

A world map where the continents are filled with various icons representing different types of waste and recycling. North America is red, South America is pink, Europe and Africa are green, and Asia and Australia are orange. The icons include plastic bottles, paper, food waste, electronic devices, and recycling symbols.

# What a Waste 2.0:

## A Global Snapshot of Solid Waste Management to 2050

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**WORLD BANK GROUP**

# 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
- Nearly 50% of solid waste operations involve the private sector, nonprofits or civil society and there is further opportunity to engage





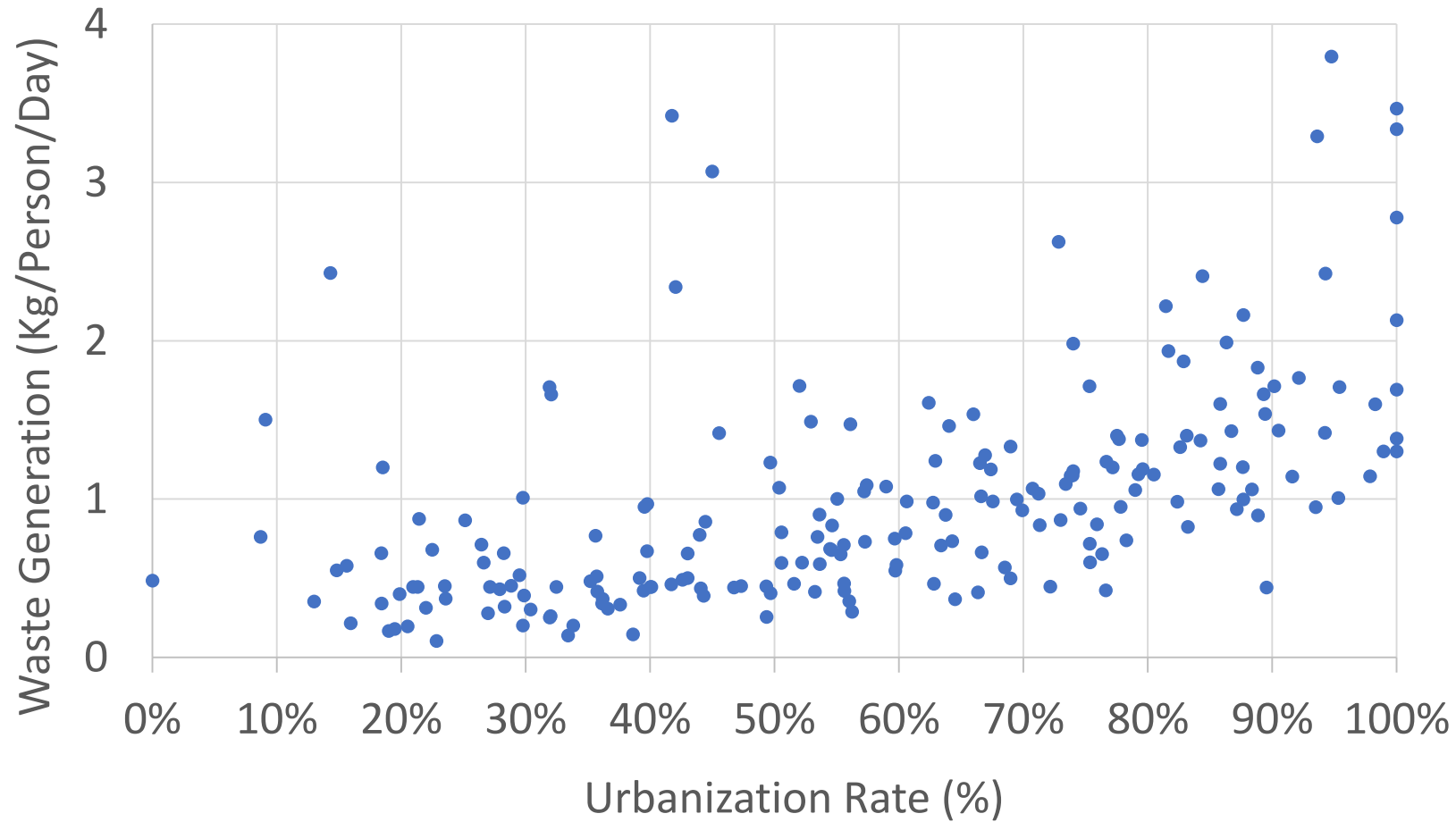
# Waste is expected to increase by 70% by 2050

**2016:** 2.01 billion tonnes



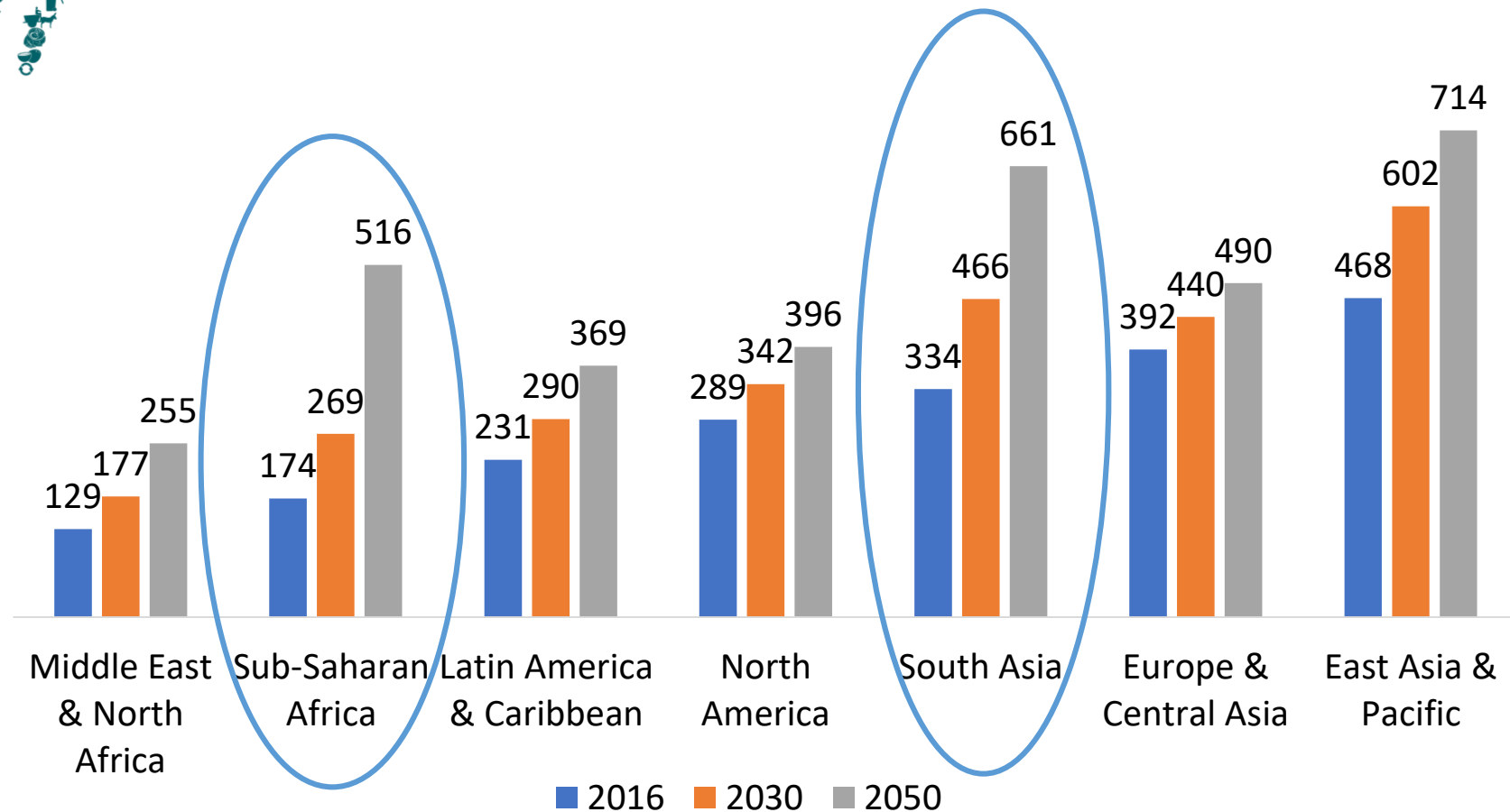
**2050:** 3.40 billion tonnes

# Waste generation is positively correlated with urbanization



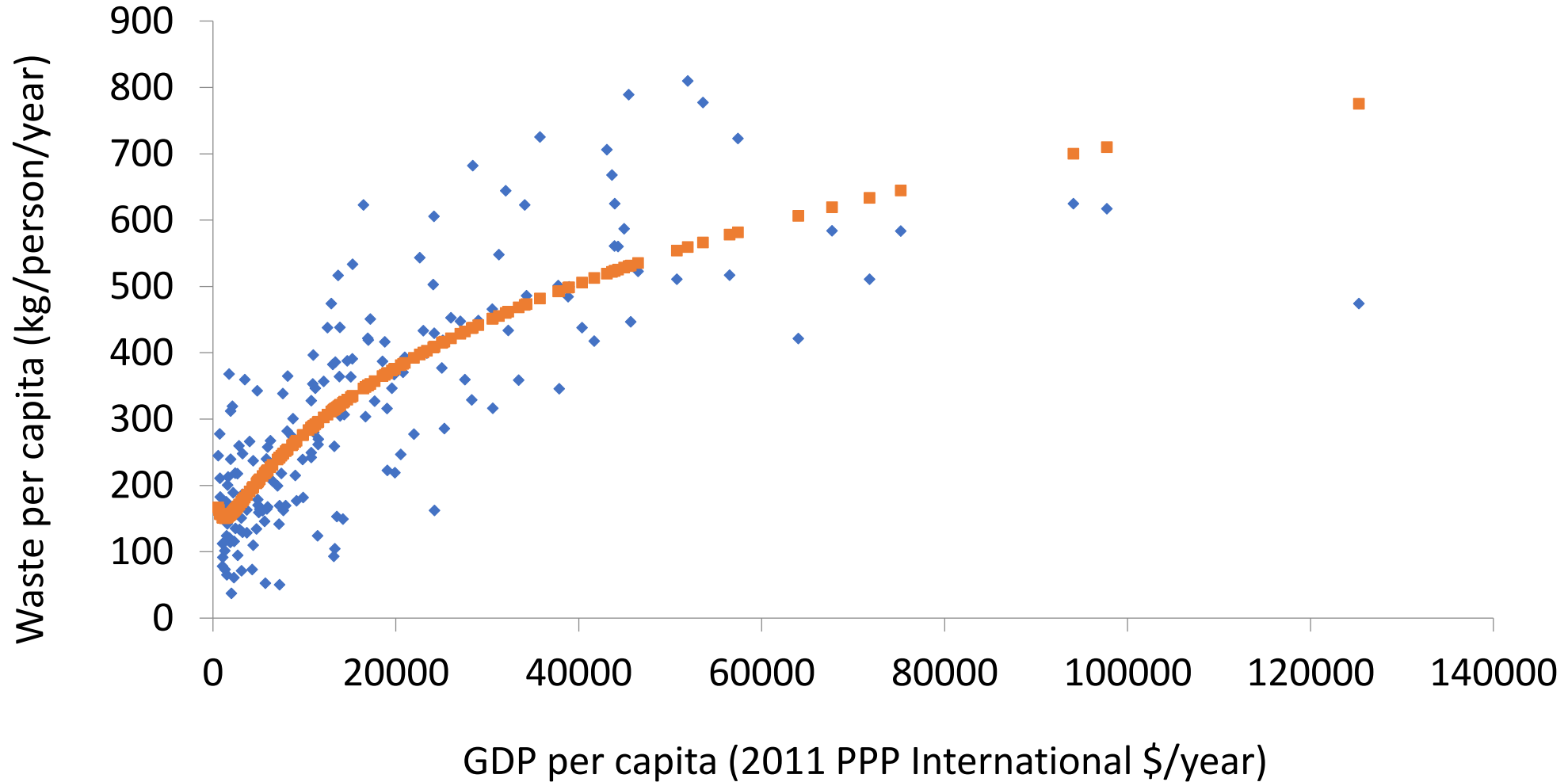


# Sub-Saharan Africa and South Asia are the fastest growing regions

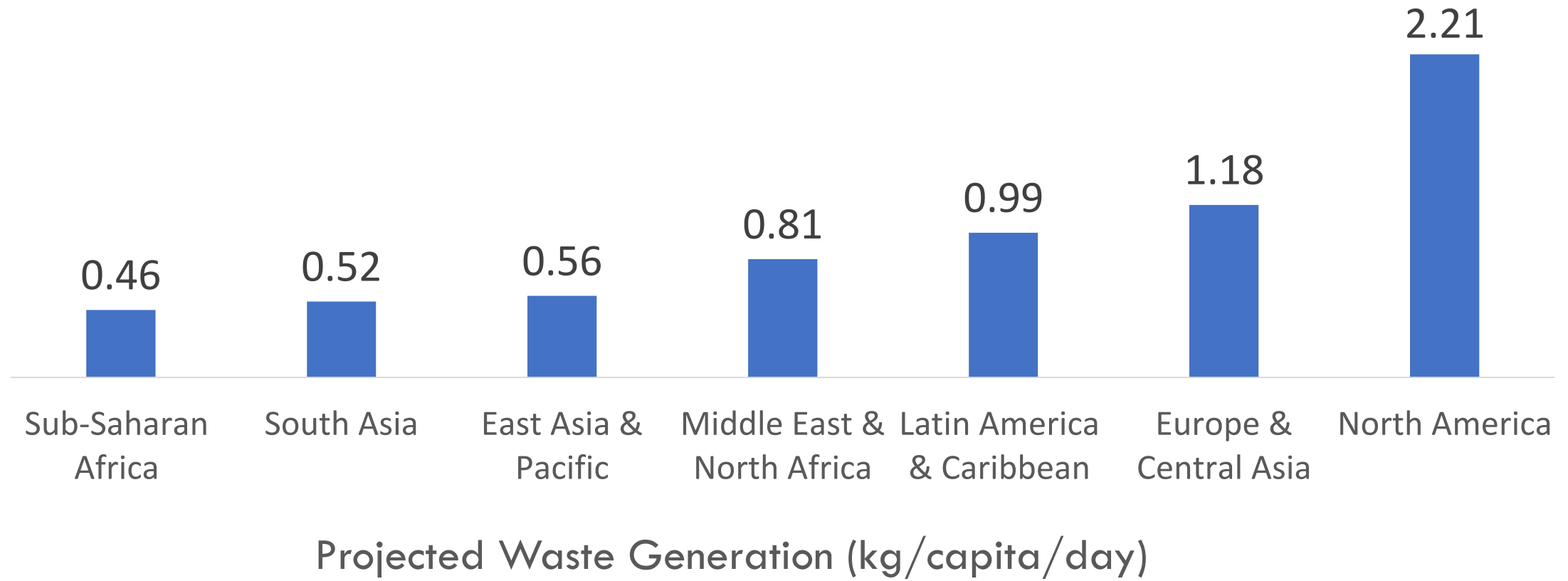


Projected Waste Generation  
Millions of tonnes/year

# 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





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

Source: FAO

# Plastic waste generation is growing rapidly



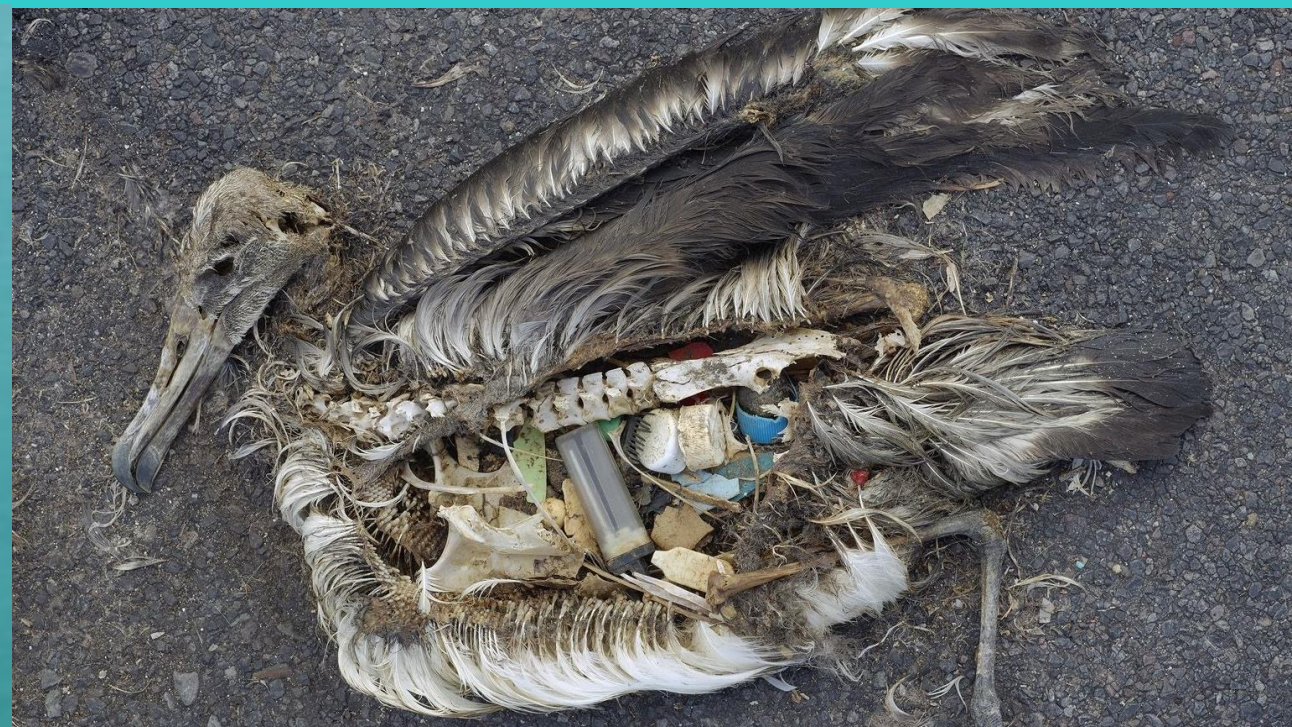
**24 trillion plastic bottles**

**242 million tonnes**

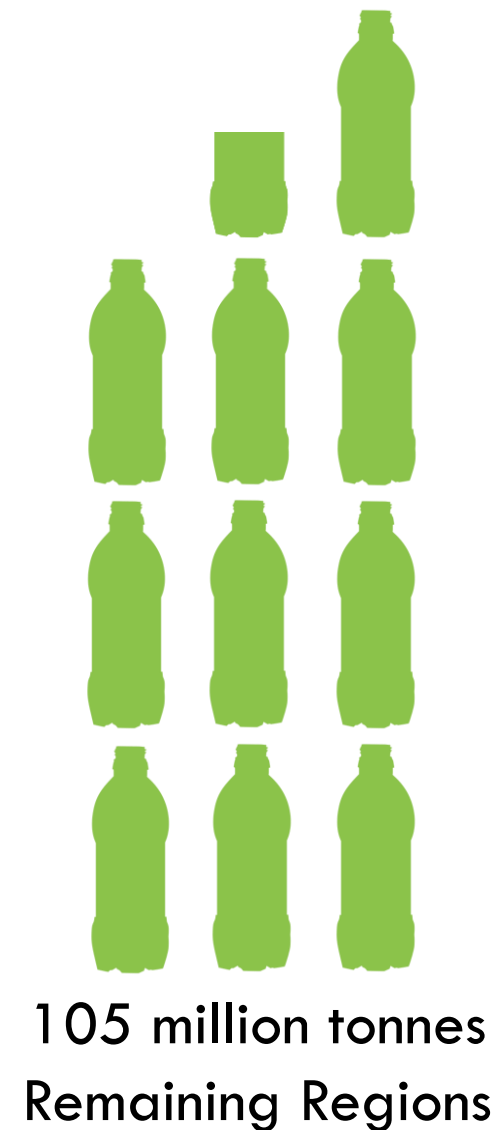
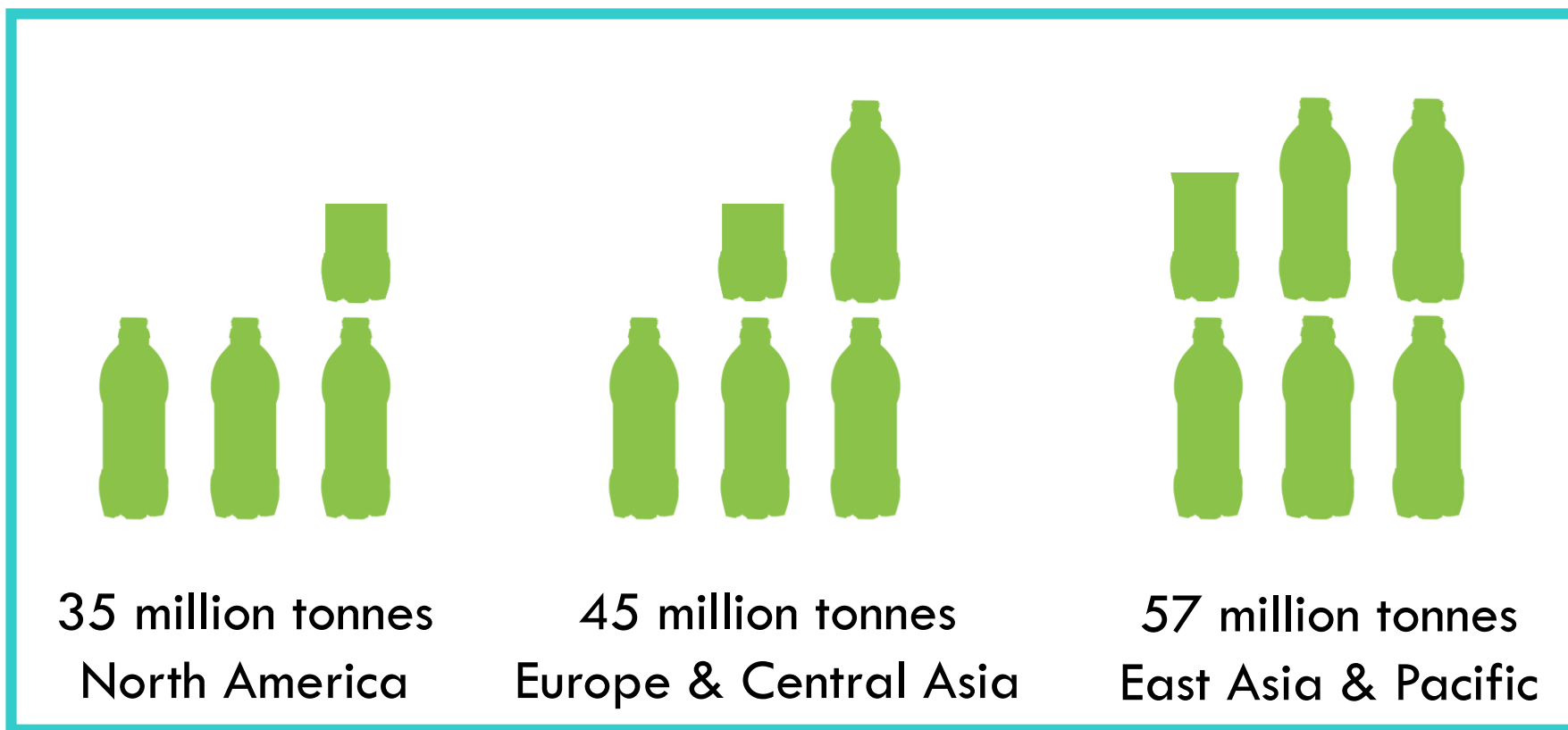
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**4.8 million Olympic-sized swimming pools**



# Three regions account for 60% of plastic waste generation

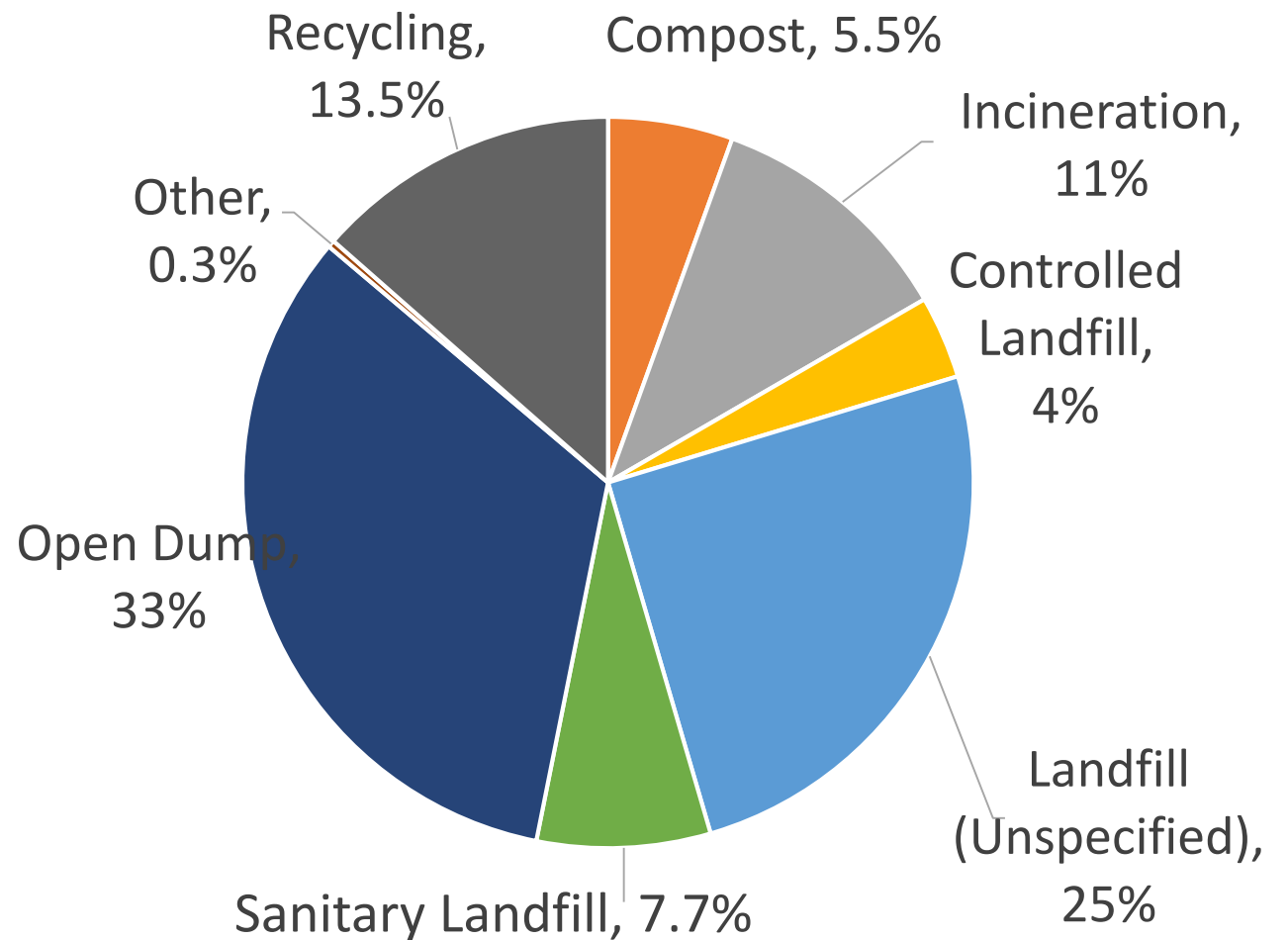




# Low-income countries collect only 39% of waste



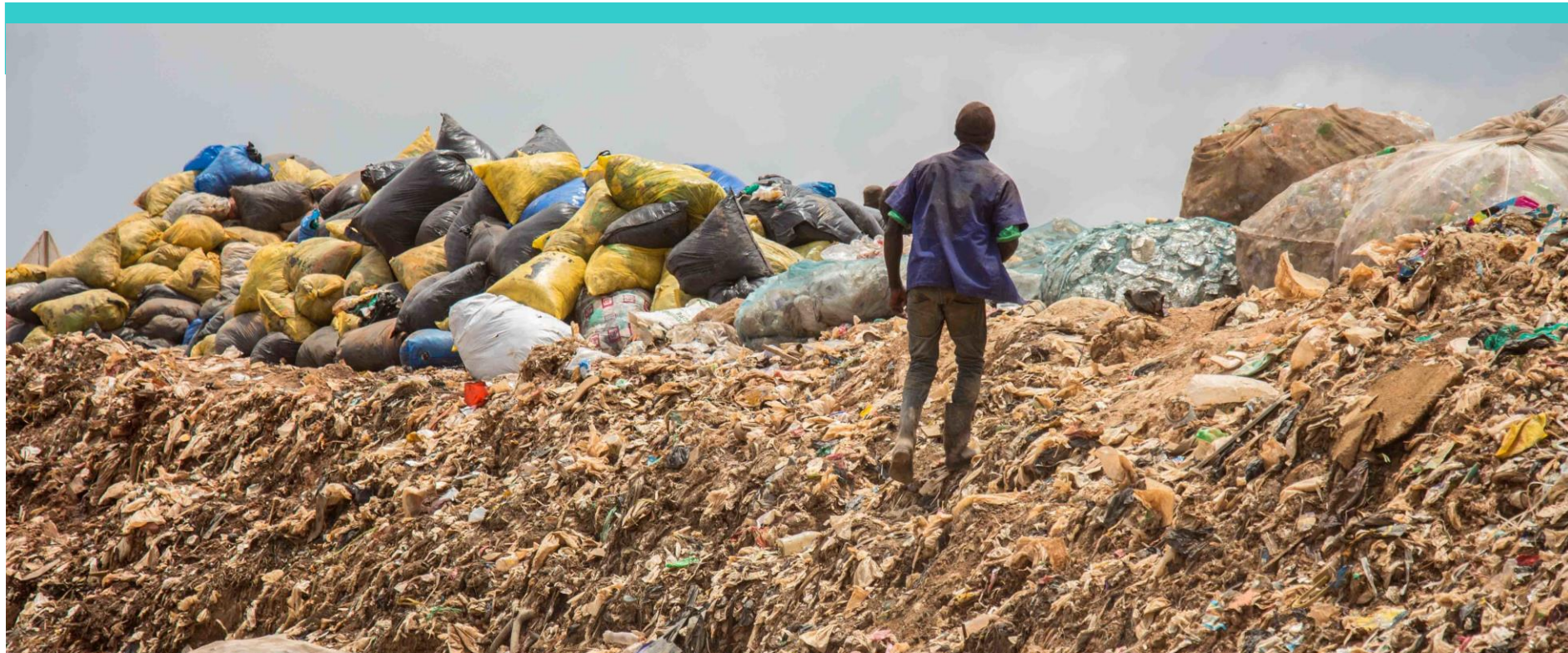
**33%** of global waste is **openly dumped** with **over 90%** in low-income countries



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

**2016:** 1.6 billion tonnes CO<sub>2</sub>-equivalent GHG emissions

**2050:** 2.6 billion tonnes CO<sub>2</sub>-equivalent GHG emissions



# The poor are most affected by inadequate waste management



**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 cities in low & middle-income countries have a **fee per household** whereas ~50% in high-income countries **pay by volume**

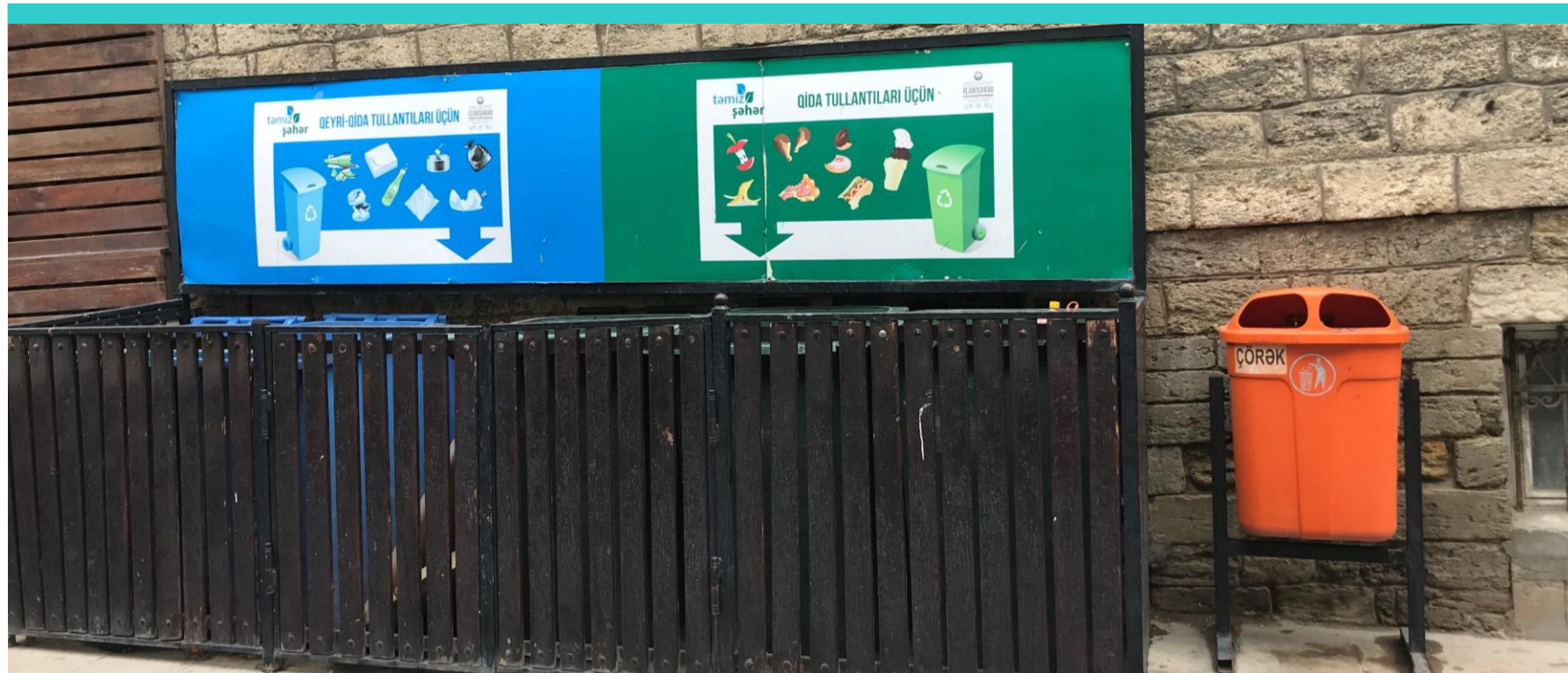
**Waste management user fees vary drastically by region**

Region	Average user fee in selected cities (US\$/year)
East Asia and Pacific	\$46
Europe and Central Asia	\$83
Latin America and the Caribbean	\$80
Middle East and North Africa	\$55
South Asia	\$34
Sub-Saharan Africa	\$10-40 (World Bank estimates)

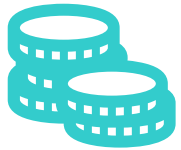


**Door-to-door fee collection** in 80% of cities in low-income countries & **joint utility billing** in ~40% in upper-middle income countries

**>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



**Time for action is now.**

# 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 the private sector

- 3) Adopt regulations and incentives to attract financing and the right partners—private sector, nonprofits, or civil society



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](https://worldbank.org/what-a-waste)