



What a Waste 3.0

**Global Snapshot of
Solid Waste Management
toward Circularity until 2050**

Kremena Ionkova
Global Lead - Solid Waste & Circularity
Public Sector Solutions, Policy & Finance



WORLD BANK GROUP

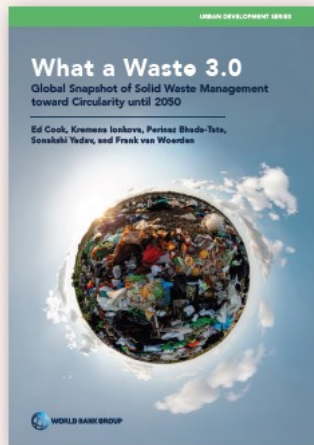
What a Waste Series

A new World Bank Group report

What a Waste 3.0

Global Snapshot of Solid Waste Management toward Circularity until 2050

What a Waste 3.0 is the most comprehensive assessment to date of global solid waste management, drawing on data from 217 countries and economies and 262 cities. Its summary of findings is available in **English, French, Japanese, and Spanish.**



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(2012)



(2018)



(2026)

What a Waste 3.0



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Annex A: Waste generation by country

Annex B: Waste treatment by country

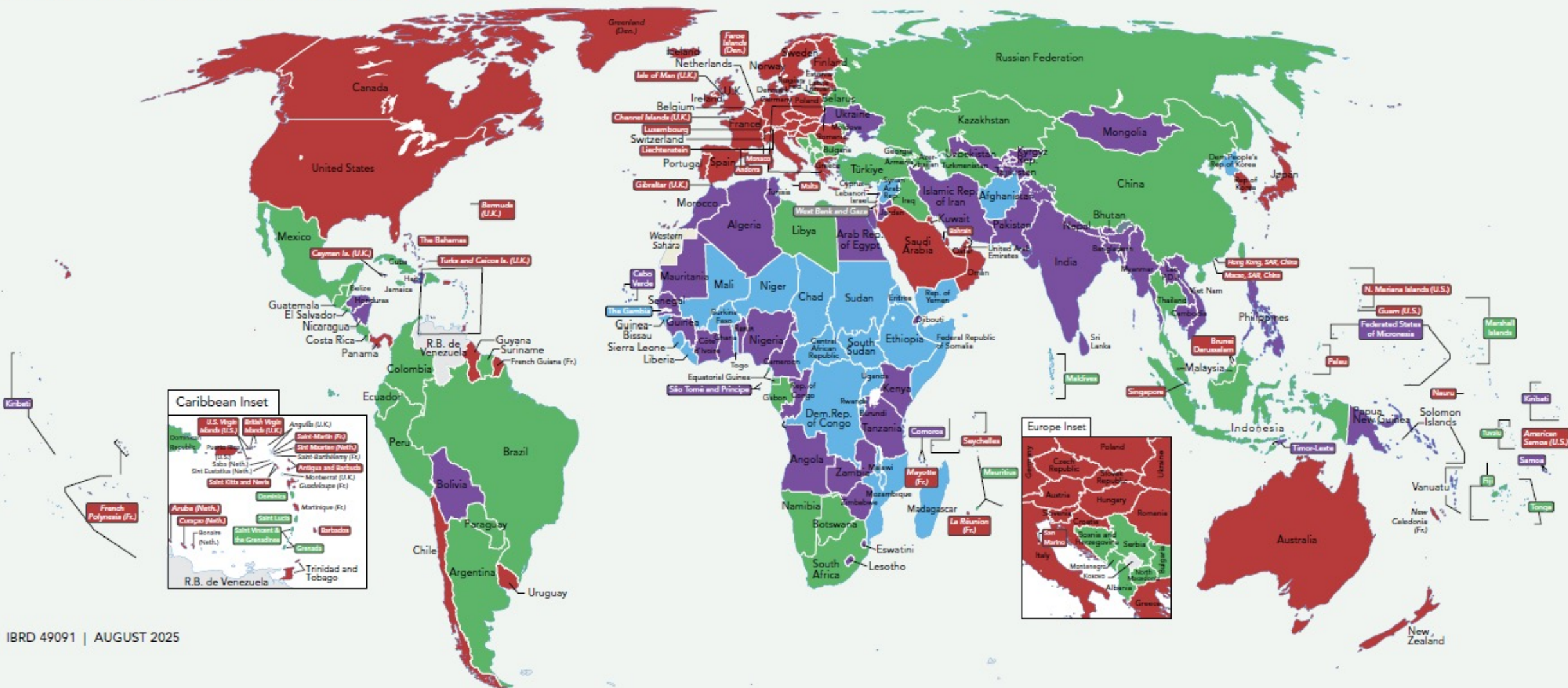


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Summary of findings
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Definition of Regions and Income Groups

Map 1.1 Definition of income groups

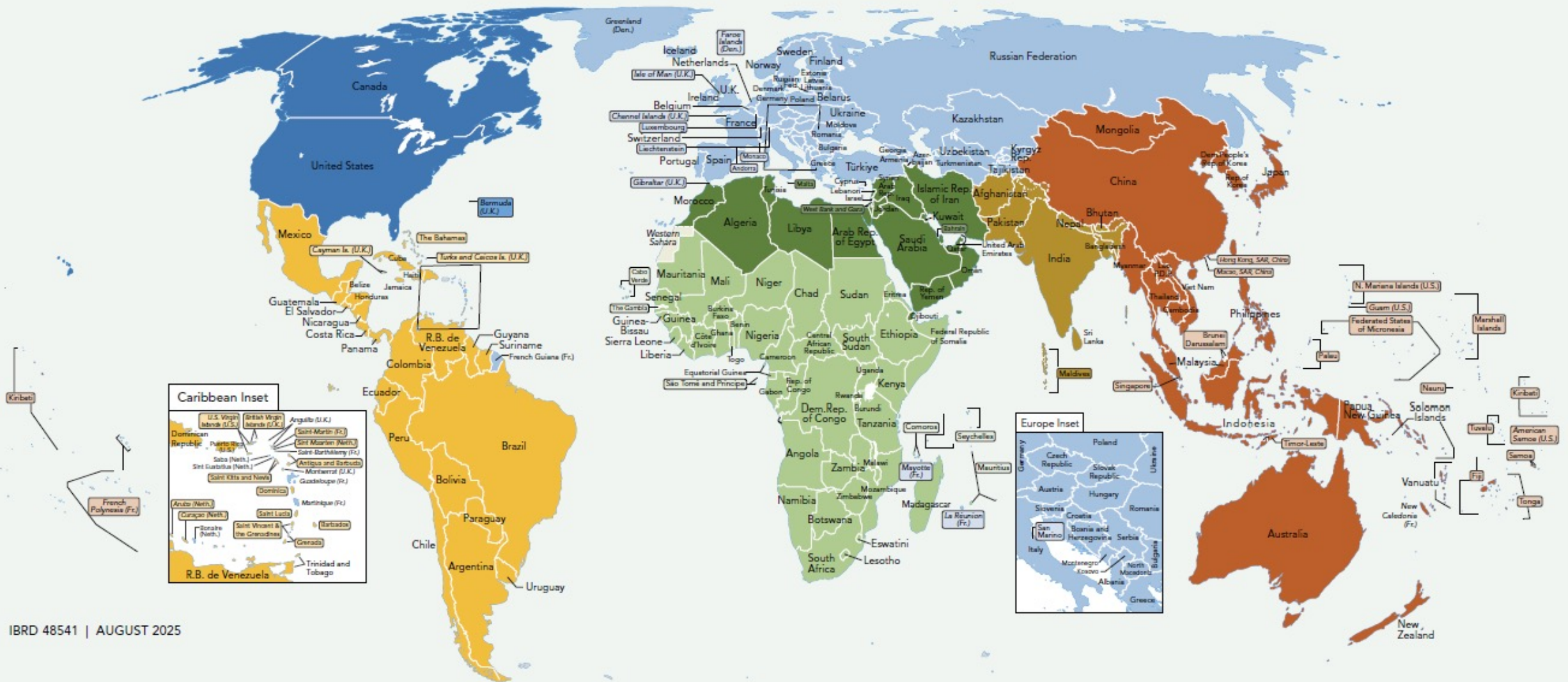


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Classification according to World Bank estimates of calendar year 2022 GNI per capita. GNI per capita (Atlas methodology US\$).

Low-income: ≤ US\$1,135 Lower-middle-income: US\$1,136-US\$4,465 Upper-middle-income: US\$4,466-US\$13,845 High-income: > US\$13,845

Map 1.2 Definition of regions per World Bank analytical classifications

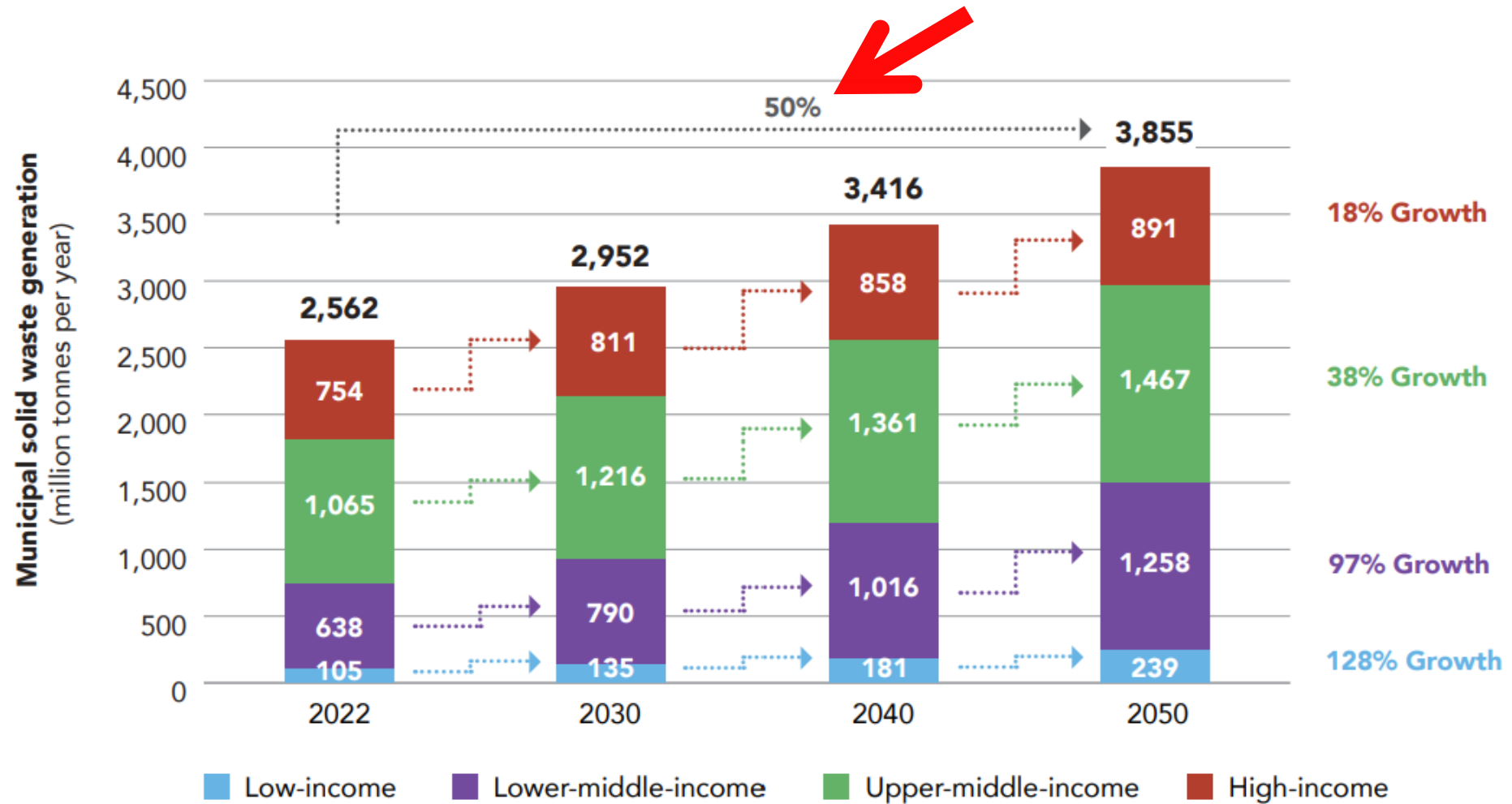


Classification according to World Bank analytical grouping for calendar year 2022.

■ North America ■ Europe & Central Asia ■ Latin America & the Caribbean ■ East Asia & Pacific ■ Middle East & North Africa ■ South Asia ■ Sub-Saharan Africa

Source: World Bank.

Global Waste Generation



Global Waste Generation

Sub-Saharan Africa (+124%)



South Asia (+99%)

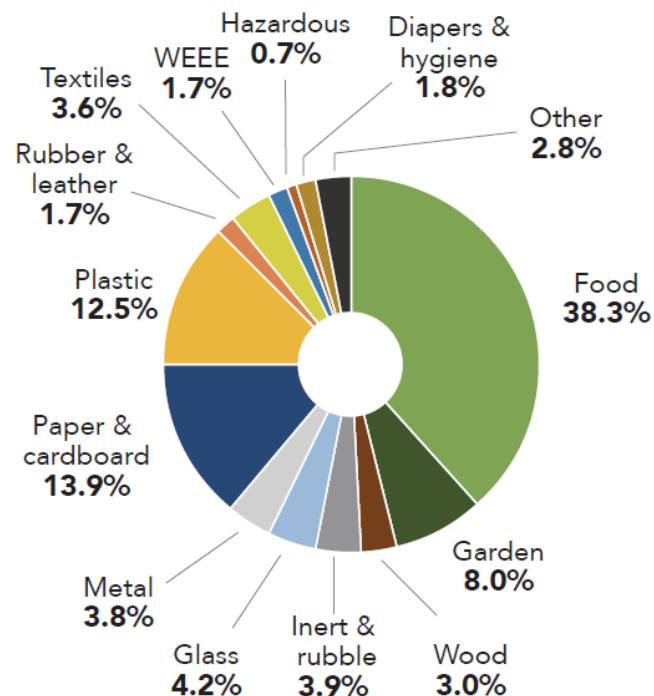


Middle East and North Africa (+85%)

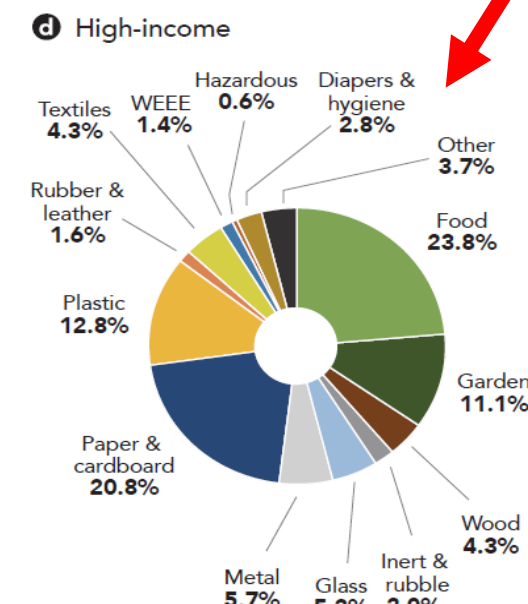
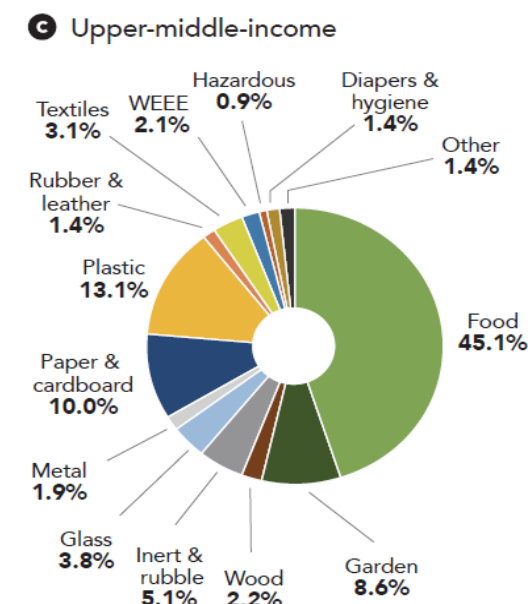
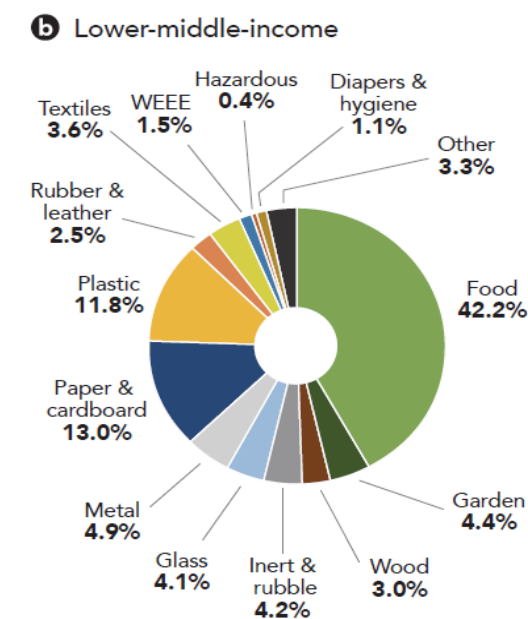
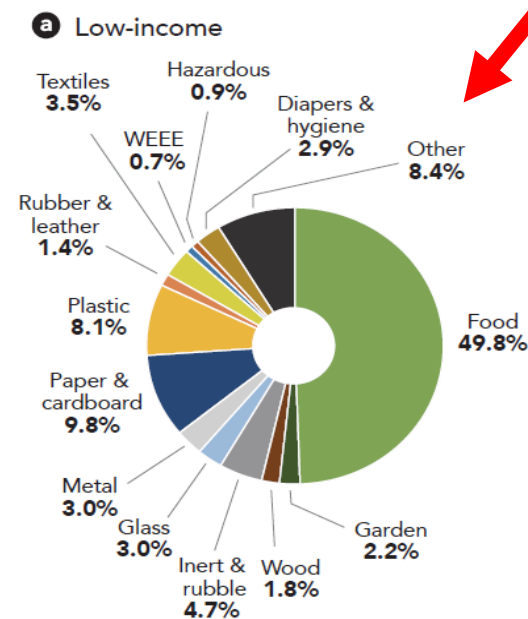


Waste Composition

Across Income Group

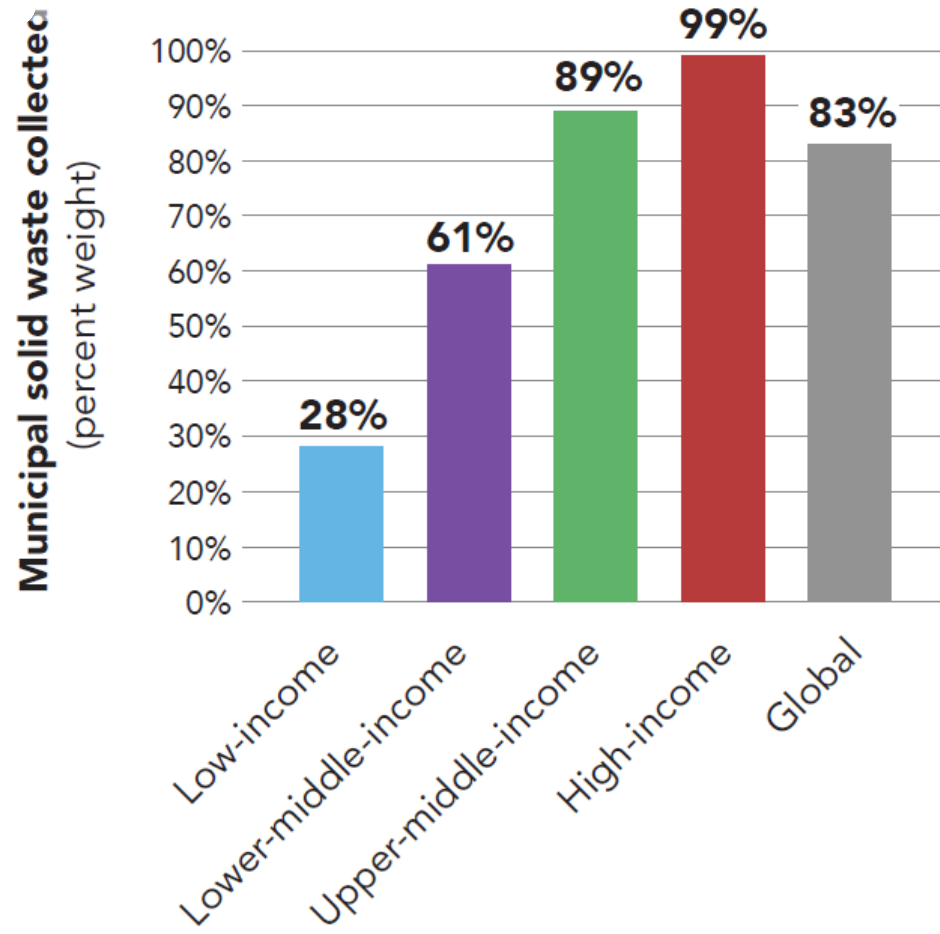


Globally, the largest waste category is **food waste (38%)**, followed by **engineered materials (34%)** -- plastic, paper and cardboard, metal, and glass.

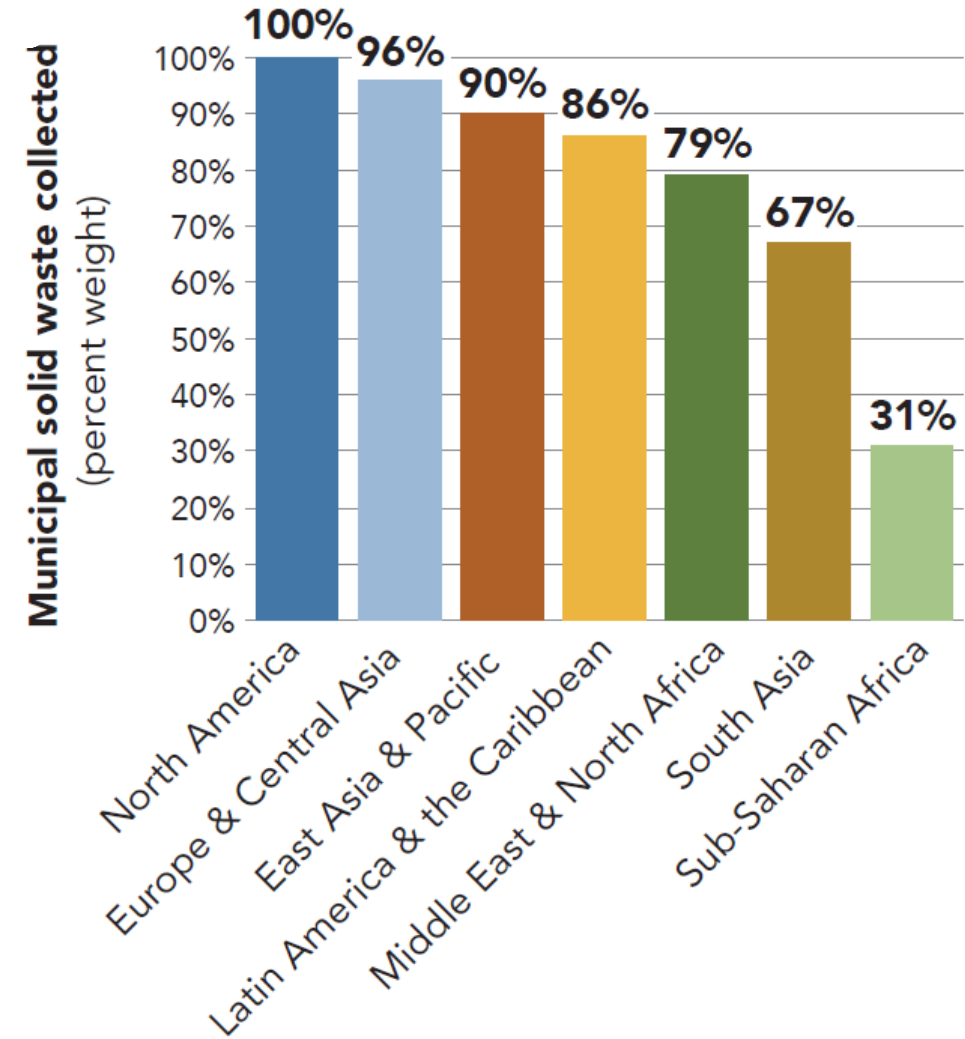


Waste Collection

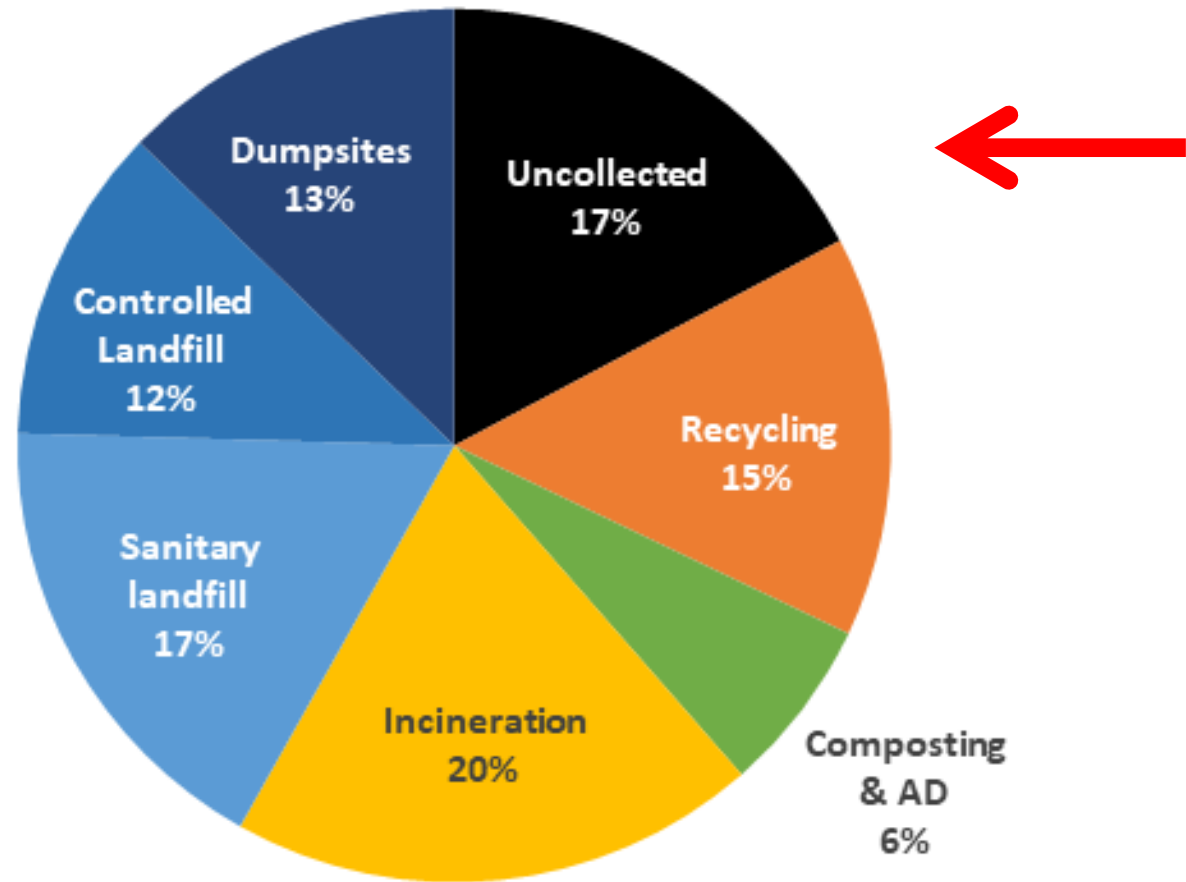
a By income group



b By region



Global Snapshot of Solid Waste Management



One-third of all global waste is unmanaged

Global municipal solid waste treatment and disposal by weight, percent mean, weighted by waste generation (2022)

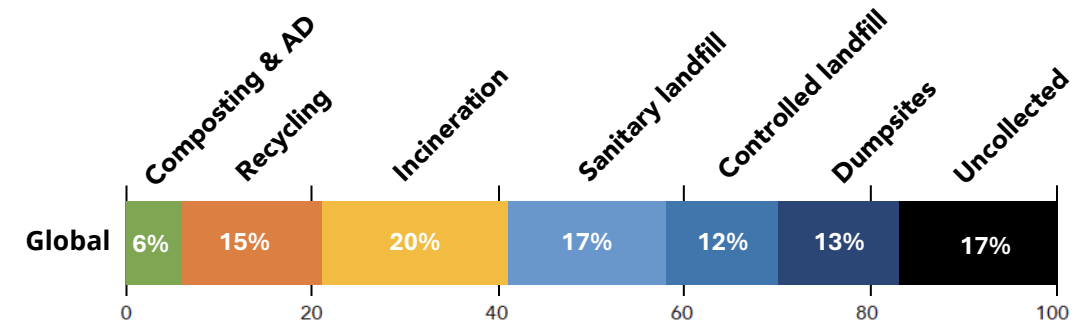
Waste Treatment & Disposal

Across Income Group and Region

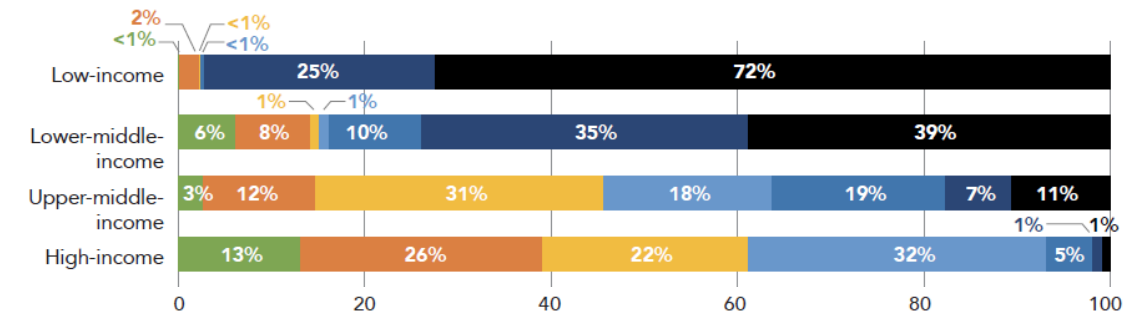
Almost **one third of global waste is not treated at all**, either being openly dumped or not collected in the first place.

Self-managed uncollected waste are typically burned, dumped (on the land or waterways), recycled, and composted.

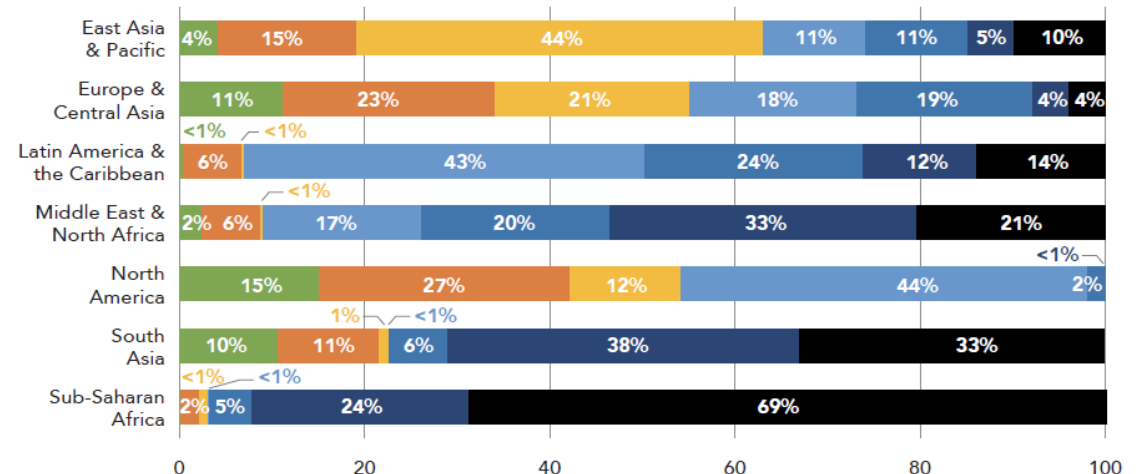
Sanitary and Controlled Landfills (29%) are the most common method of waste treatment.



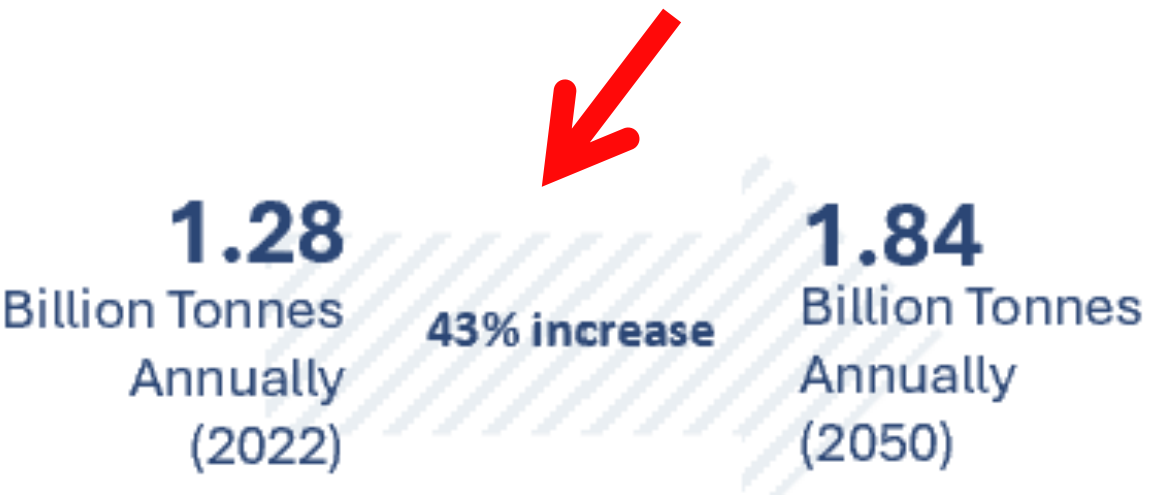
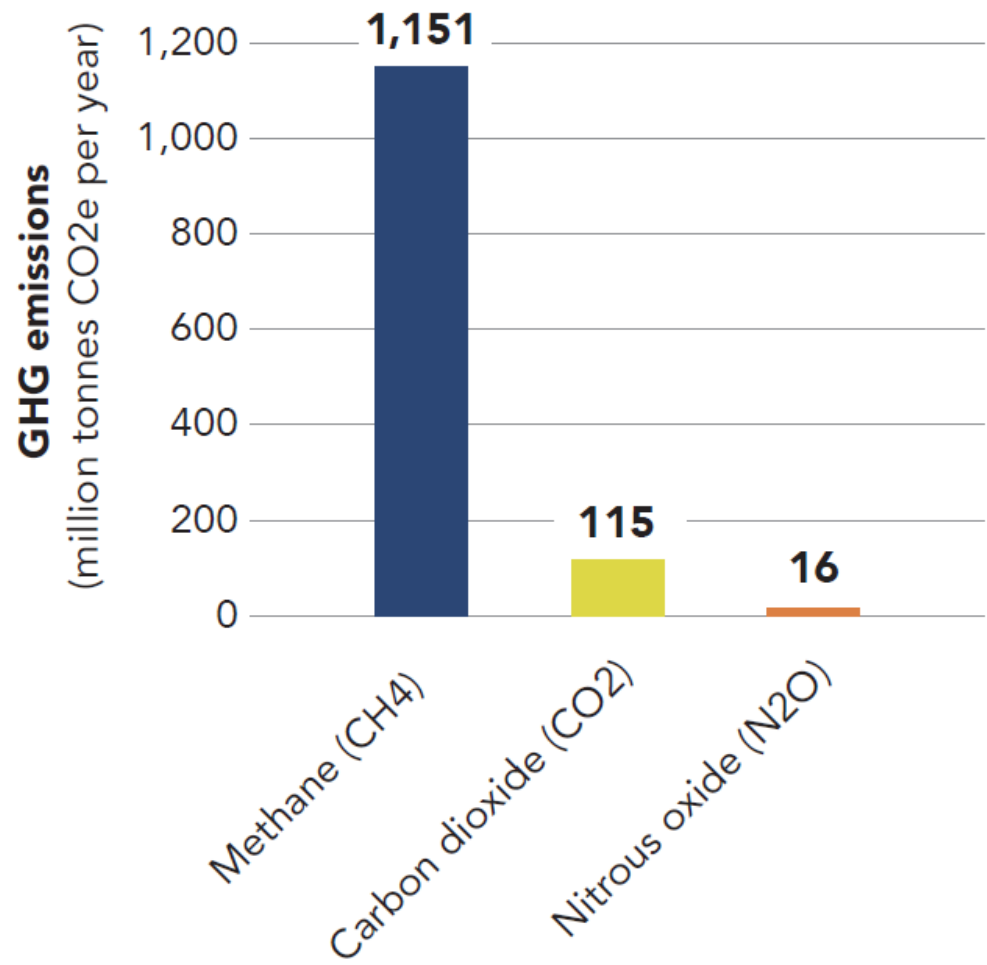
Treatment, disposal, and uncollected waste
By income group



Treatment, disposal, and uncollected waste
By region



GHGs from Waste

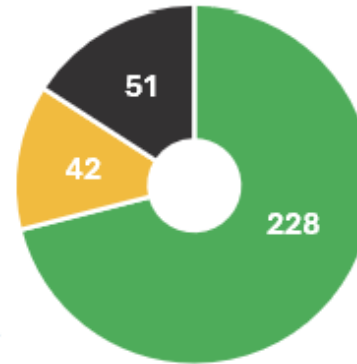


Waste Plastics

The combined proportions of poorly managed and unmanaged plastic are **29 percent (93 million tonnes per year)**.

Plastic waste generation (million tonnes per year)

By management ■ Unmanaged ■ Poorly managed ■ Managed in controlled facilities



> **80%** of all Plastics in the Oceans comes from Municipal Solid Waste

Impacts

- Major source of burning, air pollution (PM2.5 etc)
- Economic losses up to 1.5% of GDP
- Undermines tourism and agriculture
- Lost land and property value
- Foregone economic value and compounding impacts
- Public health and healthcare costs
- Major source of informal employment and livelihoods
- 18 million urban workers (direct employment, likely understated)



Costs and Financing

Annual costs



Public Expenditure

0.15 GDP in most low- and middle-income countries

VERSUS:

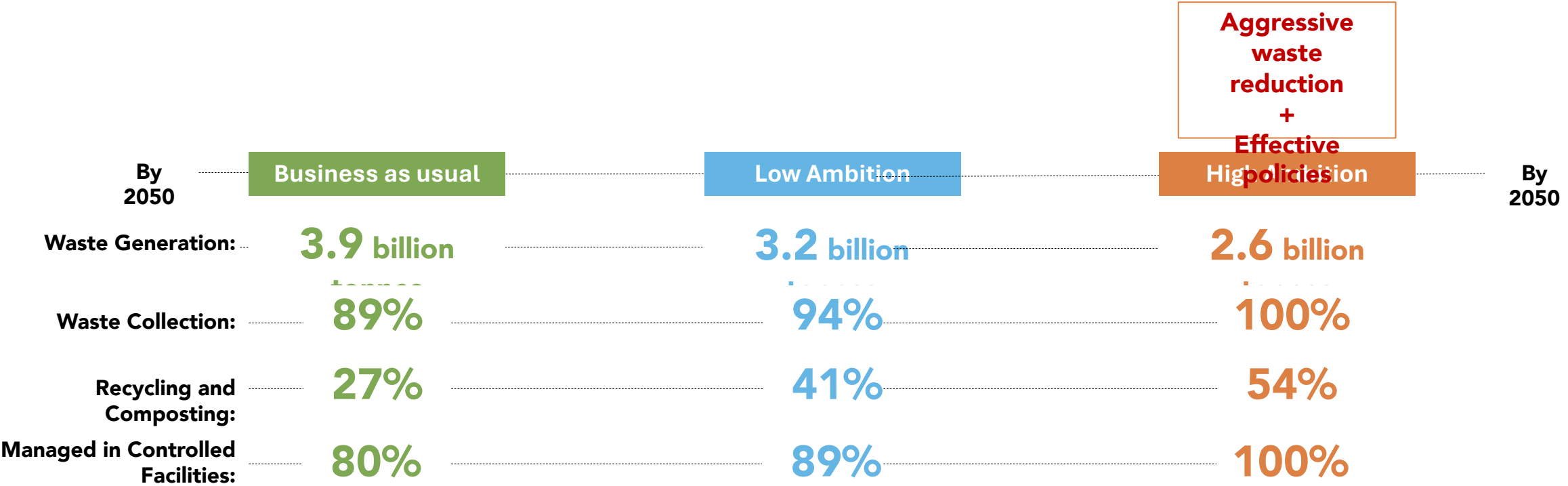
0.3% - 0.5% GDP required in middle-income countries

0.8% GDP required in low-income countries



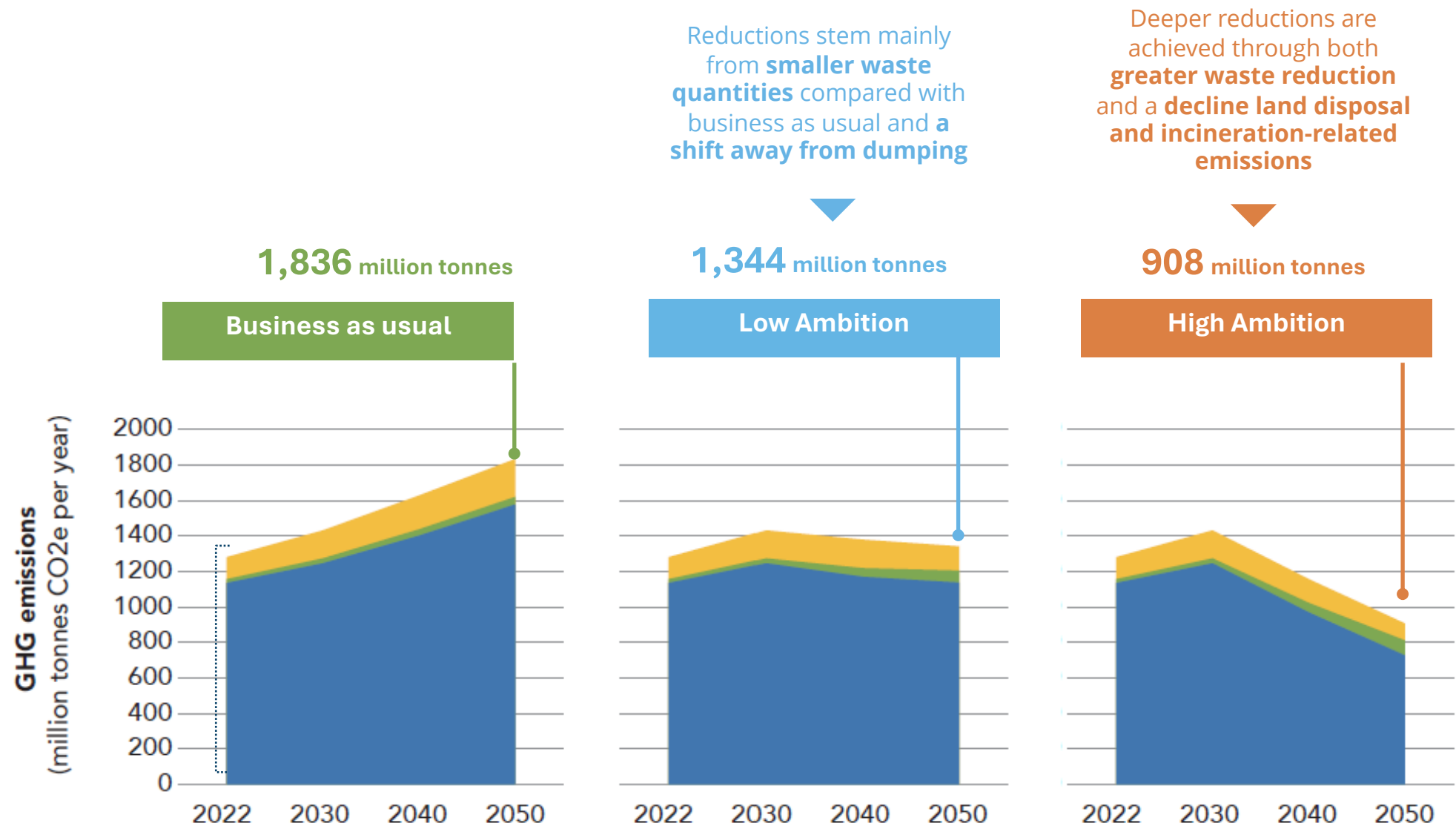
Scenarios

Year 2050



GHGs emissions

2022-2050



Costs and Financing

Investment Needs to 2050

~**\$2 trillion investment need** in low- and middle income countries

VERSUS:

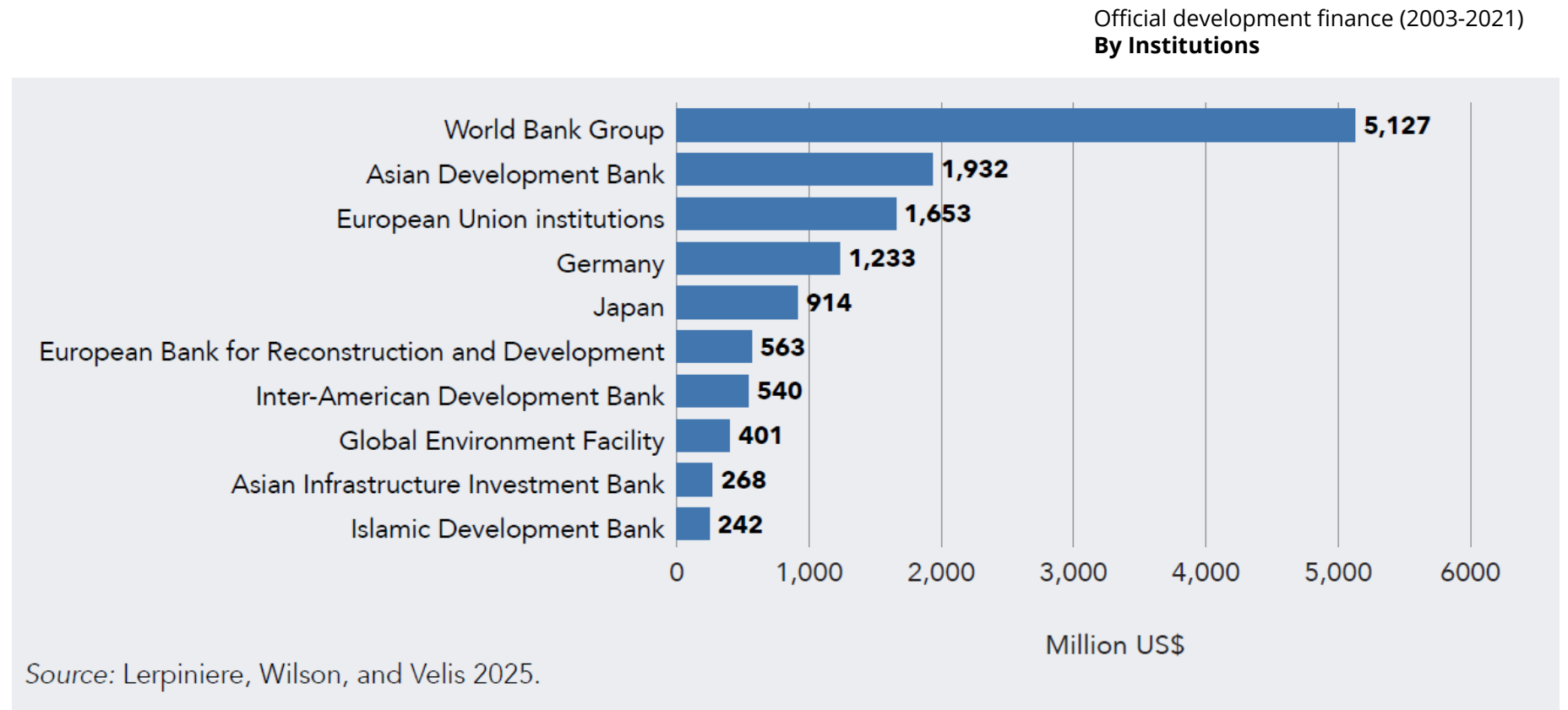
\$15 billion (2003-2021) in official development finance (ODF)*

- Only 0.5% of all ODF was for waste management*
- 10x less than Water and Sanitation*

*Source: Lerpeniere, Wilson, and Velis (2025)



Investment Needs



Mobilizing investments at this scale require a mix of **domestic fiscal resources, development finance, private capital**

Administrations, Operations, and Jobs

Laws and Regulations

National waste management regulations

95%

Specialized laws on plastics

88%

Local waste management Regulations

70%

Planning Instruments

National waste management strategies

70%

National agency or department

94%

SWM Information System

48%

Regional and local waste management plans

52%

Local Department

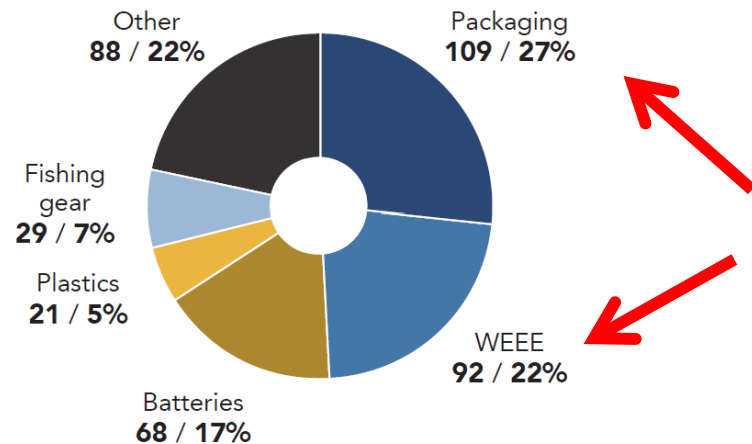
76%



Administrations, Operations, and Jobs

Extended producer responsibility is a policy instrument that transfers responsibility for the end-of-life management of products and their packaging on to producers. It also provides incentives to prevent waste at source and promotes product design for the environment.

Number and proportion of extended producer responsibility schemes
by product group

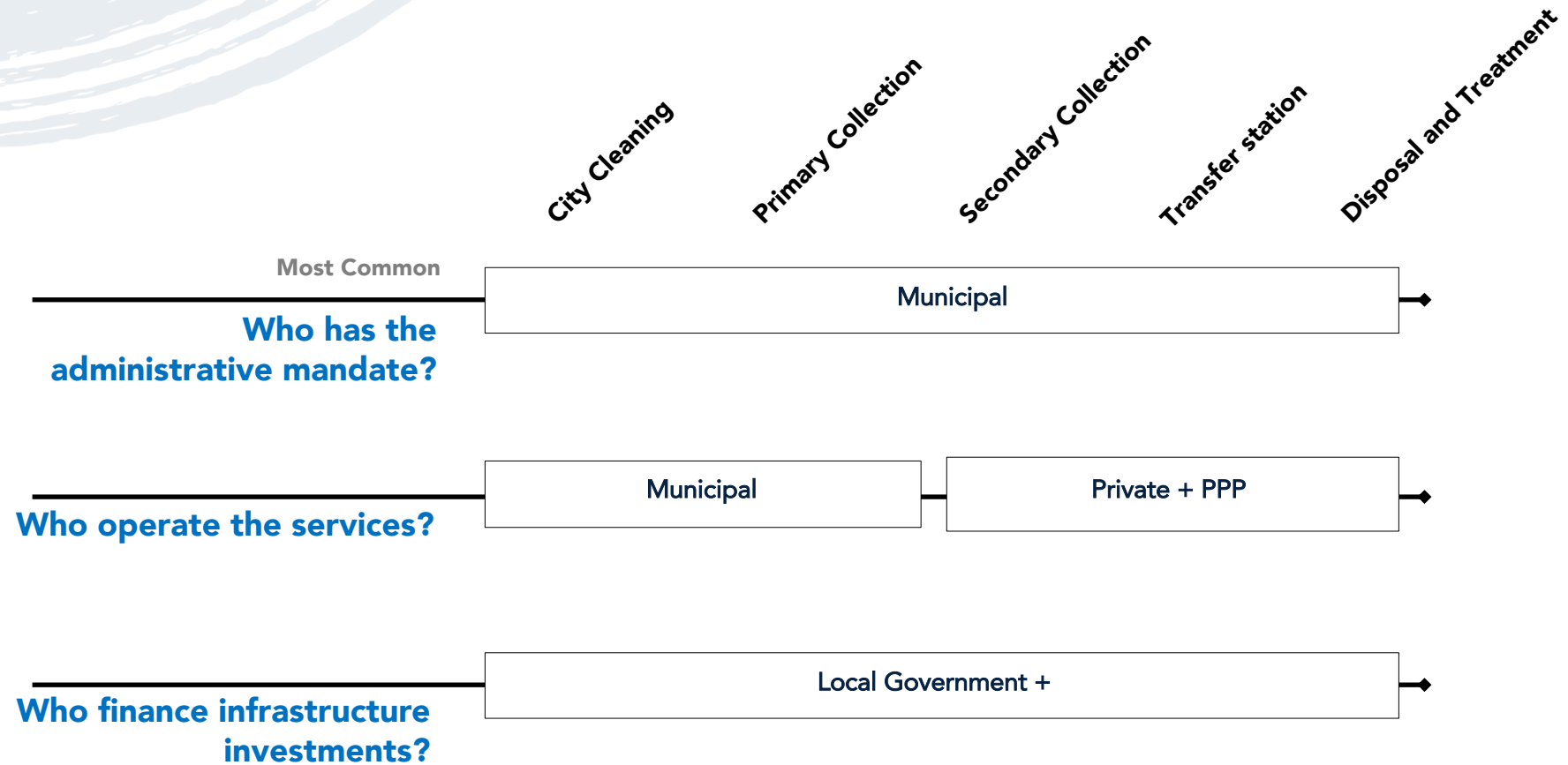


EPR has **been implemented mostly in high income countries**, but interest in it continues to grow in all regions and economic groups.

Presence of EPR (Adopted/Exploring):

- **84%** Europe and Central Asia
- **68%** East Asia and Pacific
- **67%** North America
- **63%** South Asia
- **60%** Sub-Saharan Africa
- **57%** Middle East & North Africa
- **55%** Latin America & the Caribbean

Administrations, Operations, and Jobs





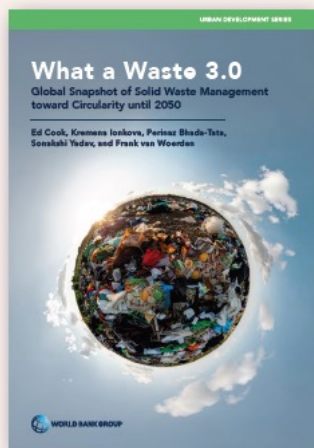
The urgency is therefore twofold: **to expand systems fast enough** to keep pace with rising waste volumes, and **to raise performance well above current baselines** to avoid compounding the broader economic costs of inaction and damages from unmanaged waste.

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Thank you

Solid Waste Management World Bank Group
solidwaste@worldbank.org

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