REQUEST FOR QUOTATION RFQ 101/20

NAME & ADDRESS OF FIRM	DATE: August 21, 2020
	REFERENCE: **Supply of road automatic weather stations**

Dear Sir / Madam:

We kindly request you to submit your quotation for **Supply of road automatic weather stations**
The detailed Technical Specification is attached separately as 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 16:00 (GMT +4) on September 10, 2020 and via ☒e-mail, only.

Tenders.armenia@undp.org

No hard copies are accepted

Quotations submitted by email must be limited to a maximum of 10MB, virus-free and no more than 3 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 the 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:

Delivery Terms [INCOTERMS 2010]	☒DAP
Customs clearance1, if needed, shall be done by:	☒UNDP

1 *Must be linked to INCO Terms chosen.*

Exact Address/es of Delivery Location/s	Merdzavan village, Armavir Marz, Armenia
Latest Expected Delivery Date and Time *(if delivery time exceeds this, quote may be rejected by UNDP)*	☒ 100 days from the signing the contract for goods)
Delivery Schedule	☒Required
Mode of Transport	☒LAND ☒SEA
Preferred Currency of Quotation2	☒United States Dollars or ☒Local Currency: Armenian drams
Value Added Tax on Price Quotation3	☒Must be exclusive of VAT and other applicable indirect taxes
After-sales services required	☒Warranty period as of Annex 1.
Deadline for the Submission of Quotation	16:00, *Thursday, September 10, 2020 Local time*
All documentations, including catalogs, instructions and operating manuals, shall be in this language	☒English or ☒Armenian
Documents to be submitted	☒Duly Accomplished Form as provided in Annex 2, and in accordance with the list of requirements in Annex 1; ☒ Latest Business Registration Certificate; ☒ Latest Internal Revenue Certificate / Tax Clearance; ☒ Manufacturer's Authorization of the Company as a Sales Agent (if Supplier is not the manufacturer); ☒ Written Self-Declaration of not being included in the UN Security Council 1267/1989 list, UN Procurement Division List or other UN Ineligibility List; ☒ Company's profile; ☒ List of similar past contracts ☒ Technical specifications of the proposed goods ☒ Quality certificates, ISO 9001:2015 or similar
Period of Validity of Quotes starting the Submission Date	☒60 days 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	☒ Not permitted
Payment Terms	☒ 20% upon complete delivery of goods

2 Local vendors must comply with any applicable laws regarding doing business in other currencies. Conversion of currency into the UNDP preferred currency, if the offer is quoted differently from what is required, shall be based only on UN Operational Exchange Rate prevailing at the time of UNDP's issuance of Purchase Order.
3 This must be reconciled with the INCO Terms required by the RFQ. Furthermore, VAT exemption status varies from one country to another. Pls. tick whatever is applicable to the UNDP CO/BU requiring the goods.

	80% upon successful installation (Please refer to payment terms described in technical specifications)
Liquidated Damages	☒Will be imposed under the following conditions: Percentage of contract price per day of delay: 0.25% Max. no. of days of delay: 6 weeks Next course of action: contract termination
Evaluation Criteria	☒ Technical responsiveness/Full compliance to requirements and lowest price. ☒ Suppliers must have at least 3 years of experience in supplying and installation of products with similar technical specifications. ☒ Acceptance of warranty requirements ☒ Full acceptance of the PO/Contract General Terms and Conditions.
UNDP will award to:	☒ Only one Supplier
Type of Contract to be Signed	Contract for Goods
Conditions for Release of Payment	☒ Written Acceptance of Goods based on full compliance with RFQ requirements
Annexes to this RFQ4	☒ Specifications of the Goods Required (Annex 1) ☒ Form for Submission of Quotation (Annex 2) ☒ General Terms and Conditions / Special Conditions (Annex 3). 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)5	Procurement Unit Procurement.armenia@undp.org 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.

4 *Where the information is available in the web, a URL for the information may simply be provided.*
5 This contact person and address is officially designated by UNDP. If inquiries are sent to other person/s or address/es, even if they are UNDP staff, UNDP shall have no obligation to respond nor can UNDP confirm that the query was received.

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 herein attached as Annex 3.

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:
https://www.undp.org/content/undp/en/home/procurement/business/protest-and-sanctions.html

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 : https://www.un.org/Depts/ptd/about-us/un-supplier-code-conduct

Thank you and we look forward to receiving your quotation.

Sincerely yours,
Procurement Unit
UNDP Armenia

Technical Specifications

Annex 1

2 ROAD AUTOMATIC WEATHER STATIONS (RAWS)

#	Description	Q-ty	Basic description and requirements		
			Functionality	**Requirement Heading**	**Requirement**
• **Following a detailed description of the technical specifications required for the supply, installation and commissioning of a network of 2 ROAD AUTOMATIC WEATHER STATIONS**					
• **For all sensors below mentioned, A recent and valid Calibration certificate shall be supplied with sensor that at least specifies: the Manufacturer, the model, the instrument type and calibration method, the traceability of the calibration, the uncertainty and the calibration factor and finally the name and signature of calibration technician that performed the calibratio**					
1.	AIR TEMPERATURE	**2**	Sensor/Hardware Performance	Measurement Range	The measurement range should be -50 °C to +70°C or better The sensor should be a temperature thermistor or based on RTD principle
			Sensor/Hardware Performance	Operational Conditions	As a minimum, the equipment installed outdoors should be capable of operating in a: Temperature Range -50°C to +70°C, Humidity Range 0-100% Non-condensing
			Sensor/Hardware Performance	Sensor Uncertaint	The sensor uncertainty should be ±0.2 °C or better.
			Measurement/ Functional Requirements	Reporting Resolution	The resolution of reported temperature should be 0.1°C or better
			Sensor Siting	Installation in Screen	The sensor/instrument for Air Temperature measurements shall be mounted in a radiation/thermometer screen (to be provided within the present call of tenders), at a height between 1.25 and 2.0 m above ground level. The screen (and other contained/attached sensors) shall not affect the measurements more than 0.5 ºC under any condition.

					The radiation shield (screen) should be preferably naturally ventilated or aspirated screens with artificial ventilation are also acceptable. In that case, the airflow across the sensors shall be 3m/s and shall not be outside the range of 2.5-10m/s under normal conditions. If an aspirated screen is used, sufficient monitoring parameters should be provided to monitor the health and status of the ventilation device.
2.	**WIND DIRECTION**	**2**	Measurement/ Functional Requirements	Measurement Range	The maximum measurement range shall be 0-360 degrees.
			Sensor/Hardware Performance	Operational Conditions	As a minimum, the equipment installed outdoors should be capable of operating in a: Temperature Range -40C to +60C, Humidity Range 0-100% The Sensor shall be heated
			Sensor/Hardware Performance	Sensor Uncertaint	The sensor uncertainty should be ±2 degree or better.
			Measurement/ Functional Requirements	Reporting Resolution	The Reporting Resolution for Wind Direction shall be 1 degree or better
3.	**WIND SPEED**	**2**	Measurement/ Functional Requirements	Measurement Range	The measurement range should be 0.3-60m/s or better. Starting threshold 0.3m/s or better.
			Sensor/Hardware Performance	Operational Conditions	As a minimum, the equipment installed outdoors should be capable of operating in a: Temperature Range -40C to +60C, Humidity Range 0-100% Non-condensing The **Wind Speed and Direction** sensor shall be sited at a standard height of 10m above open terrain. Open terrain is defined as any area where the distance between the anemometer and the obstructions is at least 10 times the height of the obstruction. The **Wind Speed and Wind direction** sensors shall be mounted on a mast. The sensor shall be heated

			Sensor/Hardware Performance	Sensor Uncertainty	The sensor uncertainty should be: ±1% or better
			Measurement/ Requirements	Reporting Resolution	The Reporting Resolution for Wind Speed shall be 0.1 m/s or better
4.	**PRECIPITATION INTENSITY**	**2**	Sensor/Hardware Performance	Sensor Type	Sensor/instrument for measuring Precipitation should be based on an electronic recording instrument. The precipitation sensor shall be supplied with heating device The sensor aperture area should be at least 200 cm^2
			Measurement/ Functional Requirements	Measurement Range	The maximum measurement range shall be: 0 – 600 mm/hour or better
			Sensor/Hardware Performance	Sensor Uncertainty	The sensor uncertainty shall be ±2% or better
			Sensor/Hardware Performance	Operational Conditions	As a minimum, the equipment installed outdoors should be capable of operating in a: Temperature Range -20C to +60C, Humidity Range 0-100% Non-condensing
			Measurement/ Functional Requirements	Reporting Resolution	The resolution of reported measurement shall be: 0.1 mm or better.
5.	**VISIBILITY AND PRESENT WEATHER**	**2**	Sensor/Hardware Performance	Sensor Type	Sensor/instrument for measuring Visibility and present weather should be based on a forward scatter instrument. The sensor shall be supplied with heating device.
			Measurement/ Functional Requirements	Measurement Range (for visibility (MOR))	The maximum measurement range (MOR) shall be: 10 m – 30 km or better.
			Sensor/Hardware Performance	Operational Conditions	As a minimum, the equipment installed outdoors should be capable of operating in a: Temperature Range -40C to +60C, Humidity Range 0-100% Non-condensing

			Sensor/Hardware Performance	Sensor Uncertainty (for visibility (MOR))	The sensor measurement uncertainty shall be ±20% at 30km or better.	
			Measurement/ Functional Requirements	Present Weather Reporting	The sensor should report the weather condition according to the WMO 4680 weather code (liquid and solid precipitation). The sensor should report the presence of: Haze or smoke, Fog, Drizzle, Rain, Snow, Hail.	
			Measurement/ Functional Requirements	Measurement Range and Uncertainty (for present weather)	The sensor precipitation detection threshold should be: 0.015mm/hour or better for rain, and 0.0015mm/hour or better for snow. Maximum rain rate should be 400 mm/hour or better. The sensor measurement uncertainty for rain intensity shall be ±15% or better.	
TOTAL FOR 2 ROAD AUTOMATIC WEATHER STATIONS (RAWS)						
TWO AUTOMATIC AGROMETEOROLOGICAL STATIONS (AAS)						
#	**Description**	**Q-ty**	**Basic description and requirements**			
			Functionality	**Requirement Heading**	**Requirement**	
• Following a detailed description of the technical specifications required for the supply, installation and commissioning of a network of 2 AUTOMATIC AGROMETEOROLOGICAL S						
• For all sensors below mentioned, A recent and valid Calibration certificate shall be supplied with sensor that at least specifies: the Manufacturer, the model, the instrument type and calibration method, the traceability of the calibration, the uncertainty and the calibration factor and finally the name and signature of calibration technician that performed the calibratio						
			Sensor/Hardware Performance	Measurement Range	The measurement range should be -40 °C to +70°C or better The sensor should be a temperature thermistor or based on RTD principle	

1	**AIR TEMPERATURE**	**2**	Sensor/Hardware Performance	Operational Conditions	As a minimum, the equipment installed outdoors should be capable of operating in a: Temperature Range -30C to +60C, Humidity Range 0-100% Non-condensing	
			Measurement/ Functional Requirements	Reporting Resolution	The resolution of reported temperature should be 0.1°C or better	
			Sensor Siting	Installation in Screen	The sensor/instrument for Air Temperature measurements shall be mounted in a radiation/thermometer screen (to be provided within the present call of tenders) on the mast. The screen (and other contained/attached sensors) shall not affect the measurements more than 0.5 ºC under any condition. The radiation shield (screen) should be preferably naturally ventilated or aspirated screens with artificial ventilation are also acceptable. In that case, the airflow across the sensors shall be 3m/s and shall not be outside the range of 2.5-10m/s under normal conditions. If an aspirated screen is used, sufficient monitoring parameters should be provided to monitor the health and status of the ventilation device.	
2.	**PRESSURE**	**2**	Sensor/Hardware Performance	Measurement Range	The measurement range should be 500 – 1100 hPa or better (for both station pressure and mean sea level pressure).	
			Sensor/Hardware Performance	Operational Conditions	The pressure sensor can be either a separate sensor installed inside the AWS enclosure or be installed in the datalogger. If the pressure sensor is a separate sensor, it has to be digital one and must include appropriate port to direct access via a portable computer connected to this port. As a minimum, the equipment installed outdoors should be capable of operating in a: Temperature Range -30C to +60C, Humidity Range 0-100%	
			Sensor/Hardware Performance	Sensor Uncertainty	The sensor total uncertainty for the range of temperature [-30 to +60°C] shall be ±1hPa or better for 600-1100 hPa. the long-term stability shall be ±1hPa per a year or better	
			Measurement/ Functional Requirements	Reporting Resolution	The resolution of reported measurement and tendency shall be 0.1 hPa or better.	

3.	**WIND DIRECTION**	**2**	Measurement/ Functional Requirements	Measurement Range	The maximum measurement range shall be 0-360 degrees.	
			Sensor/Hardware Performance	Operational Conditions	As a minimum, the equipment installed outdoors should be capable of operating in a: Temperature Range -30C to +60C, Humidity Range 0-100% The Sensor shall be heated	
			Sensor/Hardware Performance	Sensor Uncertaint	The sensor uncertainty should be ±2 degree or better.	
			Measurement/ Functional Requirements	Reporting Resolution	The Reporting Resolution for Wind Direction shall be 1 degree or better	
4.	**WIND SPEED**	**2**	Measurement/ Functional Requirements	Measurement Range	The measurement range should be 0.1-60m/s or better. Starting threshold 0.1m/s or better.	
			Sensor/Hardware Performance	Operational Conditions	As a minimum, the equipment installed outdoors should be capable of operating in a: Temperature Range -30C to +60C, Humidity Range 0-100% Non-condensing The **Wind Speed and Direction** sensor shall be sited at a standard height of 10m above open terrain. Open terrain is defined as any area where the distance between the anemometer and the obstructions is at least 10 times the height of the obstruction. The sensor shall be heated	
			Sensor/Hardware Performance	Sensor Uncertainty	The sensor uncertainty should be better than: • 0.3 m/s for wind speed of 5 m/s or better • 3% for > 5 m s^{-1}	
			Measurement/ Requirements	Reporting Resolution	The Reporting Resolution for Wind Speed shall be 0.1 m/s or better	
			Sensor/Hardware Performance	Sensor Type	Sensor/instrument for measuring Precipitation should be based on an electronic recording instrument or radar. The precipitation sensor shall be supplied with heating device	

5.	**PRECIPITATION AMOUNT/INTENSITY**	**2**	Measurement Requirements	Measurement Range (for precipitation amount)	The maximum measurement range should be 0.1-900mm/day or better.	
			Measurement/ Functional Requirements	Measurement Range (for precipitation intensity)	The maximum measurement range shall be: 0.1 – 900 mm/hour or better	
			Sensor/Hardware Performance	Operational Conditions	As a minimum, the equipment installed outdoors should be capable of operating in a: Temperature Range -30C to +60C, Humidity Range 0-100% Non-condensing	
			Measurement/ Functional Requirements	Reporting Resolution (precipitation intensity)	The resolution of reported measurement shall be: 0.1 mm/hour or better	
			Measurement/ Functional Requirements	Reporting Resolution (precipitation amount)	The Reporting Resolution for Precipitation Amount should be 0.1mm or better.	
6.	**RELATIVE HUMIDITY**	**2**	Sensor/Hardware Performance	Sensor Performance Constant	The instrument time constant under controlled conditions shall be 40s or better over the entire operational range.	
			Sensor/Hardware Performance	Operational Conditions	As a minimum, the equipment installed outdoors should be capable of operating in a: Temperature Range -30C to +60C, Humidity Range 0-100% Non-condensing	
			Sensor/Hardware Performance	Sensor Uncertainty	The sensor measurement uncertainty shall be better than ±3 %RH.	
			Measurement/ Functional Requirements	Measurement Range	The maximum measurement range should be 0-100%RH.	
			Sensor Siting	Installation in Screen	The sensor/instrument for Air Temperature measurements shall be mounted in a radiation/thermometer screen on the mast. The presence of the screen shall not affect the measurements in any way.	

					If an aspirated screen is used, sufficient monitoring parameters should be provided to enable the health and status of the ventilation device to be checked.
			Measurement/ Functional Requirements	Reporting Resolution	The Reporting Resolution for Relative Humidity shall be 1%RH or better
7.	**SOIL TEMPERATURE**	**2**	Sensor Siting	Installation Depth	Depending on the AWS Station Type, Soil Temperature sensors should be deployed at 0 cm. an appropriate mounting bracket and cover must be provided to maintain the probe above the ground and to ensure its protection
			Sensor/Hardware Performance	Measurement Range	The measurement range should be -40 °C to +60 °C or better
			Sensor/Hardware Performance	Sensor Uncertainty and resolution	The sensor uncertainty should be 0.2ºC or better. The resolution of reported temperature shall be 0.1 °C or better.
			Sensor/Hardware Performance	Operational Conditions	As a minimum, the equipment installed outdoors should be capable of operating in a: Temperature Range -40C to +50C, Humidity Range 0-100% Non-condensing
8.	**GLOBAL SOLAR RADIATION AND BRIGHTNESS**	**2**	Sensor/Hardware Performance	Measurement Range	The maximum measurement radiation range shall be at least 0.0 – 1,300 W·m2. The maximum measurement brightness range shall be at least 1.0 – 150 kLux.
			Sensor/Hardware Performance	Sensor Uncertainty	The sensor uncertainty brightness measurement should be ±3% or better
			Sensor/Hardware Performance	Operational Conditions	As a minimum, the equipment installed outdoors should be capable of operating in a: Temperature Range -30C to +60C, Humidity Range 0-100% Non-condensing
			Sensor Siting	Installation Depth	Soil Profile Temperature sensors should be deployed at 5 depths (-5, -10, -15, -20, - 25 cm).

9.	**SOIL PROFILE TEMPERATURE**	**2**	Sensor/Hardware Performance	Measurement Range	The soil moisture measurement range should be 0 to 0.7 m3m-3 or better The salinity range should be 50 to 500mSm-1	
			Sensor/Hardware Performance	Sensor Uncertainty	The sensor uncertainty should be 0.1ºC or better. The resolution of reported temperature shall be 0.1 °C or better.	
			Sensor/Hardware Performance	Operational Conditions	As a minimum, the equipment installed outdoors should be capable of operating in a: Temperature Range -40C to +60C, Humidity Range 0-100% Non-condensing	
10.	**SOIL PROFILE MOISTURE**	**2**	Sensor Siting	Installation Depth	Soil Moisture sensors should be deployed at 3 depths (-20, -50, -100 cm).	
			Sensor/Hardware Performance	Measurement Range	The measurement range should be -40 °C to +60 °C or better	
			Sensor/Hardware Performance	Sensor Uncertainty and resolution	The sensor uncertainty moisture measurement should be ±3% or better.	
			Sensor/Hardware Performance	Operational Conditions	As a minimum, the equipment installed outdoors should be capable of operating in a: Temperature Range -40C to +60C, Humidity Range 0-100% Non-condensing	
TOTAL FOR 2 AUTOMATIC AGROMETEOROLOGICAL STATIONS (AAS)						
DATA LOGGER AND INTEGRATION SOFTWARE FOR ROAD AUTOMATIC WEATHER STATIONS (RAWS) AND AUTOMATIC AGROMETEOROLOGICAL						

6.	**DATA LOGGER**	**4**	System Performance	Operational Conditions	Manufacturer must submit a confirmation that the proposed model is a recent model that have been experienced widely in several locations. The datalogger should include acquisition module and ports to connect digital and analog sensors. It allows to collect, process locally and archive measurement data and to transfer data to the AHS Network management software. It should archive locally raw data in specific format for subsequent transfer to the computer. It should manage data communication between the weather station and the AWS Network management software.	
			System Performance	Operational Conditions	The datalogger Internally software will provide the following functions: - have a library of sensor descriptions for their quick connection to the datalogger; - ensure the selection of maximum and minimum values of parameters; - provide data transfer mode once per minute; - allow computation of calculated parameters; - allow the local configuration of time, and of station parameters; -allow the visualization of the data on the data logger screen display or using an appropriate solution allowing observer working locally to have access to the data collected by the data logger. This solution can be software to be installed on an existing computer and a network cable or WiFi to connect the data logger to this local computer.	
			Sensor/Hardware Performance	Operational Conditions	As a minimum, the equipment installed outdoors should be capable of operating in a: Temperature Range -40C to +50C, Humidity Range 0-100% Non-condensing.	
			System Performance	Operational Conditions	Processor: should be 32Bit or better; The internal memory should be sufficient for at least two year of data (one-minute data of all sensors connected to the datalogger); Built-in LCD display with touchscreen.	
			System Performance	Operational Conditions	Internal memory 3.3MB not-volatile or better Communication I/O ports: RS 232, RS 485, USB and/or Ethernet	

					Built in or physical Interface for GSM / GPRS modem Sufficient number of channels to connect the analog and digital sensors above described with an extension for each type.
7.	**Integration software for connecting two RAWS and two AAS Network with the AHS Management & Data Visualization Unified System Software**	**4**	System Performance	Operational Conditions	The RAWS and AAS integration software should be developed in the format that will be compatible/interoperable with AHS unified system and different types of AWSs and radiolocation system that are installed/can be installed in future The integration software should allow the main following functions: • Data collection monitoring • WMO message edition, coding and transmission • Data Quality control procedures • Data and metadata management • Data archiving in RDBMS • Data retrieval and analysis tools • Security and user management (access permission for user role) The software shall be a web-based solution and should be open to accept third party data or to integrate the new automatic weather stations to be implemented by the AHS. The software must be in Russian and English (user-selectable).
			System Performance	Operational Conditions	The update, upgrade, RAWS and AAS integration software support as well as new functionality additions up to 10% should be provided upon request by AHS for up to 5 years or the supplier should provide Source Code of the software.
			Functional Requirements	Data collection and monitoring	• The RAWS and AAS integration software should be connected with AHS central system and shall also be able to communicate with each individual remote datalogger. Each individual datalogger of RAWS and AAS should be connected to the central system via ethernet connections. IP

					plan addresses will be used for the identification of each of them. • Time synchronization between the central servers and each datalogger must be done in regular basis. An NTP server should be used for that purpose. The integration software shall have a feature to show (to the system operator and technicians) the progress of the data acquisition from all AWS'. The following items may be shown: • The station accessed • The status of the connection using scale colors • The connection time• The progress in % received data. • The performance status of the data communication • Systematic Data recovery function in case of telecommunication or system failure
8.	**TECHNICAL DOCMENTATION ONE FOR RAWS AND ONE FOR AAS**	**2**	The documentation must make it possible to know in detail the functioning of all components of the RAWS and AAS network with their two components: hardware and software. The documentation must be provided in hard copy and in digital format (CD/DVD/memory stick). The documentation must be in English or Russian. The documentation must contain a material component that addresses the following topics: • Description of the procedures, operations and periodicity of preventive maintenance of all the equipment of the automatic station (sensors, datalogger and telecommunication means). • Tests and diagnostics to be done in case of breakdown or anomaly as well as the curative maintenance operations to be done. • Detailed leaflets of installed equipment. The documentation must contain also a RAWS and AAS software component that addresses the following topics: • User manual of the software on the datalogger and the various parameters of this equipment • User Manual for Automatic Station Network Management Software Solution • Guide for software maintenance and administration. • Description of the architecture and principles of the proposed software. • Description of the architecture of the database. • Formulas and principles for calculated parameters. • Description of the data control rules included in the software • Description of the metadata management functionality • Information on BUFR tables (version, format, editing tool, ...) • Tools and procedures for system backup / recovery.		
			• All RAWS and AAS equipment and integration software subject of the present tender shall be under warranty for a period of 3 year.		

9.	**THREE YEAR WARRANTY**	**1**	• During the warranty period, the contractor must maintain the system in a functioning state. • The contractor will make available to the beneficiary a hotline at least during opening hours and days. He will ensure a remote monitoring of the system and the correction of hardware and software anomalies that occur during this period. • The remote intervention, especially for the software solution, must be done within the 24 hours after the declaration of the breakdown on the hotline. • The defective parts must be sent not later than 2 weeks days after notification for necessity of replacement; • During the warranty period, the contractor undertakes to resolve any anomalies or BUG on the software and to upgrade all hardware or software necessary for the proper functioning of the system. • The contractor also commits to update the system to comply with any official updates or changes to meteorological codes and messages.
10.	**INSTALLATION OF RAWS AND AAS ON THE MASTS.**	**4**	The company should install RAWS and AAS on the masts, proceed with testing of installed RAWS and AAS and turn-key handover to the AHS/UNDP.

TOTAL FOR SOFTWARE AND INSTALLATION OF RAWS AND AAS

SPECIFICATIONS FOR MAST AND RELEVANT EUIPMENT FOR ENERGY AND DATA T

#	Description	Q-ty	Supplier (please provide exact model a
1	**A set of necessary electrical equipment and accessories to connect the RAWS and AAS to the electrical network including electric cables, connection box, the appropriate electric transformer, surge protectors for serial sensors, etc.**	**4**	
2	**SOLAR PANELS NOT LESS THAN 120 W or better** **Battery AGM or GEL** up to 60 Ah **The solar panel and battery must provide uninterrupted operation of RAWS and AAS at least for 7 days in case of absent of electric power supply**	**4**	
3	**SOLAR CONTROLLER** **For solar panel** not less than 120 W **Operating temperature** - 40°C to + 50°C **or better**	**4**	
4	**A waterproof cabinet shall be equipped with a radiation shield and cable protection cover. Waterproof cabinet** with not less IP66 degree of protection for placing in it the battery and the associated charge controller,	**4**	

	the electric protection, the datalogger, the GSM 4G/3G/2G		
5	**DATA TRANSFER NETWORK 4G OR 3G OR GPRS/GSM WITH 1 SIM** • Operating temperature for router - 40° to +60°C or better • Operation humidity for router 0% to 100% non-condensing **The stations and sensors can be connected to data logger via cable or wireless connection. Modem shall be a separate item and be easily replaceable without the need to replace other components in RAWS and AAS system**	**4**	
6	**Platform/mast (мачта) for installation of weather** • The mast for installation of ground-based weather station equipment should be 10 meters height, designed to allow easiest installation and maintenance (two parts with a declination mechanism is preferred) • The mast must be protected against lightning and grounded. • The ground loop for the lightening system should be constructed at least 1m far from the mast. • The mast should be made of anti-corrosion materials and painted by powder technology (powder painting). • The mast should be installed in a concrete foundation by the company using B -15 type of concrete. • The Mast should be constructed and installed with consideration of the installation of the following equipment: - Electric cabinet which consist on a Waterproof cabinet with IP66 degree of protection for placing in it the AGM battery and the associated charge controller, the electric protection, the datalogger, the GSM 4G/3G/2G router - Solar panel - AWS sensors - Mast should be workable in the altitude of 3300m, - in the temperature from -40°C to +60°C, - wind speed up 60m/s, - humidity 0-100%.	**4**	
7	**Installation work for mast**	**4**	
TOTAL FOR MAST AND RELEVANT EQUIPMENT			

Additional requirements

- ✓ The producer should have experience on installation of proposed **RAWS and AAS or AWS** for at least 3 years. Additional reference letters shall be included in the technical offer
- ✓ Experience of installing automated stations in at least one national meteorological service is an asset
- ✓ The producer or representing company should provide ISO certificates.
- ✓ The producer or representing company should provide the list of similar contracts for installation of AWS systems for the last 3 years.
- ✓ Installation period is 100 days after signing of contract.

Payment Schedule

	Deliverable	Percentage of Total Price (Weight for payment)
1	**Deliverable 1** ➢ 2 RAWS and 2 AAS and 4 Masts are delivered to Armenia ➢ RAWS and AAS integration software and Hardware connected with the unified management system of AHS. First phase performance report (90 days after signing contract)	20%
2	**Deliverable 2** ➢ 4 stations installed in Mast and functioning. ➢ Integrating Software package installed and operational in Customer's ➢ Hardware and connected with all weather stations in accordance with Technical requirement specification Provision of Final Report and acceptance by UNDP (100 days after signing contract)	80%

Annex 2

FORM FOR SUBMITTING SUPPLIER'S QUOTATION6

(This Form must be submitted only using the Supplier's Official Letterhead/Stationery7)

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. 101/20:

TABLE 1: Offer to Supply Goods Compliant with Technical Specifications and Requirements

Item No.	Description/Specification of Goods	Quantity	Latest Delivery Date	Unit Price, currency	Total Price per Item, currency
1	ROAD AUTOMATIC WEATHER STATIONS (RAWS) with integration soft, installation in the mast and 3-year warranty period	2	100 days		
2	AUTOMATIC AGROMETEOROLOGICAL STATIONS (AAS) with integration soft, installation in the mast and 3-year warranty period	2	100 days		
3	A set of necessary electrical equipment and accessories to connect the RAWS and AAS to the electrical network including electric cables, connection box, the appropriate electric transformer, surge protectors for serial sensors, etc.	4	100 days		
4	SOLAR PANELS NOT LESS THAN 120 W or better Battery AGM or GEL up to 60 Ah	4	100 days		
5	SOLAR CONTROLLER	4	100 days		
6	Waterproof cabinet	4	100 days		
7	Data transfer network 4g or 3g or gprs/gsm with 1 sim	4	100 days		
8	Platform/mast (мачта) for installation of weather	4	100 days		
9	Installation work for mast	4	100 days		
	Total Prices of Goods				
	Add: Cost of Transportation				
	Add: Cost of Insurance				
	Add: Other Charges (pls. specify)				

6 *This serves as a guide to the Supplier in preparing the quotation and price schedule.*

7 Official Letterhead/Stationery must indicate contact details – addresses, email, phone and fax numbers – for verification purposes

	Total Final and All-Inclusive Price Quotation	

TABLE 2: Offer to Comply with Other Conditions and Related Requirements

No	Description	Availability (Yes/No)
1	Technical responsiveness/Full compliance to requirements	
2	Manufacturer/suppliers must have at least 3 years of experience in manufacturing/supply and installation of products with similar technical specifications.	
3	ISO certificates, ISO 9001:2015 or similar	
4	Full acceptance of the PO/Contract General Terms and Conditions	
5	Detailed technical specifications	
6	Latest Business Registration Certificate	
7	Manufacturer's Authorization of the Company as a Sales Agent (if Supplier is not the manufacturer)	
8	Written Self-Declaration of not being included in the UN Security Council 1267/1989 list, UN Procurement Division List or other UN Ineligibility List	

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]

Annex 3

Attached separately