



## REQUEST FOR QUOTATION (RFQ) (Goods)

NAME & ADDRESS OF FIRM	DATE: June 8, 2020
	REFERENCE: RFQ/TZA/2020/011

Dear Sir / Madam:

We kindly request you to submit your quotation for **Supply of one complete set of automated weather station**, as detailed in Annex 1 of this RFQ. When preparing your quotation, please be guided by the form attached hereto as Annex 2.

Quotations may be submitted on or before **June 19, 2020, 11:00 AM** and via ☐ *hand* or ☐ *courier* or ☒ *email* address below:

[tenders.tz@undp.org](mailto:tenders.tz@undp.org)

Quotations submitted by email must be limited to a maximum of **5 MB**, virus-free and no more than 02 (two) email transmissions. They must be free from any form of virus or corrupted contents, or the quotations shall be rejected.

It shall remain your responsibility to ensure that your quotation will reach email address above on or before the deadline. Quotations that are received by UNDP after the deadline indicated above, for whatever reason, shall not be considered for evaluation. If you are submitting your quotation by email, kindly ensure that they are signed and in the pdf format, and free from any virus or corrupted files.

Please take note of the following requirements and conditions pertaining to the supply of the abovementioned good/s: *[check the condition that applies to this RFQ, delete the entire row if condition is not applicable to the goods being procured]*

Delivery Terms [INCOTERMS 2010] (Pls. link this to price schedule)	<input type="checkbox"/> FCA <input type="checkbox"/> CPT <input type="checkbox"/> CIP <input checked="" type="checkbox"/> Other <b>DDP</b>	
Customs clearance <sup>1</sup> , if needed, shall be done by:	<input type="checkbox"/> UNDP <input checked="" type="checkbox"/> <b>Supplier/Offerrer</b> <input type="checkbox"/> Freight Forwarder	
Exact Address/es of Delivery Location/s (identify all, if multiple)	<b><u>UN Sub Office Zanzibar</u></b> <b><u>ZSTC Investment House, Malawi Road Zanzibar Tanzania.</u></b> <b><u>Contact: Ali Shaib / Elia John</u></b> <b><u>Phone Number: +255 242232417</u></b>	
UNDP Preferred Freight Forwarder, if any <sup>2</sup>	<b>N/A</b>	
Distribution of shipping documents (if using freight forwarder)	<b>N/A</b>	
Latest Expected Delivery Date and Time (if delivery time exceeds this, quote may be rejected by UNDP)	<input checked="" type="checkbox"/> <b>14 working days from the issuance of the Purchase Order (PO)</b> <input type="checkbox"/> As per Delivery Schedule attached [if delivery will be staggered] Time: [pls. indicate] Time Zone of Reference: [pls. indicate]	
Delivery Schedule	<input checked="" type="checkbox"/> <b>Required</b> <input type="checkbox"/> Not Required	
Packing Requirements	<b>N/A</b>	
Mode of Transport	<input type="checkbox"/> AIR <input type="checkbox"/> SEA	<input type="checkbox"/> LAND <input checked="" type="checkbox"/> <b>OTHER N/A</b>
Preferred Currency of Quotation <sup>3</sup>	<input checked="" type="checkbox"/> <b>United States Dollars</b> <input type="checkbox"/> Euro <input type="checkbox"/> Local Currency:	
Value Added Tax on Price Quotation <sup>4</sup>	<input checked="" type="checkbox"/> <b>Must be inclusive of VAT and other applicable indirect taxes</b> <input type="checkbox"/> Must be exclusive of VAT and other applicable indirect taxes	

After-sales services required	<input checked="" type="checkbox"/> <b>Warranty on Parts for minimum period of 12 Months</b> <input checked="" type="checkbox"/> <b>Technical Support</b> <input type="checkbox"/> Provision of Service Unit when pulled out for maintenance/ repair <input type="checkbox"/> Others <i>[pls. specify]</i>
Deadline for the Submission of Quotation	<b>Friday, June 19, 2020 and 11:00 AM(GMT+3HRS)</b>
All documentations, including catalogs, instructions and operating manuals, shall be in this language	<input checked="" type="checkbox"/> <b>English</b> <input type="checkbox"/> French <input type="checkbox"/> Spanish <input type="checkbox"/> Others <i>[pls. specify, including dialects, if needed]</i>
Documents to be submitted <sup>5</sup>	<input checked="" type="checkbox"/> <b>Duly Accomplished Form as provided in Annex 2, and in accordance with the list of requirements in Annex 1; (MANDATORY)</b> <input type="checkbox"/> A statement whether any import or export licenses are required in respect of the goods to be purchased including any restrictions on the country of origin, use/dual use nature of goods or services, including and disposition to end users; <input type="checkbox"/> Confirmation that licenses of this nature have been obtained in the past and an expectation of obtaining all the necessary licenses should the quotation be selected; <input checked="" type="checkbox"/> <b>Quality Certificates (ISO, etc.);</b> <input checked="" type="checkbox"/> <b>Latest Business Registration Certificate; (MANDATORY)</b> <input checked="" type="checkbox"/> <b>Latest Internal Revenue Certificate / Tax Clearance; (MANDATORY)</b> <input checked="" type="checkbox"/> <b>Manufacturer's Authorization of the Company as a Sales Agent (if Supplier is not the manufacturer)</b> <input type="checkbox"/> Certificate of Exclusive Distributorship in the country (if applicable, and if Supplier is not the manufacturer); <input checked="" type="checkbox"/> <b>Evidence/Certification of Environmental Sustainability ("Green" Standards) of the Company or the Product being supplied;</b> <input type="checkbox"/> Complete documentation, information and declaration of any goods classified or may be classified as "Dangerous Goods". <input type="checkbox"/> Patent Registration Certificates (if any of technologies submitted in the quotation is patented by the Supplier); <input checked="" type="checkbox"/> <b>Written Self-Declaration of not being included in the UN Security Council 1267/1989 list, UN Procurement Division List or other UN Ineligibility List</b> <input checked="" type="checkbox"/> <b>Others Compliance to Technical specifications along with the proposal</b>
Period of Validity of Quotes starting the Submission Date	<input type="checkbox"/> 60 days <input type="checkbox"/> 90 days <input checked="" type="checkbox"/> <b>120 days</b>

	In exceptional circumstances, UNDP may request the Vendor to extend the validity of the Quotation beyond what has been initially indicated in this RFQ. The Proposal shall then confirm the extension in writing, without any modification whatsoever on the Quotation.
Partial Quotes	<input checked="" type="checkbox"/> <b>Not permitted</b> <input type="checkbox"/> Permitted <i>[pls. provide conditions for partial quotes, and ensure that requirements are properly listed to allow partial quotes (e.g., in lots, etc.)]</i>
Payment Terms <sup>6</sup>	<input checked="" type="checkbox"/> <b>100% upon complete delivery of goods</b> <input type="checkbox"/> Others <i>[pls. specify]</i>
Liquidated Damages	<input checked="" type="checkbox"/> <b>Will not be imposed</b> <input type="checkbox"/> Will be imposed under the following conditions: Percentage of contract price per day of delay: _____ Max. no. of days of delay: _____ After which UNDP may terminate the contract.
Evaluation Criteria <i>[check as many as applicable]</i>	<input checked="" type="checkbox"/> <b>Technical responsiveness/Full compliance to requirements and lowest price<sup>7</sup></b> Comprehensiveness of after-sales services <input checked="" type="checkbox"/> <b>Full acceptance of the PO/Contract General Terms and Conditions <i>[this is a mandatory criterion and cannot be deleted regardless of the nature of services required]</i></b> <input checked="" type="checkbox"/> <b>Earliest Delivery / Shortest Lead Time<sup>8</sup></b> <input type="checkbox"/> Others <i>[pls. specify]</i>
UNDP will award to:	<input checked="" type="checkbox"/> <b>One and only one supplier</b> <input type="checkbox"/> One or more Supplier, depending on the following factors: <i>[Clarify fully how and why will this be achieved. Please do not choose this option without indicating the parameters for awarding to multiple Suppliers]</i>
Type of Contract to be Signed	<input checked="" type="checkbox"/> <b>Purchase Order</b> <input type="checkbox"/> Contract Face Sheet (Goods and-or Services) UNDP (this template is also utilized for Long-Term Agreement <sup>9</sup> and <i>if LTA will be signed, specify the document that will trigger the call-off. E.g., PO, etc.)</i> <input type="checkbox"/> Other Type/s of Contract <i>[pls. specify]</i>

Contract General Terms and Conditions	<input checked="" type="checkbox"/> <b>General Terms and Conditions for contracts (goods and/or services)</b> <input type="checkbox"/> General Terms and Conditions for de minimi contracts (services only, less than \$50,000)  Applicable Terms and Conditions are available at <a href="http://www.undp.org/content/undp/en/home/procurement/business/how-we-buy.html">http://www.undp.org/content/undp/en/home/procurement/business/how-we-buy.html</a>
Special conditions of Contract	<input checked="" type="checkbox"/> <b>Cancellation of PO/Contract if the delivery/completion is delayed by 21 Working days after the PO is signed</b> <input type="checkbox"/> Others <i>[pls. specify]</i>
Conditions for Release of Payment	<b>Passing Inspection <i>[specify method, if possible]</i></b> <b>Complete Installation</b> <input checked="" type="checkbox"/> <b>Passing all Testing <i>[specify standard, if possible]</i></b> <input checked="" type="checkbox"/> <b>Completion of Training on Operation and Maintenance <i>[specify no. of trainees, and location of training, if possible]</i></b> <input checked="" type="checkbox"/> <b>Written Acceptance of Goods based on full compliance with RFQ requirements</b> <input type="checkbox"/> Others <i>[pls. specify]</i>
Annexes to this RFQ <sup>10</sup>	<input checked="" type="checkbox"/> <b>Specifications of the Goods Required (Annex 1)</b> <input checked="" type="checkbox"/> <b>Form for Submission of Quotation (Annex 2)</b> <input checked="" type="checkbox"/> <b>General Terms and Conditions / Special Conditions:</b> <a href="http://www.undp.org/content/undp/en/home/procurement/business/how-we-buy.html">http://www.undp.org/content/undp/en/home/procurement/business/how-we-buy.html</a> <input type="checkbox"/> Others <i>[pls. specify, if any]</i>  Non-acceptance of the terms of the General Terms and Conditions (GTC) shall be grounds for disqualification from this procurement process.
Contact Person for Inquiries (Written inquiries only) <sup>11</sup>	<b>Email : tenders.tz@undp.org</b> 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.

Goods offered shall be reviewed based on completeness and compliance of the quotation with the minimum specifications described above and any other annexes providing details of UNDP requirements.

The quotation that complies with all of the specifications, requirements and offers the lowest price, as well as all other evaluation criteria indicated, shall be selected. Any offer that does not meet the requirements shall be rejected.

Any discrepancy between the unit price and the total price (obtained by multiplying the unit price and quantity) shall be re-computed by UNDP. The unit price shall prevail, and the total price shall be corrected. If the supplier does not accept the final price based on UNDP's re-computation and correction of errors, its quotation will be rejected.

After UNDP has identified the lowest price offer, UNDP reserves the right to award the contract based only on the prices of the goods in the event that the transportation cost (freight and insurance) is found to be higher than UNDP's own estimated cost if sourced from its own freight forwarder and insurance provider.

At any time during the validity of the quotation, no price variation due to escalation, inflation, fluctuation in exchange rates, or any other market factors shall be accepted by UNDP after it has received the quotation. 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.

Any Purchase Order that will be issued as a result of this RFQ shall be subject to the General Terms and Conditions attached hereto. The mere act of submission of a quotation implies that the vendor accepts without question the General Terms and Conditions of UNDP indicated above - <http://www.undp.org/content/undp/en/home/procurement/business/how-we-buy.html>.

UNDP is not bound to accept any quotation, nor award a contract/Purchase Order, nor 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.

Please be advised that UNDP's vendor protest procedure is intended to afford an opportunity to appeal for persons or firms not awarded a purchase order or contract in a competitive procurement process. **In the event that** you believe you have not been fairly treated, you can find detailed information about vendor protest procedures in the following link: <http://www.undp.org/content/undp/en/home/operations/procurement/protestandsanctions/>

**UNDP encourages every prospective Vendor 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.

UNDP implements a zero tolerance on fraud and other proscribed practices and is committed to identifying and addressing all such acts and practices against UNDP, as well as third parties involved in UNDP activities. UNDP expects its suppliers to adhere to the UN Supplier Code of Conduct found in this link : [http://www.un.org/depts/ptd/pdf/conduct\\_english.pdf](http://www.un.org/depts/ptd/pdf/conduct_english.pdf)

**Thank you and we look forward to receiving your quotation.**

**Sincerely yours,**

*Jeremiah Mallongo*

**Jeremiah Mallongo**  
**Operations Manager**  
**June 8, 2020**

**Annex 1****Technical Specifications**

<b>BASIC MINIMUM SPECIFICATIONS</b>			
		FUNCTIONAL DESCRIPTION	COMPLIANCE
	<b>GENERAL REQUIREMENT</b>		
		<ul style="list-style-type: none"> <li>➤ High availability and accuracy of the reported data.</li> <li>➤ The lifetime of the AWS equipment must not be less than 15 years.</li> <li>➤ AWS design must be modular enabling the change of the modules and system components without any special tools.</li> <li>➤ Easy-To-use DIN-rail mounting shall be used in mounting system components</li> <li>➤ Measure the sensors with minimum of 24-bit A/D conversion (ADC).</li> <li>➤ Perform data quality check on the parameters.</li> <li>➤ Process the data using calculation and statistical functions.</li> <li>➤ Offer to the user freedom to configure multiple output messages.</li> <li>➤ Provide alarm functions based on a measured or calculated parameter exceeding its user set threshold value(s).</li> <li>➤ Log the data at the user configurable formats and intervals.</li> <li>➤ The data logger must have low power consumption due to solar power operation.</li> <li>➤ In order to withstand electrical disturbances and prevent interference with other electronic equipment, the equipment shall fulfil the EN55022 standard for emissions and IEC61000-4 standards for electrostatic discharge immunity, radiated, radio-frequency, electromagnetic field immunity, electrical fast transient/burst immunity, surge immunity and immunity to conducted disturbances, induced by radio-frequency fields</li> <li>➤ The system must have a connection port to which a Lap top can be connected in order to perform system initialization, configurations, device software update, monitor the unit operation including sensor data, and download stored data.</li> </ul>	
	<b>INTERFACES</b>		



	<b>Analog Interfaces</b>	<ul style="list-style-type: none"> <li>➤ In order to be able to measure several parameters with analog sensors, the system shall have at least ten (10) analog inputs and output, which are individually and freely configurable by the user.</li> <li>➤ at least 24-bit A/D conversion.</li> <li>➤ Measurement interval freely configurable from one (1) second to twenty-four (24) hours in one (1) second intervals independently and separately for each measurement channel.</li> <li>➤ Each sensor input should have independently configurable gain, scaling factors, and calibration coefficients and data quality</li> </ul>	
		<p>validation parameters.</p> <ul style="list-style-type: none"> <li>➤ Each sensor interface should have internal over voltage and ESD protection, minimum 5 kV per pin.</li> </ul>	
	<b>Digital Interfaces</b>	<ul style="list-style-type: none"> <li>➤ For enabling the use of sensors with digital interface and device control, an interface for digital I/O channels must be available. The interface shall have at least eight (8) digital input and output channels.</li> <li>➤ Have LED indicators for activity; in order to reduce the current consumption, it shall be easily possible to disable the LED if seen necessary</li> <li>➤ Accept any positive DC voltage from 2V to 25 V</li> <li>➤ Tolerate negative voltages down to -25 VDC</li> <li>➤ The inputs shall have switch debounce and hysteresis circuitry for reliable operation</li> </ul>	
	<b>Serial Interfaces</b>	<p>shall support the following standards</p> <ul style="list-style-type: none"> <li>➤ RS-232</li> <li>➤ RS-485</li> <li>➤ SDI-12</li> </ul>	

	<b>Network Interfaces</b>	The system must be able to have a 10 Base-T Ethernet interface with native TCP/IP support.	
	<b>Equipment Enclosure</b>	<ul style="list-style-type: none"> <li>➤ The electronic and data processing unit must be enclosed in a sealed robust enclosure with easy access to all components with mounting options at least to a mast.</li> <li>➤ The enclosure complies with the standards of NEMA-4X or IP-66 as minimum.</li> <li>➤ All connections must be through waterproof connectors, one connector for each sensor or device.</li> <li>➤ All connectors must be clearly labeled as to their function.</li> <li>➤ The connectors shall be installed at the bottom side of enclosure to reduce the risks of water or humidity penetration.</li> <li>➤ The enclosure shall be properly vented with a device, which will not allow humidity to enter in the enclosure.</li> <li>➤ The enclosure design and material shall be such that it reduces condensation caused by large daily temperature differences inside the enclosure.</li> <li>➤ The use of regularly changeable desiccant material is not allowed.</li> <li>➤ The enclosure shall be made of corrosion resistant material with high resistance to UV radiation and chemicals.</li> <li>➤ All wiring inside the enclosure shall be bundled so that no loose wires or cables exist inside the enclosure.</li> <li>➤ Whenever a pressure sensor is used there shall be a provision to install a static pressure head for minimizing the error cause by the wind turbulence at the pressure outlet</li> </ul>	

	<b>Pole Mast</b>	<ul style="list-style-type: none"> <li>➤ ➤ The tiltable pole mast shall be sufficient to securely mount the wind sensor(s) at 10 meters height (10m). The structural integrity shall also withstand the load, of a flight warning light.</li> <li>➤ The mast material shall be anodized aluminum and stainless steel.</li> <li>➤ The mast shall have minimum one set of guy wires.</li> <li>➤ The mast shall include lightning protection (rod) and electrical grounding. The lightning shall be insulated from the mast and separately grounded.</li> <li>➤ The mast shall be fully and easily tilt-able by only one person using detachable winch for sensor maintenance such that the sensor is not more than 1.5 meters above the ground for maintenance.</li> <li>➤ The mast shall withstand wind speed up to 75 m/s with optional second guy wire set.</li> </ul> <p>The mast delivery shall include all parts and material, except concrete, for easy installation.</p> <ul style="list-style-type: none"> <li>➤ The mast shall be painted as per ICAO regulation</li> </ul>	
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	<b>Data Acquisition</b>	<p>The AWS system must support various data acquisition modes including but not limited to:</p> <ul style="list-style-type: none"> <li>➤ Scheduled acquisition</li> <li>➤ On-demand acquisition</li> <li>➤ Alarm based acquisition</li> </ul> <p>Data messages shall be sent automatically by the system to servers at user defined intervals. There shall be possibility to configure several data messages to serve different purposes and/or users.</p> <p>The message type shall be;</p> <ul style="list-style-type: none"> <li>➤ METAR</li> <li>➤ SYNOP</li> <li>➤ BUFR</li> <li>➤ The system shall be capable of sending these messages by FTP using WMO file naming convention directly to an AMSS.</li> <li>➤ The system shall be capable of sending these messages according to WMO abbreviated heading. {i.e T1 T2 A1 A2 ii CCCC YYGGgg (BBB)}.</li> <li>➤ iii. The file transported shall be of WMO compliant format eg .txt</li> </ul>	
	<b>Data Transmission</b>	<p>The AWS system shall be transmitting data through cellular telemetry (GPRS) to a remote AMSS and through RS-485 to local Met office with appropriate display software.</p>	
	<b>Data Logging</b>	<ul style="list-style-type: none"> <li>➤ ➤ The system must be able to log measured and calculated data into a non-volatile flash memory.</li> <li>➤ The logging interval for each variable must be freely configurable. In case the memory should run out of free space, the system must automatically clear</li> </ul>	

		<p>more free memory by deleting the oldest data first, so that the most recent data will always be saved.</p> <ul style="list-style-type: none"> <li>➤ Primary media for data logging must be an exchangeable external memory card to allow fast local data recovery. The capacity of the memory card must be at least two gigabytes (2 GB). Compact Flash type cards are preferred for being more robust in outdoor use.</li> <li>➤ The file system on the memory card must be readable with any PC and commercial card reader.</li> </ul> <p>The system must also have internal logging capacity at least for ninety days of hourly measurements if the memory card should fail.</p>	
	<b>Data Quality Control</b>	<ul style="list-style-type: none"> <li>➤ For each measured parameter there shall be upper and lower Climatological limits that corresponds to the normal operating limits of the sensor in order to prevent the reporting of possibly false values. These parameters must be user configurable to adjust them to the local Climatological conditions.</li> <li>➤ For each parameter there shall be a 'step change' validation. If the sensor output value changes more that the set maximum value between two consecutive measurements, the value shall be set 'invalid' (e.g. erroneous). This parameter must be user configurable to adjust it to the local Climatological conditions.</li> <li>➤ For each statistical calculation, there shall be the user configurable parameter for minimum number of the samples available for computing statistical values. If the number of samples is less</li> </ul>	

		that the user set value, the value shall be set 'invalid' (e.g. erroneous).	
	<b>Calculations</b>	<p>The station must be able to perform statistical calculations for any of the variables. The period over which the calculations are made must be adjustable from 1 second to 24 hours. At least the following operations must be supported;</p> <ul style="list-style-type: none"> <li>➤ Minimum</li> <li>➤ Maximum</li> <li>➤ Average</li> <li>➤ Dew Point Temperature</li> <li>➤ QNH, QFE and QFF pressure</li> <li>➤ Pressure tendency and pressure trend</li> </ul> <p>Wind calculation: it shall be possible to make the calculation in scalar and vector formats.</p> <ul style="list-style-type: none"> <li>➤ Evapotranspiration</li> </ul> <p>The AWS system must include unit conversion module with multiple scale unit selection (e.g. m/s to knots or m/s to km/h). Unit selection shall be selectable / configurable by the user.</p>	
	<b>Alarms</b>	<p>The system shall be possible for the user to freely set threshold limits for any of the measured or calculated parameters. It must be possible to configure an alarm to be launched whenever a parameter;</p> <ul style="list-style-type: none"> <li>➤ Exceeds a set upper limit (e.g. when the precipitation intensity exceeds 30mm/h),</li> <li>➤ Is out of a user set reference range (e.g. 10 minute precipitation rate is 7 mm over the average hourly rate),</li> <li>➤ Changes faster than a user set rate, selectable both descending and/ or ascending value.</li> </ul>	

	<b>Clock</b>	<ul style="list-style-type: none"> <li>➤ The station must have a Real Time Clock (RTC) protected against power losses.</li> <li>➤ The system must be able to operate in UTC.</li> <li>➤ For supporting real-time messaging and alarm generation, the internal realtime clock's accuracy must be better than twenty (20) seconds per month.</li> </ul>	
	<b>Telemetry</b>	Data to AMSS shall be sent through GPRS, and data to the local Met station PC with appropriate software through RS-485	
	<b>Calibration and Preventive Maintenance</b>	The system shall be designed to eliminate or minimize the need for equipment adjustment, alignments, calibrations and preventive maintenance.	

## SENSORS

	<b>General Requirements</b>	<p>All sensors shall be independently operated by the electronics and data processing unit so that a possible failure of any of the sensors shall not affect the performance of the remaining sensors. The sensors must be tested to correctly operate in the system.</p> <p>All sensors must be able to operate in environmental conditions as specified, and the required performance must be reached over the whole measurement and operational temperature range.</p>	
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	<b>Air Temperature</b>	<p>Air temperature must be measured using Pt-100 resistance temperature detector (RTD) or a better sensor. To minimize the effect of sensor line resistance, the Pt-100 element shall be measured using the 4-wire resistance measurement technique.</p> <p>The air temperature sensor shall comply with the following minimum specifications;</p> <p>Sensing element: Platinum resistance element Pt-100</p> <p>Accuracy: 0.1 – 0.2 °C at + 20 °C or Better</p> <p>Resolution: 0.1 °C Operating temperature - 20...+60 °C</p>	
	<b>Relative Humidity</b>	<p>Relative humidity shall be measured with a thin film type capacitance sensor. The sensor must be protected from pollution by an appropriate, exchangeable filter. The sensor shall be</p>	
		<p>easy detachable to allow quick replacement in the field.</p> <p>The relative humidity sensor shall comply with the following minimum specifications;</p> <p>Sensor type: Capacitive</p> <p>Measuring range: 0..100 %</p> <p>Accuracy: ±2 % below 90 % of RH and ±3 % between 90..100 % or Better</p> <p>Long term stability/year: ±1 % or better</p> <p>Operating temperature : -20...+60 °C</p>	



	<b>Solar Radiation Sensor</b>	<p>Solar radiation must be measured using an ISO-9060 certified First Class pyranometer. The sensor must have a double glass dome and a drying cartridge to avoid moisture and built-in level to ease the installation.</p> <p>The following are the minimum specification;</p> <p>Spectral range: 285...2800nm (50% points)</p> <p>Sensitivity: 5...20 <math>\mu\text{V}/\text{Wm}^{-2}</math></p> <p>Response time: 18 s</p> <p>Maximum solar irradiance: 2000W/m<sup>2</sup></p> <p>Operating temperature: -20...+60 °C</p>	
	<b>Precipitation</b>	<p>The precipitation shall be measured by a tipping bucket type of sensor.</p> <p>The rain gauge shall be fabricated of corrosion resistant and rugged material. The rain gauge shall be installed on a leveled metal platform whose height is such that the rim of the rain gauge is at 1.5 meters from the ground.</p> <p>The rain gauge shall be fabricated of corrosion resistant and rugged material.</p> <p>The sensor shall comply with the following minimum specifications;</p> <p>Type: Tipping bucket</p> <p>Sensitivity : 0.2 mm per tip</p> <p>Accuracy : 1 % (at 25 mm/h)</p>	

	<b>Atmospheric Pressure Sensor</b>	<p>Atmospheric pressure shall be measured by an intelligent digital silicon solid-state pressure sensor. The sensor shall have a minimum drift and long term stability over the whole operating temperature range.</p> <p>The sensor shall have in-built temperature compensation to guarantee the required accuracy over the whole operating temperature range.</p> <p>The pressure sensor shall have the option to incorporate one, two or three sensor element. When two or three sensor elements are used, the barometer continuously compares the readings of the pressure sensor elements against one another and provides information on whether these are within the set internal difference criteria.</p> <p>The sensor shall have in-built temperature compensation. The following are the minimum specification;</p> <p>Type: Silicon capacitive pressure sensor</p> <p>Measuring range: 500...1100 hPa or Better</p> <p>Resolution : 0.1 hPa</p> <p>Accuracy : <math>\pm 0.15</math> hPa over the whole temperature range or Better</p> <p>Operating temperature : -20...+60 oC</p> <p>Output Parameters : QFE, QNH</p>	
	<b>Ultrasonic Wind Sensor</b>	<ul style="list-style-type: none"> <li>• The Ultrasonic Wind Sensor shall use ultrasound to determine horizontal speed and direction of the wind. To avoid the possible errors caused by orthogonal incidence angle, the sensor must use the three-transducer principle.</li> <li>• The ultrasonic wind sensors shall comply with the following minimum specifications;</li> </ul> <p>Measuring range: Wind speed: 0... 75 m/s Wind direction: 0...360°</p> <p>Starting Threshold: Virtually zero</p> <p>Resolution: Wind speed: 0.01m/s</p>	

		<p>Wind direction: 1°</p> <p>Accuracy: Wind speed: <math>\pm 0.2</math> m/s or 3% of reading, whichever is greater Wind direction: <math>\pm 2^\circ</math> or Better</p> <p>Operating temperature: Standard: - 20 ... +60 °C</p>	
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### GENERAL SCHEDULE OF REQUIREMENT FOR THE AWS

s/n	ITEM	Technical Description	Quantity
1	Set of AWS (complete with running software)	Mast, Logger, solar power system, sensors and accessories	
2	Desktop PC	with appropriate display software	
3	Set of working tools	pliers, Alan keys, screwdrivers etc. and the winch	Assorted
4	Laptop	For the station configuration	
5	Winch	Detachable	

*Jeremiah Mallongo*

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**Jeremiah Mallongo**  
Operations Manager  
**June 8, 2020**

## Annex 2

**FORM FOR SUBMITTING SUPPLIER'S QUOTATION<sup>12</sup>**  
*(This Form must be submitted only using the Supplier's Official Letterhead/Stationery<sup>13</sup>)*

We, the undersigned, hereby accept in full the UNDP General Terms and Conditions, and hereby offer to supply the items listed below in conformity with the specification and requirements of UNDP as per RFQ Reference No. \_\_\_\_\_:

**TABLE 1: Supply of one complete set of Automated Weather Station**

Item No.	Description/Specification of Goods	Quantity	Latest Delivery Date	Unit Price	Total Price per Item
1.	Set of AWS (complete with running software) Mast, Logger, solar power system, sensors and accessories				
2.	Desktop PC with appropriate display software				
3.	Set of working tools pliers, Alan keys, screwdrivers etc. and the winch				
4.	Laptop For the station configuration				
5.	Winch Detachable				
	<b>Total Prices of Goods<sup>14</sup></b>				
	Add: Cost of Transportation				
	Add: Cost of Insurance				
	Add: Other Charges (pls. specify)				
	<b>Total Final and All-Inclusive Price Quotation</b>				

**TABLE 3: Offer to Comply with Other Conditions and Related Requirements**

<b>Other Information pertaining to our Quotation are as follows:</b>	<b>Your Responses</b>		
	<b><i>Yes, we will comply</i></b>	<b><i>No, we cannot comply</i></b>	<b><i>If you cannot comply, pls. indicate counter proposal</i></b>
Delivery Lead Time			
Estimated weight/volume/dimension of the Consignment:			
Country/ies Of Origin <sup>15</sup> :			
Warranty and After-Sales Requirements			
a) Training on Operations and Maintenance			
b) Minimum one (1) year warranty on Machinery			
c) Service Unit to be Provided when the Purchased Unit is Under Repair			
d) Brand new replacement if Purchased Unit is beyond repair			
Validity of Quotation			
All Provisions of the UNDP General Terms and Conditions			
Compliance to specifications of services required (Annex 1)			

All other information that we have not provided automatically implies our full compliance with the requirements, terms and conditions of the RFQ.

*[Name and Signature of the Supplier's Authorized Person]*  
*[Designation]*  
*[Date]*