

September 20, 2024

**Reference:** CSIO/MSSA/HCP0057/142

**Subject:** Call for Expression of Interest (EoI)/quotation for the purchase of goods/fabrication job work for the ongoing project activities- reg

It is informed that following items are proposed to be purchased /fabricated. Interested parties are requested to **submit quotation** through email/hard copy to the undersigned **within next three days** from the date of publishing of notice.

**Items/Goods/Job work required**

<b>Sr. No.</b>	<b>Description of the items/Goods/Jobwork</b>	<b>Quantity</b>
<b>1.</b>	<b>All-in-one sensors for weather monitoring</b>	<b>01</b>

**Terms and Conditions:**

Delivery: For CSIR-CSIO, Chandigarh

Lead time/delivery time: 2-3 weeks

Payment: After delivery and successful inspection



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**HEAD ISD**, with a request to display on the CSIO website

## Specifications for the sensor(s) (lab consumables) required for IoT in Smart Agriculture

Sensors required to measure the following quantities:

Category	Observables
Atmospheric	Air temperature
	Air Humidity
	Atmospheric Pressure
	Wind Speed
	Wind Direction
	Rainfall Intensity
	Light Intensity

The observable provided by their respective sensors should meet the following standards:

Observable	Input Power Supply	Accuracy	Resolution	Measuring Range	Communication Interface Protocol
Air temperature	3V – 15V; 24V for heating if sensor requires	Upto $\pm 0.1^{\circ}\text{C}$ or better	Upto $0.01^{\circ}\text{C}$ or better	$-40^{\circ}\text{C}$ to $85^{\circ}\text{C}$ or a range containing this	RS485/ LoRa/ LoRaWAN/ SDI-12/ 4-20mA
Air Humidity		Upto $\pm 1.5\%$ RH or better	Upto $0.01\%$ RH or better	0 to 100% RH	
Atmospheric Pressure		Upto $\pm 0.5\text{hPa}$	Upto $0.1\text{hPa}$ or better	300 - 1200hPa or a range containing this	
Wind Speed		Upto $\pm 0.3\text{m/s}$ ( $\leq 10\text{m/s}$ ) or better; $\pm 3\%$ (10m/s - 50m/s) or better $\pm 5\%$ ( $> 50\text{m/s}$ ) or better	0.1 m/s or better	0 - 60 m/s standard range or a range containing this 0 - 75m/s extended range or a range containing this 0 - 80m/s withstand range or a range containing this	
Wind Direction		Upto $\pm 3.0^{\circ}$ or better	$0.1^{\circ}$ or better	0 - $360^{\circ}$	
Rainfall intensity		Upto $\pm 10\%$ or better	$0.2\text{mm/h}$ or better	0 ~ 200 mm/h	
Light intensity		Upto $\pm 5\%$ or better	5 Lux or better	0 ~ 200,000 Lux	

Quantity of sensors that provide the aforementioned observables: 1 nos