Current Status and Common Issues of Solid Waste Management in Africa

From the “Basics of Municipal Solid Waste Management in Africa” and the “Africa Solid Waste Management Data Book”.

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Inadequate collection and transport impair people’s health and the beauty of the city.

• The collection rate in Africa is estimated at around 50% on average, but this varies between countries, cities, and even within a single city.

• In many cities, the operating rate of collection equipment is roughly 50%.

• There are only a limited number of cities that know their collection rates based on quantitative data.
Improper waste disposal degrades the environment.

- Even when collected, waste is improperly disposed of in many cities. At least 70% of waste in Sub-Saharan Africa is disposed of in open dump sites.

- Contamination of surface and ground water from leachate; offensive odours and fires; methane (GHG); collapse of waste mountains leading to the loss of many lives.

<table>
<thead>
<tr>
<th>Month/Year</th>
<th>City/Country</th>
<th>Number of victims</th>
<th>Cause of accident</th>
</tr>
</thead>
<tbody>
<tr>
<td>September 2016</td>
<td>Cotonou, Benin</td>
<td>Over 100</td>
<td>Fire</td>
</tr>
<tr>
<td>March 2017</td>
<td>Addis Ababa, Ethiopia</td>
<td>115</td>
<td>Collapse</td>
</tr>
<tr>
<td>August 2017</td>
<td>Conakry, Guinea</td>
<td>9</td>
<td>Collapse</td>
</tr>
<tr>
<td>February 2018</td>
<td>Maputo, Mozambique</td>
<td>16</td>
<td>Collapse</td>
</tr>
</tbody>
</table>
How is waste generation amount estimated?

- Do you know how much waste your municipality generates?
  - No: 91%
  - Yes: 9%

- Do you know the waste generation rate in your municipality?
  - No: 82%
  - Yes: 18%

- How do you get the data?
  - Weighbridge at disposal site and/or transfer station: 20%
  - Estimated by multiplying population and waste generation rate: 45%
  - Others: 35%

  - How do you get the data?
    - No answer: 89%
    - Others: 6%
    - Refer to data in other city in other country: 6%
    - Refer to data in other city in the country: 0%
    - From a detailed waste amount survey conducted by professionals such as donor agencies, universities, and consultants: 0%
How is the waste flow estimated?

- Waste amount at some stages are measured directly by weighbridge.
- Others are estimated by various studies.
- After filling in all stages, consistency of the waste flow as a whole is checked.
What the waste flow is:

• No one can draw an absolutely accurate waste flow.
• However, it can be made more accurate using weighbridge data and results of the surveys.
• Such waste flow is enough accurate for inducing right decisions for improving SWM.
Rapid population growth and urbanization

- Total population; 150% from the year 2000 to 2015.
- Urban population, 170% over the same period.
- Ongoing trend of rapid workforce migration from rural areas is moreover accelerating the concentration of population in cities.
Why does the increase of waste amount make the waste problem serious?

Urbanization x Economic growth lead to increase of waste amount.

The SWM organization needs to change.

Change of the waste management system

Time lag

Change of rules and culture of the society

Time lag

Increase of waste amount

People understand importance of proper handling of waste and minimization.

The society needs to change.
Solid waste management implemented step-by-step

- Improve public sanitation
- Reduce environmental burden
- Reduce waste
- Initiate a circular economy

Collection
Final disposal
Minimisation and recycling
EPR, eco-friendly & sustainable designs

(Red stars mean degree of need for improvement in the SWM of African cities in general.)
Acknowledgement

Much of the data presented here is based on information provided by the representatives of ACCP member countries and cities ("focal points"). In many member countries and cities, data on waste management remains underdeveloped or uncompiled, while communication also tends to be erratic. We would like to express our appreciation to the focal points and those who assisted in the preparation of profiles and internet questions.

Thank you very much.