Urbanization and Sound Waste Management in Africa

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The global scale of urbanization and economic growth are creating a potential “time-bomb” regarding waste we generate in the world’s cities. If not addressed now, the significant negative impact on human health and the environment will be felt by nations at all levels.

- Globally 2 billion people do not have access to municipal solid waste collection services.
- 3 billion people lack access to controlled waste disposal facilities.
- If not addressed now, dumpsites will produce 8–10% of the global anthropogenic greenhouse gas emissions by 2025.
Integrated and Sustainable Solid Waste Management

- UN Habitat publication “Solid Waste Management in the World’s Cities”, next edition 2023 with ACCP

**Driver for Solid Waste Management**

- **Public health**: Legislation to establish strong municipalities and removing SWM
- **Environment**: Sanitary landfill to reduce water and air pollution
- **Resource value of waste**: organics, recyclables and reusables, livelihood for may in waste management and recycling

**Climate Change**

- Modernization, innovation and **frontier technologies**
- **Rapid urbanization** and economic growth
- **Innovative financing** mechanisms (indigenous financing, green municipal bonds)
Integrated and Sustainable Solid Waste Management

• UN Habitat publication “Solid Waste Management in the World’s Cities”

• Governance features of ISWM
  • Inclusivity
  • Financial sustainability and prosperity
  • Sound institutions and proactive policies “proxy indicator the cleanliness of a city and the effectiveness of its solid waste management system = good governance”
Waste Management and Urbanisation: A growing Problem

- Solid Waste Management in the Word Cities
  Estimated Waste generation/day/person 2006: 0.8 Kg
  Estimated Waste generation/day/person 2025: 2.4 kg

Currently Waste Generation in Africa and Asia is low but will grow with urbanisation and economic development.

Waste Generation per capita per kg: “What a Waste 2.0”
World Bank- Developed countries generate more waste/capita

World Urbanisation Trends: UN World Urbanisation Prospects

IBRD 43910 | SEPTEMBER 2018
Urbanization trends in Africa

By 2050, Africa’s urban population will increase to 1.2 billion. (cities not built yet)

More than a quarter of the 100 fastest-growing cities in the world are in Africa. (act now!)

2/3 of urban growth in secondary cities (build capacity)

60-75% of urban dwellers in informal settlements (urbanization of poverty)
Solid Waste Management SDGs, NUA and The Paris Agreement

A Global Vision to Promote Sustainable Municipal Solid Waste Management

SDG 11, 12 and 14
- Regular Waste Collection Coverage
- Controlled Management
- 3R (Reduce, Reuse, Recycle)

- 3R and Waste to energy
- Extended producer responsibility
- Environmentally sound SWM
- Promoting the circular economy

63% of INDCs mention WASTE as a mitigation source
Environmentally sustainable and climate resilient economies and communities
**Generation**
- Sub-Saharan Africa’s average waste generation rate is 0.46kg/day/person (Japan: 0.94kg/day/person, US: 2.24kg/day/person)
- Majority proportion of organics in waste over 50% in most African Cities (40% in Japan)

**Collection/Transportation**
- Less than half of the waste generated in Africa is collected formally;
- Open dumping and burning are commonly pursued to eliminate remaining household waste;
- Less than 10% of population in informal settlements and slums have access to waste collection service, 40 to 50% of urban population;
- Collection vehicles often not in use due to inappropriate technological choices through tied aid.
- High costs of maintaining and operating waste collection vehicles, sometimes 50% of municipal budget
- In most cases the solid waste collection is done by private sectors, so engagement with the active private sectors is the key.
Solid Waste Management in Africa

**Treatment / Recovery**
- Most of waste recycling is done in informal sector or by waste pickers and the work environment is hazardous
- Weak recycling industry with spotty geographical coverage

**Disposal**
- 19 out of 50 biggest dumpsites in the world is located in Africa.
- Recently series of tragedies including landslides and fire killed hundreds of people
- The fire on dumpsites is a major air pollution in the city and threatens human health
Example of Innovation: Municipal SWM Fund in Kenya – Powered by an APP

Payment
- Collection and transportation fee
- Recycling fee
- Disposal fee
- Management fee

SWM FUND for NAIROBI

Distributes automatically

CBOs & SMEs
- Primary collection fee
- Protection gear
- Salaries for workers
- Collection points management

Recycling Companies
- Recycling fee

City Government
- Secondary collection and transportation fee
- Disposal site management fee
- Vehicle maintenance fee
ISWM has to be linked to sustainable urban planning

City grows while preserving public space. Fine grid of streets. Mixed Use. Compact. And efficient waste collection
Solid Waste Management Interconnected problems and opportunities

- Better Land Use and compact cities
- More efficient waste collection
- Cleaner Cities
- More and Green Jobs + investments
- Increased tourism
- Better Municipal Revenues
- Tech. Innovation for Waste (e.g. Apps)
- Public Behavior
- Polluter Pays

Holistic and integrated systems approach
Sound Waste Management in Africa: UN-Habitat’s Recommendations

1. Promote urban legislation for cost-recovery of waste management operations (polluter pays principle)
2. Promote inter-city collaboration for waste management and disposal - the “metropolitan approach”
3. Establish and ensure compliance with minimum health and safety requirements for waste workers
4. Incentivise and Promote Technological innovation
5. Public awareness and educational campaign
6. Incentivise and Promote Technological innovation
7. Develop solutions by learning from other cities by applying lessons in specific city contexts
8. Prioritise SWM for international assistance

UN-HABITAT
FOR A BETTER URBAN FUTURE
**UN-Habitat’s Strategic Plan and Waste Management**

*Better Quality Life for ALL in an Urbanizing World*

**People**
- Increased and equal access to basic services, sustainable mobility and public space
- Expansion of waste collection service coverage to low income areas

**Prosperity**
- Increased and equitably distributed locally generated revenues
- Expanded deployment of frontier technologies and innovations
  - Sustainable SWM financing
  - Smart and frontier technology application in SWM value chain

**Planet**
- Reduced greenhouse gas emissions and improved air quality
- Improved resource efficiency and protection of ecological assets
- Effective adaptation of communities and infrastructure to climate change
  - Promotion of 5Rs
  - Develop viable and scalable business models
  - Promote circular economy
  - Address climate change mitigation and adaptation through improved SWM

**Peace**
- Enhanced social integration and inclusive communities
- Enhanced resilience of the built environment and infrastructure
  - Building resilience in the waste management service provision to accommodate migrant population and unforeseen shocks and events
Waste Wise Cities Campaign

Launched at the World Habitat Day 2018

Aim of the Campaign: TO IMPROVE SWM GLOBALLY through
- Knowledge and experience sharing in SWM between cities
- Capacity development for waste SDG indicators and governance system
- Bankable project development
<table>
<thead>
<tr>
<th>Principle</th>
<th>Description</th>
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<tr>
<td>Assess quantity and type of waste generated</td>
<td>Improve collection and transportation of waste</td>
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<tr>
<td>Ensure environmentally safe disposal</td>
<td>Promote “Rethink, Refuse, Reduce, Reuse, Recycle”</td>
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<tr>
<td>Empower and work with different stakeholders</td>
<td>Establish better working conditions for waste workers,</td>
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<tr>
<td>Learn from others on innovative technologies</td>
<td>Make long-term strategic plans considering waste</td>
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<td>Design financial and other incentives</td>
<td>Encourage “Rethinking on waste”</td>
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<td>Regularly review progress</td>
<td>Strive towards achieving the SDGs and NUA</td>
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Thank you

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