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.

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**Key Waste Data**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total municipal solid waste (MSW) generated by the city</td>
<td>556 t/d</td>
<td>96%</td>
</tr>
<tr>
<td>Total MSW collected</td>
<td>535 t/d</td>
<td>96%</td>
</tr>
<tr>
<td>Total MSW collected and managed in controlled facilities</td>
<td>535 t/d</td>
<td>96%</td>
</tr>
<tr>
<td>Per capita MSW generation</td>
<td>0.88 kg/cap/d</td>
<td>11%</td>
</tr>
<tr>
<td>Per capita household food waste generation</td>
<td>0.28 kg/cap/d</td>
<td>11%</td>
</tr>
</tbody>
</table>

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**City:** Seremban  
**Country:** Malaysia  
**Population:** 630,000 (2020)  
**Year of WaCT Survey:** 2021
Household and non-household waste generation

<table>
<thead>
<tr>
<th></th>
<th>Average household waste generation (kg/capita/day)</th>
<th>Total population</th>
<th>Total MSW generated by households (t/day)</th>
</tr>
</thead>
<tbody>
<tr>
<td>High income</td>
<td>0.61</td>
<td>118,440</td>
<td>73</td>
</tr>
<tr>
<td>Middle income</td>
<td>0.53</td>
<td>246,330</td>
<td>132</td>
</tr>
<tr>
<td>Low income</td>
<td>0.59</td>
<td>265,230</td>
<td>157</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>0.57</strong></td>
<td><strong>630,000</strong></td>
<td><strong>361</strong></td>
</tr>
</tbody>
</table>

Total MSW generated from non-household sources (t/day): 195 calculated using proxy of 35% of total MSW

Composition of waste at the households and at the disposal site

Average household waste composition

- Higher income areas: 12% Kitchen/canteen, 47% Garden/park, 6% Plastics dense, 7% Wood (processed), 9% Special wastes, 12% Paper/cardboard, 7% Glass, 1% Other
- Middle income areas: 12% Kitchen/canteen, 46% Garden/park, 6% Plastics dense, 7% Wood (processed), 9% Special wastes, 12% Paper/cardboard, 7% Glass, 1% Other
- Lower income areas: 10% Kitchen/canteen, 54% Garden/park, 6% Plastics dense, 7% Wood (processed), 9% Special wastes, 12% Paper/cardboard, 7% Glass, 1% Other

Waste composition at disposal site

- Average composition: 11% Kitchen/canteen, 50% Garden/park, 7% Plastics dense, 9% Wood (processed), 6% Special wastes, 8% Paper/cardboard, 7% Glass, 1% Other
- Composition at disposal site: 10% Kitchen/canteen, 53% Garden/park, 7% Plastics dense, 9% Wood (processed), 3% Special wastes, 7% Paper/cardboard, 3% Glass, 1% Other

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

<table>
<thead>
<tr>
<th>Types</th>
<th>Recyclable waste generation from households (t/day)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Food waste</td>
<td>179</td>
</tr>
<tr>
<td>Plastic film</td>
<td>33</td>
</tr>
<tr>
<td>Plastic dense</td>
<td>24</td>
</tr>
<tr>
<td>Paper and cardboard</td>
<td>21</td>
</tr>
<tr>
<td>Glass</td>
<td>8</td>
</tr>
<tr>
<td>Metal</td>
<td>5</td>
</tr>
<tr>
<td>Total</td>
<td>270</td>
</tr>
</tbody>
</table>

WaCT Flow Chart

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