

# SCHEDULE OF REQUIREMENTS AND TECHNICAL SPECIFICATIONS

## GENERAL INFORMATION

**Services/Work Description:** Procurement Request for the Supply, Installation, Configuration, Testing, Commissioning; Training and After Sales Services Calibration System Facility

**Project/Program Title:** SCIEWP

**Specific Location:** Addis Ababa, Ethiopia

**Type of the Contract:** Invitation to Bid (ITB) Firm Level Supply

**Expected Delivery Date:** Within three month time from PO date

## I. BACKGROUND / RATIONALE

The service provided by the National Meteorological Agency (NMA) of Ethiopia heavily relies on the observational data collected across the country. Meteorological data observed at an observation site is transmitted to respective regional offices and head office for both internal and external uses. As indicated in World Meteorological Organizations (WMO) guidelines each National Meteorological and Hydrological Services (NMHS's) need to use standard instruments for measuring various meteorological parameters.

As a member of WMO, NMA follows the standards and regulations of operation set forth by WMO. So, NMA is installing standard instruments at meteorological observation sites in the country. Having in place standard instruments by itself is not the end of the story. These well tested and standard instruments have to be calibrated before installation and need to be calibrated at set standard time intervals. Calibration of meteorological instruments can be made in a laboratory or using mobile laboratories. For each and every meteorological instrument, standard calibration techniques and methods of checking the proper functioning of instruments is available. One of the things that should be fulfilled to apply the available techniques and methods of checking the proper functioning of meteorological instruments is to have well equipped calibration laboratory.

Hence NMA is looking ahead to put in place well equipped and up to standard calibration laboratory to secure quality meteorological data collection.

## II. OBJECTIVES OF THE SUPPLY OF GOODS / EQUIPMENT / TECHNOLOGIES

The objectives of the consultancy service is procuring and installing standard calibration laboratory instruments.

## III. PRODUCT SPECIFICATIONS AND COMPLIANCE SHEET

The UNDP Ethiopia Country Office hereby request for suppliers which Long-term Agreement (LTA) with UN Agencies to supply the following product and service specification and/or "its equivalent":

Items	Item/s to be Supplied	Description/Specifications of Goods (Minimum Technical Requirements Including Applicable Standards)	Qty	Remarks (if any)
1	Calibration Chamber For Thermometer Air	<ul style="list-style-type: none"><li>Range: -50 to +50 °C</li><li>Accuracy +/-0.3 °C</li><li>Dimension (Internal) : W600 H850 D800</li></ul>	1	

Items	Item/s to be Supplied	Description/Specifications of Goods (Minimum Technical Requirements Including Applicable Standards)	Qty	Remarks (if any)
	chamber Type	<ul style="list-style-type: none"> <li>• With Verification certificate from Accredited laboratory</li> <li>• Manufactured as per the requirement of WMO standard</li> <li>• Installation and Commissioning</li> </ul>		
2	Calibration Chamber For Hygrometer (Wet & Dry Air mixed Type)	<ul style="list-style-type: none"> <li>• Range: 15 to +95 %RH</li> <li>• Accuracy +/- 2 %RH (at 25 °C)</li> <li>• Dimension (Internal) : W750 H700 D700</li> <li>• With Verification certificate from Accredited laboratory</li> <li>• Manufactured as per the requirement of WMO standard</li> <li>• Installation and Commissioning</li> </ul>	1	
3	Calibration Chamber For Barometers	<ul style="list-style-type: none"> <li>• Range:- 4 to 1150 hPa</li> <li>• Accuracy:- +/- 0.05 hPa</li> <li>• Dimension (Internal) : <math>\phi</math> 930 D700mm</li> <li>• With Verification certificate from Accredited laboratory</li> <li>• Manufactured as per the requirement of WMO standard</li> <li>• Installation and Commissioning</li> </ul>	1	
4	Hand-Held Thermometer meter (calibration)	<ul style="list-style-type: none"> <li>• Measurement range:- 10 - +40 °C</li> <li>• Accuracy -10 - +20 °C <math>\pm(0.176 - 0.0028 \times \text{temperature})</math> °C</li> <li>• +20 - +40 °C <math>\pm(0.07 + 0.0025 \times \text{temperature})</math> °C</li> <li>• Temperature sensor Pt100 RTD 1/3 Class B IEC 751</li> <li>• Response time with additional temperature probe in 3 m/s air flow <ul style="list-style-type: none"> <li>63 % &lt;20 s</li> <li>90 % &lt;35 s</li> </ul> </li> <li>• Unit °C</li> <li>• Carrying case for device &amp; accessories</li> <li>• With Verification certificate from Accredited laboratory</li> <li>• Manufactured as per the requirement of WMO standard</li> </ul>	5	
5	Hand-Held Humidity Meter (calibration)	<ul style="list-style-type: none"> <li>• Measurement range 0 - 100 % RH</li> <li>• Accuracy at +15 - +25 °C <math>\pm 1</math> %RH (0 - 90 %RH)</li> <li>• <math>\pm 1.7</math> %RH (90 ... 100 %RH)</li> <li>• -10 ... +40 °C <math>\pm(1.0 + 0.008 \times \text{reading})</math> %RH</li> <li>• Factory calibration uncertainty (+20 °C /+68 °F) <ul style="list-style-type: none"> <li><math>\pm 0.6</math> %RH (0 ... 40 %RH)</li> </ul> </li> </ul>	5	

Items	Item/s to be Supplied	Description/Specifications of Goods (Minimum Technical Requirements Including Applicable Standards)	Qty	Remarks (if any)
		<ul style="list-style-type: none"> <li>±1.0 %RH (40 ... 97 %RH)</li> <li>Response time at +20 °C in still air with a sintered PTFE filter 63 % 20 s</li> <li>Carrying case for device &amp; accessories</li> <li>With Verification certificate from Accredited laboratory</li> <li>Manufactured as per the requirement of WMO standard</li> </ul>		
6	Pynarometer	<ul style="list-style-type: none"> <li>Mass: 400 gram</li> <li>Cable: 300 cm, 2 lead unshielded</li> <li>Detector: Photovoltaic silicon cell</li> <li>Spectral response: 300-1150 nm (see note)</li> <li>Spatial response: cosine to ca. 700</li> </ul>	5	

#### IV. DELIVERY SCHEDULE AND DELIVERY LOCATION

##### a. Delivery Schedule

- The delivery date of product and/or goods within three (3) months of issuance of Purchase Order (PO) upon contract award.
- The specific delivery date for ancillary services such as configuration, testing, training, within two (2) months after delivery of goods.
- Meeting the delivery date is one of the pre-requisites for a bidder to be considered for technical evaluation

##### b. Delivery Location/Place

- National Meteorological Agency Addis Ababa, Ethiopia.

#### V. CAPACITY BUILDING / TRAINING

Two week on site training for technicians /administrators / operators.

*NOTE: All Training related costs to Ethiopian participants will be covered by National Meteorological Agency (NMA).*

#### VI. WARRANTY AND AFTER SALES SERVICES

Two years warranty with detailed description of the nature of after sale service.

#### VII. PAYMENT MILESTONES AND AUTHORITY

Prospective Supplier will indicate the cost of services for each deliverable in US dollars or internationally convertible currencies when applying for this Invitation to Bid (ITB) request. The Supplier will be paid based on the effective UN Operational Exchange Rate (UNOER), and only after approving authority confirms the successful supply of each deliverable as stipulated hereunder. In accordance with UNDP rules, the lump sum contract amount to be offered should consider the CIF Value of the goods inclusive of travel, living allowances (for technical experts), communications, taxes, out of pocket expenses, and other ancillary costs in relation to the supply, installation, testing and commissioning of Calibration System Facility.

A winning Supplier shall then be paid the lump sum contract amount upon certification of the completed

tasks satisfactorily, as per the following delivery and payment schedule:

No.	Deliverables	Expected Date of Delivery/Completion	Approval should be obtained
1	Supply of Goods as per 2010 INCOTERM	upon arrival of the goods and equipment	UNDP CRGG and NMA Technical Team
2	Installation, Configuration, Testing, Commissioning of calibration system facility and On-site Training at NMA; and After Sales Services	upon completion of all installations, configuration and handed over through a formal handover report	" " "

\* This shall be the basis of payment tranches

## VII. MINIMUM ORGANIZATION AND CONSULTANCY TASK FORCE REQUIREMENTS

### 9.1 Minimum Organization Requirements

The prospective Supplier and/or Bidder is expected to meet the following minimum requirements:

- It must have at least 5 years of practical experience in the supply, installation and training of meteorological instrument calibration and/or similar projects;
- Tax Registration/Payment Certificate issued by the Internal Revenue Authority evidencing that the Bidder is updated with its tax payment obligations, or Certificate of Tax exemption, if any such privilege is enjoyed by the Bidder;
- Certificate of Registration of the business, including Articles of Incorporation, or equivalent document if Bidder is not a corporation;
- Full compliance of Bid to the Technical Requirements;
- Quality Certificate (e.g., ISO, etc.) and/or other similar certificates, accreditations, awards and citations received by the Bidder, if any
- Environmental Compliance Certificates (Renewed **ISO 14000 Certification** or its equivalent), Accreditations, Markings/Labels, and other evidences of the Bidder's practices which contributes to the ecological sustainability and reduction of adverse environmental impact (e.g., use of non-toxic substances, recycled raw materials, energy-efficient equipment, reduced carbon emission, etc.), either in its business practices or in the goods it manufactures;

The multi-disciplinary team should comprise members with the following educational qualifications; experience and competencies:

### 8.2 Task Manager / Team Leader

#### Academic Qualification:

- At least Master's degree in Mechanical/Electrical Engineering or related fields.

#### Experience:

- A professional experience in meteorological instruments calibration.

#### Competencies:

- Ability to provide general leadership and direction in due process of supplying, installation, testing, and commission of meteorological instruments calibration.
- Ability to work under pressure, with a group of UN agencies, and to deliver in a timely manner without compromising quality standards;
- Strong organizational skills;
- Strong communication skills;
- Proficiency should be in English.

### 8.3 Project Staff / Trainers

#### Academic Qualification:

- A minimum of a University Degree in computer hardware and software engineering or a relevant area.

#### Experience:

- A minimum of 5 years of professional experience and proven expertise and experience in installation, testing commissioning and/or training of meteorological instruments calibration.

#### Competencies:

- Training and hands-on experience in installation, testing commissioning and/or training of meteorological instruments calibration;
- Ability to work under pressure, with a group of UN agencies, and to deliver in a timely manner without compromising quality standards;
- Strong communication skills;
- Strong presentation and facilitation skills;
- Proficiency should be in English.

### IX. RECOMMENDED PRESENTATION OF TECHNICAL and FINANCIAL PROPOSAL

For purposes of generating proposals whose contents are uniformly presented and to facilitate their comparative review, a Service Provider here below is given a proposed Table of Contents. Accordingly; respective Bidder's Technical Proposal document must have at least the follow preferred content which is outlined in the ITB Standard Bid Document (SBD).

### X. DETAIL RELATED SERVICES

Further to the Schedule of Requirements and Product Specifications in the preceding Table, Bidders are requested to take note of the following related services and Terms/Responsibilities pertaining to successful delivery of the Schedule of Requirements:

No.	Related Services	Terms / Responsibilities
1	Exact Address of Delivery/Installation Location	<input checked="" type="checkbox"/> Indicate the detail address Institution Name/Project Site: National Meteorological Agency City: Addis Ababa PO. Box: 1090
2	Mode of Transport Preferred	<input checked="" type="checkbox"/> AIR
3	Delivery Date	<input checked="" type="checkbox"/> Within three months from PO date
4	Import Duty and Taxes	<input checked="" type="checkbox"/> Beneficiary Partner will cover the related import duties and taxes upon clearance of the goods from Ethiopian Customs Authority
5	Inspection upon delivery	<input checked="" type="checkbox"/> UNDP and/or Beneficiary Partner will conduct post-delivery inspection on each field unit and will then verify operating functions as per the requirements
6	Installation Requirements	<input checked="" type="checkbox"/> Installation, configuration and commissioning of the system in Addis Ababa Head Office
7	Testing Requirements	<input checked="" type="checkbox"/> The Supplier will conduct site test for all equipment. Any defects found shall be rectified at no additional cost to UNDP

No.	Related Services	Terms / Responsibilities
8	Scope of Training on Operation and Maintenance	<input checked="" type="checkbox"/> The Supplier will supply all manual, software and training materials required for the operation and maintenance of the equipment supplied as per the detail Specs
9	Commissioning	<input checked="" type="checkbox"/> The Supplier will assist the beneficiary and its representatives in the commissioning of all equipment supplied