# Existing challenges concerning waste management in Swaziland and the need for an integrated policy

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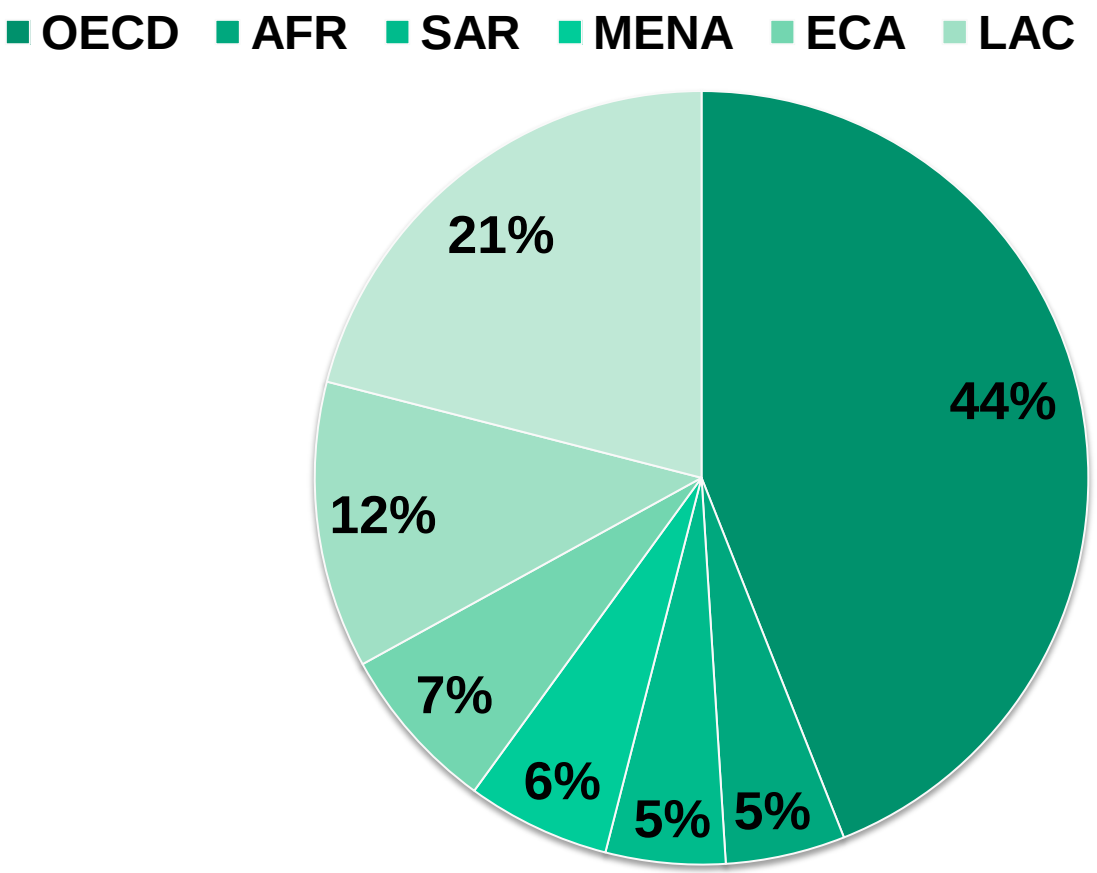
# Waste Generation by Region




**Waste generation is linked to wealth** – *more wealthy, more wasteful*

**OECD countries generate almost half of the world's waste, about 572 million tonnes/annum; AFR and SAR produce the least**

# Waste generation in Africa

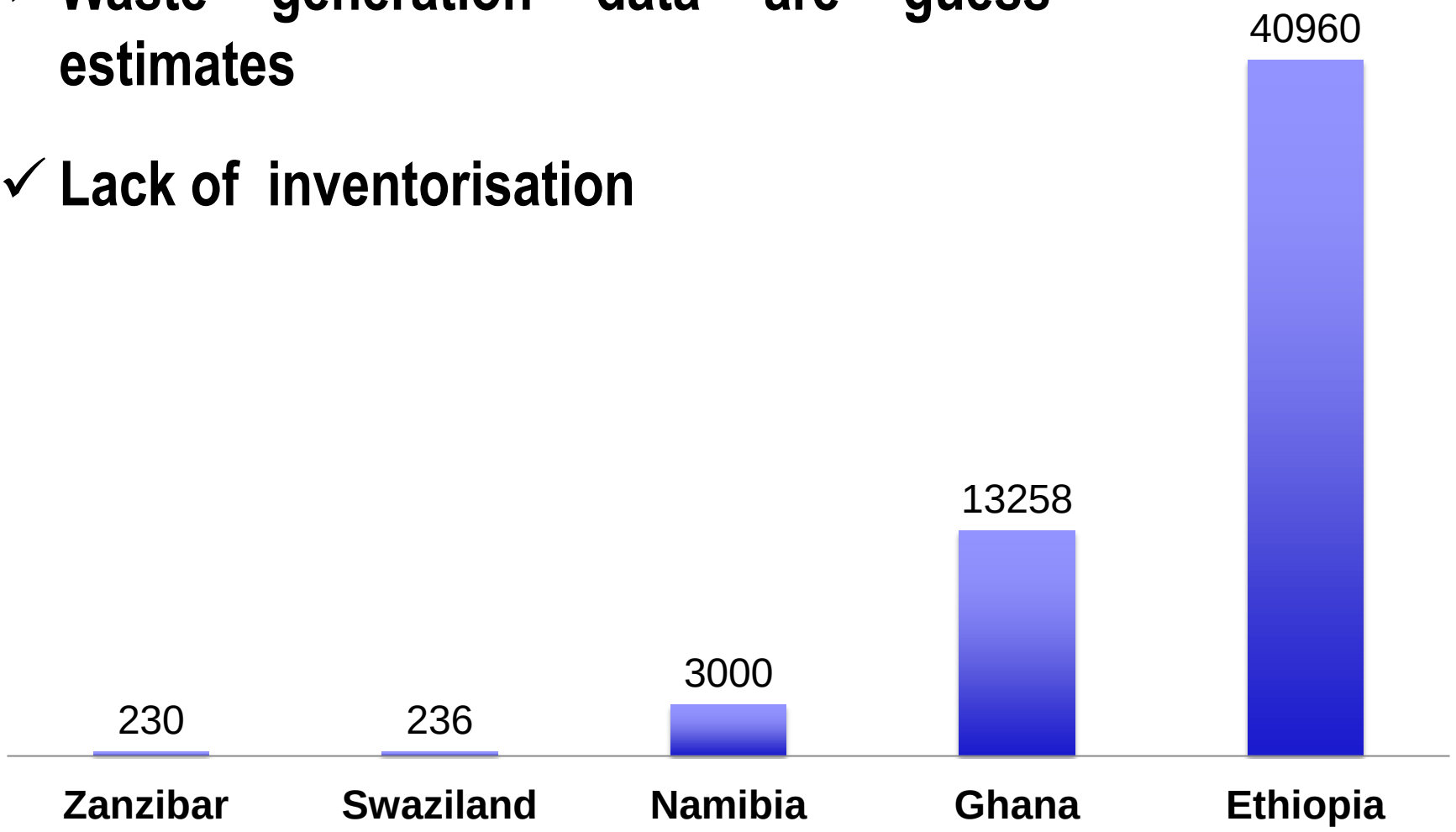
- Fastest rate of urbanisation **at 3.5% a year;** about 36% people live in urban areas, expected **to reach 50% by 2050**.

- Waste generation in Sub-Saharan Africa is approximately **62 million tonnes/annum**.

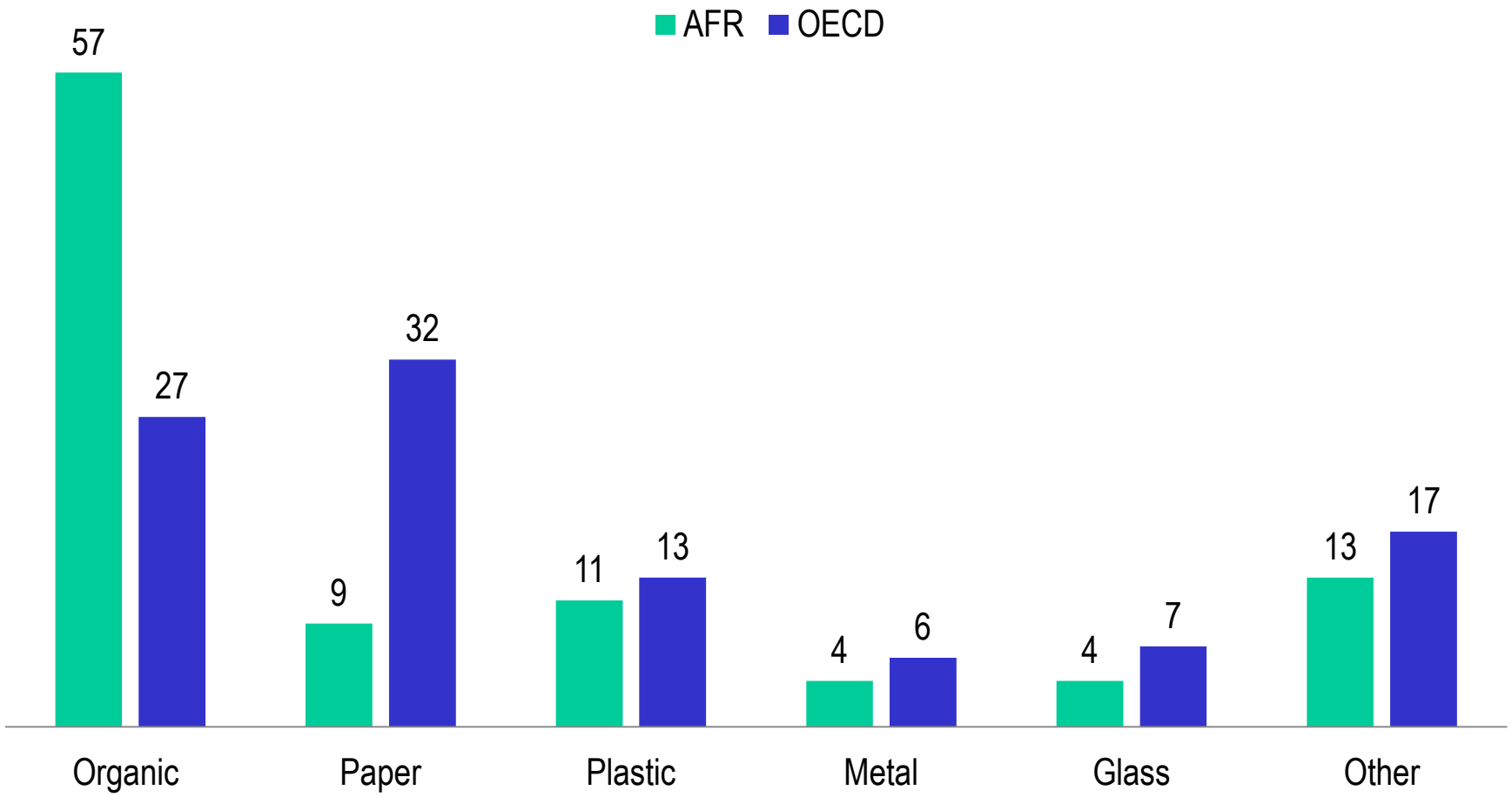
- Average per capita waste generation is 0.65 kg/capita/day, but spans a wide range, from 0.09 to 3.0 kg/capita/day.

# Daily waste generation (tonnes per day)

- ✓ Waste generation data are guess-estimates
- ✓ Lack of inventorisation



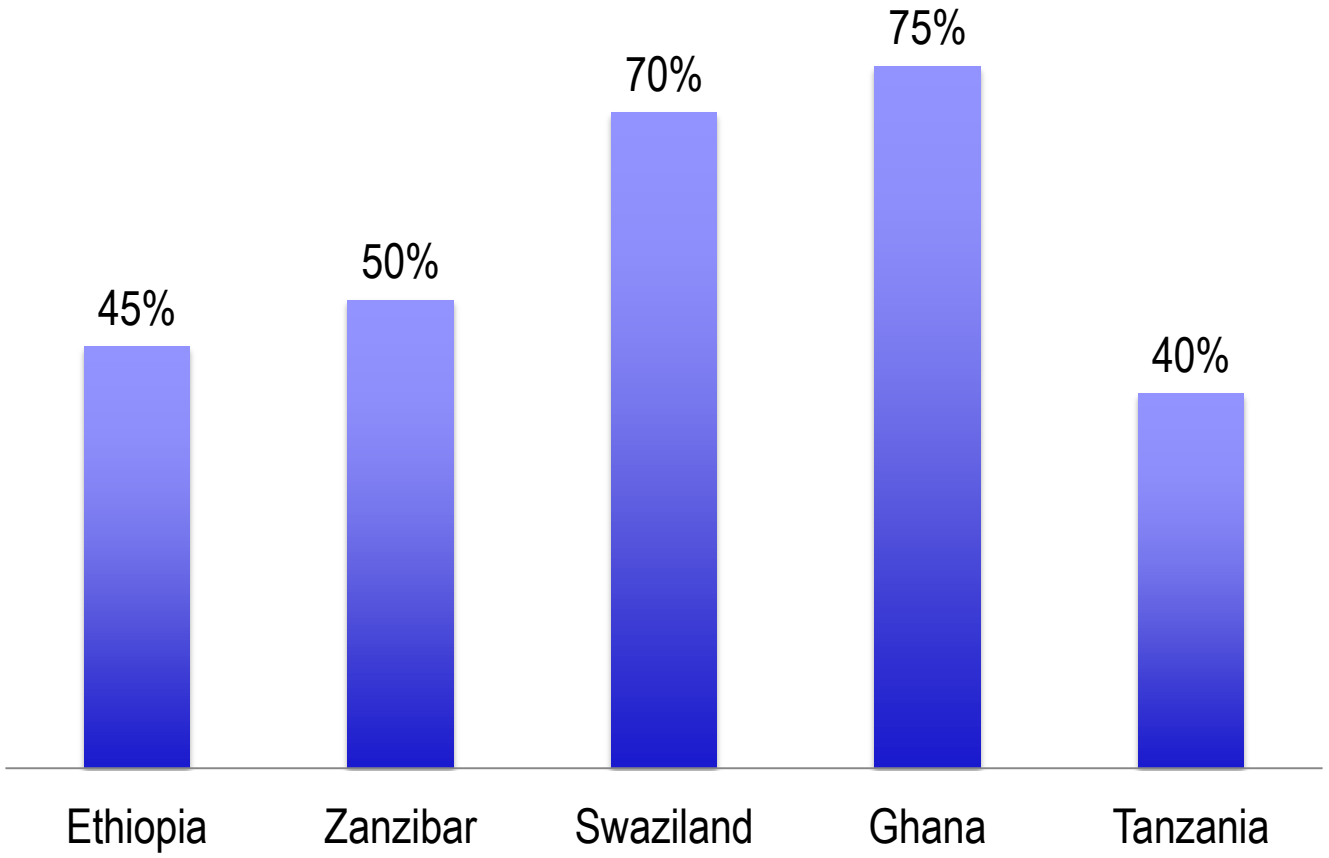
# Waste Composition - linked to wealth




**Low and middle-income countries have a high percentage of organic matter, ranging from 50%-85%.**

*Source: What a Waste, World Bank, 2012*

# Waste collection efficiency in cities




***Inadequate in majority of the African countries due to dearth of infrastructure and manpower; Collection is near to zero in rural and peri-urban areas in most countries***

# Waste processing and disposal

- Most countries in Africa do not have appropriate processing-disposal capacities
- Unsegregated waste is collected
- Recycling of waste is high, but by informal sector with poor health and safety practices
- Organic waste is largely dumped or consumed by stray animals
- Most countries don’t have processing systems for biomedical, e-waste and hazardous wastes

# Findings of the Scoping Visit for Swaziland done by CSE team

(October, 2016)

# **Estimating waste**: Swaziland

- Swaziland last waste inventory done in 1997
- Then waste generated was 86,323 tonnes/year = 0.02 kg per person per day
- Clearly this is not the case; *per capita could be around 0.5-0.8 kg per person per day in urban towns* – catching up fast with the rest of world.
- **Per capita waste generation will increase as societies get richer**

# **Composition**: Swaziland

- Composition: Roughly 60% organic, rest plastic, glass, paper (10%), inert 30%
- But remember this will change – fast – more plastic, more non-biodegradable
- Determines what will be the ‘method’ of waste management

# **Collection**: Swaziland

- Collection frequency: >50% (overall),
- In towns good collection: Mbabane, Matsapha over 75%
- Collection and transportation managed by town councils and town boards in urban areas, in rural areas managed by chief dorms
- No segregation or treatment

# **Treatment**: Swaziland

- Inadequate emphasis
- Limited buy back centres or recycling stations: 2 in Mbabane, 3 in Matsapha, receive waste from commercial and industrial units, not from households
- But you are **upcycling**: Ngwenya Glass, local markets, need to upscale it.
- Need to consider how to promote segregation and reuse

# Reportage of Swaziland's upcycling initiatives in environmental fortnightly *Down to Earth*

## Africa's waste challenge

Swati Singh Sambyal @swatissambyal | Wednesday 15 March 2017

For Africa, solid waste management is becoming a major concern. The writer reports from Zanzibar and Swaziland on how two contrasting scenarios are offering solutions

In Zanzibar (extreme left), authorities collect only 40 per cent of garbage.

# **Disposal**: Swaziland

- Solid Waste

❑ Urban areas: Mixed household waste collected from households by ULA goes to landfill sites

❑ Mbabane, Matsapha, Piggs Peak are the three (3) municipal owned engineered landfills, one landfill owned by Royal Swaziland Sugar Corporation

❑ Rural areas: Not under ULAs, dumped in backyard pits

- Clinical waste is incinerated in urban areas, in rural areas dumped in backyard pits
- Hazardous waste transported under Basal Convention to South Africa for treatment

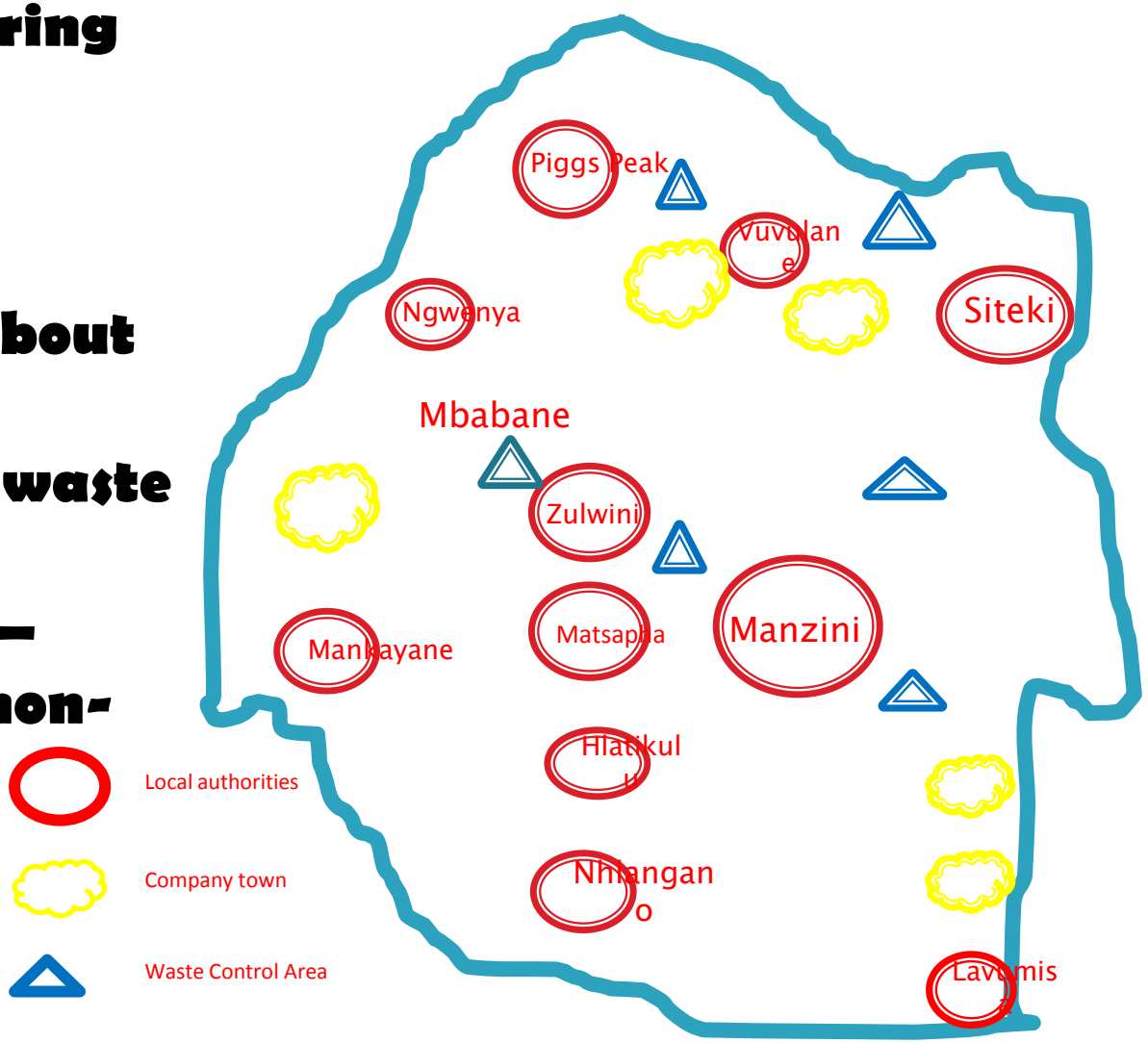
**Waste control areas, "dump" sites but littering continues**

**Problem will grow**

**Waste generation is about wealth**

**As societies get richer waste grows**

**Composition changes – waste becomes more non-biodegradable**




Matsapha landfill site


Open dumping in rural areas


Lavumisa dumpsite


Mbabane landfill site


Waste collection points in rural areas near Matsapha


Leachate collection tank, but no treatment


Recyclables burried in Piggs Peak landfill


Disposal site in Ngwenya

Disposal in lakes and water bodies

Dumpsite near Malindza

# Scoping: Findings

- Swaziland is growing economically and this growth will have environmental consequences
- Swaziland government has enacted key legislations for environment and waste management
  - Environmental Management Act, 2002
  - Waste Regulations, 2000
  - National Solid Waste Management Strategy, 2001
  - **Litter Regulations, 2011**
  - **Need Integrated Policy then a number of legislations**
- Swaziland government (Ministry of Tourism and Environmental Affairs and SEA) along with urban local authorities have worked to put into place systems for waste collection

# SETTING THE AGENDA FOR A GARBAGE-FREE SWAZILAND

# Challenges are growing

- All our countries struggle to keep pace with this **growth-pollution nexus**. Do not have resources to clean up; we stay behind the problem
- Economic growth means waste quantum will increase; composition will change
- Mountains of waste pile up; tourism economies suffer; health is impacted. Crisis grows
- Must re-engineer the system so that it not just collects waste but processes it and recycles it
- *Waste cannot be wasted in our countries*

# Need to strengthen waste management

**Agenda 1.** Develop integrated policy/legislation based on the principles of waste minimisation, segregation and processing

**Agenda 2.** Operationalize segregation at source

**Agenda 3.** Strengthen collection and processing systems

**Agenda 4.** Develop decentralized systems for processing: waste is not waste, but resource

**Agenda 5.** Impose user-fees and penalties


# THANK YOU