



## SUPPLEMENTAL BID BULLETIN NO. 1

**Subject: PROCUREMENT OF EQUIPMENT AND OTHER ACCESSORIES FOR HABITAT AND ECOLOGICAL ASSESSMENT AND MONITORING**

**Reference No.: FishCoRe-2025-NCB-Goods-1**

**Date: November 21, 2025**

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This is to inform all prospective bidders that the Bid Documents for the abovementioned project have been updated to include the following:

❖ **Addendum to Technical Specification:**

***Section VII – Revised Technical Specifications***

**LOT 4 – Ecological Assessment / Monitoring Equipment**

- Acoustic Doppler Current Profiler
- Test Kits
- Plankton Sampling and Counting Tools
- Niskin Water Sampler
- CTD (Conductivity, Temperature, Depth) Profiler
- Multiparameter Digital Water Quality Meter

*Please see attached **Section VII – Revised Technical Specifications (Lot 4)**, labeled as **Annex A**.*

❖ **Pre-Bid Conference Details:**

The Pre-bid conference for this Project on **November 26, 2025 (Wednesday), 01:00 PM** at **BFAR-FishCoRe Conference Room, 2nd floor, National Food Authority Building, Visayas Avenue, Brgy. Vasra, Quezon City**, through a hybrid setup, allowing participation both in person and via Zoom video conferencing.

Pre-Bid Zoom Link:

<https://zoom.us/j/92234653977?pwd=oABBnaCskvlPOTL6RQoY2vnPf7naMN.1>

All other terms, conditions, and requirements in the original Bid Documents remain unchanged.

Please be guided accordingly.

*ORIGINAL SIGNED*

**NAZARIO C. BRIGUERA**

*Chairperson, Special Bids and Awards Committee*

Technical Characteristics				
LOT 4: <u>PROCUREMENT OF ECOLOGICAL ASSESSMENT AND MONITORING EQUIPMENT</u>				
Estimated Project Cost (EPC) :			PhP 37,410,942.00	
BFAR-FISHCORE SPECIFICATIONS			BIDDER'S STATEMENT OF COMPLIANCE	
Quantity	Unit	Item Description	(Put "comply" if the offer meets the indicated minimum specification, and actual specifications if not)	Indicate where the particular technical specification can be validated i.e. the page number of the brochure, data sheet, manual or can be proven through actual presentation of equipment.
4	units	<b>1. Acoustic Doppler Current Profiler</b>		
		<ul style="list-style-type: none"> <li>● Water Profiling: <ul style="list-style-type: none"> <li>○ Vertical Resolution 0.25m, 0.5m, 1m, 2m, 4m, 8m</li> <li>○ Long Range Mode: 2m, 4m, 8m</li> </ul> </li> <li>● Profile Parameters: <ul style="list-style-type: none"> <li>○ Velocity accuracy- 0.3% of the water velocity relative to ADCP relative to ADCP <math>\pm 0.3\text{cm/s}</math></li> <li>○ Velocity resolution- 0.1cm/s</li> <li>○ Velocity range- <math>\pm 5\text{m/s}</math> (default) <math>\pm 20\text{m/s}</math> (max)</li> <li>○ Number of depth cells- 1-255</li> <li>○ Ping rate- Up to 10Hz</li> </ul> </li> <li>● Echo Intensity Profile: <ul style="list-style-type: none"> <li>○ Vertical resolution Depth cell size, user configurable</li> <li>○ Dynamic range 80dB</li> <li>○ Precision <math>\pm 1.5\text{dB}</math></li> </ul> </li> <li>● Transducer and Hardware <ul style="list-style-type: none"> <li>○ Beam angle- <math>20^\circ</math></li> <li>○ Configuration 4-beam, convex</li> <li>○ Internal memory-Two PCMCIA card slots; one memory card included</li> <li>○ Communications-RS-232 or RS-422; ASCII or binary output at 1200-115,200 baud</li> </ul> </li> <li>● Power <ul style="list-style-type: none"> <li>○ DC input 20-50VDC</li> <li>○ Number of batteries-1 internal battery pack</li> <li>○ Internal battery voltage -42VDC (new) 28VDC (depleted)</li> <li>○ Battery capacity @ <math>0^\circ\text{C}</math>-450 watt hrs</li> <li>○ Standard Sensors</li> </ul> </li> </ul>		

	<ul style="list-style-type: none"> <li>○ Temperature (mounted on transducer)-Range -5° to 45°C, Precision ±0.4°C, Resolution 0.01°</li> <li>○ Tilt-Range ±15°, Accuracy ±0.5°, Precision ±0.5°, Resolution 0.01°</li> <li>○ Compass (fluxgate type, includes built-in field calibration feature)-Accuracy ±2°5, Precision ±0.5°5, Resolution 0.01°, Maximum tilt ±15°</li> <li>● Environmental <ul style="list-style-type: none"> <li>○ Standard depth rating- 200m; optional to 500m, 1000m, 6000m</li> <li>○ Operating temperature -5° to 45°C</li> <li>○ Storage temperature (without batteries) -30° to 60°C</li> <li>○ Weight in air 13.0kg</li> <li>○ Weight in water 4.5kg</li> <li>○ Dimensions -228.0mm wide x 405.5mm long</li> </ul> </li> </ul>		
12	sets	<b>2. Test Kits</b>	
		<p><b>A. Water Quality Test Kit</b></p> <ul style="list-style-type: none"> <li>● Direct Reading Titrator Tests:</li> <li>● Alkalinity: Neutralization, 0-200 ppm (50 tests)</li> <li>● Carbon Dioxide: Neutralization, 0-50 ppm (50 tests)</li> <li>● Chloride: Argentometric, 0-200 ppm (50 tests)</li> <li>● Dissolved Oxygen: Azide Modification of Winkler Method, 0-10 ppm (50 tests)</li> <li>● Hardness (Total): Complexometric, 0-200 ppm (50 tests)</li> <li>● Temperature:</li> </ul> <p><b>FACTOR RANGE</b></p> <ul style="list-style-type: none"> <li>● Armored Thermometer: -5°C to 45°C</li> <li>● Octa Slide Comparator Tests:</li> <li>● Ammonia Nitrogen: Nessler, 0.2-3.0 ppm (50 tests)</li> <li>● Nitrite Nitrogen: Diazotization/Coupling, 0.05-0.8 ppm (50 tests)</li> <li>● pH: Wide Range, 5.0-10.0 (50 tests)</li> </ul> <p><i>(Note: 10 sets for saltwater and 2 sets for freshwater)</i></p> <p><b>B. Soil Nutrient Test Kit</b></p> <ul style="list-style-type: none"> <li>● Test ranges:</li> <li>● Aluminum: 5-125 ppm (50 tests)</li> <li>● Calcium: 150-2800 ppm (50 tests)</li> <li>● Chloride: 25-500 ppm (50 tests)</li> <li>● Humus (Organic): 1.5-8% (50 tests)</li> <li>● Iron (Ferric): 5-125 lbs/acre (50 tests)</li> </ul>	

		<ul style="list-style-type: none"> <li>• Magnesium: 5-150 ppm (50 tests)</li> <li>• Manganese: 4-40 ppm (50 tests)</li> <li>• Nitrogen (Ammonia): 5-150 ppm (50 tests)</li> <li>• Nitrogen (Nitrate): 10-150 lbs/acre (50 tests)</li> <li>• Nitrogen (Nitrite): 1-50 ppm (50 tests)</li> <li>• pH: 3.8-9.6 pH (100 tests)</li> <li>• Phosphorus: 10-200 lbs/acre (50 tests)</li> <li>• Potassium: 100-400 lbs/acre (50 tests)</li> <li>• Sulfate: 50-2000 ppm (50 tests)</li> </ul>		
12	sets	<b>3. Plankton Sampling and Counting Tools</b>		
		<b>A. Plankton Net</b> <ul style="list-style-type: none"> <li>• Specifications:</li> <li>• Plankton Net 13500</li> <li>• 15" (38.1cm) tall, 5" (12.7cm) dia. mouth</li> <li>• 10 mesh, 153 micron nylon cloth</li> <li>• Clear, conical tube attached at the end of the net allows plankton viewing; includes 2 tubes</li> <li>• Net mouth braced by sturdy stainless steel ring and harness</li> </ul> <b>B. Haemocytometer</b> <ul style="list-style-type: none"> <li>• Model number: 8100105</li> <li>• Type: Thoma</li> <li>• Standard</li> <li>• Scale marked line (mm): 1 x 1</li> <li>• Hemocytometer</li> <li>• Scale mark thickness: 3 - 4µm</li> <li>• Scale mark depth: 0.100mm±2µm</li> <li>• Plate thickness: Approx 4.3mm</li> <li>• Material: White glass</li> <li>• Refractive index: Nd = 1.523</li> <li>• Variance value: Le = 58.6</li> <li>• Alkali elution amount: 0.1mg (Na<sub>2</sub>O)</li> <li>• *Since this product is made in Germany, it did not have domestic inspections, etc.</li> <li>• Accessories: Cover glass x 2 sheets (26 x 20 x 0.4mm)</li> <li>• RoHS3 (EU)2015/863 Certificates can be issued</li> </ul> <b>C. Sedgewick Rafter</b> <ul style="list-style-type: none"> <li>• Cell Depth: 1mm.</li> <li>• Volume: 1.0mL.</li> <li>• Base dimensions: 75mm x 33mm (length x width)</li> <li>• WD: Requires at least 0.5mm working distance.</li> </ul>		

11	units	<b>4. Niskin Water Sampler</b>		
		<ul style="list-style-type: none"> <li>• Sizes (Capacity): 1.2L, 2.5L, 5L, 10L, up to 30L</li> <li>• Material: PVC or plastic (non-metallic); some versions Teflon-coated</li> <li>• Length (5L): ~27 in (69 cm)</li> <li>• Weight (5L): ~8.5 lbs (3.9 kg)</li> <li>• Operation: Open on deployment, closes at depth (via messenger or rosette/CTD)</li> <li>• Type: Free-flushing, cylinder-shaped</li> </ul>		
4	units	<b>5. CTD (Conductivity, Temperature, Depth) Profiler</b>		
		<ul style="list-style-type: none"> <li>• Measures conductivity, temperature, and pressure at 4 scans/sec (4 Hz) and provides high accuracy and resolution, reliability, and ease-of-use for a wide range of research, monitoring, and engineering applications.</li> <li>• Pump-controlled, T-C ducted flow minimizes salinity spiking caused by ship heave and allows for slow descent rates without slowing sensor responses, improving dynamic accuracy and resolving small-scale structure in the water column.</li> <li>• The 19plus V2 supports numerous auxiliary sensors including dissolved oxygen, pH, turbidity, fluorescence, oil-in-water, PAR, nitrates, and altimeter, with six A/D channels and one RS-232 data channel.</li> <li>• Nine alkaline D-cells provide power for up to 60 hours of profiling.</li> <li>• Features:</li> <li>• Unique internal-field conductivity cell permits use of T-C duct, minimizing salinity spiking.</li> <li>• Aged and pressure-protected thermistor has a long history of exceptional accuracy and stability.</li> <li>• Pressure sensor with temperature compensation is available in eight strain-gauge ranges (to 7000 m) and eleven Digiquartz® ranges (to 10,500 m).</li> <li>• Pump runs continuously in profiling mode, providing correlation of CTD and plumbed auxiliary sensor measurements.</li> </ul>		

5	units	6. Multiparameter Digital Water Quality Meter		
		<ul style="list-style-type: none"> <li>• Benchtop Yes, optical BOD probe for the lab is available</li> <li>• Buffer Recognition: Yes, auto-buffer recognition for USA (4.00, 7.00, 10.00) and NIST (4.01, 6.86, 9.18) buffer sets. Calibration values are automatically compensated for temperature for both buffer sets.</li> <li>• Certifications FCC, WEEE, UN Part III Section 38.3 test methods for lithium-ion batteries (class 9), RoHS, Assembled in USA, IP-67, 1-meter drop test, CE</li> <li>• Connectivity / Communications Built-in micro USB On-The-Go port for PC connection, recharging/powering the ProDSS and connecting directly to a USB stick</li> <li>• Connector MS (military spec) waterproof with quarter-turn bayonet lock (unsurpassed in regards to durability)</li> <li>• Data Management KorDSS desktop PC software (included), &gt;100,000 data sets</li> <li>• Desktop Software Compatible KorDSS desktop PC software (included)</li> <li>• Digital / Digital Sensors: Yes</li> <li>• Flow Cell Yes, flow cell is available</li> <li>• GLP Compliance detailed GLP information is stored and is available to view, download or print: Yes</li> <li>• GPS coordinates are stored with measurement data and site lists, Optional internal GPS</li> <li>• Graphic Display Color, LCD graphic display, backlit keypad</li> <li>• Languages Italian, German, Norwegian, English, French, Portuguese, Japanese, Chinese (Simplified &amp; Traditional), Spanish</li> <li>• Logging Capabilities Single point or Continuous: Yes</li> <li>• Measurement Method / Channels Digital</li> <li>• Memory &gt;100,000 data sets, 400 GLP files</li> <li>• Multiparameter: Yes</li> <li>• Operating Temperature 0 to 50°C (32 to 122°F)</li> </ul>		

		<ul style="list-style-type: none"> <li>• Salinity Measurement range: 0 - 70 (ppt) (%)</li> <li>• Measurements:</li> <li>• Dissolved Oxygen (DO, % saturation &amp; mg/L)</li> <li>• Temperature</li> <li>• pH &amp; ORP (Oxidation-Reduction Potential)</li> <li>• Conductivity, Specific Conductance, Salinity, Resistivity</li> <li>• Turbidity, Total Dissolved Solids (TDS), Total Suspended Solids (TSS)</li> <li>• Ammonium, Ammonia, Nitrate, Chloride</li> <li>• Chlorophyll-a, Phycocyanin, Phycoerythrin (Algae)</li> <li>• Water Density, Depth, Barometric Pressure</li> <li>• Battery Life: ~48 hours (rechargeable lithium-ion battery)</li> <li>• Data Storage: 100,000+ data sets, 400 GLP files</li> <li>• Connectivity: Micro USB (PC connection, charging, data transfer)</li> <li>• GPS: Optional internal GPS for location tagging</li> <li>• Software: KorDSS desktop software included</li> <li>• Build &amp; Durability:</li> <li>• Waterproof (IP-67 rated, even with battery cover off)</li> <li>• Drop-resistant (1-meter drop test passed)</li> <li>• 4 universal sensor ports (supports all ProDSS sensors)</li> <li>• Multiparameter &amp; Smart Digital Sensors</li> <li>• Size &amp; Cable Options:</li> <li>• Handheld unit: 8.3 cm W × 21.6 cm L × 5.6 cm D</li> <li>• Sensor bulkhead: Various sizes depending on configuration</li> <li>• Cable length: Up to 100m</li> </ul>		
		<p><b>OTHER REQUIREMENTS:</b></p> <ol style="list-style-type: none"> <li>i. Free training on how to use and maintain the equipment;</li> <li>ii. Provision of Operational Manual;</li> <li>iii. Accessible service maintenance facility</li> <li>iv. With atleast one (1) year service and parts warranty</li> </ol> <p><b>Submission upon delivery:</b></p> <ol style="list-style-type: none"> <li>i. "Warranty certificates" or its</li> </ol>		

		<p>equivalent, per industry standard relative to each item required of product certification issued by the manufacturer/ brand owner. Additional documentation on the duration or period covered and describing the process of how product warranties can be availed by the End-user.</p> <p>ii. "Certificate of Product Authenticity" or "Original Product Certification", or its equivalent from the manufacturer/ brand owner for the following items:</p> <ol style="list-style-type: none"> <li>1. Acoustic Doppler Current Profiler (ADCP),</li> <li>2. CTD Profiler,</li> <li>3. Niskin Water Sampler, and</li> <li>4. Multiparameter Digital Water Quality Meter)</li> </ol>		
		<p><b>DELIVERY PLACE:</b></p> <p>BFAR Central Office- Property Section</p> <p><b>DELIVERY PERIOD:</b></p> <p>Delivery of procured items must commence 20 days and must be completed maximum 60 days, upon issuance of the NOA and NTP.</p>		

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**Name of Company**

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**Signature over Printed Name  
of Authorized Signatory**

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**Date**