



Ministry of Environment and Energy
Male', Republic of Maldives



SUPPLY AND DELIVERY OF WASTE MANAGEMENT EQUIPMENT TO 10 ISLANDS OF HUVADHU ATOLL

Funded by

the Public Sector Investment Program

of the Government of the Republic of Maldives

January 2017

Issued By:

**Tender Evaluation Section
Ministry of Finance and Treasury**



SUPPLY AND DELIVERY OF WASTE MANAGEMENT EQUIPMENT TO 10 ISLANDS OF HUVADHU ATOLL

1. INTRODUCTION

Ministry of Environment and Energy (MEE) on behalf of the Government of Maldives is seeking the assistance of a qualified and competent company/firm for the **Supply and Delivery of Waste Management Equipment to 10 Islands of Huvadhu Atoll** that include the following islands:

1. GA. Maamendhoo
2. GA. Dhevvdhoo
3. GA. Kodey
4. GA. Gemanafushi
5. GDh. Madaveli
6. GDh. Hoadedhdhoo
7. GDh. Nadella
8. GDh. Gadhdhoo
9. GDh. Fiyoari
10. GDh. Vaadhoo



2. DELIVERABLES

| # | Type of Equipment | Qty. |
|----------|--|------|
| 1 | To be Delivered to GA. Maamendhoo | |
| a | Glass to Sand Crusher | 1 |
| b | Plastic Shredder | 1 |
| c | Metal Can Baler | 1 |
| d | Vegetation Shredder | 1 |
| e | Mechanical Rotary Compost Screen | 1 |
| 2 | To be Delivered to GA. Dheevadhoo | |
| a | Glass to Sand Crusher | 1 |
| b | Plastic Shredder | 1 |
| c | Metal Can Baler | 1 |
| d | Vegetation Shredder | 1 |
| e | Mechanical Rotary Compost Screen | 1 |
| 3 | To be Delivered to GA. Kodey | |
| a | Glass to Sand Crusher | 1 |
| b | Plastic Shredder | 1 |
| c | Metal Can Baler | 1 |
| d | Vegetation Shredder | 1 |
| e | Mechanical Rotary Compost Screen | 1 |
| 4 | To be Delivered to GA. Gemanafushi | |
| a | Glass to Sand Crusher | 1 |
| b | Plastic Shredder | 1 |
| c | Metal Can Baler | 1 |
| d | Vegetation Shredder | 1 |
| e | Mechanical Rotary Compost Screen | 1 |
| 5 | To be Delivered to GDh. Madaveli | |
| a | Glass to Sand Crusher | 1 |
| b | Plastic Shredder | 1 |
| c | Metal Can Baler | 1 |
| d | Vegetation Shredder | 1 |
| e | Mechanical Rotary Compost Screen | 1 |
| 6 | To be Delivered to GDh. Hoadedhdhoo | |
| a | Glass to Sand Crusher | 1 |
| b | Plastic Shredder | 1 |
| c | Metal Can Baler | 1 |
| d | Vegetation Shredder | 1 |
| e | Mechanical Rotary Compost Screen | 1 |
| 7 | To be Delivered to GDh. Nadella | |
| a | Glass to Sand Crusher | 1 |



| | | |
|-----------|---|---|
| b | Plastic Shredder | 1 |
| c | Metal Can Baler | 1 |
| d | Vegetation Shredder | 1 |
| e | Mechanical Rotary Compost Screen | 1 |
| 8 | To be Delivered to GDh. Gadhdhoo | |
| a | Glass to Sand Crusher | 1 |
| b | Plastic Shredder | 1 |
| c | Metal Can Baler | 1 |
| d | Vegetation Shredder | 1 |
| e | Mechanical Rotary Compost Screen | 1 |
| 9 | To be Delivered to GDh. Fiyoari | |
| a | Glass to Sand Crusher | 1 |
| b | Plastic Shredder | 1 |
| c | Metal Can Baler | 1 |
| d | Vegetation Shredder | 1 |
| e | Mechanical Rotary Compost Screen | 1 |
| 10 | To be Delivered to GDh. Vaadhoo | |
| a | Glass to Sand Crusher | 1 |
| b | Plastic Shredder | 1 |
| c | Metal Can Baler | 1 |
| d | Vegetation Shredder | 1 |
| e | Mechanical Rotary Compost Screen | 1 |

Supply and Delivery of Waste Management Equipment to 10 Islands of Huvadhu Atoll



3. REQUIREMENTS - SPECIFICATION OF EQUIPMENT

5.1. Glass to Sand Crusher

5.2. Plastic Shredder

5.3. Metal Baler

5.4. Vegetation Shredder / Chipper

5.5. Manual Rotary Compost Screen

*All equipment provided must be brand new items.

*The brand name, model number and country of origin must be described in the proposal

*The supplier must carry out full capacity test run with the presence of a personal from Island council for all the supplied and installed equipment.

*The supplier must provide operations training to the operators of the equipment.

5.1. Glass to Sand Crusher

| # | Feature | Requirement |
|--|---------------------------|---|
| General Information | | |
| 1 | Crushing Time | 0.5 to 1.0 tonne/hour |
| 2 | Crushing Ratio | Maximum output grain not more than 0.5mm in diameter |
| 3 | Motor | 2 to 5 HP |
| 4 | Standard Electrical Power | 3 Phase electrical, 400V AC, 50Hz |
| Glass Crusher Dimensions and Weight | | |
| 5 | Feeder Hopper | Measurement of Feeder mouth diagonal measurement not less than 300mm |
| Other Specifications | | |
| 6 | Control | Should have an automatic cut off switch |
| 7 | Seal | Air tight seal when feeding the machine and when transferring the crushed material to the collection container |
| Parts and Documents | | |
| 8 | Operating Manual | Operating manual for safe operations of the machine under normal operations. The operations manual must include trouble shooting and remedy guide table |
| 9 | Maintenance Manual | Maintenance manual covering routine service requirements. The maintenance manual must include a labelled diagram |
| 10 | Language of Documents | All literature in the English language |
| 11 | Free to customer parts | Free to customer spare parts |
| 12 | Replacement Parts | Should be readily available in the Republic of Maldives, South Asia or South East Asia |
| 13 | Warranty | Each unit supplied to carry a statement of minimum one year warranty. |



5.2. Plastic Shredder

| # | Feature | Requirement |
|-----------------------------|----------------------------|---|
| General Information | | |
| 1 | Motor | 3 to 5 HP |
| 2 | Standard Electrical Power | 3 Phase electrical, 400V AC, 50Hz |
| 4 | Type of Plastic | Can shred all types of plastic |
| 5 | Input Size | Capable of shredding plastic material of dimension not less than 600mm during continuous feed operations; |
| | Shredding Ratio | Largest dimension of output material not more than 10mm |
| 6 | Shredding Blade Material | Blades should have a lifetime not less than 5 years and be made of corrosion resistant material |
| 7 | Output of Plastic Material | 30 – 100 kg per hour |
| Other Specifications | | |
| 8 | Safety Measures | “hands free” cutting operation for all plastics and dust curtain fitted at the feed hopper and the discharge |
| | Control | Should have an automatic cut off switch |
| Parts and Documents | | |
| 10 | Operating Manual | Operating manual for safe operations of the machine under normal operations. The operations manual must include trouble shooting and remedy guide table |
| 11 | Maintenance Manual | Maintenance manual covering routine service requirements. The maintenance manual must include a labelled diagram |
| 12 | Language of Documents | All literature in the English language |
| 13 | Free to customer parts | Free to customer spare parts |
| 14 | Replacement Parts | Should be readily available in the Republic of Maldives, South Asia or South East Asia |
| 15 | Warranty | Each unit supplied to carry a statement of minimum one year warranty. |



(Handwritten signature)

5.3. Metal Baler

| # | Feature | Requirement |
|-----------------------------|-----------------------------|---|
| General Information | | |
| 1 | Motor | 3 to 5 HP |
| 2 | Standard Electrical Power | 3 Phase electrical, 400V AC, 50Hz |
| 4 | Type of Metal | Can compact and bale all types of metal |
| 5 | Compaction Compartment Size | Inside volume of feeder not less than 2 square meters |
| | Bale Tying | Bale tying material readily available in the country |
| | Bale Ejection | Hydraulic |
| Other Specifications | | |
| 8 | Safety Measures | Hands free compacting operation for all metals |
| | Control | Should have an automatic cut off switch |
| Parts and Documents | | |
| 10 | Operating Manual | Operating manual for safe operations of the machine under normal operations. The operations manual must include trouble shooting and remedy guide table |
| 11 | Maintenance Manual | Maintenance manual covering routine service requirements. The maintenance manual must include a labelled diagram |
| 12 | Language of Documents | All literature in the English language |
| 13 | Free to customer parts | Free to customer spare parts |
| 14 | Replacement Parts | Should be readily available in the Republic of Maldives, South Asia or South East Asia |
| 15 | Warranty | Each unit supplied to carry a statement of minimum one year warranty. |



5.4. Vegetation Shredder/Chipper

| # | Feature | Requirement |
|-------------------------------|------------------------|---|
| General Specifications | | |
| 1 | Details | Supplied new. Petrol/diesel driven mobile multi vegetation shredder/chipper (leaf and wood etc.) similar to that offered by Hansa (C21), Ducar 15HP, Echo bearcat (SC5720b) etc. Similar products offered by other manufactures will be considered without prejudice. |
| 2 | Engine | 15 -20 HP 4 stroke air cooled petrol engine (Brigs and Stratton/ Kolher/Honda etc or similar) with Manual- or Electric-Start. Diesel equivalent maybe offered. |
| | Control | Should have an automatic cut off switch |
| 4 | Chipping Capacity | 100-130mm chipping capacity (approx.) |
| 5 | Chipping Method | Blade or disc with hammer operating action |
| 7 | Body | heavy duty welded structural steel |
| 9 | Mount | Self-mounted or trailer mounted with inflatable tyres |
| 10 | Paint and Finish | Painted with primers and powder / epoxy finish to all exposed surfaces |
| Parts and Documents | | |
| 12 | Operating Manual | Operating manual for safe operations of the machine under normal operations. The operations manual must include trouble shooting and remedy guide table |
| 13 | Maintenance Manual | Maintenance manual covering routine service requirements. The maintenance manual must include a labelled diagram |
| 14 | Language of Documents | All literature in the English language |
| 15 | Free to customer parts | Free to customer spare parts |
| 16 | Replacement Parts | Should be readily available in the Republic of Maldives, South Asia or South East Asia |
| 17 | Warranty | Each unit supplied to carry a statement of minimum one year warranty. |



5.5. Manual Rotary Compost Screen

| # | Feature | Requirement |
|----|------------------------|---|
| 1 | Power | Manual |
| 2 | Drum Diameter | 1000 to 1500 mm |
| 3 | Screen Size | 10x10mm with 7x7mm supplied sieve insert |
| 4 | Rotation | Manual rotation |
| 5 | Collection of Material | Allows easy collection of material in a removable tray |
| 6 | Body | heavy duty welded structural steel |
| 7 | Mount | Self-mounted |
| 8 | Paint and Finish | Painted with primers and powder / epoxy finish to all exposed surfaces |
| 10 | Operating Manual | Operating manual for safe operations of the machine under normal operations. The operations manual must include trouble shooting and remedy guide table |
| 11 | Maintenance Manual | Maintenance manual covering routine service requirements. The maintenance manual must include a labelled diagram |
| 12 | Language of Documents | All literature in the English language |
| 13 | Free to customer parts | Free to customer spare parts |
| 14 | Replacement Parts | Should be readily available in the Republic of Maldives, South Asia or South East Asia |
| 15 | Warranty | Each unit supplied to carry a statement of minimum one year warranty. |



