

Portugal's Path to **ZERO WASTE** Cities: Innovation, Policy, and Replicable Municipal Solutions

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Portugal in the world



Portugal in Europe





Municipal Waste Production

Municipal Waste Production

WHERE ARE WE AND WHY DO WE HAVE TO CHANGE?

State of play in 2024 – Municipal Waste

National data (including the Autonomous Regions)

5.5 million
tonnes generated
Total annual volume of
municipal waste generated
nationwide

519
kg/inhabitant/year
Per capita waste
generation, reflecting the
consumption patterns of
Portugal's population

(1,42 kg/inhabitant/day)



38%
BIOWASTE

Only 13%

covered by separate
collection of biowaste (2024)

Estimated 2030 target:
70%

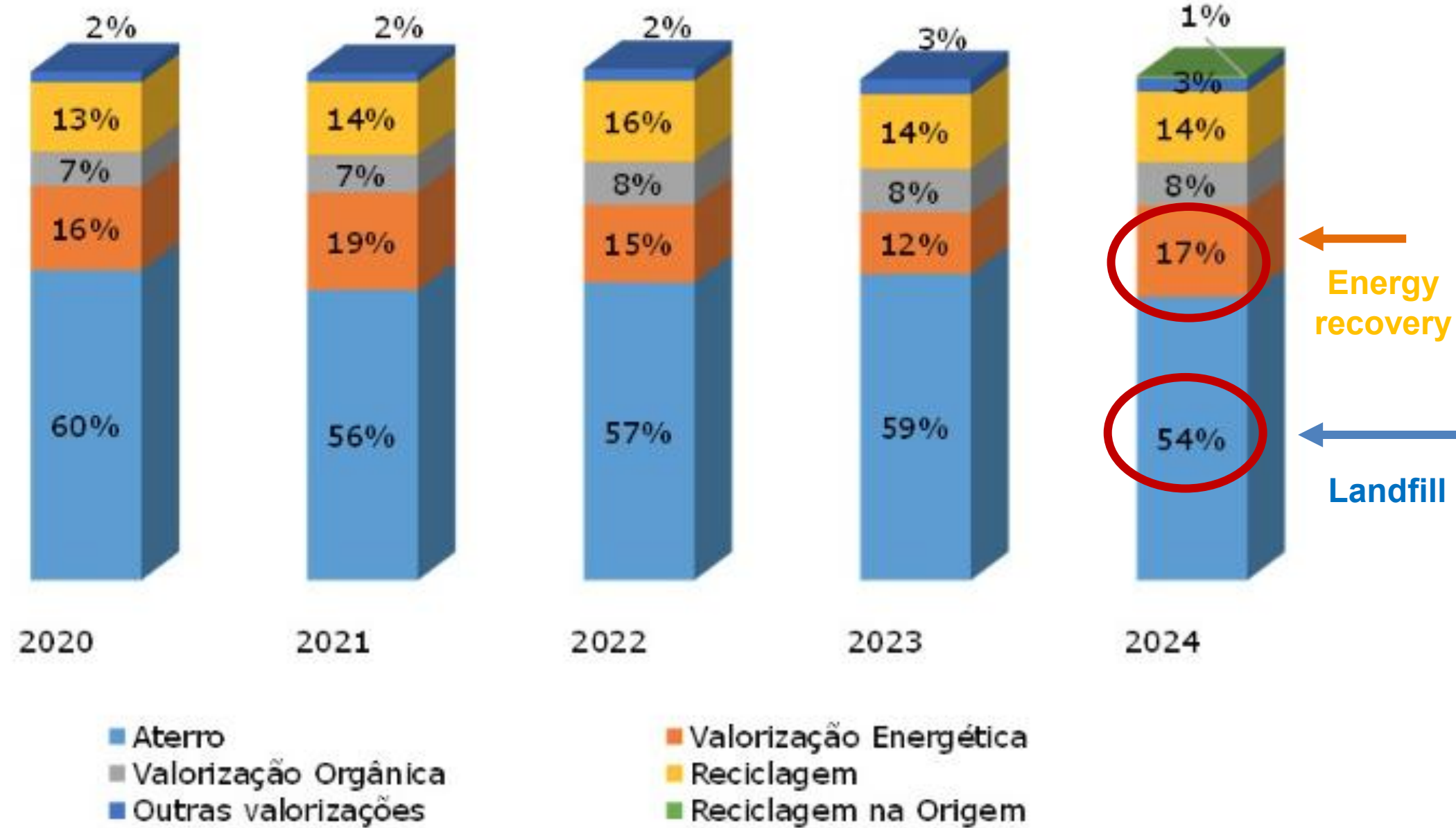


Production of municipal waste
continues to increase



**Pressure on
cities**

Final destination

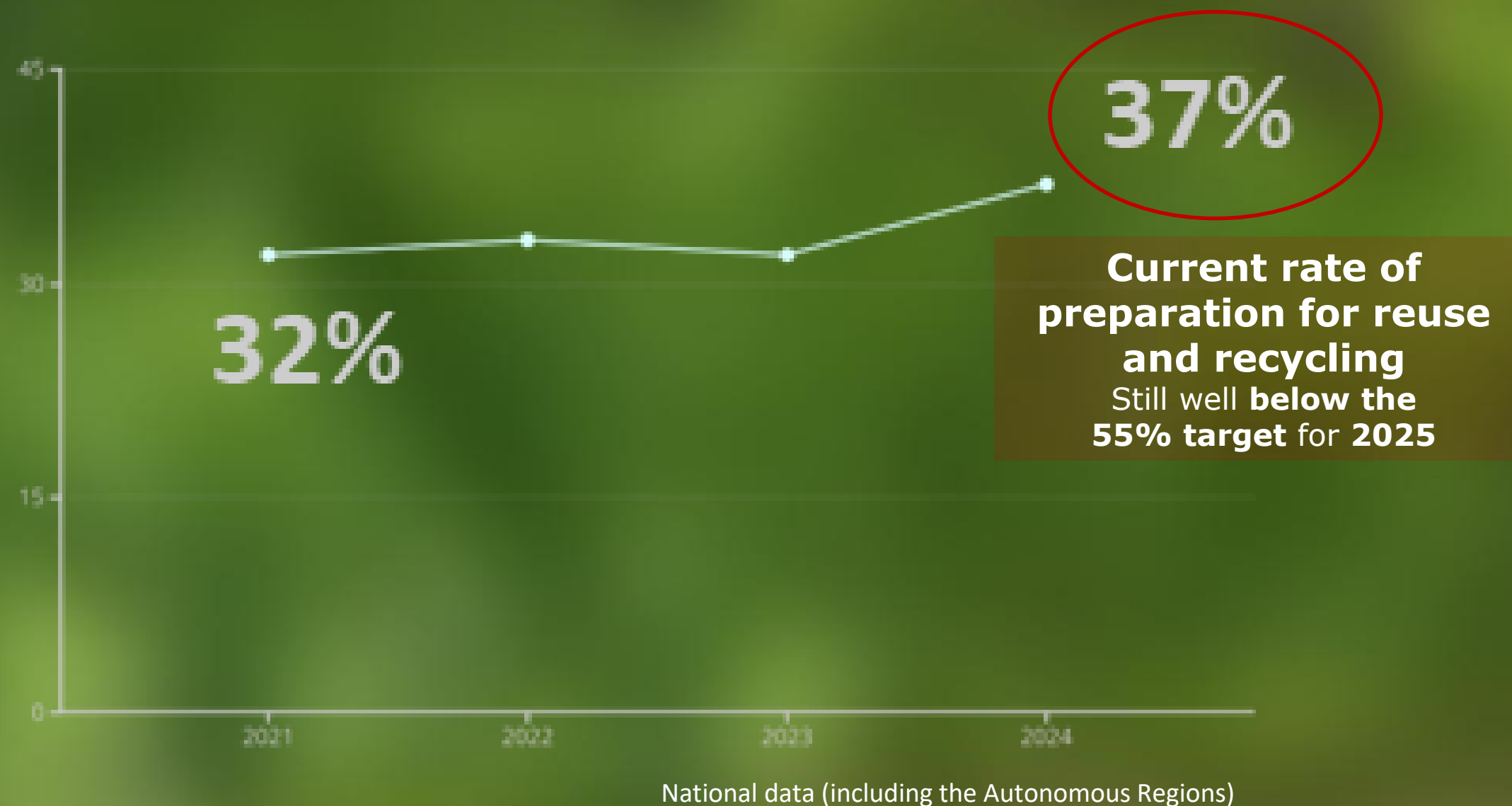


Landfill target is 10% (by 2035)

Progress towards meeting the PRR target

Preparation for Reuse and Recycling

PRR target in 2025 is 55% risk of default



- ✓ A slight increase in 2024, but values for meeting the target for preparation for reuse and recycling (PRR) have practically stagnated in recent years.

Prevention of Municipal Waste Production

Current per capita municipal waste generation in Portugal

519

kg/hab/year (2024)

National 2030 target

511

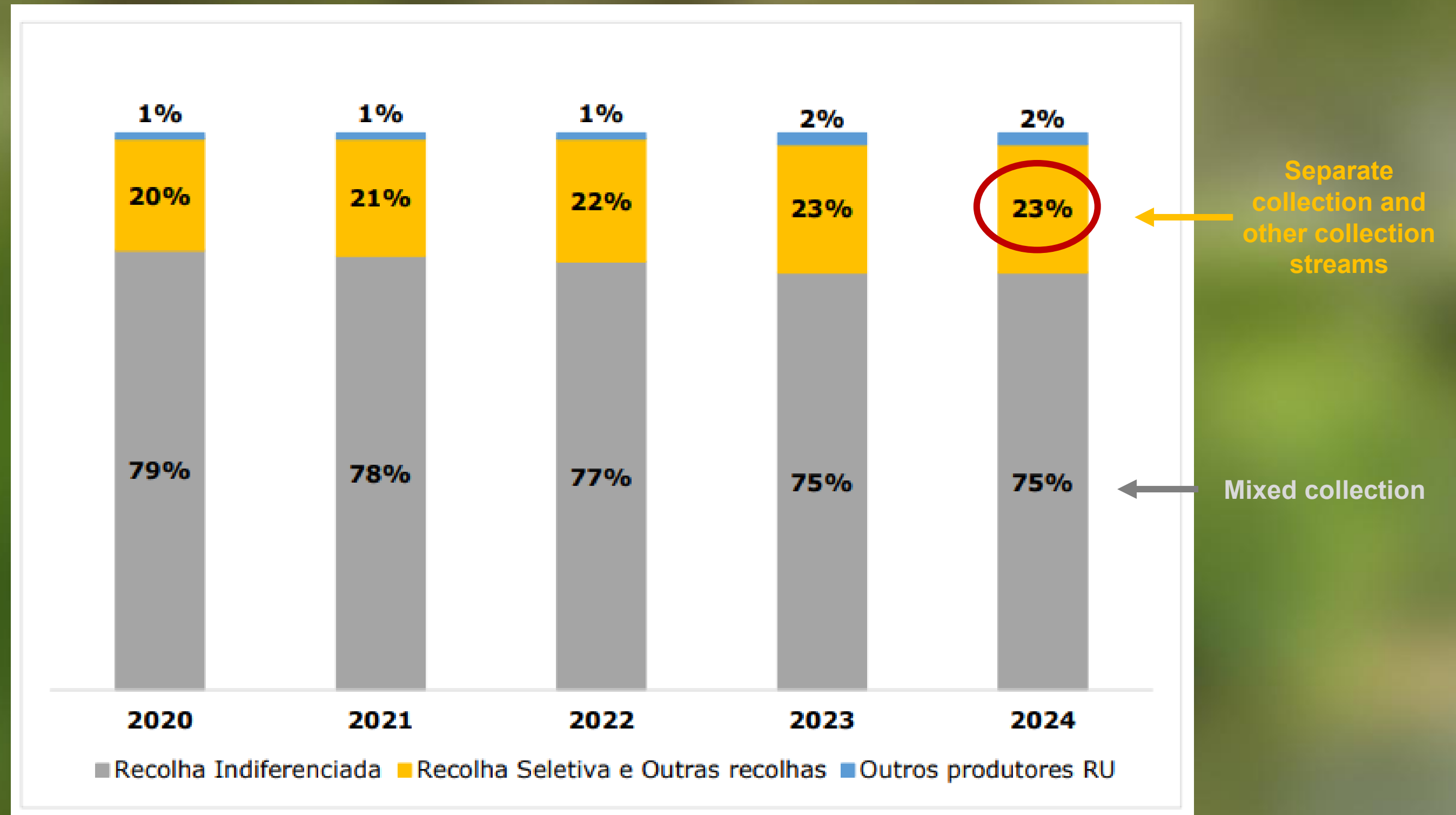
kg/hab/year Target



Need to invest in **prevention** and **reuse solutions**



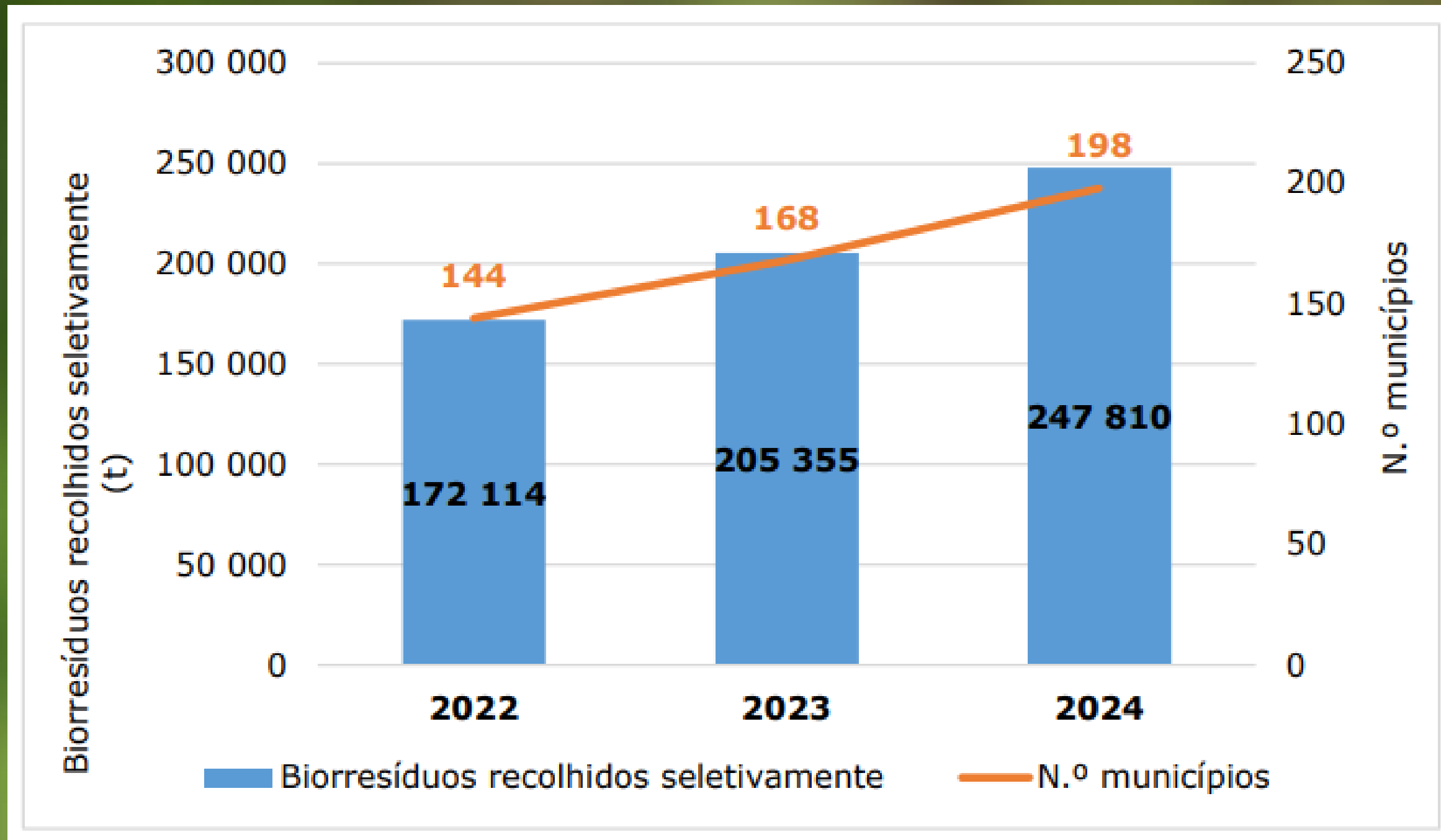
Selective waste collection



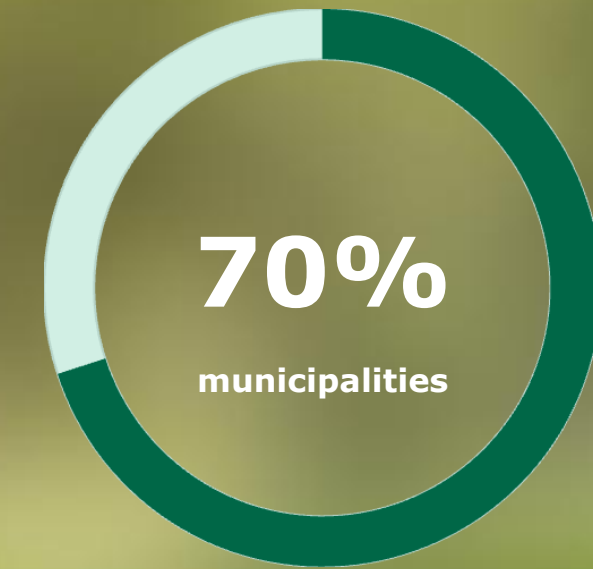
Selective collection rate with very slight growth

Accelerating separate collection of recyclables is essential to meet EU recycling targets and reduce landfill dependency.

Bio-waste – selective collection



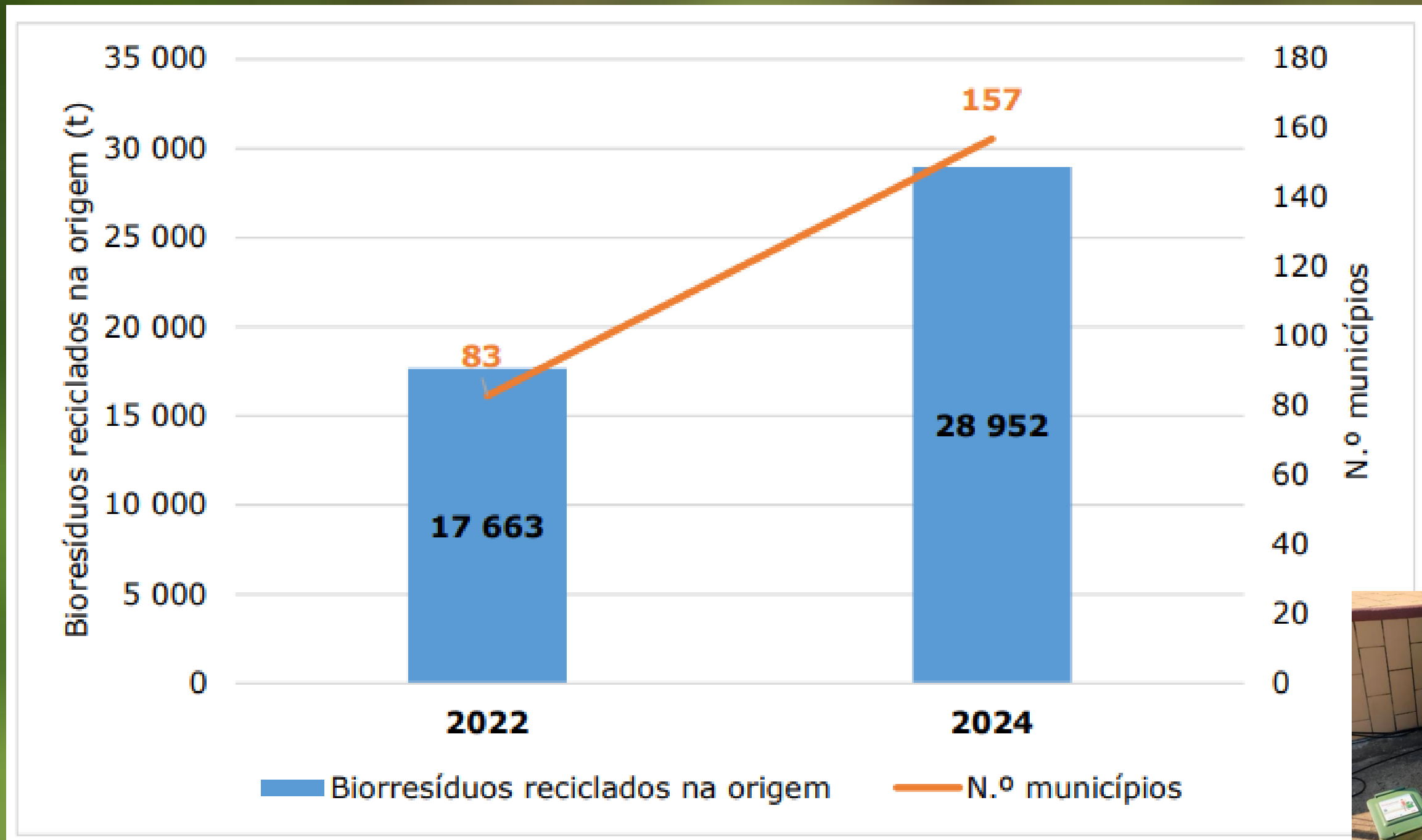
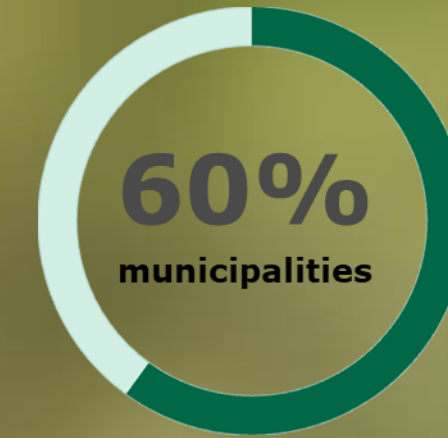
Increase in the amounts collected, although still reduced



~70% municipalities on the continent have already **started selective collection of bio-waste**



Bio-waste – Recycling at source



- Almost 60% of the municipalities on the continent have already started selective collection of bio-waste
- Increase in the amounts collected, although still reduced



Proximity Solution: Home and community composting programs

FINANCING STRATEGY

Infrastructure Investment Priorities

Alignment with the Separate Collection Strategy

Municipal waste management systems (SGRU) are preparing investments to address the expected increase in separate collection of **biowaste** and **multimaterial streams**, adapting treatment infrastructure accordingly.



Organic Recovery

- Expand and upgrade composting and anaerobic digestion capacity
- Handle growing volumes of separately collected biowaste



Multimaterial Sorting

- Increase capacity and efficiency of sorting facilities
- Improve recovery rates and quality of recyclables



Intermunicipal Projects

- Prioritise shared infrastructure across municipalities
- Optimise public investment
- Enable scale for advanced and efficient treatment solutions

Infrastructure adaptation is necessary but not sufficient.

It must be complemented by:

- Awareness and behavioural change
 - PAYT systems to promote source separation
 - Development of end-markets for recycled materials
- Supporting a circular economy approach

FINANCING STRATEGY

Support under the Sustainable 2030 Programme



“Vamos lixar o lixo”
“Let’s Separate the Waste”

National Awareness Campaign

An ongoing campaign focused on the separate collection of biowaste, launched with the Christmas campaign.



Waste Prevention Studies and PAYT Implementation

Technical support to municipalities for the implementation of waste generation-based charging schemes (PAYT).



Monitoring Platform

Real-time dashboard for monitoring municipal waste performance, disaggregated at municipal level. The public procurement procedure has closed and bids are currently under evaluation.

National Awareness Campaign

Let's separate
the waste



apa

Around **3 million tonnes** of municipal waste in landfills are a monumental problem.

Let's separate the waste before our future is wasted.

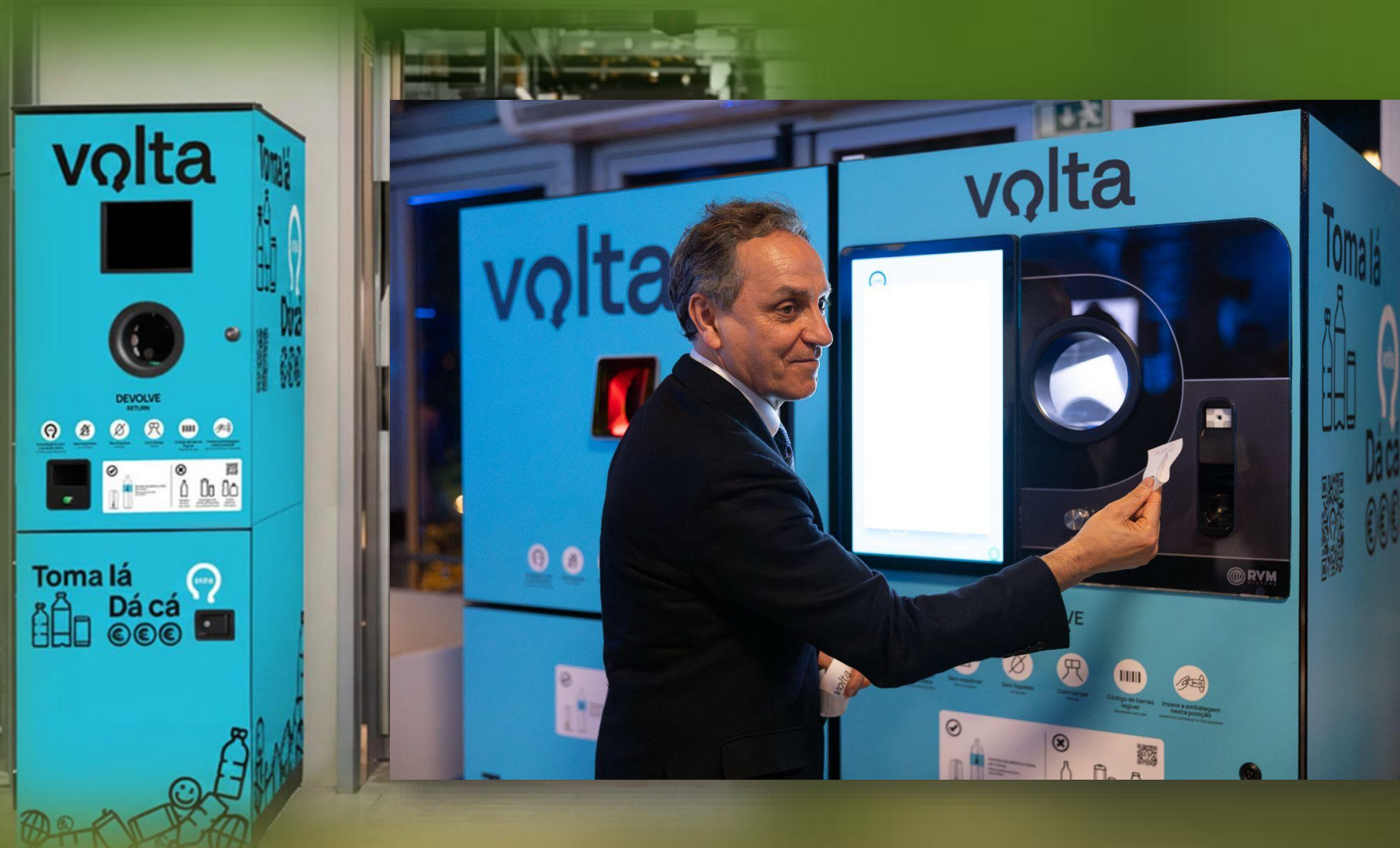
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Take the Quiz

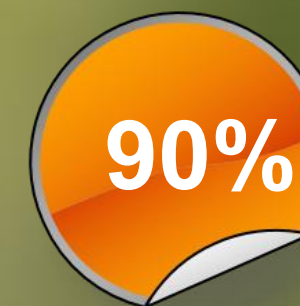
Deposit Return System (DRS)

Collection Points

- **The volta brand** will operate an organised collection network to ensure the effective return and processing of containers covered by the DRS.
- The system will combine **automated solutions, manual collection points and dedicated units for large volumes**, ensuring accessible and efficient operation across the whole country.



TARGET 2029



by weight of packaging placed on the market

A clear plastic water bottle and a blue aluminum can, both featuring the 'volta' logo (a white circle with a lightning bolt and a downward arrow). The background is a solid blue color. The URL 'sdrportugal.pt' is visible in the top right corner.

Eligible Containers

The following containers can be returned under the Deposit Return System (DRS), provided they display the volta symbol:

- > Plastic bottles (smaller than 3 litres)
- > Aluminium and steel cans (smaller than 3 litres)

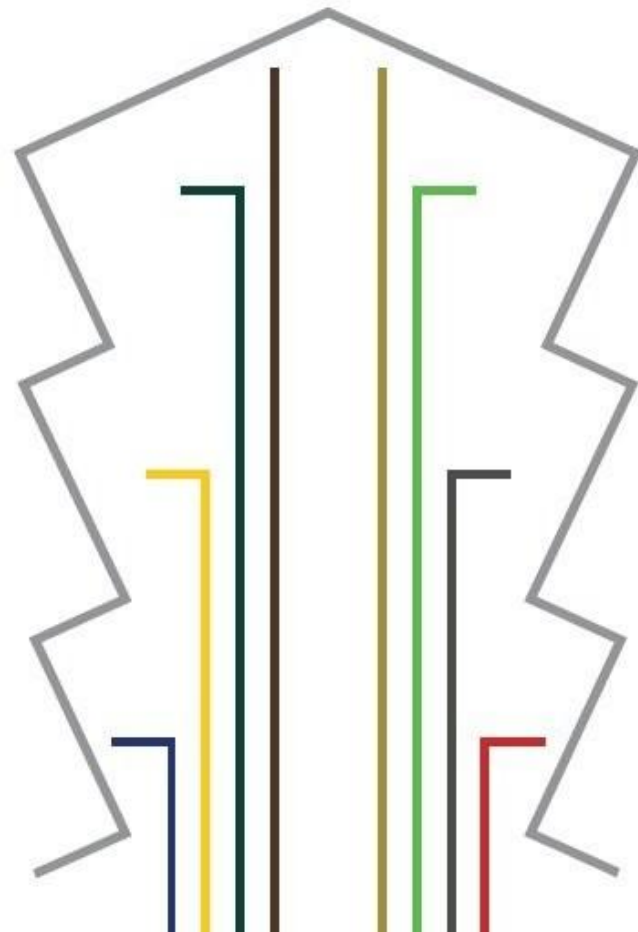
Containers must be empty, undamaged, and have a readable barcode.





Example of
Municipal Solutions:
Maia city (North of Portugal)

Recycling Centre



Main Waste Streams

- Paper & cardboard
- Plastics
- Glass (packaging)
- Garden waste
- Bulky waste
- WEEE
- Wood and metals

Additional Waste Streams

- Construction & demolition waste (CDW)
- Textiles
- Used cooking oil (UCO)
- Expanded polystyrene (EPS)
- Flat glass
- Agricultural plastics
- MDF

Overview

- 5 facilities
- 25 waste streams
- Household and non-household waste
- Opening hours: Monday–Saturday, 9:00–18:00

Smart Recycling Centre

Special / Hazardous Waste

- Contaminated packaging
- Aerosols
- Batteries and accumulators
- Lamps (tubular and compact)
- Ink cartridges and toner
- Mineral oil

Other Fractions

- Coffee capsules
- Cork stoppers
- Bottle caps



BIOWASTE



I - PREVENTION (FOOD WASTE REDUCTION)

- Awareness-raising (schools, events, etc.)
- Projects (Dose Certa, Embrulha, Re-Food, etc.)



II – LOCAL TREATMENT

- Home composting
- Community composting
- Dehydrators



III – COLLECTION FOR TREATMENT

- Door-to-door collection of food waste
- Household users:
 - Single-family housing
 - Multi-family housing
- Non-household users
- Door-to-door collection of garden waste



INFORMATION SYSTEM

Database

- Customers
- Equipment
- Collection routes

Containers

- ID
- Delivery
- Maintenance

Vehicles

- GPS
- Collections
- Events

Access Control

- Segmentation
- Bidirectional communication

PAYT (Pay-As-You-Throw)

- Collections
- Access control



Scheduling

- Maia Ambiente (collection)
- LIPOR (delivery)

Data Integration

- Weighing
- Billing

Business Intelligence (BI)

- Reports
- Statistics



BIOWASTE-> COMPOST

7.500

tonnes of biowaste

2025

1.750

tonnes of compost



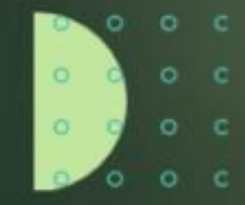
100% NATURAL

Certified

CLASSE I

Suitable for organic farming

lipor 



THANK YOU

OBRIGADO

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apa

agência portuguesa
do **ambiente**

