**ANNEX 1: SCHEDULE OF REQUIREMENTS**

UNDP has embarked on the project of “**Supporting the Economic Empowerment of the Artisanal Fishing Community of the Republic of Mauritius**” whose primary objective is to support the artisanal fishing community of the Republic of Mauritius for the sustainable management of coastal fisheries and to improve their economic situation.

A key activity under the project is the deployment at sea of modern Fish Aggregating Devices (FADs) which require the procurement, mounting, installation of the following items:

1. **Materials for mooring line** comprising of cables, chains and related accessories which will allow the FADs to be anchored at depths ranging from 800 to 3000 metres and prevent the FADs from drifting away.
2. **Satellite buoy tracking/ biomass sensors** which will be attached to the FADs and provide data to help the artisanal fishers to locate the FADs as well as better plan their fishing trips.
3. **Reinforced fibreglass unsinkable buoys** to which all electronic equipment will be attached. The structure should be resistant to adverse weather conditions and designed to buffer the impact of collision with sea going vessels.
4. **Satellite Buoy tracking and biomass software** which will enable the Ministry of Blue Economy, Marine Resources, Fisheries and Shipping (MoBEMRFS) to receive and interpret the data received from the satellite buoy and the biomass sensor and make it available to fishers.

The required quantities and specifications are given in price activity schedule below.

| **Item No.** | **Materials** | | **Qty for 1 set** | | | **Projected Quantities of FADs\*** | | **Unit Price (USD)** | **Total Price (USD)** | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **LOT 1 – Supply of Materials for mooring line (Long Term Agreement)** | | | | | | | | | | |
| 1.1 | Chain - Galvanised and interlinked, diameter 12mm | | 20 m | | | **15 sets\*** | |  |  | |
| 1.2 | Rope polyamide - Diameter 18mm, 3 strands twist right hand lay | | 1 coil of 200 m | | |  |  | |
| 1.3 | Rope polypropylene - diameter 20mm, 3 strands twist right hand lay | | 10 coils of 200 m each | | |  |  | |
| 1.4 | Shackles - Galvanized, diameter 12mm | | 4 | | |  |  | |
| 1.5 | Shackles - Galvanized, diameter 16mm | | 6 | | |  |  | |
| 1.6 | Thimble - Galvanized, diameter 18mm | | 4 | | |  |  | |
| 1.7 | Thimble - Galvanized, diameter 12mm | | 4 | | |  |  | |
| 1.8 | Swivel - Galvanized, diameter 18mm | | 5 | | |  |  | |
| 1.9 | Self-adhesive retro reflective tape - Width 50mm, Class B with honeycomb structure  Colors: Red, Silver or Fluo | | Roll of 3 m | | |  |  | |
| 1.10 | Strap bands Brown/black/dark blue colour | | 1 coil of 25 m | | |  |  | |
| 1.11 | Mixed-wire rope (nylon-type intertwined with steel) diameter 14mm | | 100 m | | |  |  | |
| 1.12 | Zinc anode 1 to 1.5kg | | 3 | | |  |  | |
| **Subtotal for LOT 1** | | | | | | | | |  | |
| **LOT 2 – Supply of Satellite buoy tracking/ biomass sensor and associated satellite tracking software (Long Term Agreement)** | | | | | | | | | | | |
| **2.1** | | **Satellite buoy tracking / biomass sensor as per following specifications** | | 1 | **15 sets\*** | |  | | |  | |
| The satellite buoy tracking/ biomass sensor should be:   * Capable of producing pings on a regular basis * Able to detect the aggregation of biomass down to a depth of at least 300m beneath the FAD * Able to capture and transmit data such as GPS position, temperature, sea surface temperature and diurnal migration of biomass * Compatible with cartography of Eastern Africa * Impact and abrasion resistant * Fitted with an echo sounder for accurate biomass determination * Able to distinguish big from small fish (eco filtering, species/size discrimination) * Able to estimate biomass volume * Capable of detecting fish shoal behaviour | |
| **2.2** | | **Relevant downloading and processing software compatible with the above Satellite buoy tracking / biomass sensor** | | **1 (One-off item)** | | |  | | |  | |
| **2.3** | | **Relevant training to at least five (5) Officers from the MoBEMRFS and the Rodrigues Regional Assembly about downloading and processing software compatible with satellite buoy tracking/ biomass sensor** | | **At least 5 (One-off item)** | | |  | | |  | |
| **Subtotal for LOT 2** | | | | | | | | | |  | |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Item No.** | **Materials** | **Qty for 1 set** | **Projected Quantities of FADs\*** | **Unit Price (USD)** | **Total Price (USD)** |
| **LOT 3 – Supply of Reinforced Fibreglass Buoy (Long Term Agreement)** | | | | | |
| **3.1** | **Reinforced Fibreglass Buoy as per following specifications:** | 1 | **15 Sets\*** |  |  |
| * + - * The buoy should be a large, fiberglass reinforced plastic buoy of a volume of 800 to 900 litres, diameter1200 to 1300 mm and height of 1000mm measured from base to top of the buoy and ballasted with concrete to act as counterweight to provide stability.       * The thickness of the fibreglass buoy should be at least 10mm       * A stainless-steel rod of diameter 16 mm with both extremities secured within the concrete ballast and twisted into a ring of diameter 100mm should be provided under the buoy for anchoring the buoy       * The buoy should bear a stainless-steel mast of 60mm diameter and 1450mm in height reinforced with fiberglass.       * At least three stainless steel lifting legs should be provided on the top side of the buoy and 2 stainless U-bolt on the sides for rigging purposes.       * The buoy should be filled with polystyrene foam and fitted on the outside throughout the maximum horizontal circumference with a rubber fender of minimum thickness 60mm.       * Fitted with a solar-powered flashing beacon light and a tube type radar reflector on a stainless-steel mast.       * The buoy should be coloured yellow and bear the ‘X’-stop mark indication as provided in the International Navigation and Maritime Guidelines.       * The buoy should bear the **relevant logos to be provided by the project team** and markings of at least 150mm in height and in black colour as follows: **FAD, DCP, FISHERIES, MAURITIUS, Tel: +2302347207, Email: fitec@govmu.org**       * Resistant to adverse weather condition and designed to buffer the impact of collision with sea going vessels |
| **Subtotal for LOT 3** | | | | |  |

**LOT 4:** **Mounting, installation, and deployment of Fish Aggregating Devices (FADs) including provision of necessary materials – Long Term Agreement**

The objective of Lot 4 is to award the **Mounting, installation, and deployment of Fish Aggregating Devices (FADs) including provision of necessary materials** to technically and financially responsive bidders. The quoted price should include cost of assembly, transportation to the delivery location and deployment at sea with the assistance of **relevant staff from the Fisheries Training and Extension Centre (FiTEC)**. The design of the FAD is at **Appendix 1** and the list of materials to be used in the construction of the FADs is given at **Table 1 below**.

**Note:** A pre-bid meeting will be held on **16 February 2022** @ **10.00 am** at the **Fisheries Training and Extension Centre (FiTEC), Pointe aux Sables, Mauritius.**

**International bidders** are invited to join the pre-bid meeting via Zoom:

**Zoom Link:** <https://undp.zoom.us/j/84785899296?pwd=aGJVYU9uV2hiU3JDanZ2a28rSWhpQT09>

**Meeting ID**: 847 8589 9296

**Passcode**: 352110

| **Item No.** | **Description** | **Projected Quantities of FADs\*** | **Unit Price (USD)** | **Total Price (USD)** |
| --- | --- | --- | --- | --- |
| **A** | Mounting, installation, and deployment of Fish Aggregating Devices (FADs) including provision of necessary materials *(Including assembly, transportation of the FADs to delivery point and deployment at sea)* | 15\* |  |  |
| **B** | Relevant downloading and processing software compatible with the above Satellite buoy tracking / biomass sensor **(One-Off item for Lot 4)** | 1 |  |  |
| **C** | Relevant training to at least five (5) Officers from the Ministry of Blue Economy, Marine Resources, Fisheries and Shipping and the Rodrigues Regional Assembly about downloading and processing software compatible with satellite buoy tracking/ biomass sensor **(One-Off item for Lot 4)** | At least 5 |  |  |
| **TOTAL FOR LOT 4** | | | |  |

**TABLE 1 – Materials to be used in the construction of 1 set of Fish Aggregating Device (FAD)**

| **SN** | **Description** | **Qty for 1 set of FAD** |
| --- | --- | --- |
| **1.0 – Materials for Mooring Line** | | |
| 1.1 | Chain - Galvanised and interlinked, diameter 12mm | 20 m |
| 1.2 | Rope polyamide - Diameter 18mm, 3 strands twist right hand lay | 1 coil of 200 m |
| 1.3 | Rope polypropylene - diameter 20mm, 3 strands twist right hand lay | 10 coils of 200 m each |
| 1.4 | Shackles - Galvanized, diameter 12mm | 4 |
| 1.5 | Shackles - Galvanized, diameter 16mm | 6 |
| 1.6 | Thimble - Galvanized, diameter 18mm | 4 |
| 1.7 | Thimble - Galvanized, diameter 12mm | 4 |
| 1.8 | Swivel - Galvanized, diameter 18mm | 5 |
| 1.9 | Self-adhesive retro reflective tape - Width 50mm, Class B with honeycomb structure  Colors: Red, Silver or Fluo | Roll of 3 m |
| 1.10 | Strap bands Brown/black/dark blue colour | 1 coil of 25 m |
| 1.11 | Mixed-wire rope (nylon-type intertwined with steel) diameter 14mm | 100 m |
| 1.12 | Zinc anode 1 to 1.5kg | 3 |
| **2.0 – Satellite buoy tracking/ biomass sensor and associated satellite tracking software** | | |
| 2.1 | **Satellite buoy tracking / biomass sensor as per following specifications** |  |
| The satellite buoy tracking/ biomass sensor should be:   * Capable of producing pings on a regular basis * Able to detect the aggregation of biomass down to a depth of at least 300m beneath the FAD * Able to capture and transmit data such as GPS position, temperature, sea surface temperature and diurnal migration of biomass * Compatible with cartography of Eastern Africa * Impact and abrasion resistant * Fitted with an echo sounder for accurate biomass determination * Able to distinguish big from small fish (eco filtering, species/size discrimination) * Able to estimate biomass volume * Capable of detecting fish shoal behaviour | 1 |
| **3.0 – Reinforced Fibreglass Buoy** | | |
| 3.1 | **Reinforced Fibreglass Buoy as per following specifications:** | 1 |
| * + - * The buoy should be a large, fiberglass reinforced plastic buoy of a volume of 800 to 900 litres, diameter1200 to 1300 mm and height of 1000mm measured from base to top of the buoy and ballasted with concrete to act as counterweight to provide stability.       * The thickness of the fibreglass buoy should be at least 10mm       * A stainless-steel rod of diameter 16 mm with both extremities secured within the concrete ballast and twisted into a ring of diameter 100mm should be provided under the buoy for anchoring the buoy       * The buoy should bear a stainless-steel mast of 60mm diameter and 1450mm in height reinforced with fiberglass.       * At least three stainless steel lifting legs should be provided on the top side of the buoy and 2 stainless U-bolt on the sides for rigging purposes.       * The buoy should be filled with polystyrene foam and fitted on the outside throughout the maximum horizontal circumference with a rubber fender of minimum thickness 60mm.       * Fitted with a solar-powered flashing beacon light and a tube type radar reflector on a stainless-steel mast.       * The buoy should be coloured yellow and bear the ‘X’-stop mark indication as provided in the International Navigation and Maritime Guidelines.       * The buoy should bear the **relevant logos to be provided by the project team** and markings of at least 150mm in height and in black colour as follows: **FAD, DCP, FISHERIES, MAURITIUS, Tel: +2302347207, Email: fitec@govmu.org**       * Resistant to adverse weather condition and designed to buffer the impact of collision with sea going vessels |
| **4.0 – Anchoring weights** | | |
| 4.1 | Metal drums – Empty, well-cleaned, volume 200L | 6 |
| 4.2 | Casting of concrete mix -grade 25 (To be casted in metal drums) | 6 x 200 L |

**General Note: UNDP intents to enter into a Long-Term Agreement (LTA) with the successful bidder of any Lot for a period of one (1) year with possible extension for another one (1) year depending on the bidder’s satisfactory performance and UNDP’s requirements and budget.**

**\*The projected total quantity to be ordered by UNDP over the lifetime of the Long-Term Agreement however, UNDP makes no financial commitment for purchase of any quantity.**

**Delivery Requirements**

| **Delivery Requirements** | |
| --- | --- |
| **Delivery date and time** | For **Lot 1,2,3 & 4**, Bidder is required to deliver the items within **45 days** from date of each issued Purchase Order under the LTA. |
| **Delivery Terms (INCOTERMS 2020)** | Delivery at Place (DAP) for Lot 1,2,3 & Deployment at sea for Lot 4 |
| **Customs clearance**  **(must be linked to INCOTERM** | Not applicable  Shall be done by:  Name of organisation (where applicable)  Supplier/bidder  Freight Forwarder |
| **Exact Address(es) of Delivery Location(s)** | **Fisheries Training and Extension Centre (FiTEC), Pointe aux Sables, Mauritius** |
| **Distribution of shipping documents (if using freight forwarder)** | N/A |
| **Packing Requirements** | **Required for Lot 2 – Items to be marked as Fragile** |
| **Training on Operations and Maintenance** | **Required for Lot 2 and Lot 4** |
| **Warranty Period** | **Minimum of 2 years required for Lot 2 and Lot 4** |
| **After-sales service and local service support requirements** | **Yes, applicable for Lot 2 and Lot 4 during warranty period** |
| **Preferred Mode of Transport** | NA |