Waste Wise Cities Tool in Tripoli, Lebanon

WASTE WISE CITIES

Step 1: Preparation

Step 2: Household MSW Generation and Composition

Step 3: Non-Household MSW Generation

Step 4: MSW Received by Recovery Facilities and Control Level of Recovery Facilities

Step 5: MSW Received by Disposal Facilities and Control Level of Disposals Facilities

Step 6: Waste Composition at Disposal Facilities

Step 7: Calculating Food Waste, Recycling, Plastic Leakage, Greenhouse Gas Emissions and Air Pollution

In the rapidly urbanizing world, the crisis in waste management and plastic pollution is a reflection of current unsustainable lifestyles.

The availability of fact-based data on municipal solid waste can guide evidence-based planning and lead to increasingly effective and efficient solid waste collection systems, enhanced local resource recovery and controlled waste disposal, thereby improving the quality of life for urban residents.

UN-Habitat's Waste Wise Cities Tool (WaCT) assesses the parameters for Sustainable Development Goal indicator 11.6.1 - the proportion of municipal solid waste collected and managed in controlled facilities out of total municipal solid waste generated, by the city. It consists of seven steps and provides the necessary data to support evidence-based decision making by city managers.

Together we can achieve a sustainable future.

Have a look at the Waste Wise Cities website, learn about the WaCT and how its application created impact on the ground in other cities.

City **Tripoli**	Population	Year of WaCT survey
Country **Lebanon**	**630,000 (2025)**	**0**

Key Waste Data

Total municipal solid waste (MSW) generated by the city
575 t/d

Total MSW collected
100%
574 t/d

Total MSW collected and managed in controlled facilities
67%
384 t/d

Per capita MSW generation
0.91 kg/cap/d

Per capita household food waste generation
0.35 kg/cap/d

City recovery rate
0%
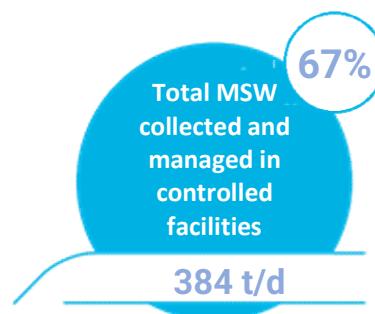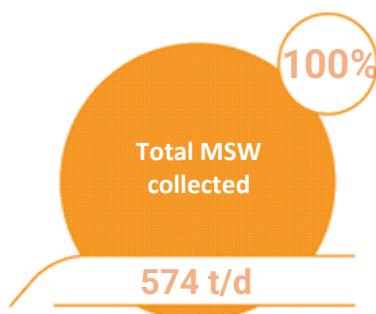
Household and non-household waste generation

	Average household waste generation (kg/capita/day)	Total population	Total MSW generated by households (t/day)
Higher income	0.83	31,500	26
Middle income	0.00	126,000	0
Lower income	0.80	472,500	376
TOTAL	**0.64**	**630,000**	**402**

Total MSW generated from non-household sources (t/day) calculated using proxy of 30% of total MSW   **172**

## Composition of waste at the households and at the disposal site

Household waste composition higher income areas
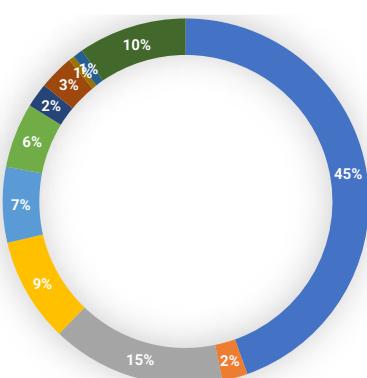

Household waste composition middle income areas
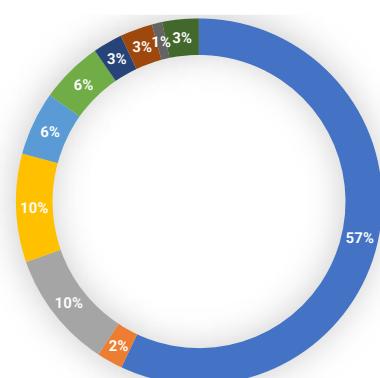

Household waste composition lower income areas
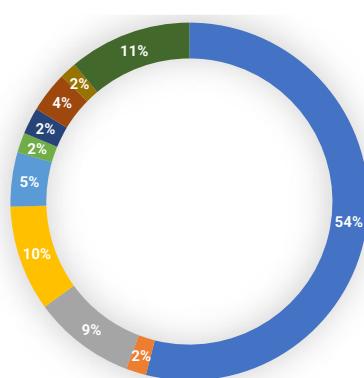
Average household waste composition
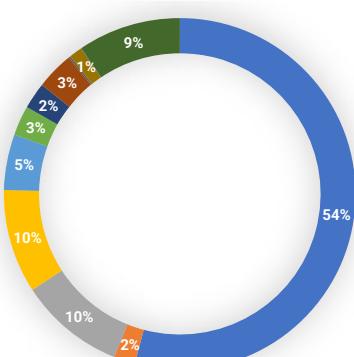
Waste composition at disposal site
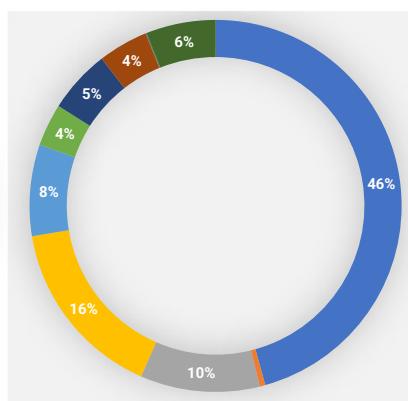
Overall MSW composition Using WaCT -> WFD calculation
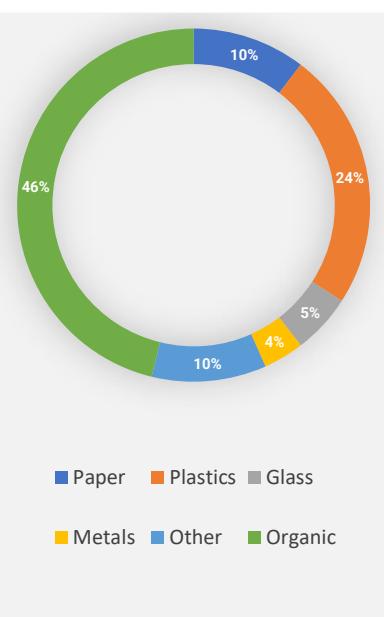

Legend:
- Kitchen/canteen
- Garden/park
- Paper/cardboard
- Plastic film
- Plastics dense
- Metals
- Glass
- Textiles/shoes
- Wood (processed)
- Special wastes
- Composite products
- Other

Legend (Overall MSW):
- Paper
- Plastics
- Glass
- Metals
- Other
- Organic

Potential recyclables from households

Types	Recyclable waste generation from households (t/day)
Food waste	218
Plastics dense	21
Plastic film	38
Paper and cardboard	39
Glass	10
Metal	11
Total	337

WaCT Flow Chart

0.35 kg/p/day
Food waste

0%
City recovery rate

-3 t/d

recovered
0 t/d

Recovery facilities

0 t/d
controlled

Recovered recyclables
3 t/d

Rejects / residues
0 t/d

Household generation
402 t/d

11.6.1
67%
managed in controlled facilities

100% collected

Total MSW generated
575 t/d

577 t/d

disposed
574 t/d

Disposal facilities

384 t/d
controlled

Non-household generation
172 t/d

uncollected
1 t/d

Not reaching facilities

For more info and if interested in WaCT application contact the Waste Wise Cities Team at WasteWiseCities@un.org