



UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION

TECHNICAL SPECIFICATIONS FOR PURCHASE OF SEAWEED PROCESSING EQUIPMENT

1. General Background Information

- 1.1 UNIDO, through cooperation with governments and other agencies in the frame of the African Agribusiness and Agroindustry Development Initiative (3ADI), developed technical assistance projects to enhance agribusiness value chains in over 15 African countries. In the course of formulation and implementation of these projects, UNIDO has also established strong networks of various stakeholders in respective countries and in the continent. The project aims to promote agribusiness development in Africa through innovative Public Private Partnerships (PPP). Linking the project directly to ongoing UNIDO 3ADI activities, it will establish PPPs to strengthen agribusiness value chains and enhance social return of private businesses. Main activities of the project will be the provision of technical assistance services which will enhance the capacity of target beneficiaries (SMEs, entrepreneurs, cooperatives, and farmers etc.) through value chain development and coordination with private partners.
- 1.2 The project aims to promote agribusiness development in Africa through innovative Public Private Partnerships (PPP). Linking it up directly to existing 3ADI activities, in three components (subprojects) the project will establish PPP to strengthen agribusiness value chains and enhance social return of private businesses. The three subprojects go back to requests that UNIDO received from Governments in the frame of the 3ADI.
- 1.3 The project's objective is to reduce poverty among poor seaweed farmers (95% of which are women), fishermen and laborers in Zanzibar, Tanzania, through introducing new seaweed processing technology that enables to accrue more value added in seaweed farmers pockets through the sales of new higher value products from seaweed. Direct beneficiaries of the project will be 1200 households (10% of all seaweed producers) whose women engage in seaweed production; their incomes will increase by 50% within three years (see figure below) and will participate in profits as they secure equity in MUZE processing facilities. Farm productivity will

TECHNICAL SPECIFICATIONS

<120113>

effectively increase and costs will decrease as MUZE processing systems pick up live seaweeds from farms. This would eliminate the need for farmers to invest substantial amounts of unproductive labor in drying seaweeds and it would enable production to continue during rainy seasons. Further, and most important, some 12.000 households will benefit from higher seaweed prices that competitors have to pay. More than half of the members of these households live below the poverty line.

2. The Scope of Supply

2.1 The following items should be supplied:

GENERAL REQUIREMENTS: ALL ELECTRICAL EQUIPMENT, PLUGS AND CABLES MUST BE COMPLIANT WITH ELECTRICAL NETWORK STANDARDS IN THE UNITED REPUBLIC OF TANZANIA:

| Item | Name | Name and required parameters | Quantity |
|--------------|--|---|------------------------|
| LOT 1 | | | |
| 1.1 | Floating (marina-style) jetty | Marina-style floating dock units with at least twenty ton loading capacity including lighting & other electrical systems installed | Est.10 units of floats |
| 1.2 | Hoist/crane at jetty | Five ton capacity. Powered by electric motor or diesel engine. Should have a boom that can swing over boats and shift loads onto the dock floats. | One unit |
| 1.3 | Totes/crates for carrying wet seaweed | One ton capacity. Made from robust plastic or other material not susceptible to corrosion in sea water. | 20 units |
| 1.4 | Trailer for hauling totes/crates | Ten ton capacity. Robust units made from materials not susceptible to corrosion in sea water | Two units |
| LOT 2 | | | |
| 2.1 | Laboratory equipment for preparation & testing of seaweed extracts | <ol style="list-style-type: none"> Balance, electronic pan (accurate to 0.01 gm.) Gel tester with appropriate plungers for carrageenan tests for gels with break-strength less than 2,000 gm/cm² Sample mill for making small quantities (at least 100 grams) of 40-200 mesh powdered seaweed extracts Drying oven with volume at least 50 liters with temperature regulated to 60-80 degrees Celsius Rotary vacuum evaporator with adjustable speed (covering at least 20-100 rpm) and water bath with temperature adjustable between 20-90 degrees Celsius Chiller for evaporator to bring condenser cooling water down to about two degrees Celsius | One unit of each |
| LOT 3 | | | |
| 3.1 | Covered solar drying units for live seaweeds | Solar tunnel dryer units each with twenty square meters of surface area and with removable covers made using UV-resistant plastic or glass. Loading density maximum five kg live seaweed per square meter. Must have gently inclined bottom and drainage system below so seaweed juice can be collected | 120 units |

TECHNICAL SPECIFICATIONS

<120113>

| | | | |
|--------------|--|---|-----------|
| | | in containers as it runs out of the seaweed. | |
| LOT 4 | | | |
| 4.1 | Screw press for juicing seaweeds | 1,000 wet kg/hr capacity for food grade quality (as used in fruit processing). For separating juice and pulp fractions of live seaweeds. | Two units |
| 4.2 | Platform weighing scale | 2,000 kg capacity. For weighing material in and out of juicing equipment. Platform size about 2 x 2 meters. | Two units |
| 4.3 | Chipping/ cutting mill | 1,000 wet kg/hr capacity. For cutting live seaweeds to a size suitable for feeding into screw presses. | Two units |
| 4.4 | Juice/pulp centrifuge | 1,000 liter/hr capacity. For removing fine particulate matter from seaweed juice prior to evaporation/concentration. | Two units |
| 4.5 | Totes/crates for carrying seaweed pulp | One ton capacity. Made from robust plastic or other material not susceptible to corrosion in sea water. | Ten units |
| 4.6 | Juice transport tanks | 5,000 liter capacity. Robust and made from corrosion resistant materials. Easy to load and unload from transport truck. | Six units |

** Compliance must be confirmed in detail by the supplier's offer and technical documentation and will be verified by UNIDO during technical evaluation; if not compliant with UNIDO parameters, the supplier must indicate his parameters in column 'Remarks'.*

*** Please not whether any installation of equipment or training services will be included and indicate any associated costs*

TECHNICAL SPECIFICATIONS

<120113>

2.2 Supplier's General Responsibilities

The supplier must provide evidence of being a recognized supplier of equipment nationally/internationally.

The supplier shall make its best efforts to ensure that all works will be carried out according to "good quality and adequate accessories". The supplier assumes the overall responsibility for the correct selection of the equipment at the eight identified food processing groups

The supplier shall take into account all the details presented in these TSs and shall request any further information, which is considered necessary for the correct implementation of the Works.

The supplier should be able to supply, install and train personnel where necessary and also to provide all services needed for the technical reception of the equipment at the sites.

2.3 Reporting

A final report (in English) should be submitted to UNIDO no later than 2 weeks after the installation and training has been completed, for approval by UNIDO.

2.4. Language

The Official Project communication language shall be English. The drawings, catalogues, illustrations, printed specifications and other documentation related to the contract shall be in English.

3. Guarantee Requirements

At least a one year guarantee is required.

4. Delivery Period/delivery address

The contract should be completed within two months after contract award.

TECHNICAL SPECIFICATIONS

<120113>

Delivery addresses:

| Lot No | Destination |
|--------|--|
| 1 – 4 | c/o C-weed Corporation Ltd., Tumbe village, Pemba, Zanzibar, Tanzania |

5. Bidding process

UNIDO maintains the right of ordering the Lots separately at different points in time. Each supplier can bid for 1 or more Lots if available.

6. Award conditions

UNIDO reserves the right to split an award between any suppliers in any combination, as it may deem appropriate. If the quotation is submitted on an "all or none" basis, it should be clearly stated as such in your response to this RFQ.

TECHNICAL SPECIFICATIONS
<120113>

TO BE FILLED OUT BY SUPPLIER AND RETURNED TO UNIDO

ANNEX I. Cost of services and supplies

The bidder is expected to provide costs estimates in the following format.

| | UNIDO REQUIREMENTS | | TO BE COMPLETED BY THE INVITEE | | | | |
|-------|--------------------|--|--------------------------------|----------------|----------------------|------------|---------|
| | Item | Name and required parameters | Quantity | Unit price USD | Total item price USD | Compliance | Remarks |
| LOT 1 | 1.1 | Floating (marina-style) jetty at Tumbe | 10 units of floats | | | | |
| | 1.2 | Hoist/crane at jetty | 1 | | | | |
| | 1.3 | Totes/crates for carrying wet seaweed | 20 | | | | |
| | 1.4 | Trailer for hauling totes/crates | 2 | | | | |
| | 1. | Total Price | | | | | |
| LOT 2 | 2.1 | Laboratory equipment for preparation & testing of seaweed extracts | 1 | | | | |
| | 2. | Total Price | | | | | |
| LOT 3 | 3.1 | Covered solar drying units for live seaweeds | 120 | | | | |
| | 3 | Total Price | | | | | |
| LOT 4 | 4.1 | Screw press for juicing seaweeds | 2 | | | | |
| | 4.2 | Platform weighing scale | 2 | | | | |
| | 4.3 | Chipping/ cutting mill | 2 | | | | |
| | 4.4 | Juice/pulp centrifuge | 2 | | | | |
| | 4.5 | Totes/crates for carrying seaweed pulp | 10 | | | | |
| | 4.6 | Juice transport tanks | 6 | | | | |
| | 4 | Total Price | | | | | |
| | | Provision of services** | | | | | |
| | | Cost of transportation of the equipment to the factory sites (including customs declaration registration and transportation service; UNIDO is exempt from customs duties and VAT) DAP Terms apply plus insurance at 110% of the value of the equipment | | | | | |
| | | TOTAL PRICE | | | | | |

*(UNIDO expects an offer for **at least one LOT** of items mentioned on this page. UNIDO reserves the right to order the items under the different LOT-s with separate delivery dates over 2016.)*

*** Please not whether any installation of equipment or training services will be include free of charge.*