

A Global Snapshot of Solid Waste Management

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Main Messages

- Waste generation is anticipated to increase by 70% by 2050 with Sub-Saharan Africa and South Asia growing the fastest (35% of global waste by 2050)
- One-quarter of global plastic waste is coming from East Asia and the Pacific with ocean waste primarily coming from 5 countries in the region. A circular approach is necessary for sustainable development
- Nearly 50% of solid waste operations involve the private sector, nonprofits or civil society and there is further opportunity to engage





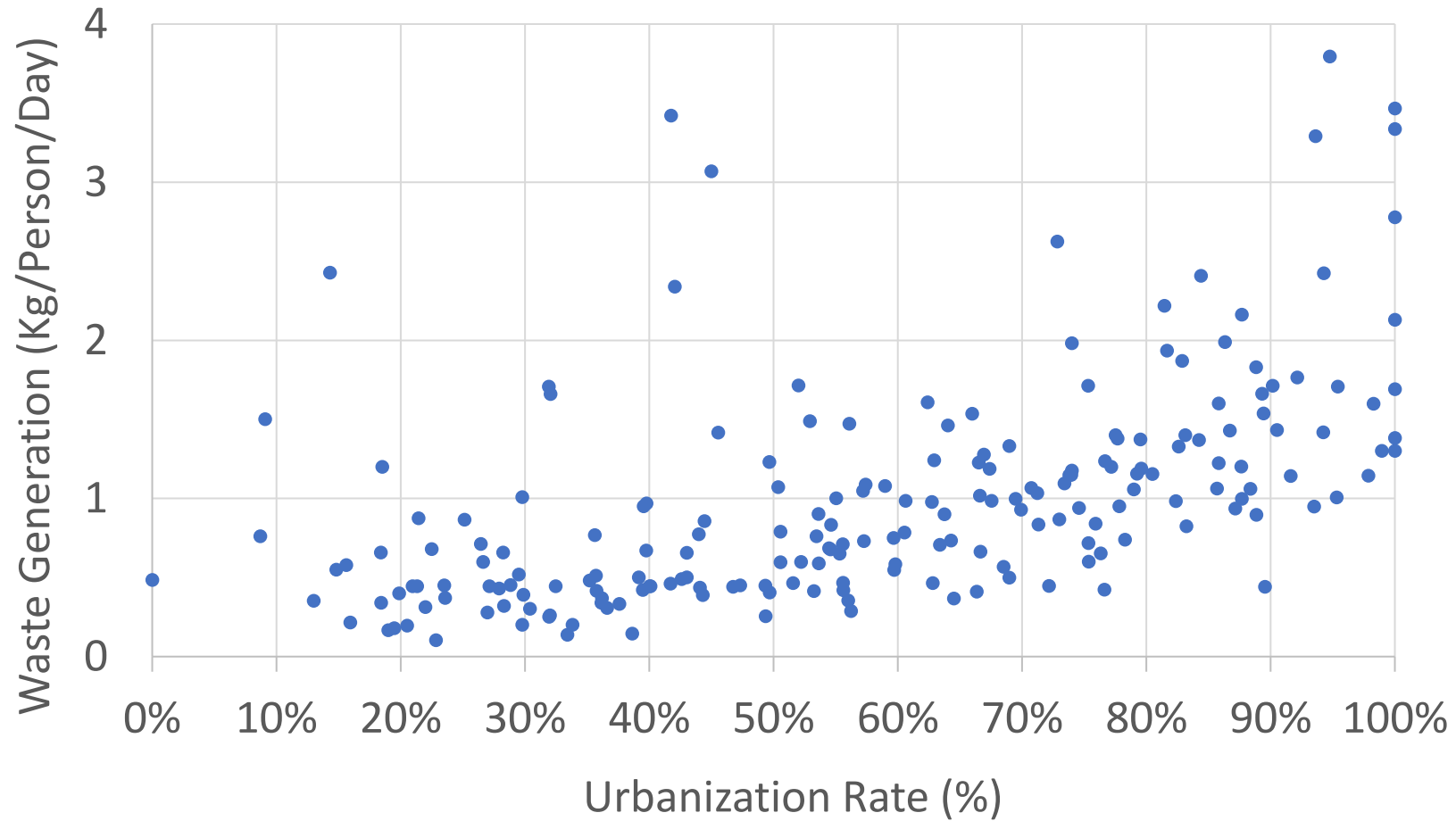
Waste is expected to increase by 70% by 2050

2016: 2.01 billion tonnes

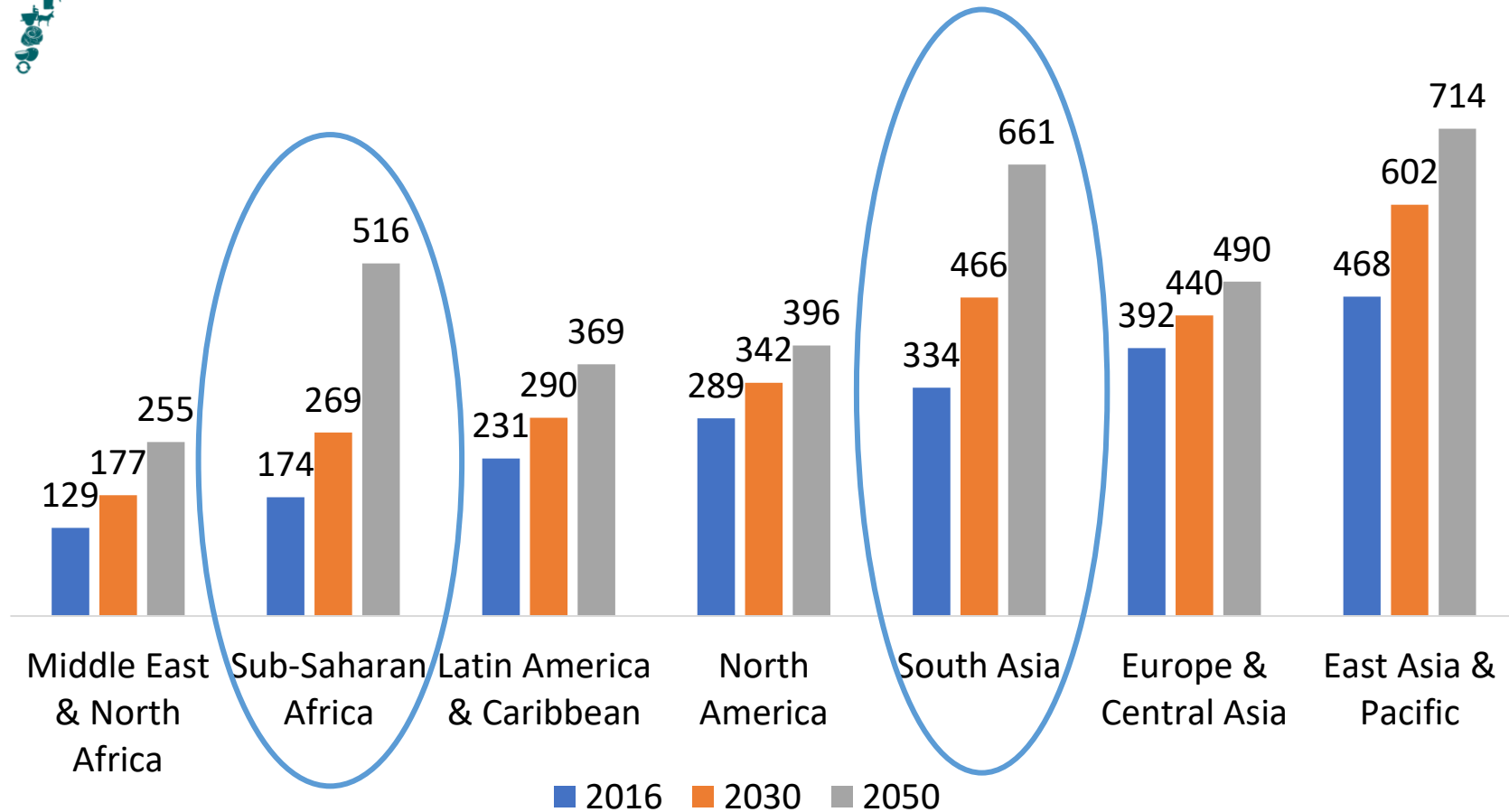


2050: 3.40 billion tonnes

Waste generation is positively correlated with urbanization

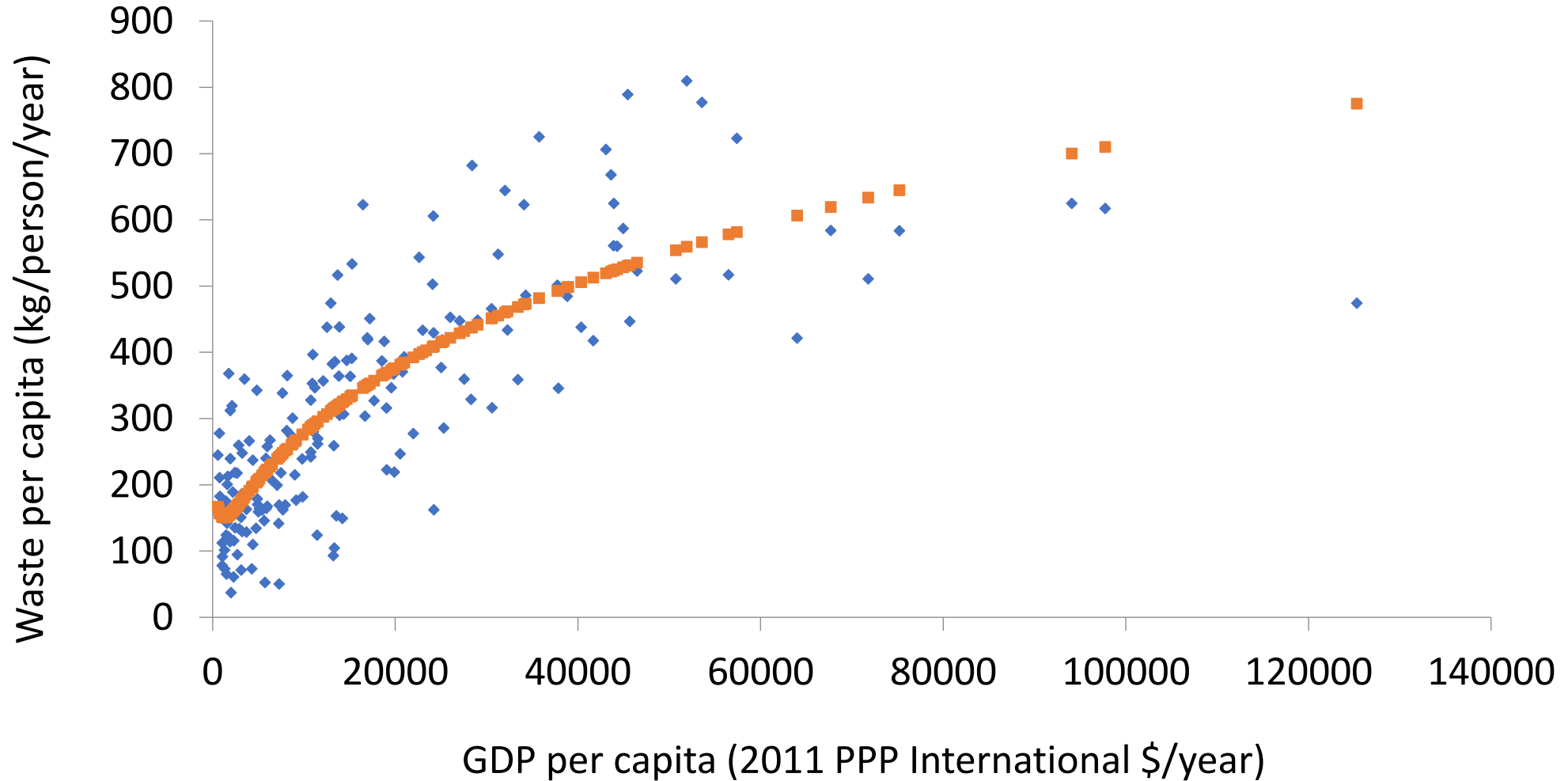


Sub-Saharan Africa and South Asia are the fastest growing regions

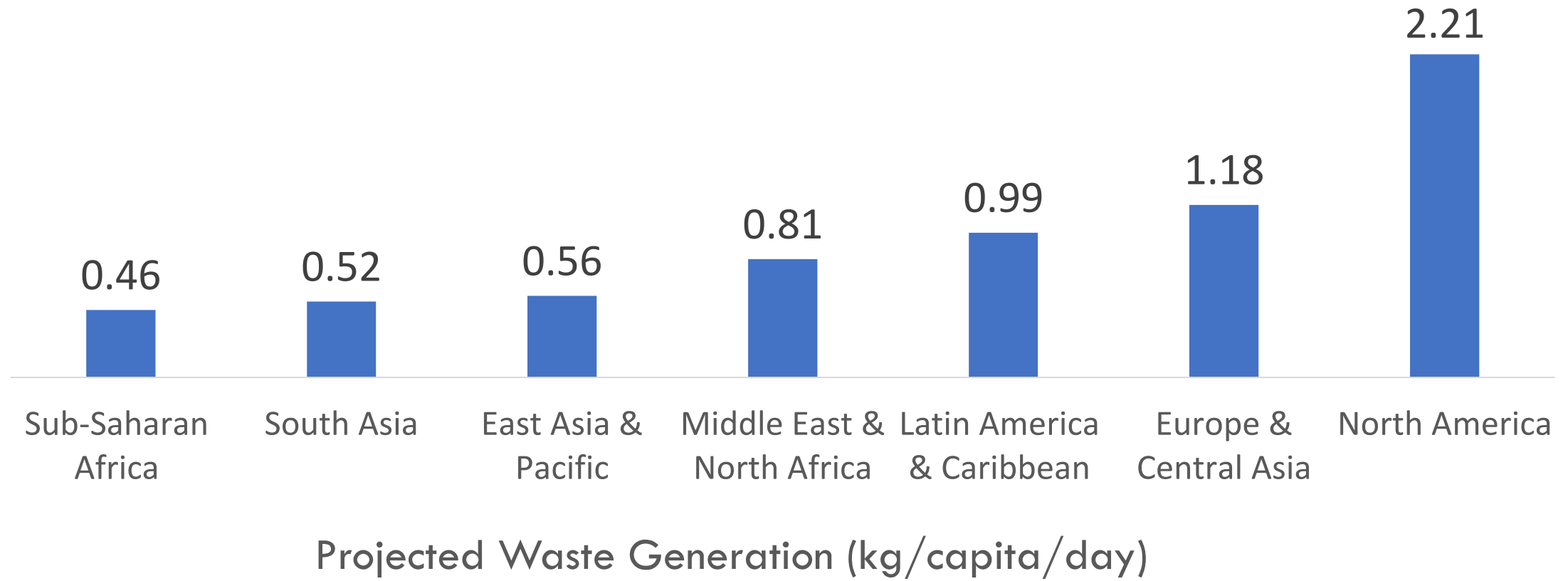


Projected Waste Generation
Millions of tonnes/year

Per capita waste generation increases with income



High income countries generate 34% of the world's waste with 16% of the global population



Average global waste generation is 0.74 kg/capita/day



Composition of waste varies by income



A row of several grey plastic bins filled with food waste. The bins contain various items such as green vegetables, lemons, a can of Coca-Cola, and other food scraps. A teal semi-transparent banner is overlaid on the center of the image with white text.

**Food loss and waste
amounts to 30% globally**

Source: FAO

Plastic waste generation is growing rapidly



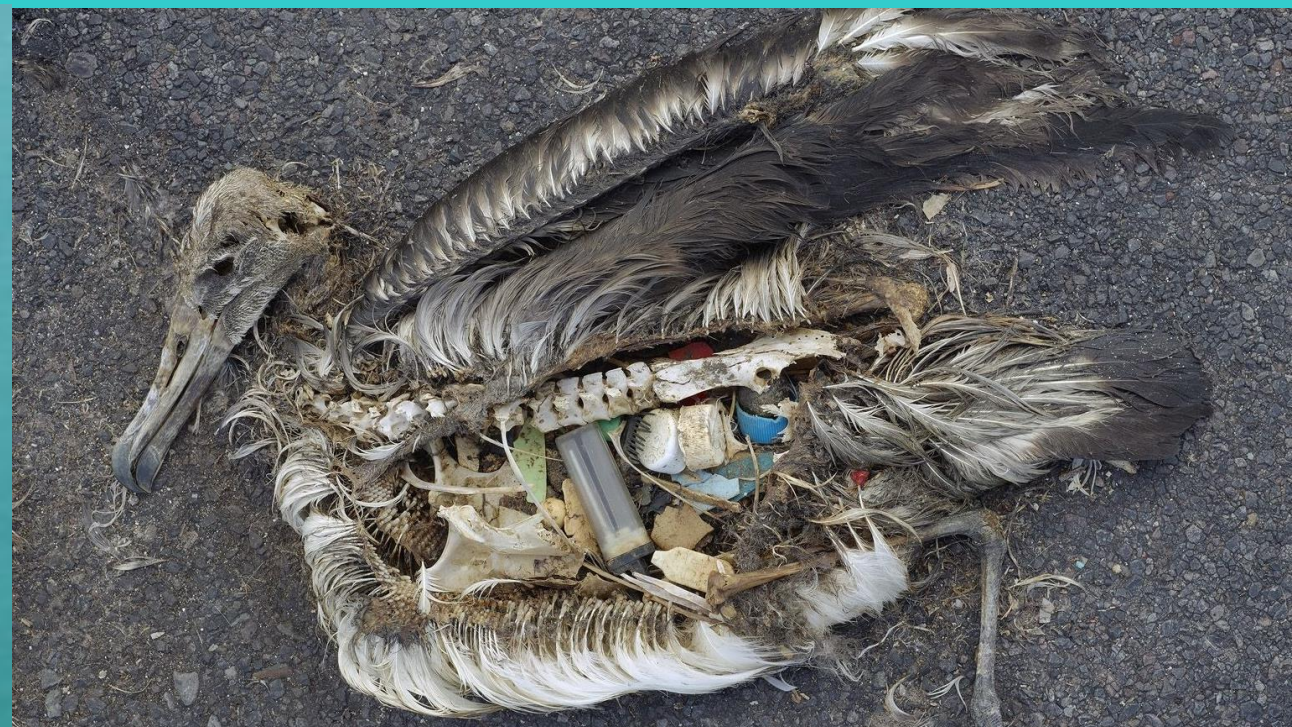
24 trillion plastic bottles

242 million tonnes

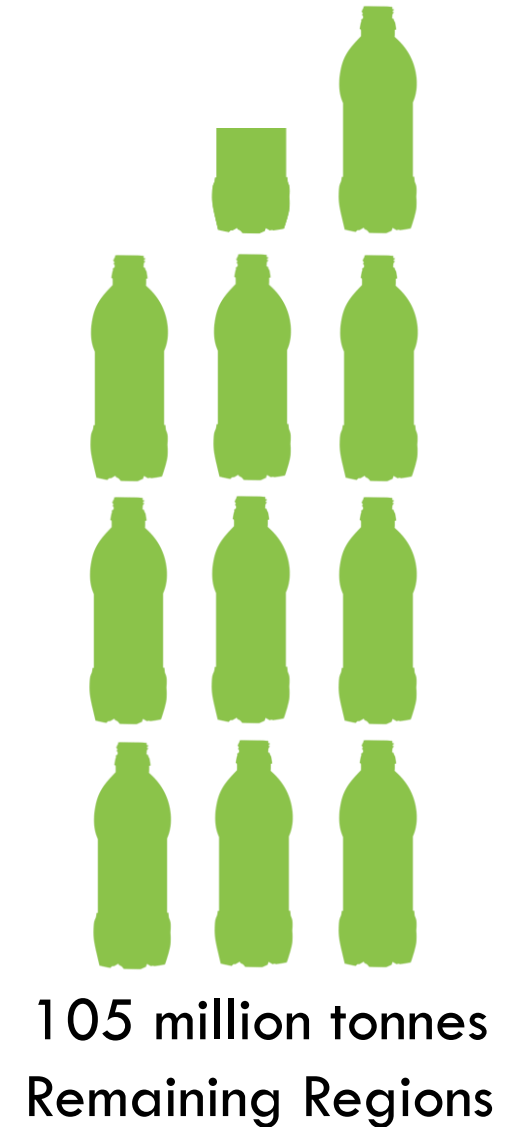
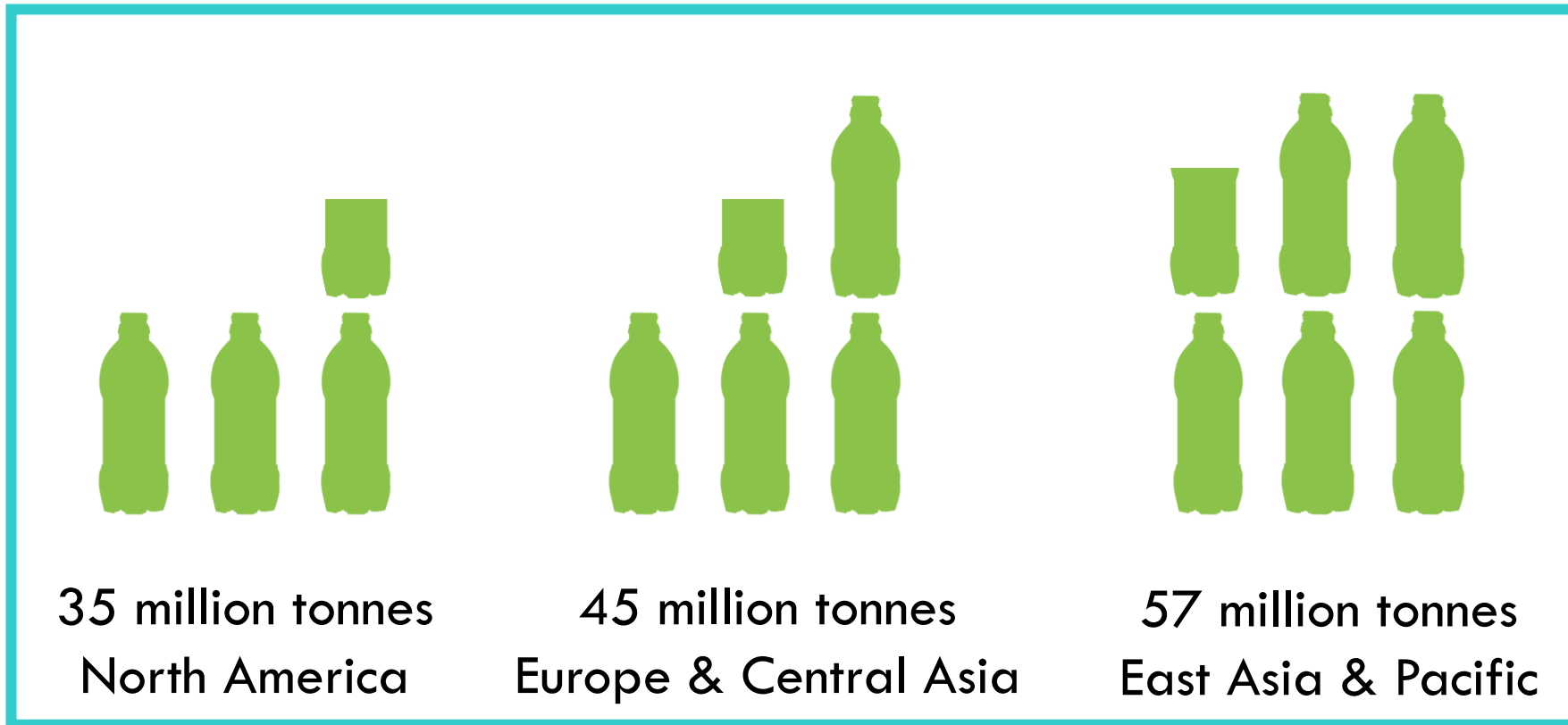
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4.8 million Olympic-sized swimming pools



Three regions account for 60% of plastic waste generation



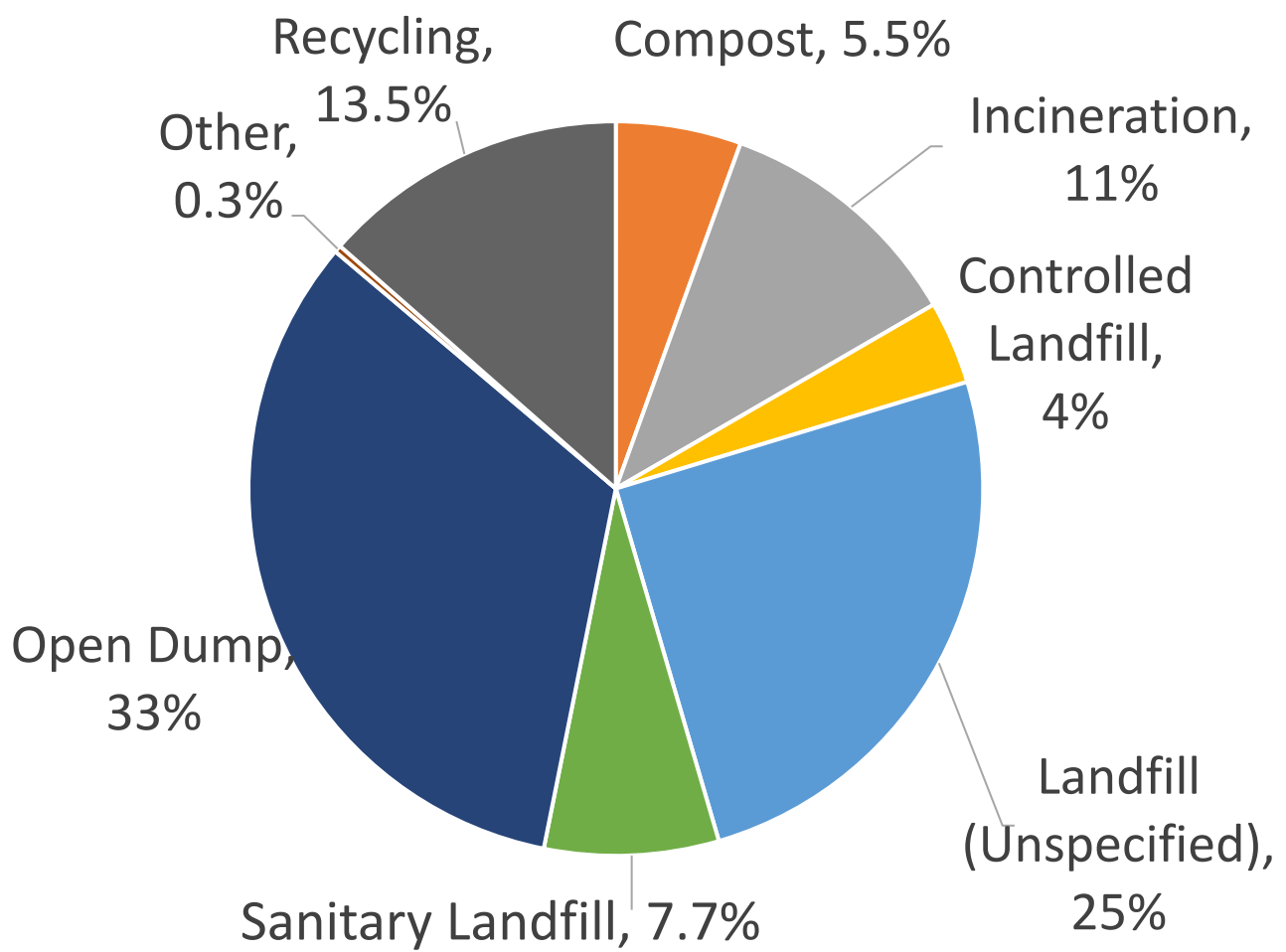


Low-income countries collect only 39% of waste





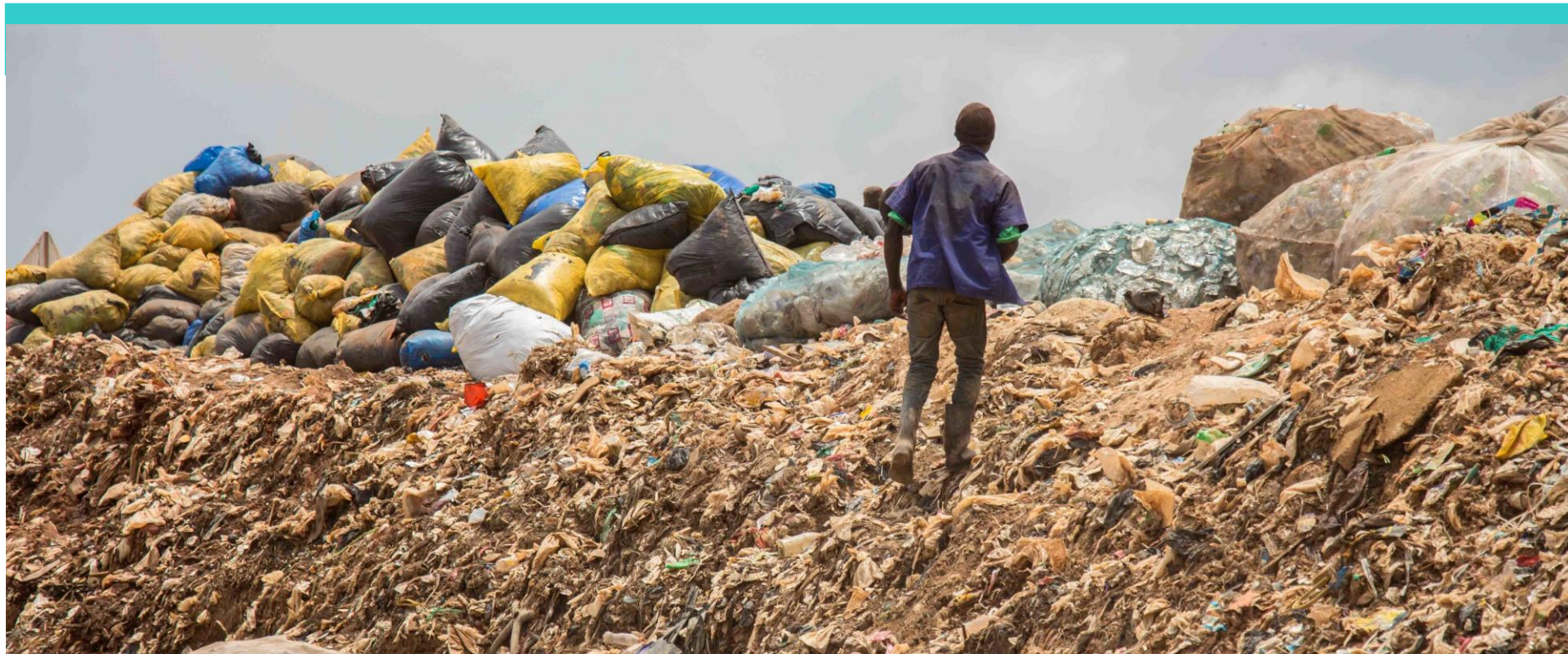
33% of global waste is **openly dumped** with **over 90%** in low-income countries



Solid waste management contributes to **5% of global emissions** (excluding transportation)

2016: 1.6 billion tonnes CO₂-equivalent GHG emissions

2050: 2.6 billion tonnes CO₂-equivalent GHG emissions



30% of countries **do not have any institutions or policies to address waste**



Waste is overwhelming a predominantly local government responsibility

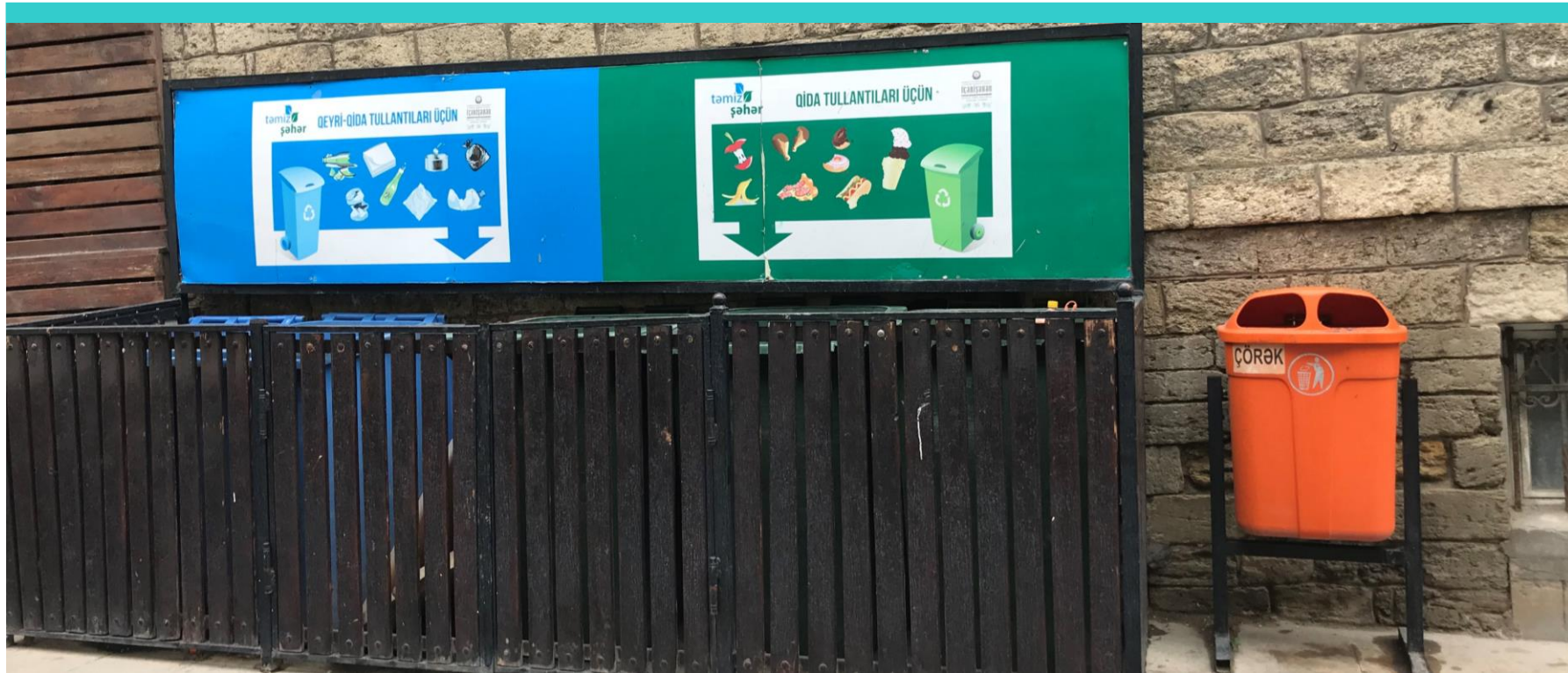




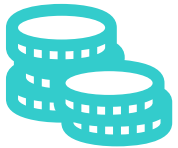
Local governments often lack funds, **only covering ~50% of investment costs** for waste systems

Remainder comes mainly from the national government and the private sector

>50% of services are operated by **public entities** & **~1/3** involve a **public-private partnership**



In low-income countries waste management consumes ~20% of municipal budgets



High income countries: >\$100/tonne

Lower-income countries: ~\$35/tonne



The poor are most affected by inadequate waste management





Scale of informality is significant, with at least **1% of urban population earning informally** through waste sector

In Mumbai, Jakarta, and Buenos Aires, economic impact is estimated to be more than \$880 M/year

Studies have shown challenges include

lack of access to quality waste streams (73%), unstable prices (87%), & lack of negotiation power (61%) across 5 cities in Africa, Asia and Latin America

harassment (80%), social exclusion (97%), poor treatment by local authorities (84%), & regulations & bylaws regarding waste (89%) in Bogota and Durban



Models to improve informal livelihoods in waste sector:

- 1) Formalization and integration of waste pickers
- 2) Strengthening of the recycling value chain
- 3) Consideration of alternative employment opportunities



Major investment is needed



- 1) Focus on Sub-Saharan Africa and South Asia which account for nearly half of the growth in waste by 2050
- 2) Prioritize 5 countries in Asia to address bulk of marine litter problem





Engage partners

- 3) Adopt regulations & incentives to attract financing and the right partners—private sector, nonprofits, informal sector, or civil society
- 4) Work with manufacturers, governments, operators, & citizens to support a circular economy

A large, sprawling pile of plastic waste, including bottles, containers, and other debris, stretches across the landscape under a sunset sky. The sun is low on the horizon, casting a warm glow over the scene.

Thank you

worldbank.org/what-a-waste