST/EDT (New York) time zone.</p>
Method of Submission	<p>Quotations must be submitted as follows:</p> <p>Bid submission address: bids.ph@undp.org</p> <p>Email Subject should be: RFQ-045-PHL-2022</p> <ul style="list-style-type: none"> ▪ File Format: pdf ▪ File names must be maximum 60 characters long and must not contain any letter or special character other than from Latin alphabet/keyboard. ▪ All files must be free of viruses and not corrupted. <p>Detailed instructions on how to submit, modify or cancel a bid in the eTendering system are provided in the eTendering system Bidder User Guide and Instructional videos available on this link: http://www.undp.org/content/undp/en/home/operations/procurement/business/procurement-notices/resources/</p>
Cost of preparation of quotation	<p>UNDP shall not be responsible for any costs associated with a Supplier's preparation and submission of a quotation, regardless of the outcome or the manner of conducting the selection process.</p>
Supplier Code of Conduct, Fraud, Corruption,	<p>All prospective suppliers must read the United Nations Supplier Code of Conduct and acknowledge that it provides the minimum standards expected of suppliers to the UN. The Code of Conduct, which includes principles on labour, human rights, environment and ethical conduct may be found at: https://www.un.org/Depts/ptd/about-us/un-supplier-code-conduct</p> <p>Moreover, UNDP strictly enforces a policy of zero tolerance on proscribed practices, including fraud, corruption, collusion, unethical or unprofessional practices, and obstruction of UNDP vendors and requires all bidders/vendors to observe the highest standard of ethics during the procurement process and contract implementation. UNDP's Anti-Fraud Policy can be found at http://www.undp.org/content/undp/en/home/operations/accountability/audit/office_of_audit_andinvestigation.html#anti</p>
Gifts and Hospitality	<p>Bidders/vendors shall not offer gifts or hospitality of any kind to UNDP staff members including recreational trips to sporting or cultural events, theme parks or offers of holidays, transportation, or invitations to extravagant lunches, dinners or similar. In pursuance of this policy, UNDP: (a) Shall reject a bid if it determines that the selected bidder has engaged in any corrupt or fraudulent practices in competing for the contract in question; (b) Shall declare a vendor ineligible, either indefinitely or for a stated period, to be awarded a contract if at any time it determines that the vendor has engaged in any corrupt or fraudulent practices in competing for, or in executing a UNDP contract.</p>
Conflict of Interest	<p>UNDP requires every prospective Supplier to avoid and prevent conflicts of interest, by disclosing to UNDP if you, or any of your affiliates or personnel, were involved in the preparation of the requirements, design, specifications, cost estimates, and other information used in this RFQ. Bidders shall strictly avoid conflicts</p>

	<p>with other assignments or their own interests, and act without consideration for future work. Bidders found to have a conflict of interest shall be disqualified.</p> <p>Bidders must disclose in their Bid their knowledge of the following: a) If the owners, part-owners, officers, directors, controlling shareholders, of the bidding entity or key personnel who are family members of UNDP staff involved in the procurement functions and/or the Government of the country or any Implementing Partner receiving goods and/or services under this RFQ.</p> <p>The eligibility of Bidders that are wholly or partly owned by the Government shall be subject to UNDP's further evaluation and review of various factors such as being registered, operated and managed as an independent business entity, the extent of Government ownership/share, receipt of subsidies, mandate and access to information in relation to this RFQ, among others. Conditions that may lead to undue advantage against other Bidders may result in the eventual rejection of the Bid.</p>
General Conditions of Contract	<p>Any Purchase Order or contract that will be issued as a result of this RFQ shall be subject to the General Conditions of Contract</p> <p>Select the applicable GTC:</p> <p><input checked="" type="checkbox"/> General Terms and Conditions / Special Conditions for Contract.</p> <p>Applicable Terms and Conditions and other provisions are available at UNDP/How-we-buy</p>
Special Conditions of Contract	<p><input checked="" type="checkbox"/> Possible Cancellation of PO/Contract if the delivery/completion is delayed by 30 days</p>
Eligibility	<p>A vendor who will be engaged by UNDP may not be suspended, debarred, or otherwise identified as ineligible by any UN Organization or the World Bank Group or any other international Organization. Vendors are therefore required to disclose to UNDP whether they are subject to any sanction or temporary suspension imposed by these organizations. Failure to do so may result in termination of any contract or PO subsequently issued to the vendor by UNDP.</p> <p>It is the Bidder's responsibility to ensure that its employees, joint venture members, sub-contractors, service providers, suppliers and/or their employees meet the eligibility requirements as established by UNDP.</p> <p>Bidders must have the legal capacity to enter a binding contract with UNDP and to deliver in the country, or through an authorized representative.</p> <ul style="list-style-type: none"> • Minimum of 3 years of continuous experience in project integration or Engineering, Procurement and Construction (EPC) of residential and commercial solar PV systems (2 kW to 100 kW systems). Bidders to list at least 3 such projects (completed or ongoing) in their proposal. • Minimum average of Php 2 Million gross sales in the last 2 years (2019-2020) based on Audited Financial Statements • Will be able to deploy 1 solar PV technician with at least 3 years of experience in installing Solar PV system. • Bidder must have an active service center in the Philippines for the past 2 years
Currency of Quotation	<p>Quotations shall be quoted in PHP for local firms or USD for international firms</p>
Joint Venture, Consortium or Association	<p>If the Bidder is a group of legal entities that will form or have formed a Joint Venture (JV), Consortium or Association for the Bid, they shall confirm in their Bid that : (i) they have designated one party to act as a lead entity, duly vested with authority to legally bind the members of the JV, Consortium or Association jointly and severally, which shall be evidenced by a duly notarized Agreement among the legal entities, and submitted with the Bid; and (ii) if they are awarded the contract, the contract shall be entered into, by and between UNDP and the designated lead entity, who shall be acting for and on behalf of all the member entities comprising the joint venture, Consortium or Association.</p> <p>Refer to Clauses 19 – 24 under Solicitation policy for details on the applicable provisions on Joint Ventures, Consortium or Association.</p>
Only one Bid	<p>The Bidder (including the Lead Entity on behalf of the individual members of any Joint Venture, Consortium or Association) shall submit only one Bid, either in its own name or, if a joint venture, Consortium or Association, as the lead entity of such Joint Venture, Consortium or Association.</p> <p>Bids submitted by two (2) or more Bidders shall all be rejected if they are found to have any of the following:</p> <p>a) they have at least one controlling partner, director or shareholder in common; or b) any one of them receive or have received any direct or indirect subsidy from the other/s; or</p>

	<p>b) they have the same legal representative for purposes of this RFQ; or</p> <p>c) they have a relationship with each other, directly or through common third parties, that puts them in a position to have access to information about, or influence on the Bid of, another Bidder regarding this RFQ process;</p> <p>d) they are subcontractors to each other's Bid, or a subcontractor to one Bid also submits another Bid under its name as lead Bidder; or</p> <p>e) some key personnel proposed to be in the team of one Bidder participates in more than one Bid received for this RFQ process. This condition relating to the personnel, does not apply to subcontractors being included in more than one Bid.</p>
Duties and taxes	<p>Article II, Section 7, of the Convention on the Privileges and Immunities provides, inter alia, that the United Nations, including UNDP as a subsidiary organ of the General Assembly of the United Nations, is exempt from all direct taxes, except charges for public utility services, and is exempt from customs restrictions, duties, and charges of a similar nature in respect of articles imported or exported for its official use. All quotations shall be submitted net of any direct taxes and any other taxes and duties, unless otherwise specified below:</p> <p>All prices must:</p> <p><input checked="" type="checkbox"/> be exclusive of VAT and other applicable direct taxes</p>
Language of quotation	<p>English</p> <p>Including documentation such as catalogues, instructions and operating manuals.</p>
Documents to be submitted	<p>Bidders shall include the following documents in their quotation:</p> <p><input checked="" type="checkbox"/> Annex 2: Quotation Submission Form duly completed and signed</p> <p><input checked="" type="checkbox"/> Annex 3: Technical and Financial Offer duly completed and signed and in accordance with the Schedule of Requirements in Annex 1</p> <p><input checked="" type="checkbox"/> Company Profile</p> <p><input checked="" type="checkbox"/> Brochures and technical specifications/ descriptions of the materials to be supplied and single line diagram based on the Bill of Materials (BOM) included in the bid.</p> <p><input checked="" type="checkbox"/> Portfolio of all past Solar PV projects completed in the last three years (Optional to attach actual pictures; max of 2 photos per project)</p> <p><input checked="" type="checkbox"/> Audited Financial Statements for 2019-2020</p> <p><input checked="" type="checkbox"/> Business Registration</p> <p><input checked="" type="checkbox"/> Tax Payment Clearance/Certification</p>
Quotation validity period	Quotations shall remain valid for 120 days from the deadline for the Submission of Quotation.
Price variation	No price variation due to escalation, inflation, fluctuation in exchange rates, or any other market factors shall be accepted at any time during the validity of the quotation after the quotation has been received.
Partial Quotes	<input checked="" type="checkbox"/> Not permitted
Alternative Quotes	<input checked="" type="checkbox"/> Not permitted
Payment Terms	<input checked="" type="checkbox"/> Other Refer to ToR
Conditions for Release of Payment	<p><input checked="" type="checkbox"/> Passing Inspection</p> <p><input checked="" type="checkbox"/> Passing all Testing</p> <p><input checked="" type="checkbox"/> Written Acceptance of Goods, Services and Works, based on full compliance with RFQ requirements</p>
Contact Person for correspondence, notifications and clarifications	<p>E-mail address: procurement.ph@undp.org</p> <p>Subject of email: RFQ-045-PHL-2022: SUPPLY, DELIVERY, AND INSTALLATION of MMSU Solar Powered Aquatic Life Support System,</p> <p>Attention: Quotations shall NOT be submitted to this address but to the address for quotation submission above. Otherwise, offer shall be disqualified.</p> <p>Any delay in UNDP's response shall be not used as a reason for extending the deadline for submission, unless UNDP determines that such an extension is necessary and communicates a new deadline to the Proposers.</p>
Clarifications	Requests for clarification from bidders will not be accepted any later than 4 days before the submission deadline.
Evaluation method	<input checked="" type="checkbox"/> The Contract or Purchase Order will be awarded to the lowest priced substantially compliant offer.

Evaluation criteria	<input checked="" type="checkbox"/> Full compliance with all requirements as specified in Annex 1 <input checked="" type="checkbox"/> Full acceptance of the General Conditions of Contract <input checked="" type="checkbox"/> Comprehensiveness of after-sales services
Right not to accept any quotation	UNDP is not bound to accept any quotation, nor award a contract or Purchase Order
Right to vary requirement at time of award	At the time of award of Contract or Purchase Order, UNDP reserves the right to vary (increase or decrease) the quantity of services and/or goods, by up to a maximum twenty-five per cent (25%) of the total offer, without any change in the unit price or other terms and conditions.
Type of Contract to be awarded	<input checked="" type="checkbox"/> Purchase Order <input checked="" type="checkbox"/> Contract Face Sheet (Goods and-or Services) (this template is also utilised for Long-Term Agreement) and if an LTA will be signed, specify the document that will trigger the call-off. E.g., PO, etc.)
Expected date for contract award.	15 June 2022
Publication of Contract Award	UNDP will publish the contract awards valued at USD 100,000 and more on the websites of the CO and the corporate UNDP Web site.
Policies and procedures	This RFQ is conducted in accordance with UNDP Programme and Operations Policies and Procedures
UNGM registration	Any Contract resulting from this RFQ exercise will be subject to the supplier being registered at the appropriate level on the United Nations Global Marketplace (UNGM) website at www.ungm.org . The Bidder may still submit a quotation even if not registered with the UNGM, however, if the Bidder is selected for Contract award, the Bidder must register on the UNGM prior to contract signature.

ANNEX 1: SCHEDULE OF REQUIREMENTS

TERMS OF REFERENCE SUPPLY, DELIVERY, AND INSTALLATION MMSU SOLAR POWERED AQUATIC LIFE SUPPORT SYSTEM

A. Background

The Development for Renewable Energy Applications Mainstreaming and Market Sustainability (DREAMS) Project is a five-year project being implemented by the Department of Energy (DOE) through its Renewable Energy Management Bureau (REMB) in partnership with the Global Environment Facility (GEF) and the United Nations Development Programme (UNDP).

The DREAMS project offers a Support Facility for RE (SF4RE) to leverage investments for RE projects to increase RE-based installed capacity and provide capacity building on RE applications for local government units including the academe. On 16th March 2022, the DREAMS approved the proposal from the Mariano Marcos State University-Laoag Ilocos Norte for the installation of “Solar Powered Aquatic Life Support System” at the College of Aquatic Sciences and Applied Technology (CASAT), Sitio Uno, Brgy. Pias Sur, Currimao, Ilocos Norte.

B. Stakeholders of the Project

The project will be implemented together with Mariano Marcos State University (MMSU) under the office of the MMSU President and the participation of the CASAT.

C. Objective

Demonstrate the Productive Use of Renewable Energy (PURE) that will eventually benefit of small pond operators. The solar powered fishpond with automated Dissolved Oxygen System (DOS) will showcase the concept that utilization of renewable energy in agriculture and fisheries will not implore competition on area utilization but will contribute to increased yield and income.

D. SCOPE OF WORK AND METHODOLOGY OF THE REQUIRED SERVICES

• Locations and Scope of Work:

- i. The system will be installed at the demonstration fishponds being managed by the College of Aquatic Sciences and Applied Technology (CASAT), located at Sitio Uno, Brgy. Pias Sur, Currimao, Ilocos Norte. (See Annex A: Site Map)
- ii. The Contractor will supply, deliver, and install a Solar Powered Aquatic Life Support System (ALSS) via a Net metered 22kWp Grid-tied solar PV installation with secured floating structure in 4 fishpond areas of the CASAT. A total of four 4 sets of Automated Aerator Systems (AAS) shall also be installed.

2. Preparation of Work Program

Once the contract is awarded, the Contractor is required to meet with the MMSU and make final site inspection. The Contractor shall then present a work program in consultation with MMSU and the DREAMS PMU. The work program shall contain the final electrical diagrams, method statement for the installation of the solar panels for each site and the commissioning procedures.

3. Supply, delivery, installation, testing and commissioning

- i. Supply: The Contractor shall provide the materials, staff/labor, all equipment, and tools necessary to deliver test and complete the installation. The Bill of Materials and their specifications are in Annex A and B.

ii. On the delivery and testing:

Delivery : the contractor will be responsible for safe delivery of all the material at the designated sites. MMSU may help provide required labour etc for support on delivery and unloading etc. but the payment and other arrangements will be the responsibility of the contractor.

Testing : Material inspection will be conducted upon delivery. Aside from visual inspection, to be tested, before acceptance, are the solar panels, inverters, and the solar water pumps and the aerators. All these should be functional based on specifications, e.g. rated voltage, discharge rate of water, efficiency factor as indicated in the brochure. The components must run for at least 5 minutes. The Contractor is responsible for the materials and tools to be used for the test. The MMSU shall have 10 calendar days to further test the supplied components indicated above upon arrival. If no report requesting for replacement is received from MMSU these components shall be considered as fully accepted.

iii. Commissioning: Upon complete installation, the entire system (solar pv and aeration systems) must be operational for a period of 30 calendar days with a minimum duration of 4 hours per day (staggered or continuous) excluding agreed upon shutdowns or maintenance periods. Any day of unplanned shutdowns shall be added to the required commissioning period to complete the 30-day duration and number of hours.

iv. Installation: All permits, and licenses required for the installation and connection to the grid shall be secured by the Contractor. The MMSU will assist in the acquisition of these permits as may be required.

v. The Contractor is encouraged to use local unskilled labor and shall include in its final report the number of jobs created. The participation of women in the technical installation process is highly encouraged by UNDP.

4. After Service and Product Warranty

The Contractor will provide the Service and Product warranty for specific items in Annex B. The Terms and Conditions for the Service Warranty is in Annex C.

5. Training Component

As stated in the TOR, the MMSU, consistent with its academic, research and extension objective will assign selected students (minimum of 5 but maximum of 10) that may serve as apprentice to the Contractor during the installation period. The Contractor has the option to participate in the selection of the students. The students shall be issued a Certificate of Apprenticeship by the Contractor. The design of the apprenticeship (number of days, activities, qualification) will be done by MMSU in agreement with Contractor.

6. Health Protocols

Considering the COVID-19 pandemic and declaration of State of Public Health Emergency in the Philippines, all work of the Firm shall be done within the guidelines and protocols set by the Philippine Government and local Government Units that will or may be involved.

E. Expected Outputs and Deliverables

Deliverables/ Outputs	Estimated days to Complete	Target Due Dates	Approvals Required (review output and confirm acceptance)	Review and Approvals Required (review output and endorse acceptance)

Detailed Work Program and the final electrical diagrams and method statement for the installation of the solar panels at the site as agreed upon with MMSU and the PMU Submission of signed service and product warranty agreements.	10	Not later than 10 days after the signing of Contract.	National Project Director	DREAMS Project Manager and/or UNDP Programme Analyst
Delivery of all materials as indicated in Annex A	30	Not later than 40 days after the Contract was issued/signed. NLT 30 October 2021.		
Completed installation and successful commissioning based on agreed upon procedures (see scope of work)	50	Not later than 90days after signing of Contract		
Submission of Completion Report inclusive of as-built plans, brochures of major components and Certificate of Acceptance by MMSU. The Certificate shall also reflect absence of liability of the Contractor to the MMSU, The Completion report must be duly endorsed by the MMSU and validated by the DREAMS PMU.	10	Not later than 130 days from the date of Contract Signing		
Total	100			

The DREAMS PMU shall have a maximum of 10 calendar days to validate all reports that are submitted.

F. Institutional Arrangement/ Governance and Accountability

A Project Work Group (PWG) shall be formed during the preparation of the Work Program. At the minimum, it shall be composed of the Contractor's Project Manager, focal person/s from MMSU (Office of President), focal person/s from CASAT, the DREAMS Project Manager and the DREAMS RE Expert. The work of the Contractor will be supervised by the UNDP DREAMS Project Manager in coordination with the MMSU and technical guidance of the appropriate division of REMB.

G. Duration of the Work

The duration will be from 30th June 2022- 15th November 2022

H. Facilities to be provided by the Project

The DREAMS project nor MMSU shall not provide any materials, facilities or other equipment to the Contractor.

The MMSU may offer a warehouse or storage area for the equipment. If the MMSU storage area is acceptable to the Contractor, the Contractor shall make arrangements with the MMSU for the security and safekeeping of the materials and equipment.

The Contractor has the option to select its own warehouse. The safekeeping and security of equipment shall remain as sole responsibility of the Contractor.

I. Scope of Price Proposal and Schedule of Payments

This will be a lump sum contract and the quoted amount must be “all inclusive” of expenses, e.g. materials, supplies, manpower, logistics, meals, lodging, and other costs. The contract price is fixed regardless of changes in cost components.

Deliverable	Payment
Detailed Work Program including the pond location and final electrical diagrams and method statement for the installation of the solar panels per site as agreed upon with MMSU and the DREAMS PMU Submission of signed Service and Product warranty agreements.	10%
Delivery of all materials at site as indicated in the Bill of Materials	50%
Completed installation and successful commissioning (30 calendar days on all sites)	30%
Submission of Completion Report inclusive of as-built plans, brochures of major components and Certificate of Acceptance by MMSU. The Certificate shall also reflect absence of liability of the Contractor to the MMSU, The Completion report must be duly endorsed by the MMSU and validated by the DREAMS PMU. The DREAMS PMU shall be given 20 calendar days to validate the report	10%
TOTAL	100%

J. KEY PERFORMANCE INDICATORS AND SERVICE LEVEL.

Key services required	Frequency	Minimum standard/requirement
Regular Project Meeting of Project Working Group (PWG)	at least 4 times (preparation of work program; after arrival of materials on site; completion of installation and Final Turn over)	Minutes of meeting prepared by the contractor and endorsed by MMSU
validation of billing statement	every billing period	Billing statement to UNDP endorsed by the MMSU
Completion Report	End of the project	see Final Completion Report

Non-submission of these documents (either in hard or soft copies) will lead to deferment of payments due to the Firm. For purposes of documentation, soft copies of the reports are acceptable but duly signed hard copies of the reports must be submitted as part of the Completion Report for final payment.

K. Qualifications of the Successful Firm Contractor and its Key Personnel

1. Minimum of 3 years of continuous experience in project integration or Engineering, Procurement and Construction (EPC) of residential and commercial solar PV systems (2 kW to 100 kW systems)
2. Minimum PHP 2 million (worth of gross sales) of completed engineering, procurement, and construction in the last 2 years based on Audited Financial.
3. Will be able to deploy 1 Solar PV technicians with at least three years of experience in installing Solar PV systems.

L. Criteria for Selection of the Best Offer

The technical evaluation will be pass or fail basis and the lowest financial bid from “technically compliant and responsive” bidder will be considered for award.

M. Documents required to be submitted:

- Brochures and technical specifications/ descriptions of the materials to be supplied and single line diagram based on the Bill of Materials (BOM) included in the bid.
- Portfolio of past Solar PV projects completed in the last three years based on the table in Annex B (optional to attach actual pictures; max of 2 photos per project)
- Audited Financial Statements as required to validate the information on K.2

Annex A1 : Bill of Materials (BOM), Technical Specifications and other requirements and Annex a2 are pictures of the materials

Annex A1. Bill of Materials/Quantities Please note the following: NON-SUBMISSION IS A GROUND TO RATE THE BID AS A FAILED BID.							
<ol style="list-style-type: none"> 1. Brochures with detailed technical specifications of the major components, e.g., solar pv panels, inverters, controllers, batteries including the balance of components shall be submitted. 2. Performance warranties refer to either the rated depreciation of the components or the lifespan of the material being supplied or installed. This also pertains to product warranty that the goods/materials would perform to its stated functions and if not satisfied would be replaced based on the conditions of the warranty agreement. 3. Service warranty refers to the maintenance service to be provided by the supplier/contractor. Thus, the Supplier/Contractor either guarantees that labor on maintenance or repair of the material based on agreed upon cost and conditions on the warranty document. 							
	Category	Description	Specifications and tech requirements	Qty	Unit of Measurement	Service Warranty	Product Warranty
1	Major components	Raspberry Pi 4 Model B SBC	Broadcom BCM2711, Quad core Cortex-A72 (ARM v8) 64-bit SoC @ 1.5GHz, 4GB LPDDR4-3200 SDRAM Memory, 2.4 GHz and 5.0 GHz IEEE 802.11ac wireless, Bluetooth 5.0, BLE, Gigabit Ethernet, 5V DC via USB-C connector (minimum 3A*), OpenGL ES 3.0 graphics	2	piece	NA	1 year

2	Household and consumables	Raspberry Pi 4 Model B Official PSU	Interface: USB-C, Voltage: 5.1V, Current rating: 3A, UK Plug	2	piece	NA	1 year
3	Major components	Touch Screen Display	Daughter Board, Raspberry Pi 7" Touch Screen Display, 10 Finger Capacitive Touch	2	piece	NA	1 year
4	Major components	Memory card	128GB MicroSDXC UHS-I Class10 U1	4	piece	NA	NA
5	Major components	Router	Frequency:2.4/5Ghz, Interface: 4ports ethernet, Speed: AC1900(min)	1	piece	1 year	2 years
6	Major components	Outdoor mount access point	EAP110 300Mbps Wireless N Outdoor Mount Access Point - POE	2	set	1 year	3 years
7	Major components	ESP32 DevKitC V4	Wi-Fi: 802.11 b/g/n Power: Micro-USB, 3.3V, 5V, GND Maximum Operating Frequency: 240MHz Analog Input Pins: 12-bit, 18 Channel, Communication: SPI (4), I2C (2), I2S (2), CAN, UART (3), Bluetooth: V4.2	12	piece	NA	1 month
8	Major components	Printed Circuit Board	Perforated, Size: 3"x4", Tin metal pads	8	piece	NA	NA
9	Major components	16-Bit Analog to Digital Converter	Part number: ADS1115 16-Bit ADC - 4 Channel with Programmable Gain Amplifier Logic: 3.3V	10	piece	NA	1 month
10	Household and consumables	2-pin PCB Terminal Strip	2-pin PCB Terminal Strip, 2.54mm Pitch	50	piece	NA	NA
11	Household and consumables	Hex Standoff	Nickel Plated, Material: Brass, Screw: M3, Type: Hex Male-Female, Body length: ~15 mm, total length ~21 mm	50	piece	NA	NA
12	Distribution and mounting	Waterproof Enclosure	Rating: IP65, Type: NEMA 4 ABS, Size: 160x92x74mm peripheral	5	piece	NA	NA

13	Major components	Solid State Relay	Type: DC-AC, Current max: 40A DC rating: 3-32VDC Maximum load voltage: 24-380VAC	15	piece	NA	NA
14	Household and consumables	Hook up Wire	Type: Stranded, Standard: UL1015, Material: PVC, Color: Blue, Size: 18 AWG, 0.81 mm ² , Length: 100 ft, 30.5 m	1	roll	NA	NA
15	Household and consumables	Signal Wire	Type: 2 cores, Material: Tin/Copper Braid ground insulation, PVC outer insulation, Size: 22-28AWG	20	meters	NA	NA
16	Household and consumables	Fork / Spade Tongue Terminal	Wire Size: 12AWG to 10AWG, 6 mm ² , Screwing size: M5, #10, Jacket: Vinyl	100	piece	NA	NA
17	Household and consumables	FVPC Insulated Crimp Pin Connector	Wire Size: 2.6mm ² to 6.6mm ² , 12AWG to 10AWG, Pin Diameter: 2.7m, Pin Length: 14mm Pin	100	piece	NA	NA
18	Major components	Current Sensor	Part Number: ACS770LCB-100B-PFF-T, Current: 100A(max)	10	piece	NA	1 month
19	Major components	Analog Dissolved Oxygen Sensor / Meter Kit for Arduino	Dissolved Oxygen Probe: Type: Galvanic Probe, Detection Range: 0~20mg/L, Response Time: Up to 98% full response, within 90 seconds (25°C), Pressure Range: 0~50PSI, Cable Length: 2 meters, Probe Connector: BNC Signal Converter Board Operating Voltage: 3.3~5.5V, Output Signal: 0~3.0V, Cable Connector: BNC, Signal Connector: Gravity Analog Interface (PH2.0-3P), Dimension: 42mm * 32mm	6	set	1 year	1 year

20	Major components	MPRLS Ported Pressure Sensor	Voltage - Supply:3V ~ 5V Interface: I ² C, Sensing Range:0 ~ 25 PSI	6	piece	NA	1 month
21	Major components	Temperature Humidity Pressure Sensor	BME280, Voltage - Supply:3V Interface: I ² C, SPI, Sensing Range:0 ~ 25 PSI	6	piece	NA	1 month
22	Household and consumables	DC Axial Fan	Size: 40x40mm, Voltage:12V, Current rating: 170mA	5	piece	NA	6 months
23	Household and consumables	AC-DC Converter (PSU) 5V 12V	Part Number: ECP40UD01, Output Voltage: 5 V dc, 12 V dc, Output Current: 2.6 A, 7.8 A, Power Rating: 40W, Number of Outputs: 2, Input Voltage: 85 → 264V ac, Mounting Type: Chassis Mount, Package Type: Open Frame	5	piece	6 months	1 year
24	Household and consumables	AC-DC Converter (PSU) 3.3V	Port Number: ECL10US03-T, Output Voltage: 3.3V dc, Output Current: 2.6A, Power Rating: 8.6W, Number of Outputs: 1, Input Voltage: 120 → 370 Vdc, 85 → 264 Vac, Mounting Type: Chassis Mount, Package Type: Open Frame	5	piece	6 months	1 year
25	Major components	Floating Water Pump aerator	Power: 750w-1100w, Voltage: 220V single phase, Lift: 7m, Flow: 30m3/h, Coverage: 200-600 m2 fishpond, Spray Diameter: 3m, Inclusion: Floating ball, oxygen pump head, drain elbow	10	piece	1 month	1 month
26	Major components	Electric Water Pump Jet Booster Shallow Well Self-Priming	Power: 1HP/750w, Voltage: 220v, Frequency: 60hz, Phase: single phase, Flow: 80L/m,	5	piece	1 year	1 year

		Pump	1"x1" intake/discharge diameter				
27	Household and consumables	Nylon Rope	length: 200m, diameter: 3mm (#6), must be High quality	7	roll	NA	NA
28	Household and consumables	Royal Cord	Type: 2-core, size: 12AWG/3.5mm ² , length: 75m	2	roll	NA	NA
29	Major components	Submersible Pump	power: 69 watts, flow rate: 4400 L/hour, frequency: 50 HZ, head: 2.5 m, voltage: 220-240 V, size: 155x100x130 mm, weight 1.3 kg	16	piece	2 months	2 months
30	Household and consumables	foot valve (1 ¼")	see photo or equivalent	16	piece	NA	NA
31	Household and consumables	coupling male adapter (1 ¼")	see photo or equivalent	16	piece	NA	NA
32	Household and consumables	pvc pipe (1")	see photo or equivalent	42	piece	NA	NA
33	Household and consumables	pvc pipe (1 ¼")	see photo or equivalent	12	piece	NA	NA
34	Household and consumables	pvc elbow (1")	see photo or equivalent	128	piece	NA	NA
35	Household and consumables	pvc tee (1")	see photo or equivalent	48	piece	NA	NA
36	Household and consumables	pvc male adaptor (1")	see photo or equivalent	16	piece	NA	NA
37	Household and consumables	pvc cement	1L, for water	1	liter	NA	NA
38	Distribution and mounting	angle bar	(302 stainless, 2"x2"x1/4", 6m long)	45	piece	NA	NA
39	Distribution and mounting	flat bar	(304 stainless, 50mmX6mm, 6m long)	5	piece	NA	NA
40	Distribution and mounting	flat bar	Flat bar 20mm x 3mm thick x 6 meters (Grade	30	piece	NA	NA

			304)				
41	Major components	Solar Panel 455W (Monocrystalline)	455Wp, 41.7V Vmpp, 10.92A Imp, 95.5V Voc, 11.66A Isc	44	piece	5 years	5 years
42	Major components	Hybrid Inverter 6kW	Hybrid/Grid-tie, Wi-Fi ready	1	piece	5 years	5 years
43	Major components	On-Grid Inverter 5kW	On-Grid, Wi-Fi Ready	3	piece	5 years	5 years
44	Major components	Solar Battery 200 Ah	12V 200 Ah Gel Type maintenance free deep cycle battery	12	piece	2 years	2 years
45	Distribution and mounting	Plastic Drum for floater	HDPE Drum at least 200-210 kgs	40	piece	NA	NA
46	Distribution and mounting	Battery Rack	Heavy duty, stainless steel, can accommodate 6-12 pcs gel type batteries	2	piece	NA	NA
47	Distribution and mounting	Powerhouse	Powerhouse (2.5x3x2.5 (LxWxH) -provides 2 indoor outlets & 2 outdoor outlets -provides roofing -provides weatherproof exhaust fan at least 12x12 inches -provides illumination (at least 2 lighting outlets and 15 watts for led light - daylight) -stainless steel for truss construction -smooth finished wall (indoor and outdoor) with weatherproof paint with primer -fiber cement board for ceiling (indoor and with vents for outdoor) -provides service entrance (4 for solar panel to inverters and 1 for grid), must be IMC/RSC -provides wall mounted combiner electrical box (at least 70cmx100cm)	1	lot	NA	NA
48	Distribution and mounting	Float voltaic Installation	Installations of the Floating 19.8kW Solar PV System	1	lot	NA	NA
49	Distribution and mounting	Solar Panel Aluminum	Solar mounting Standard, 2100mm	52	piece	NA	NA

		Railings	length				
50	Distribution and mounting	Solar DC Cables	Solar DC Twin Cable 6mm	300	meter	NA	NA
51	Distribution and mounting	Service Wire	#4AWG or 30mm2 wire DUPLEX Service Wire (100meters/roll)	2	roll	NA	NA
52	Distribution and mounting	AC wire	#8AWG or 8.0 mm2 TTHN/THWN-2 Wire Black (10 meters/roll)	1	roll	NA	NA
53	Distribution and mounting	Ground wire	#12AWG or 3.5 mm2 TTHN/THWN-2 Wire Green (150 meters/roll)	1	roll	NA	NA
54	Distribution and mounting	Grounding Clamp	Grounding 5/8"	4	piece	NA	NA
55	Distribution and mounting	Grounding Rod	Galvanized Ground Rod 5/8" X 5ft	4	piece	NA	NA
56	Distribution and mounting	MC4 Connectors	Pair Type MC4 Connectors Solar Panel Cable	20	piece	NA	NA
57	Distribution and mounting	Distribution Box	At least 4-8 ways distribution box	12	piece	NA	NA
58	Distribution and mounting	Rough-ins Materials	Conduits/pipes, clamps, connectors, couplings, & screws	1	lot	NA	NA
59	Distribution and mounting	Solar Mounting Accessories for Solar Panel Mid Clamp	Adjustable Mid Clamp (up to 55mm)	130	piece	NA	NA
60	Distribution and mounting	Solar Mounting Accessories for Solar Panel End Clamp	Adjustable End Clamp (up to 55mm)	48	piece	NA	NA
61	Distribution and mounting	Solar Mounting Accessories for Solar Panel L Foot	Aluminum. Modular structure suitable for any item size	200	piece	NA	NA
62	Distribution and mounting	Insulator cable support	Heavy Duty Secondary Rack 2 Wire with Spool	10	piece	NA	NA

63	Distribution and mounting	Rebar	Rebar (Grade 60) 10mm x 6 meters	3	piece	NA	NA
64	Distribution and mounting	GI-wire	GI Wire #16 1.65mm	1	kg	NA	NA
65	Distribution and mounting	GI-pipe	GI Pipe Sched 40, 2" dia (50.8mm) x 6 meters	8	piece	NA	NA
66	Distribution and mounting	Angle Bar 1"x1"x3/16"	Stainless Angle Bar 1"x1"x3/16" thick x 6 meters (Grade 304)	40	piece	NA	NA
67	Distribution and mounting	DC Breakers	DC breaker, 500Vdc 130A, 2pole	2	piece	NA	NA
68	Distribution and mounting	DC Breakers	Miniature DC breaker 500VDC 30-amp 2 Pole	12	piece	NA	NA
69	Distribution and mounting	AC Breakers	Miniature AC breaker 230VAC 125-amp 2 Pole	1	piece	NA	NA
70	Distribution and mounting	AC Breakers	Miniature AC breaker 230VAC 50-amp 2 Pole	8	piece	NA	NA
71	Distribution and mounting	AC Breakers	Circuit Breakers, 250VAC, bolt on, 30A	6	piece	NA	NA
72	Distribution and mounting	Panel board	6 holes, bolt on	1	piece	NA	NA
73	Household and consumables	Cement Bag	Cement Bag 40 kg	3	piece	NA	NA
74	Household and consumables	Electrical Tape	Electrical Tape 16 meters x 19mm	10	piece	NA	NA
75	Household and consumables	Consumable Kit	Splice Kit	48	piece	NA	NA
76	Household and consumables	Bolts & Nuts	Stainless Steel Bolt and Nut (with locknut and washer)	100	piece	NA	NA
77	Household and consumables	Tex Screw	Self-Drilling Screw/Tex Screw Metal 25mm (100 pcs/pack)	2	pack	NA	NA
78	Household and consumables	Tex Screw	Self-Drilling Screw/Tex Screw Metal 35mm (100 pcs/pack)	2	pack	NA	NA

79	Household and consumables	Cable Tie	Black, at least 6-8 inches (100/pack)	3	pack	NA	NA
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* Brochures with specific technical descriptions are required for all Major Components of items 41, 42,43 and 44. For the others refer to the pictures with technical features and specifications (Annex B). UNDP does not discriminate on any brands. Finally, Single Line Diagram shall be provided. Non submission of brochures for the Major Items is a ground for disqualification. UNDP reserves the right to demand additional information related to the offered materials.

Annex A2: Pictures of the Materials (See PDF File)

Annex B: Site Location (see PDF File)



Annex C: Service Level Agreement (With Contractor)

The Service Provider confirms to be fully responsible for its diligent and satisfactory compliance to this Service Level Agreement (SLSA) as defined in the Terms of Reference particularly the Bill of Materials.

1. Preventive maintenance

- a. Upon completion of the commissioning period, agree with the Client on a maintenance service plan.
- b. Provide at least two (2) capable and officially designated Contact Persons that the Client will communicate with and various communication channels such as email, cellular phone, landline phone, social media including local message delivery services for the immediate performance of this service and performance warranty.
- c. The Client will also provide the names of their designated Contact Persons. Changes or additions in the designation of Contact persons and communication channels, from both parties, shall be relayed and properly acknowledged within 10 working days.
- d. The Service Provider must communicate to the Client within 3 days upon receipt of the communication or message. In discussion with the Client, the Contractor shall prepare a work plan and agreement on the schedule for the delivery of services and parts as may be needed including possible costs of services that is beyond the warranty, if any. The work plan or actions needed for delivery of services shall commence within 10 calendar days from the receipt of the message from the Client and must be completed based on the agreed upon work plan.
- e. Ensure availability or replacement parts as maybe needed. The Service Provider shall therefore during the period of the warranty communicate with Client on a monthly basis to anticipate possible mechanical and electrical problems and thereby reduce down time of the Facility.

2. Administrative Arrangement

- a. All logistical expenses such as payment of technician/s, cost of travel to the site, meals, lodging, and communication expenses shall be the responsibility of the Service Provider.
- b. The Client should, within 5 calendar days, inform the Service Provider of any observed equipment defects or malfunctions noted to enable the Service Provider to recommend corrective actions or immediately provide services to rectify the problem and prevent future damage to the equipment.
- c. In case of repairs or replacements, the Client shall use only services and replacement parts which are provided, supplied or validated by the Service Provider or its appointed parties and not by other parties.
- d. In case of dispute, both parties shall exert all efforts to resolve the issue via consensus or other acceptable traditional forms of dispute settlement at the local level.

Name and Signature of Designate Representative of Contractor

Delivery Requirements

Delivery Requirements	
Delivery date and time	Refer to Terms of Reference (ToR)
Delivery Terms (INCOTERMS 2020)	Refer to Terms of Reference (ToR)
Customs clearance (must be linked to INCOTERM)	<p>Shall be done by UNDP (where applicable). If the items are imported, the supplier/bidder should facilitate all importation processes required. UNDP will only provide approval from the Department of Foreign Affairs (DFA) for duty free entry of goods and endorse the same to the Department of Finance (DOF). The Trace number will then be shared with the supplier's broker for follow-up with Department of Finance's approval. Once DOF approves, supplier's broker shall pull out the imported items. UNDP will provide the supplier's broker with a Certificate of Guarantee and Authorization letter addressed to Bureau of Customs (BOC) prior to broker's pull out of goods and delivery and unloading at the final</p> <p>Vendor will forward to UNDP one set of digital copies in advance (7 days prior to shipment):</p> <ul style="list-style-type: none"> a) Commercial invoice b) Packing list c) Airway Bill (signed draft AWB 3-5 days prior to shipment, and confirmed AWB to be submitted on the day of shipment) or Waybill (if sea) <p>Bidder is also responsible for engaging the services of a broker to facilitate National Telecommunications Commission (NTC) and Optical Media Board (OMB) Clearances. (if applicable)</p>
Exact Address(es) of Delivery Location(s)	Refer to ToR
Distribution of shipping documents (if using freight forwarder)	<p>c/o Contractor</p> <p>Required supporting documents:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Copy of Airway Bill/ Bill of Lading <input type="checkbox"/> Copy of official Packing List <input type="checkbox"/> Copy of Commercial Invoice <input type="checkbox"/> Details of nominated broker that will process release of the items at BOC <p>✓ Consignee should be United Nations Development Programme</p> <p>✓ Address: 15th Floor North Tower, Rockwell Business Center Sheridan, Sheridan Street corner United Street, Highway Hills, Mandaluyong City 1550, Philippines</p> <p>✓ All requirements must have signature and date</p> <p>✓ Invoice date must be earlier than AWB date</p> <p>✓ Please send required documents 7 working days before shipping the items to avoid shipment abandonment that will entail another process, documentations, approval and penalties.</p>
Packing Requirements	Supplier/bidder
Additional requirements	Warranty Certificates per product as specified in Annex A Bill of Materials
Training on Operations and Maintenance	Required per TORA
Warranty Period	As per ToR
After-sales service and local service support requirements	As per ToR
Preferred Mode of Transport	Land and Sea