Cambodian Education and Waste Management Organization (COMPED)

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Kuala Lumpur Convention Centre, MALAYSIA
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Waste management in Battambang Municipality

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1. Who we are – (COMPED – Waste Management)

2. Solid Waste Management in Cambodia

3. Solid Waste Management in Battambang Municipality

4. Challenges of improper waste management
1. Who we are – (COMPED NGO)

COMPED from what abbreviation ???
2. Solid waste management in Cambodia

2.1 Amount of waste disposal at landfills in Cambodia

- Population: 14.7 million people in 2013
- Waste disposal at landfills:
  - 2017: 1.4 million ton
  - 2013: 1 million ton
- Increasing Rate: 43.8% in 5 years

Source: Ministry of Environment Cambodia, 2018
2. Solid waste management in Cambodia

2.2 Waste Composition

Waste in municipalities/cities – 05 Major cities in Cambodia in 2010 including Battambang Municipality: The majority of the waste is organic which amounts to approximately 60-70%, followed by plastic waste, paper, metal and other waste.
3. Solid Waste Management in Battambang Municipality

3.1 Introduction of Battambang Municipality

- Surface area: 115.44 km²
- Total population: 153,044 (2018)
- Total Sangkats: 10
- Amount of Waste to landfill: 170 T/d (2018)
3. Solid Waste Management in Battambang Municipality

3.2 Background of CCAC in the city

Key Developments in Waste Management Sector

- **Implementation Challenges**
  - Budget and personnel constraints
  - Low awareness and lack of cooperation by residents
  - Limited waste collection services subsequent lack of willingness to pay

<table>
<thead>
<tr>
<th>Year</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009</td>
<td>CINTRI starts collection service in 8 out of 10 Sangkats</td>
</tr>
<tr>
<td>2010</td>
<td>Community-based WM through City-to-City Cooperation (IGES)</td>
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<tr>
<td>2011</td>
<td>Development of Waste management strategy (2012 - present)</td>
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<td>2012</td>
<td>Battambang joined CCAC-MSWI</td>
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<td>2013</td>
<td>Development of Work Plan for SLCP reduction (CCAC-MSWI)</td>
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<tr>
<td>2014</td>
<td>ADB Landfill Improvement Project (2017-2019)</td>
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<tr>
<td>2015</td>
<td>Enactment of Sub-Decree No. 113</td>
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<tr>
<td>2016</td>
<td>National Budget Program (USD 87,000)</td>
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<tr>
<td>2017</td>
<td>Contract with Leap Lim Waste Collection Company → Expansion of service coverage</td>
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</tbody>
</table>

- Source separation, collection and composting of organic waste (2012 - present)
- Separation of recyclable waste (2012 - present)
- Landfill fire management (2015 - present)
- Prohibiting open burning (2015 - present)
- Stakeholder agreement on collection service (2012 - present)
- Cleaning Campaign (Every year on National and International Environmental Day in the month of June)

Source: UNEP 2018: The Case of Battambang City
3. Solid Waste Management in Battambang Municipality

3.3 Waste composition, waste disposal and composting

### Waste Amount (Tonnes/day)

<table>
<thead>
<tr>
<th>Year</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Landfill</td>
<td>59</td>
<td>90</td>
<td>140</td>
<td>170</td>
</tr>
<tr>
<td>Compost</td>
<td>1.2</td>
<td>2</td>
<td>3</td>
<td>3.5</td>
</tr>
</tbody>
</table>

- **Organic waste**: 73%
- **Plastic waste**: 12%
- **Paper**: 4%
- **Glass**: 2%
- **Textile**: 2%
- **Metal**: 0.1%
- **Other waste**: 7%
3. Solid Waste Management in Battambang Municipality

3.4 Waste collection and transport companies

• Waste collection by CINTRI

• Waste cleansing and collection by Leap Lim Company
3. Solid Waste Management in Battambang Municipality

3.5 Promoting Waste Separation at source for recycling

**Biogas**
3. Solid Waste Management in Battambang Municipality

3.5 Promoting Waste Separation at source for recycling

Open Windrow Composting
3. Solid Waste Management in Battambang Municipality

3.5 Promoting Waste Separation at source for recycling

Plastic Bottle-brick House
3. Solid Waste Management in Battambang Municipality

3.6 Landfill, Informal Sector and Waste Recycling
There are around 10 to 40 families of waste picker (30 to 80 people). They pick up recyclable waste and they sold their recyclable waste 1 time per week and they got from 25 USD to 35 USD per time. Most of their recyclable waste was sold onsite (at the landfill).
3. Solid Waste Management in Battambang Municipality

3.6 Landfill, Informal Sector and Waste Recycling

- There are **22 junkshops** in Battambang
- Estimated recycle waste is about **406 tonnes/month**
3. Solid Waste Management in Battambang Municipality

3.7 Preservation of city heritage and waste management improvement

Plastic Waste Collection, awareness raising by COMPED, local authorities in cooperation with local stakeholders
4. Challenges of improper waste management

Landfills in Cambodia

79 landfills/dumpsites in Cambodia (mostly open pits and open burning)
Thanks for your kind attention

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