The HJM Group

Making Theoretical Approaches a Reality &
Innovating into Sustainable Development

Chemical
&
Industrial Processes

Digital
Technology

1

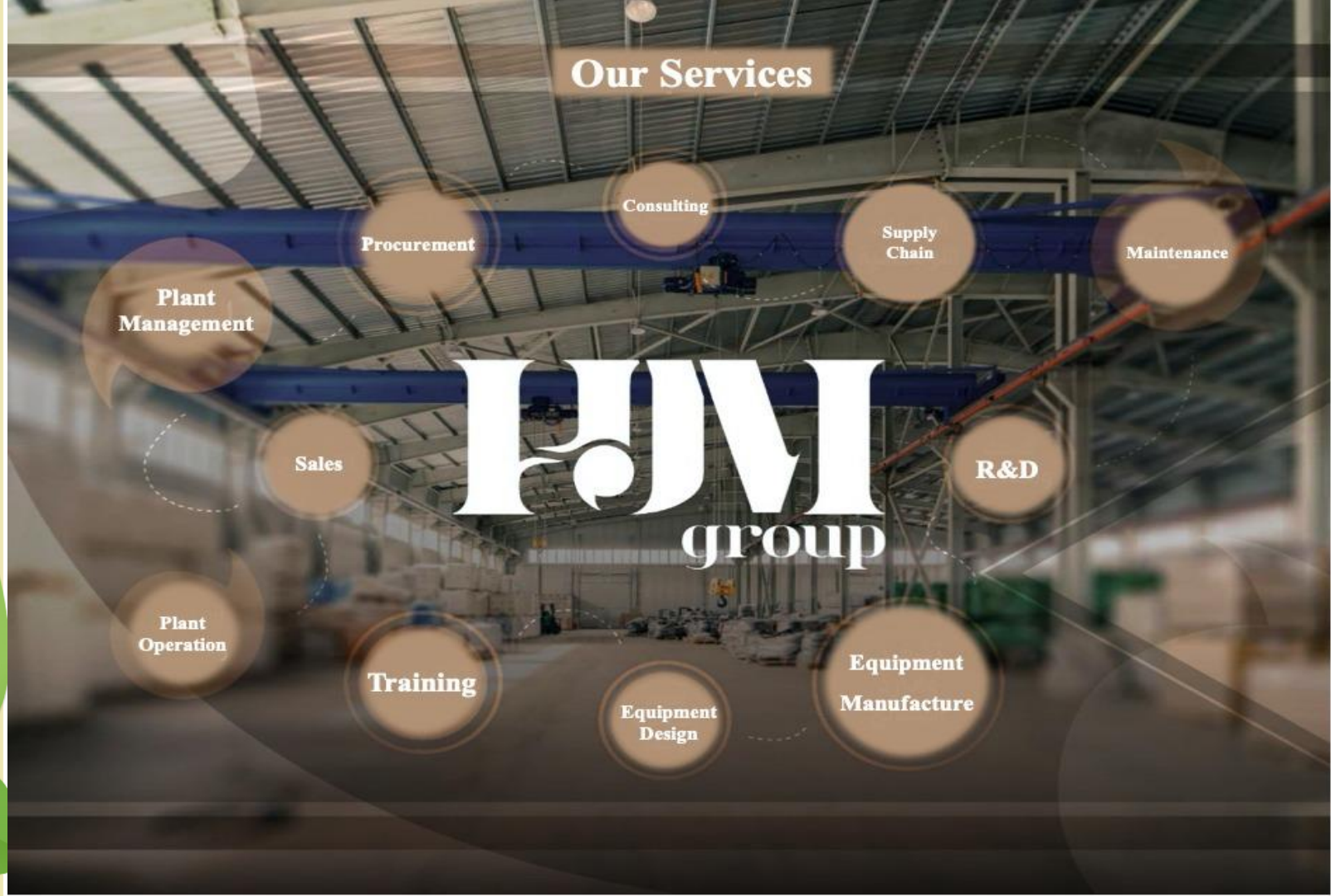
2

3

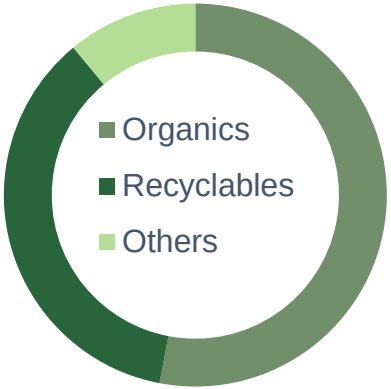
4

Environment
&
Solid waste

Green
Energy


Our Services
Consulting
Procurement
Supply Chain
Maintenance
Plant Management
HJM group
Sales
R&D
Plant Operation
Training
Equipment Design
Equipment Manufacture

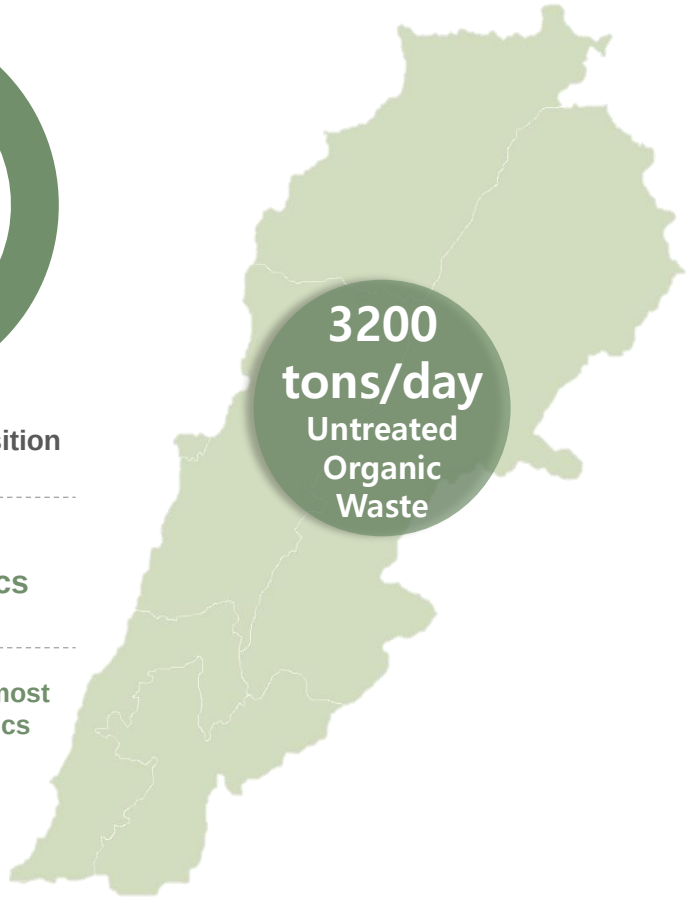
Country Profile on Solid Waste Management Situation



Solid Waste Composition

53% Organics

Lebanon generates almost 3500 tons/day Organics



Solid Waste Final Destination

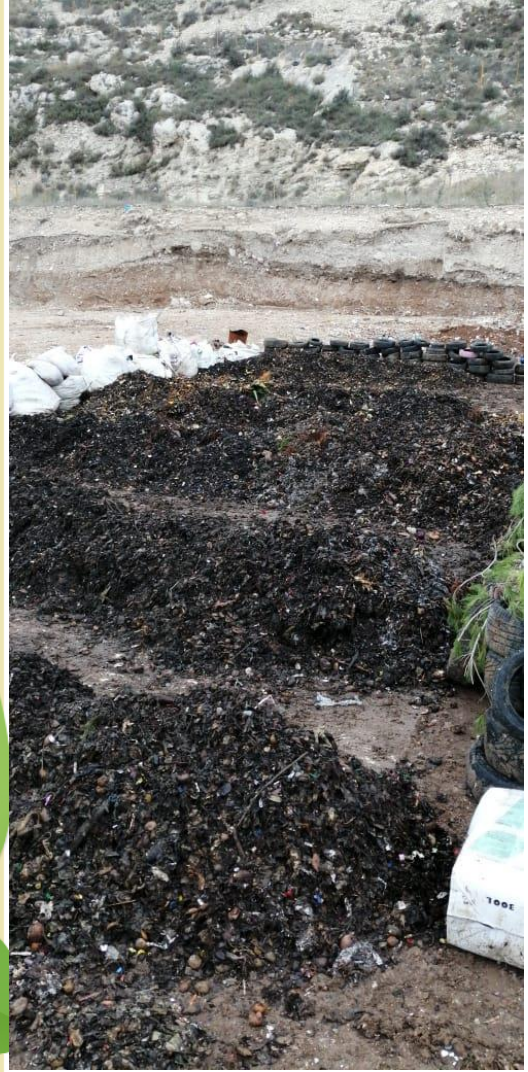
10% Composted

Lebanon treats only 350 kg of Organics Daily

55,049 tons
Organic Fertilizers Imported

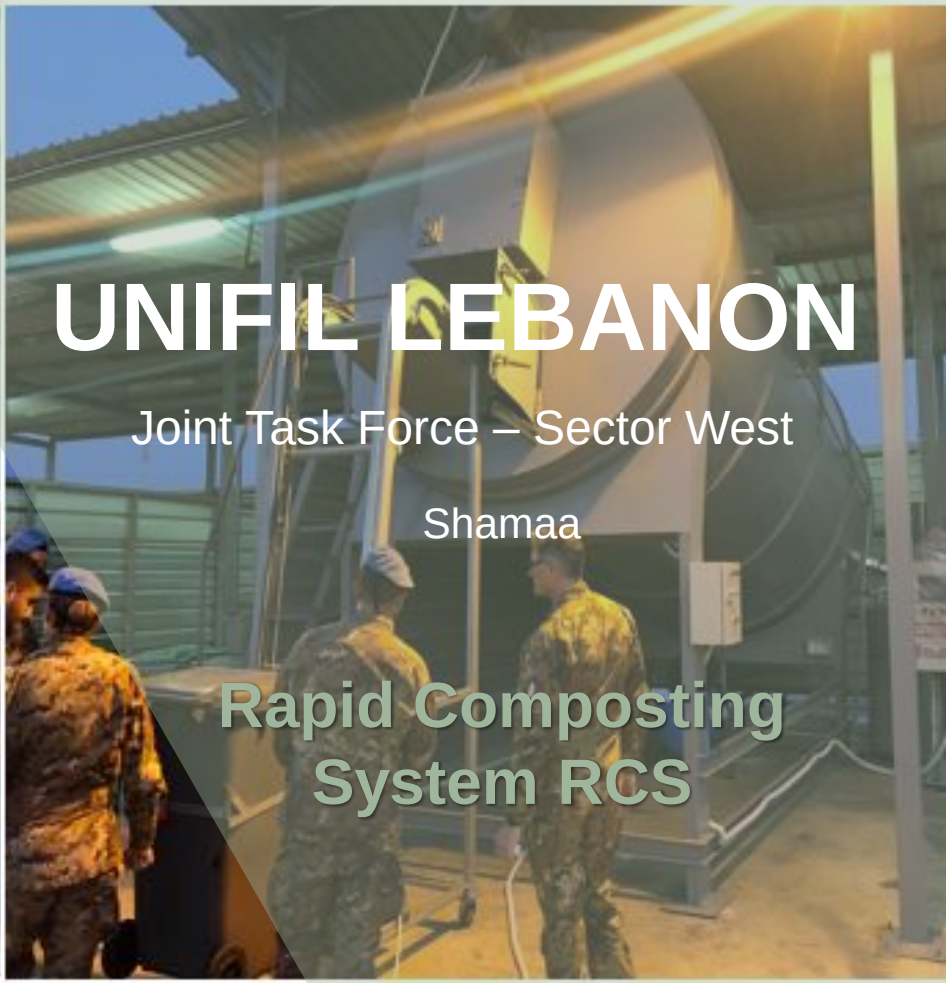
$ 13.6 millions

247 - 2000 $/ton to
Import Cost



An Eco-friendly Innovative Solution

“The Rapid Composting System RCS”



UNIFIL LEBANON

Joint Task Force – Sector West

Shamaa

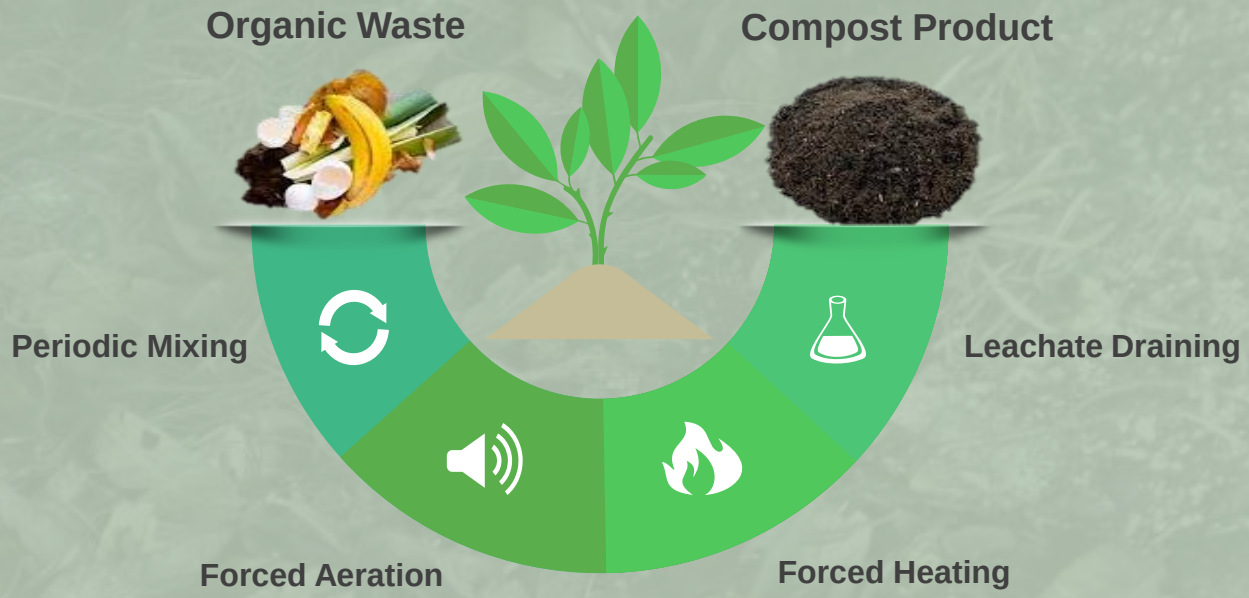
Rapid Composting System RCS

DERQANOON EL NAHER

Materials Recovery Facility

Rapid Composting System RCS

We produce High Quality Compost, at Minimum Time and Cost



Batch of Organic Waste

COMPOST

United Nations Interim Force in Lebanon

Office of the DMS

Environmental Management Unit

Initial Environmental Assessment

For

Rapid Composting System at UNP 2-3 Sector West HQ - Shamaa

EIR Report

UNIFIL

Office of the Director of Mission Support
Environmental Management Unit (EMU)

SITE: **Sector West HQ UNP 2-3 Shamaa** Assessment DATE: **19/02/2020**

Nearest Town: **Naqoura** Weather Condition: **sunny and cold**

Background:

UNIFIL Sector West – HQ acquired a Rapid Composting System. This system comprises an inclined reactor with fixed ends. The biological process by which the food waste is converted into compost is the "aerobic microbial degradation of organic materials". The process requires heating (diesel heater), aeration (Blower) and mixing.

Below, the main phases of the composting process:

Certificate of Whole System Testing

UN Joint Task Force Lebanon – Sector West

Date: February-14-2020

The Rapid Composting System was manufactured in accordance with standard manufacturing processes for the product in effect at the time of manufacture. All equipment have been tested and approved.

Items	Key Test Results	Type of Failure
Reactor Mixer and Motor	No noise, no vibration, no motor/blades breakdown Good inverter frequency for rotation	N/A
Reactor Heater	Consumption 3Liters/hour Good fuel/air calibration No fuel leakage, no polluted emissions	N/A
Air Blower	Good oxygen supply Blower motor runs without bearing noise	N/A
Venting Valve	Open/close effectively Good ventilation	N/A
Air Compressor	No leakage in the suction/discharging air ports Unblocked pressure line, and correct cut-off pressure Normal duty cycle	N/A
Biofilter	Appropriate filtering media Pressure drop is detected via pressure gauge No bad odor emissions	N/A
Sensors	All sensors are in good repair Correct accurate readings	N/A
Control System	Interface features are functioning correctly Screen is in good repair Alarm system is verified to be working	N/A

Serial Number: KSN CR0116019-LB **Year of Manufacture:** 2019-2020

This is to certify that the identified system was manufactured and assembled under the rigid quality requirements of our Engineering specifications for materials and processes.

We certify that all the equipment have been tested and complies with the Functional Test Requirements, and has been continuously operated for a minimum of three consecutive days. All testing operations have been verified and are certified to meet all general performance specifications. **The system operates satisfactorily and meets its specified operating criteria.**

No defects in the equipment were found and as such are classified as "Conforming".

Authorized Signature

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Water Treatment
Waste Treatment
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