

FROM WASTE TO ENERGY

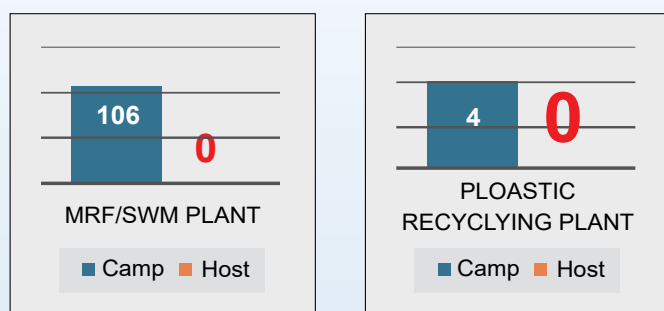
TURNING A CRISIS INTO OPPORTUNITY

1. Background and Context

The Rohingya influx in Cox's Bazar has placed immense pressure on already fragile waste management systems. Host communities, which had no structured waste management facilities, now face mounting environmental, health, and social challenges. The combined waste from Rohingya camps and surrounding areas has reached unsustainable levels, creating urgent risks to public health and water security.

2. Key findings

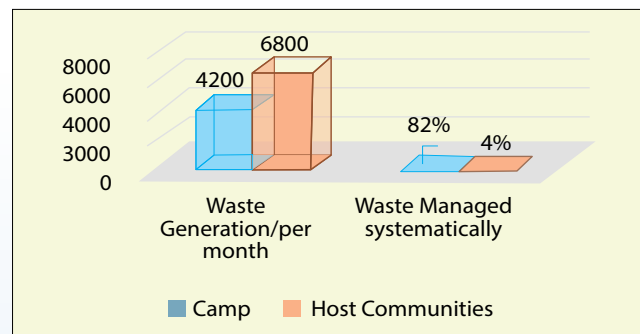
2.1 Solid Waste Management Plant



- I. There are 106 solid waste management plants that are functional in camps (IOM, 2022). Also, 4 plastic recycling plants exist within camps (UNICEF, 2022).
- II. Host communities have no formal solid waste management or recycling plants, widening the service gap even in nearby Kutupalong and Courtbazar of Ukhiya Upazilla. Please note that these two marketplaces are heavily used by both Rohingya and host communities. In Courtbazar, despite hosting several NGO offices and residential areas, there is no structured waste management system in place.

2.2 Waste Generation and Management

- I. A total of 10,000 tons of waste is generated monthly in the host and camps (DoE, 2021).
In camps, 82% of waste is systematically managed through collection, disposal, and partial recycling (IOM, 2022).
- II. In host communities, only 4% of waste is managed, leaving the rest uncollected, openly dumped, or burned (BRAC, 2022).



2.3 Recycling and Segregation

- I. In camps, 84% of households segregate waste. 23% of inorganic waste recycled (IOM, 2022; UNHCR, 2023).
- II. In host communities, only 10–15% of waste is segregated at source, and no formal recycling facilities exist (UNHCR, 2023).

3. Impacts on Host Communities

- I. Open dumping contaminates soil and farmland, reducing agricultural productivity.
- II. Leachate pollutes ponds and shallow aquifers, worsening water scarcity.
- III. Open burning of plastics contributes to air pollution and climate impacts.
- IV. Unsafe water leads to health risks such as typhoid, diarrhea, and skin diseases.
- V. Farmers are losing productivity due to degraded soils. Around 300 acres of land are uncultivable due to waste from camps.
- VI. Small-scale livelihoods (farming, fishing, trading) are directly affected.

4. Way Forward: Turning Waste into Resources

- I. Set up treatment plants for fecal sludge management to produce compost for agricultural use.
- II. Wastewater treatment plant for reuse in irrigation.
- III. Recycling of inorganic waste into different materials.
- IV. Conversion of organic waste into fertilizer.
- V. Transformation of inorganic waste into fuel.
- VI. Production of biogas from organic waste.

All the above examples are already available in the camps.