



Financing Solid Waste Management in Africa

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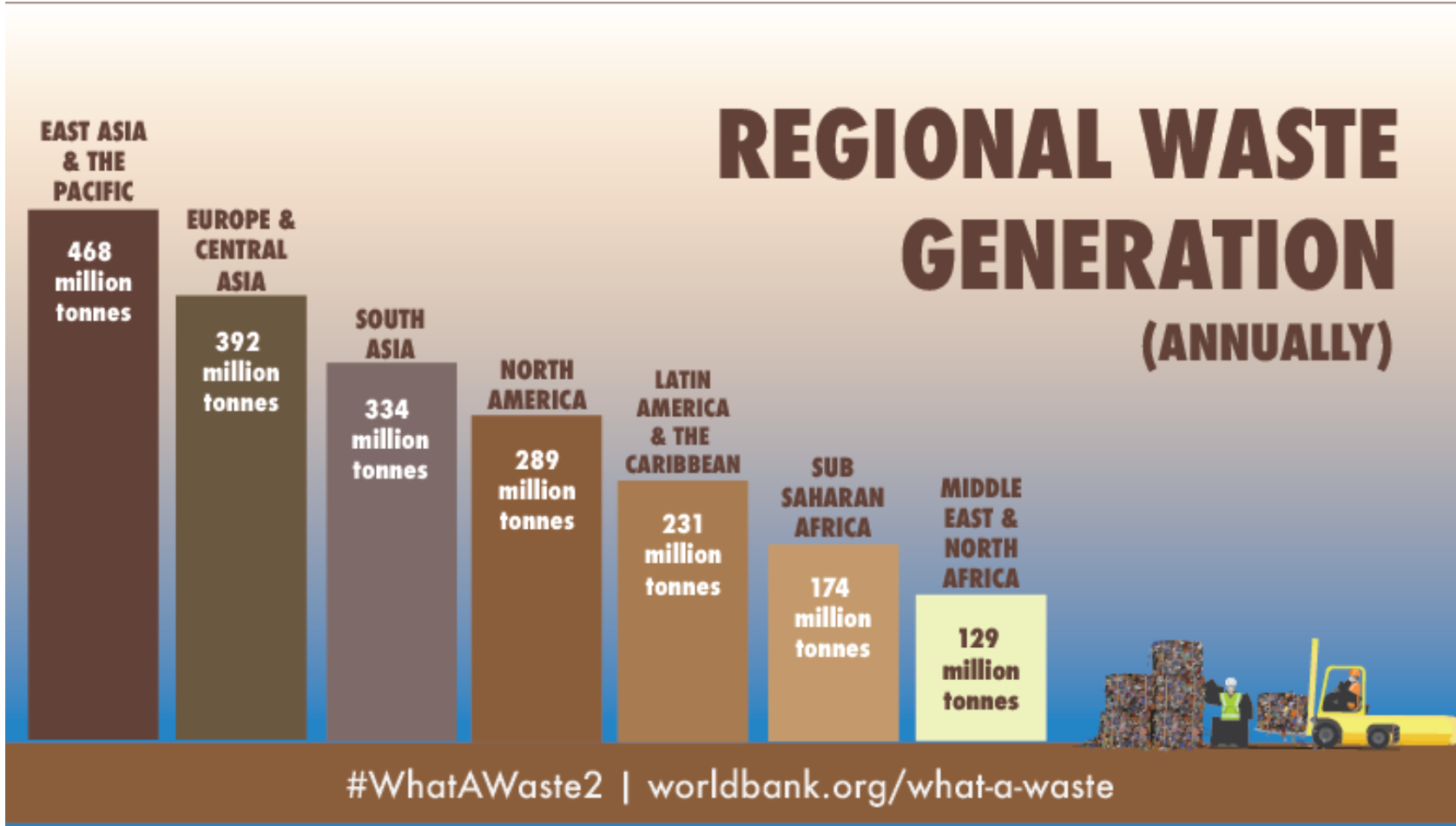
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WORLD BANK GROUP

Waste generation is anticipated to increase by 70% by 2050 globally.

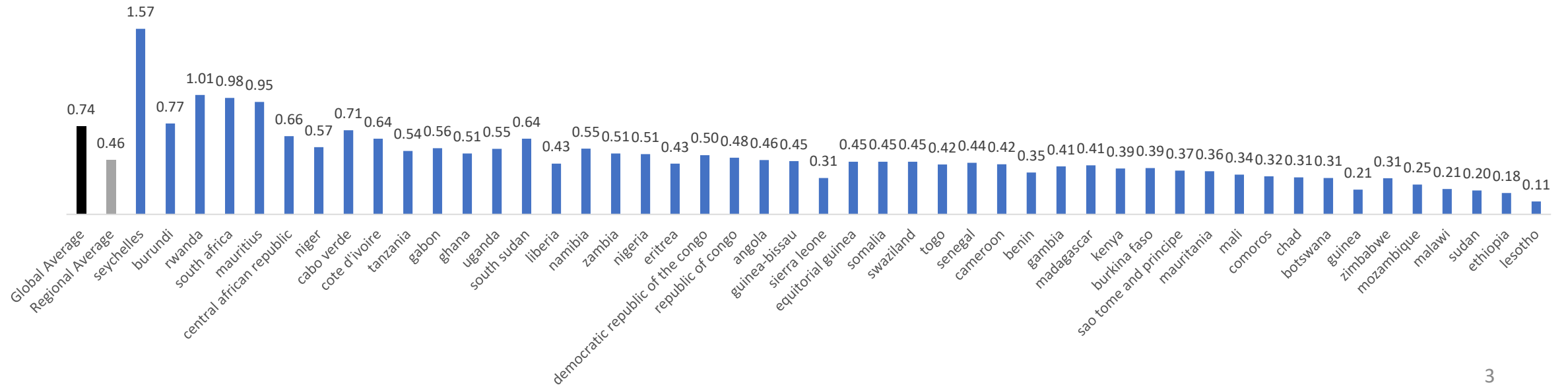
Currently, Sub-Saharan Africa's per capita generation rate is the lowest.



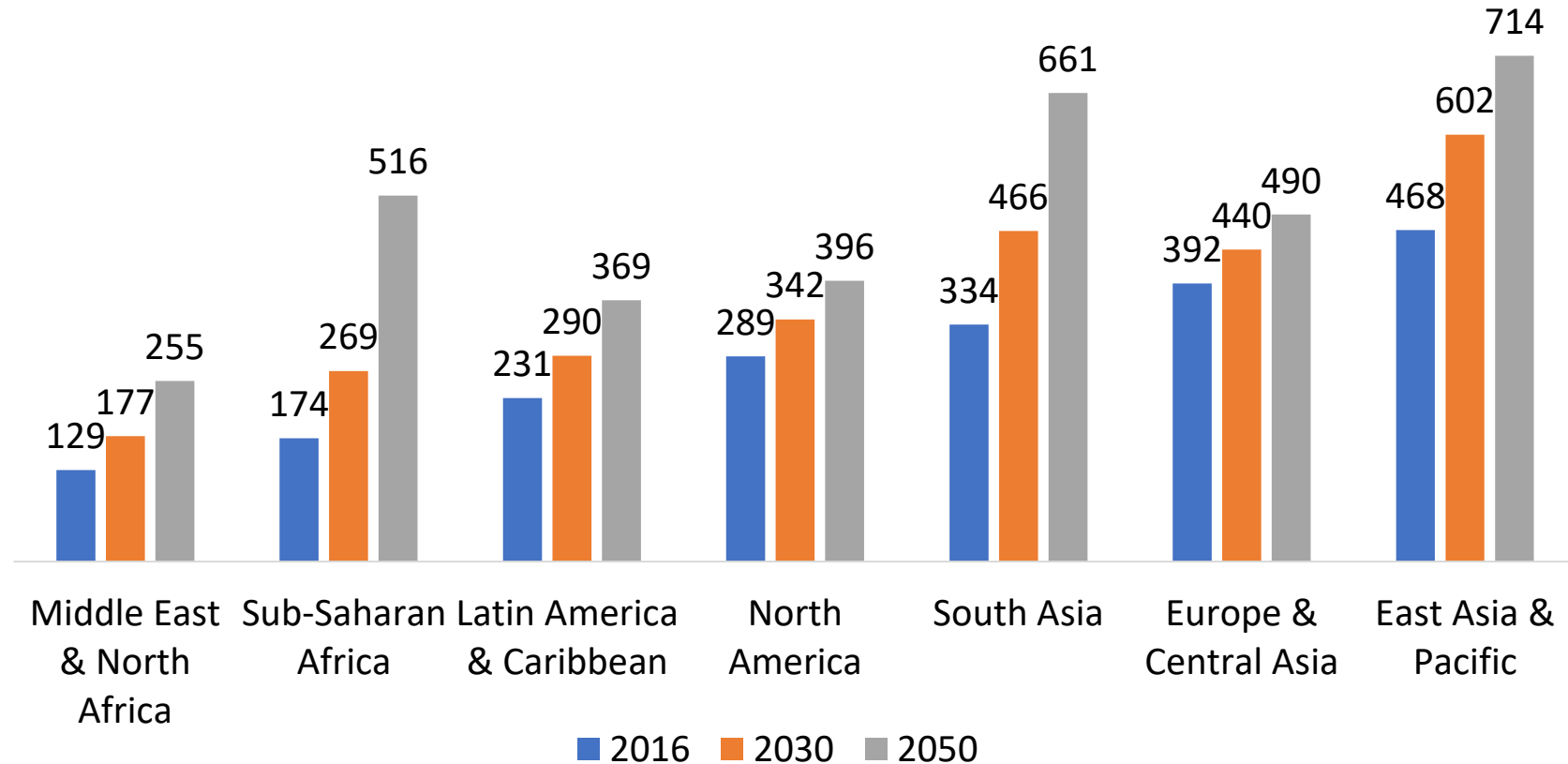
The region generated **174 million tonnes of waste in 2016**. The largest waste generators are middle-income countries or those with significant tourist populations.



Waste Generation Rates: Sub-Saharan Africa Region
 Kg / capita / day
 Data adjusted to 2016



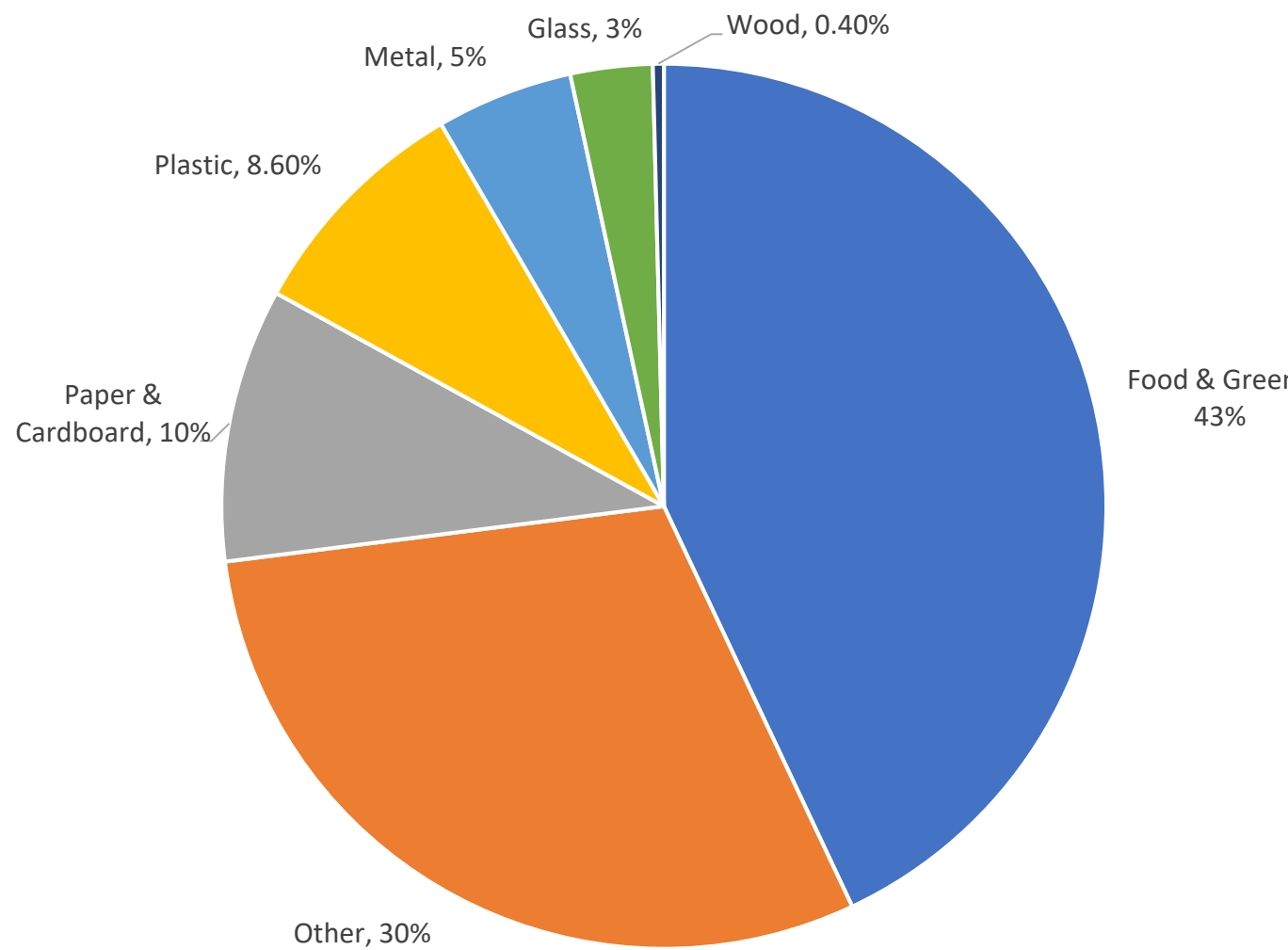
However, Sub-Saharan Africa is the fastest growing region with waste expected to nearly triple by 2050



Projected Waste Generation
Millions of tonnes/year

More than 40 percent of the waste in the Sub-Saharan Africa region is **organic**.

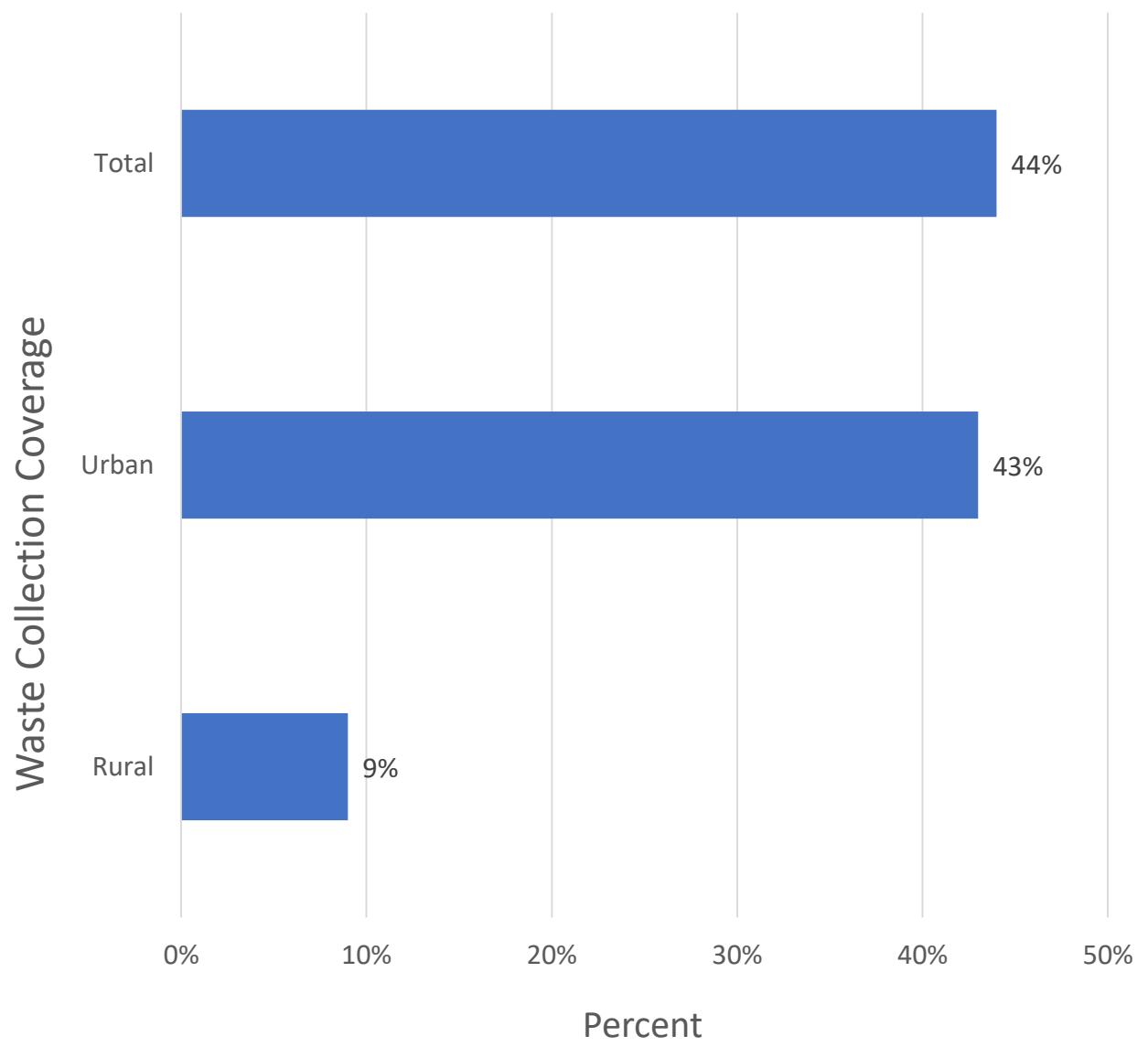
30 percent of waste is typically inert waste **such as sand and fine particles**.





Less than half of the waste generated in Africa is collected formally.

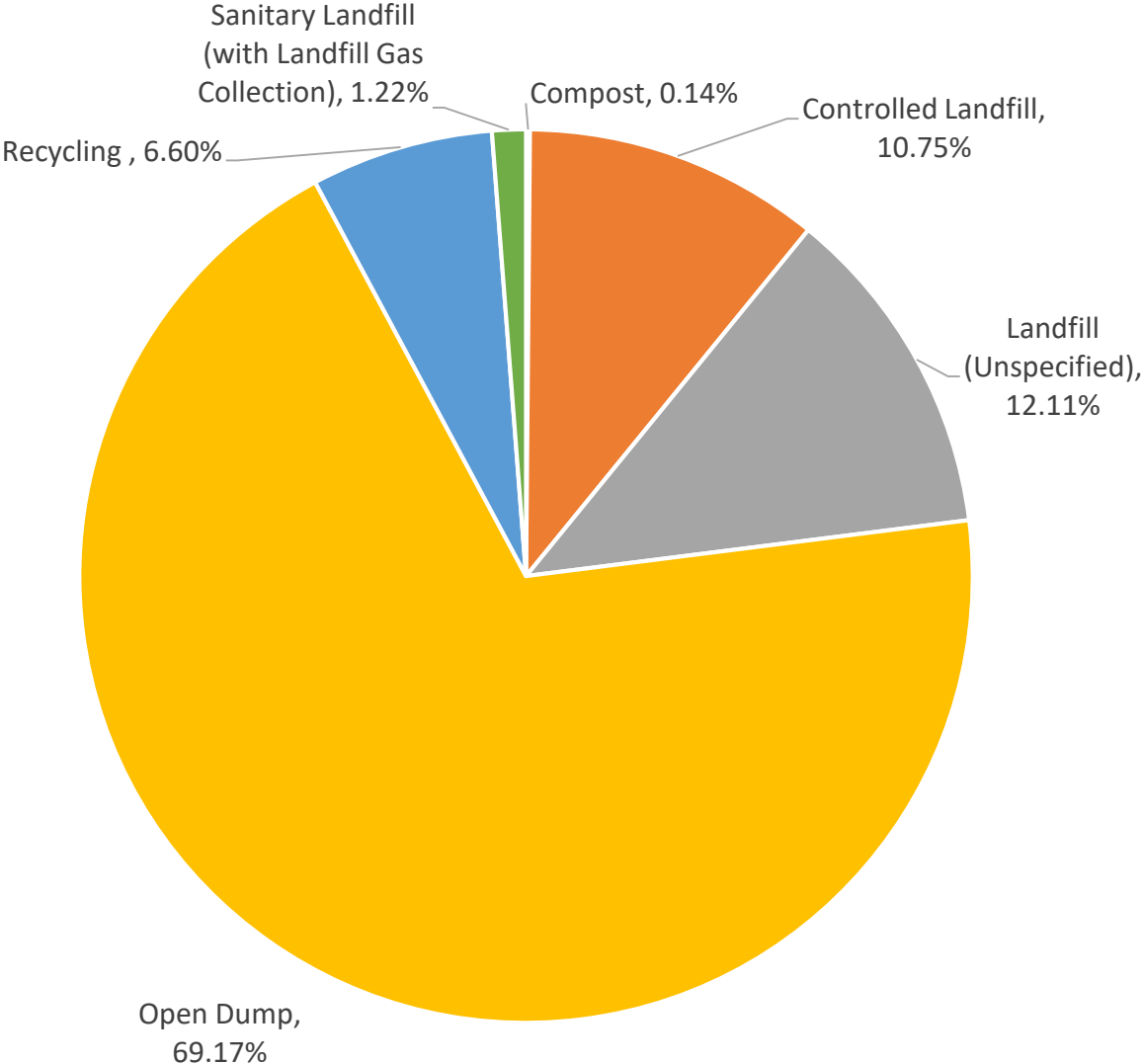
Waste collection is often nonexistent in rural areas.





Almost every country in the region is at a **very early stage in source separation.**

69% of waste is
openly dumped
and often burned





The number of new disposal facilities is **not meeting the need** given the growing quantities of waste

Key challenges

Overuse of facilities



Citizen resistance



Land scarcity



High urbanization and sprawl

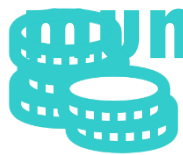




Local governments often lack funds, **only covering ~50%** of **investment costs** for waste systems

Remainder comes mainly from national government subsidies and the private sector

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



High income countries: >\$100/tonne

Lower-income countries: ~\$35/tonne



Typical Waste Management Costs by Disposal Type (US\$/tonne)

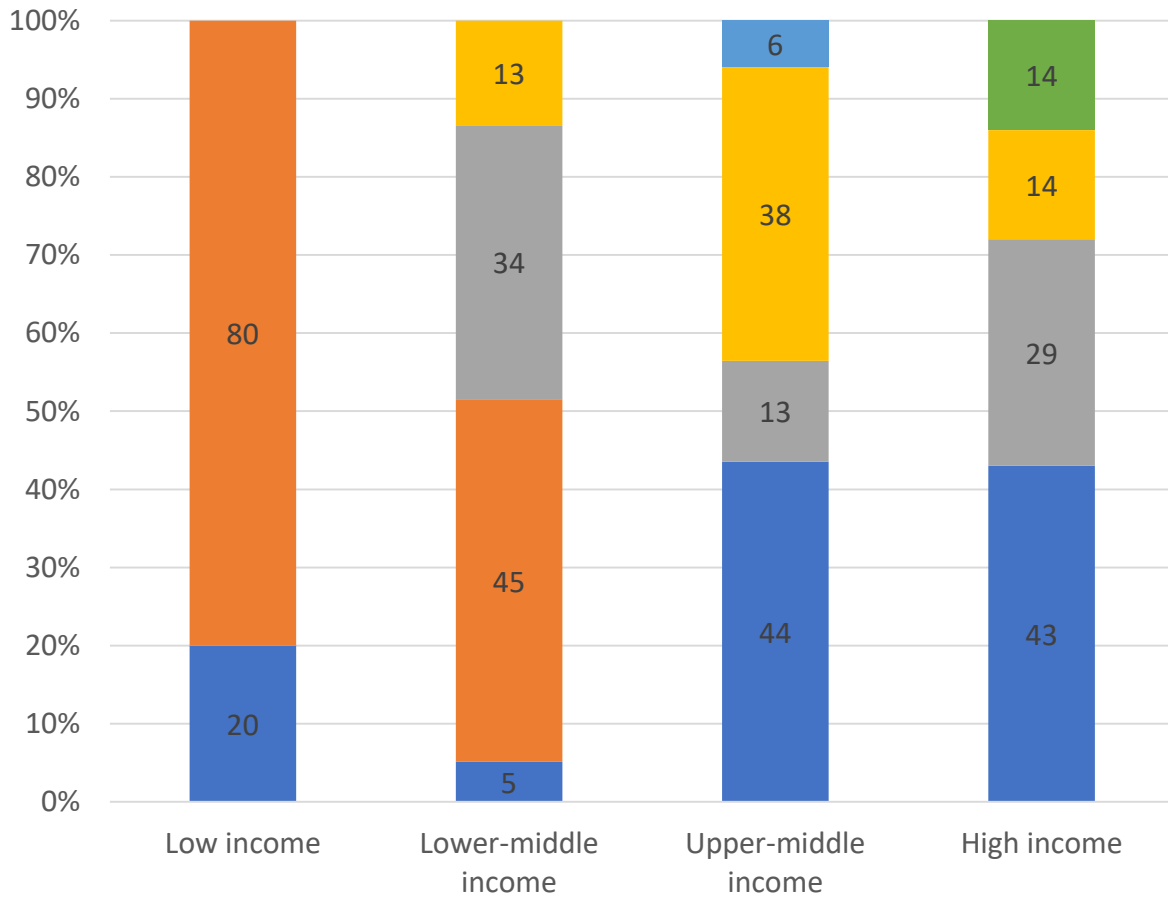
	Low-income countries	Lower middle-income countries	Upper middle-income countries	High-income countries
Collection and transfer	20-50	30-75	50-100	90-200
Controlled landfill to sanitary landfill	10-20	15-40	20-65	40-100
Open dumping	2-8	3-10	-	-
Recycling	0-25	5-30	5-50	30-80
Composting	5-30	10-40	20-75	35-90

Source: WB Solid Waste CoP and Climate and Clean Air Coalition

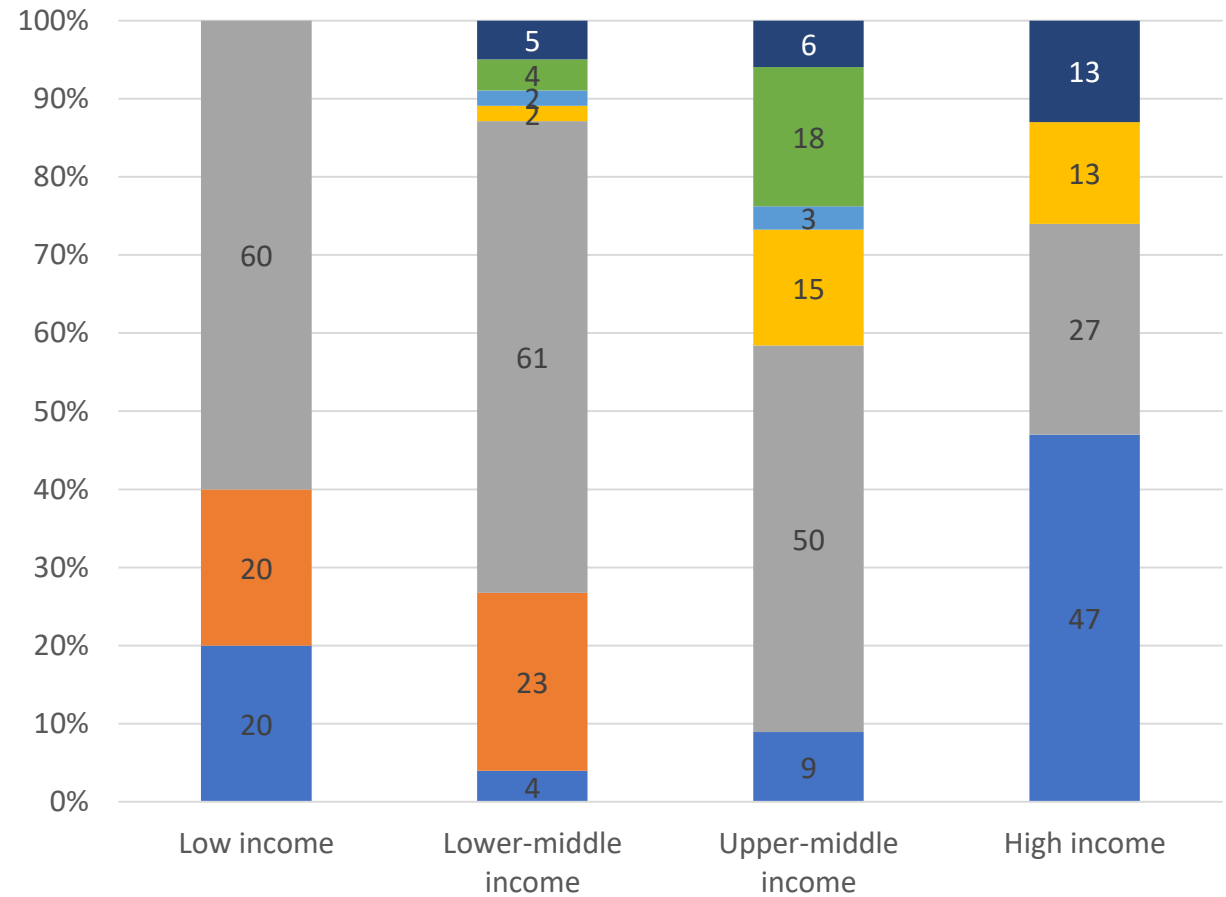
Region	Average user fee in selected cities (US\$/year)
East Asia and Pacific	\$46
Europe and Central Asia	\$83
Latin America and the Caribbean	\$80
Middle East and North Africa	\$55
South Asia	\$34
Sub-Saharan Africa	\$10-40 (World Bank estimates)

Waste management fee type and billing method

Household billing method



House hold fee type

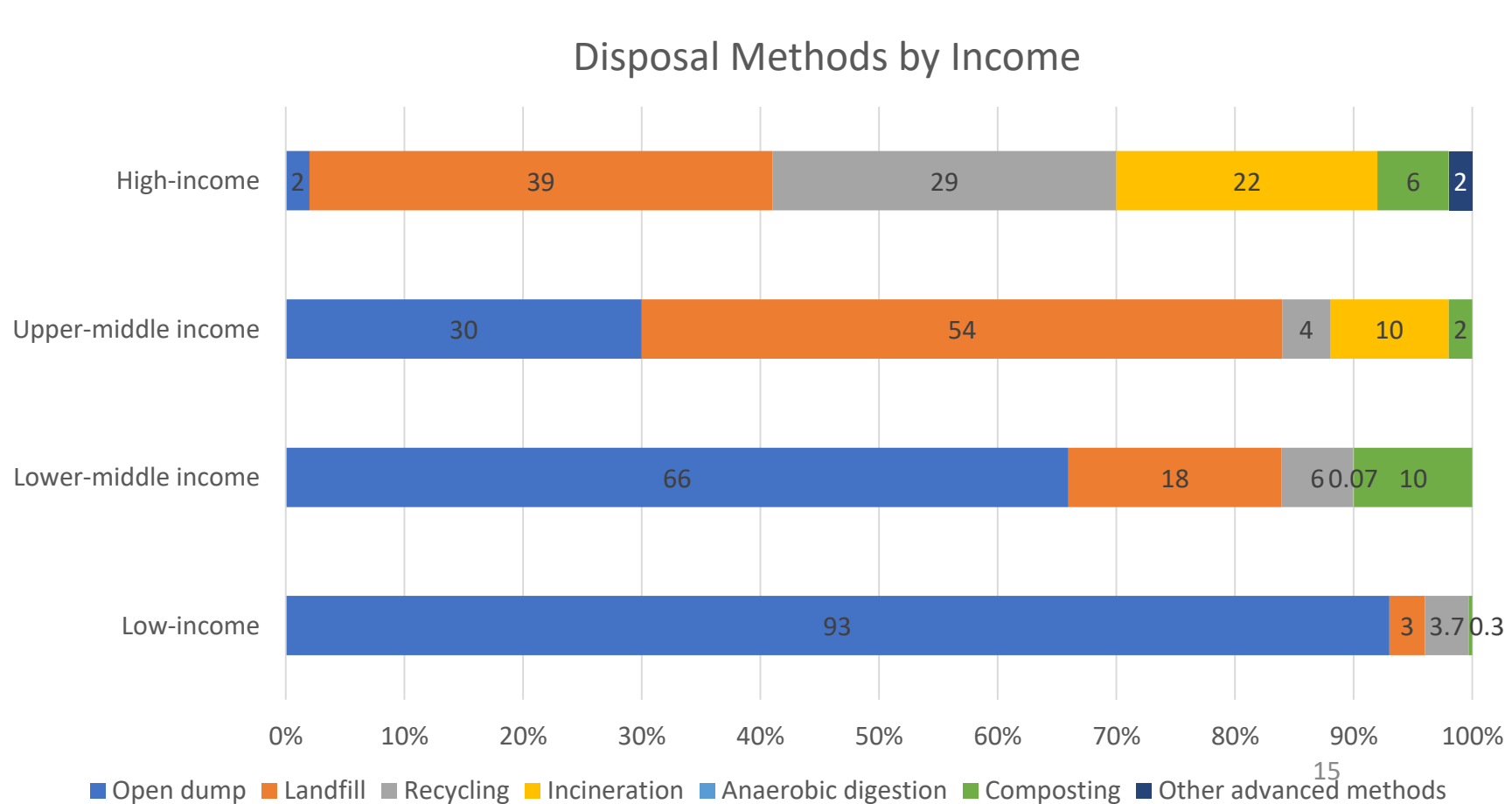
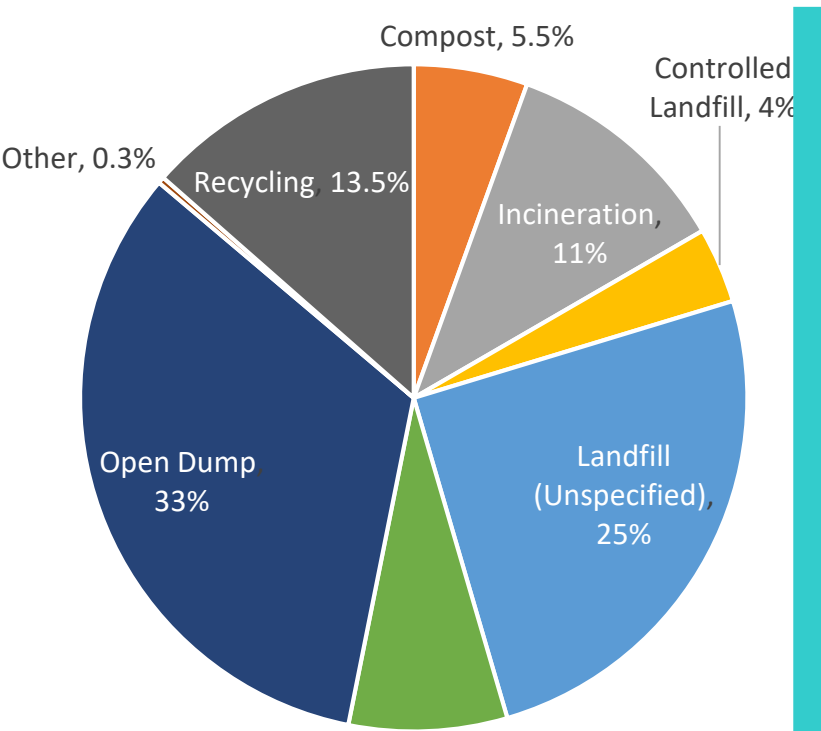


- Direct solid waste billing
- Door-to-door fee collection
- Joint propoerty tax billing
- Joint utility billing
- Delivery of payment to central location
- Other

- Fee per volume of waste
- Flat fee per income level
- Flat fee per household
- Propoerty Value
- Propoert Location
- Variable based on cost
- Other

Can you **make money** from recycling?

Global Waste Treatment and Disposal



Financing Sources for SWM in Africa

Capital Investments

- Central government transfers
- General local government revenue
- Municipal bonds
- Financing from IFIs
- Private investments

Operating Costs

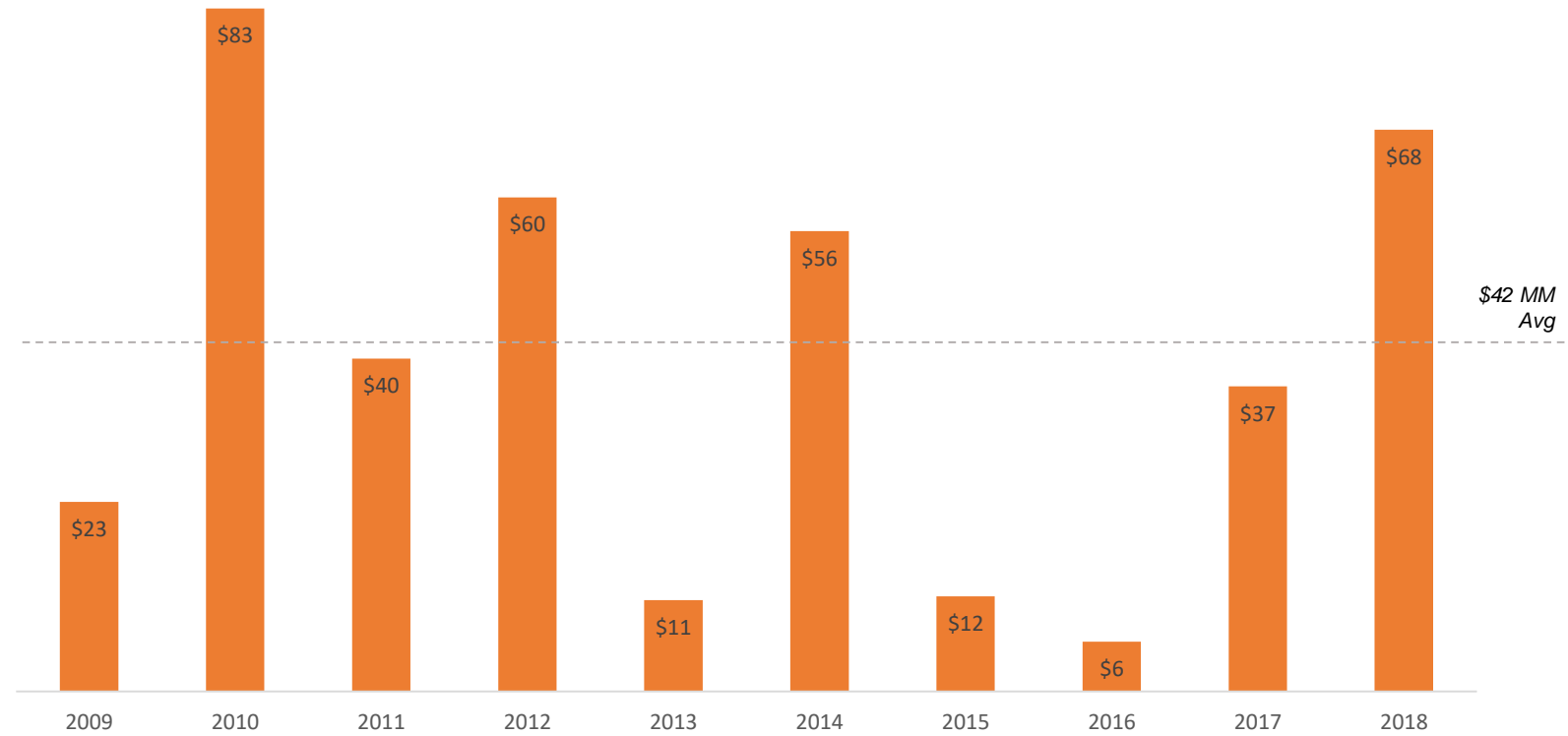
- Fees, user charges and taxes from households and the institutions/businesses
- Transfers from general municipal revenue
- Proceeds from sale of recyclables
- Proceeds from carbon offset (if available)
- Income from Extended Producer Responsibility schemes

Solid Waste Management Lending in Africa

Key takeaways:

- In the last 10 years, the World Bank committed at least **\$417 million** in lending to solid waste management in Africa across **42 projects**
- On average, the World Bank committed at least **\$42 million** in solid waste funding per year

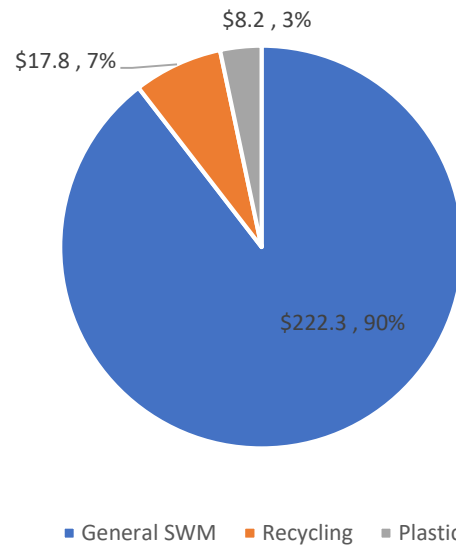
World Bank Solid Waste Management Commitments: Africa Region 2010-2019



Source: 2019 SWM Portfolio Review
Figures reflect lending projects; advisory projects are not included
Study in progress; numbers subject to minor adjustments

SWM Lending in Africa: Recycling and Waste Type

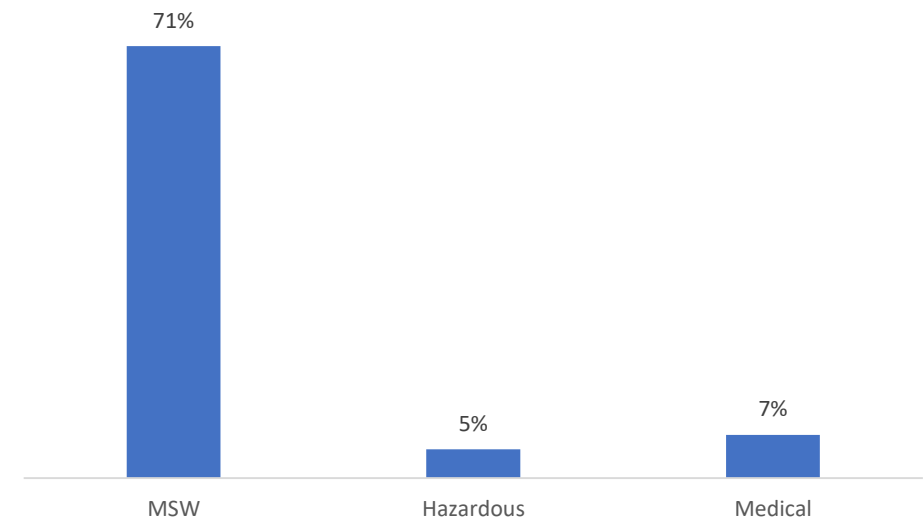
Recycling and Plastics Lending
2014-2019



Key takeaways:

- Around 7% of lending addresses recycling of waste, and 3% of lending improves management of plastics.
- Recycling funding has increased over time

Primary Waste Type
2010-2019



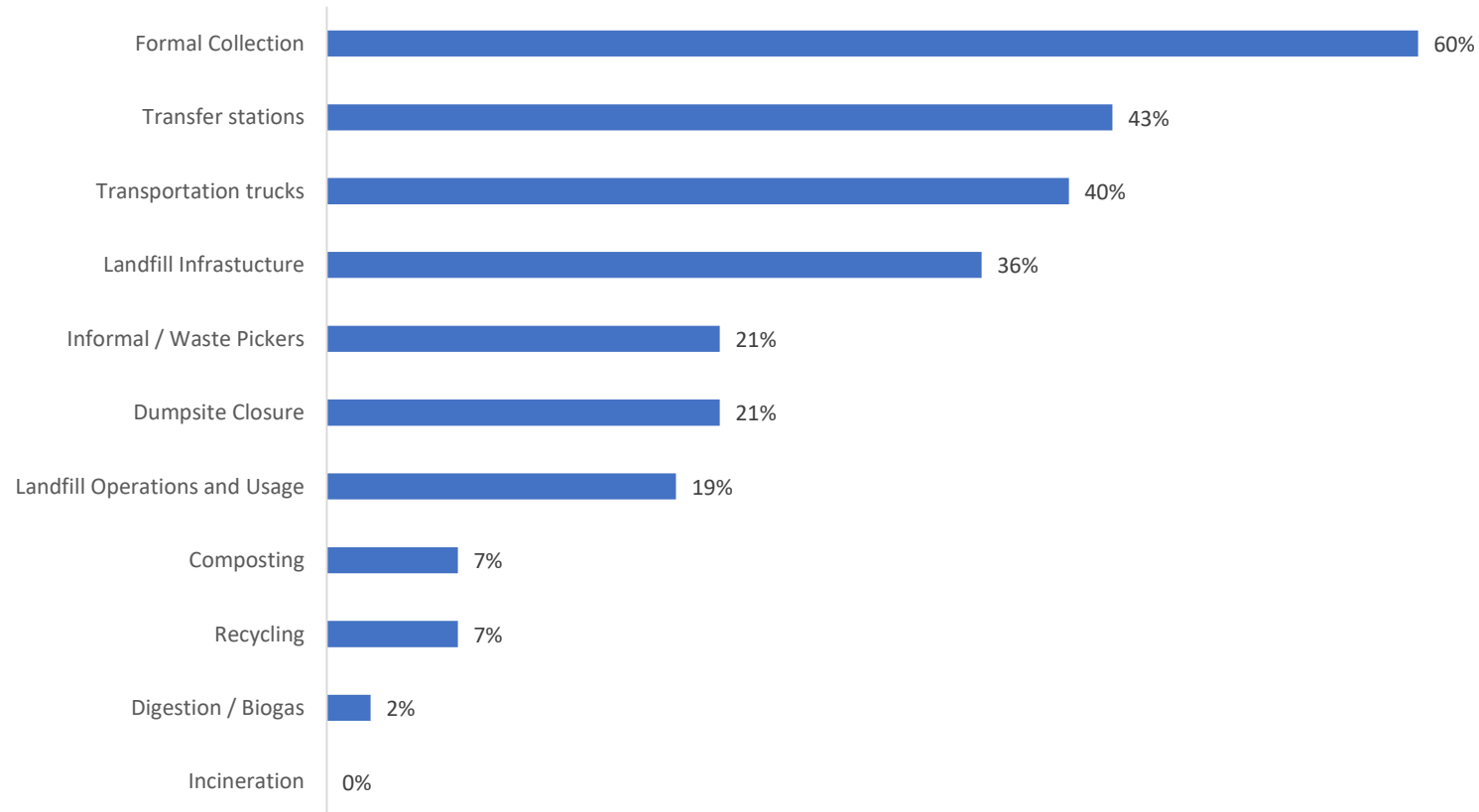
Key takeaways:

- World Bank lending projects in Africa primarily address the management of Municipal Solid Waste (household and commercial).

Source: 2019 SWM Portfolio Review
Figures reflect lending projects; advisory projects are not included
Study in progress; numbers subject to minor adjustments

SWM Lending in Africa: Value Chain

Primary Waste Type 2010-2019



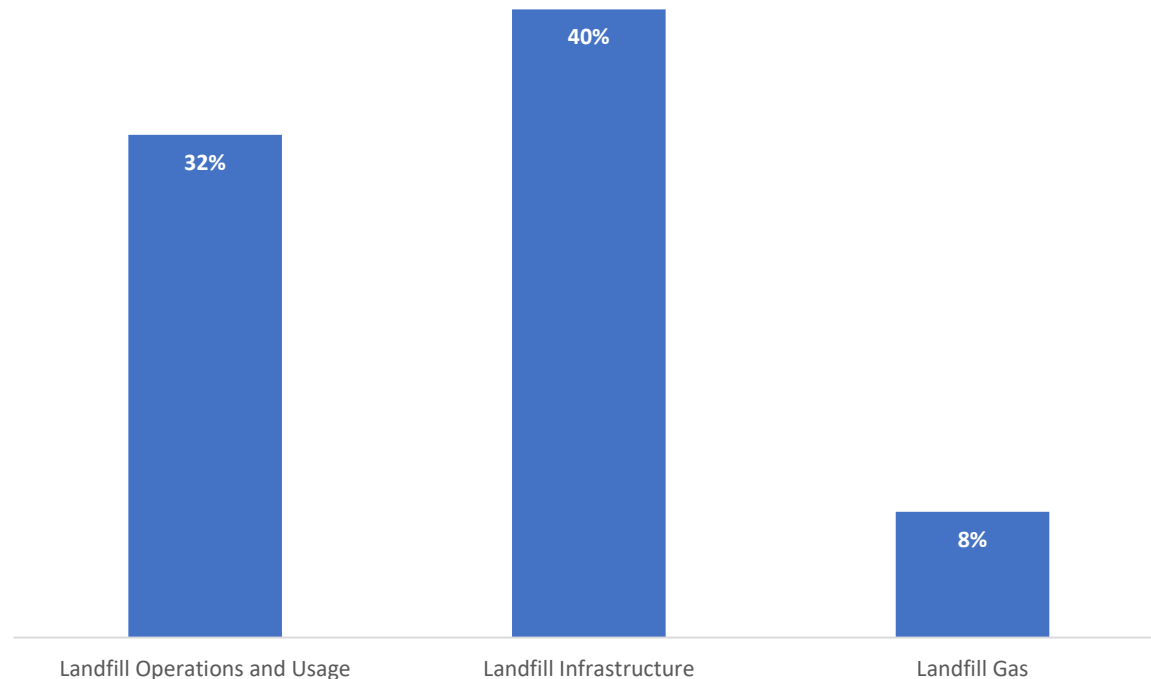
Key takeaways:

- In the past 10 years, waste collection projects have been most common, supported by infrastructure for transfer stations and trucks
- Recycling and composting projects comprise about 7% of lending
- Waste-to-energy incineration is not a focus of lending projects in Africa

Source: 2019 SWM Portfolio Review
Figures reflect lending projects; advisory projects are not included
Study in progress; numbers subject to minor adjustments

SWM Lending in Africa: Landfills

Landfill Projects 2014-2019



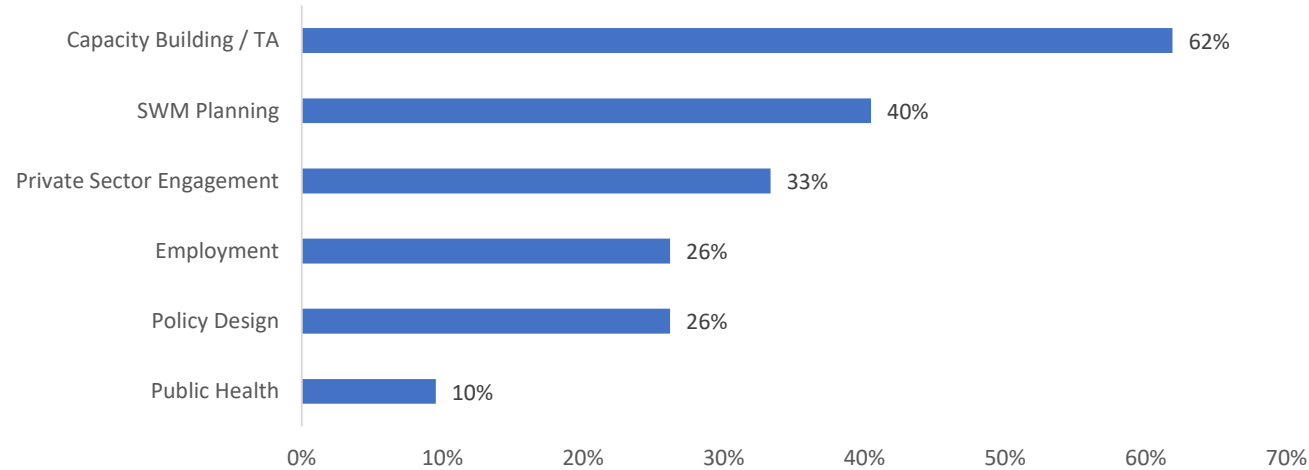
Key takeaways:

- Most recent projects addressing landfills finance landfill infrastructure. Around 40% of waste projects finance new landfill construction, expansion of cells, site studies, or capping of old landfills.
- Landfill operations is also commonly funded through operational lending, which entails training and capacity building for landfill management and improving connectivity to landfills
- Few landfill operations have implemented landfill gas collection systems

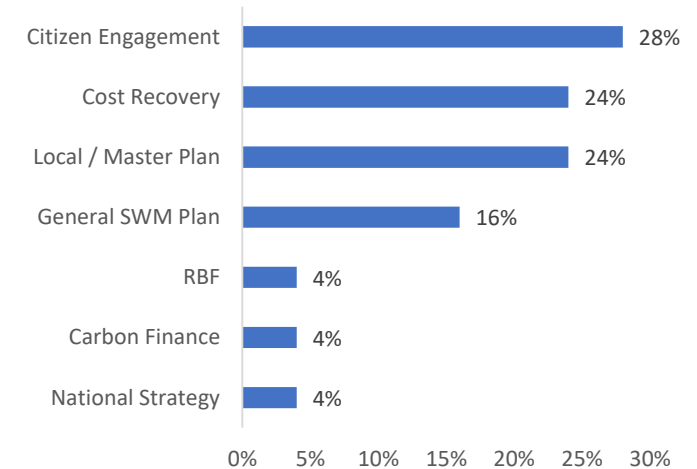
Source: 2019 SWM Portfolio Review
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SWM Lending in Africa: Additional Topic Areas

Topic Areas
2010-2019



Topic Areas
2014-2019



Key takeaways:

- Most World Bank lending projects in Africa (62%) also include a capacity building component for national government, local government, or service providers
- 40% of projects include a national or local planning component
- About 1/3 of projects address private sector engagement in solid waste management, mainly through waste collection
- Carbon finance and results-based financing are also becoming common instruments for strengthening service delivery

Source: 2019 SWM Portfolio Review
Figures reflect lending projects; advisory projects are not included
Study in progress; numbers subject to minor adjustments

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