WASTE MANAGEMENT PLANNING IN PORTUGAL

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REPÚBLICA PORTUGUESA

AMBIENTE E AÇÃO CLIMÁTICA

TOPICS

1. Strategic Framework

2. Planning Model

3. National Waste Management Plan – PNGR 2030

4. Strategic Plan for Non Municipal Waste – PERNU 2030

5. Strategic Plan for Municipal Waste - PERSU 2030

STRATEGIC FRAMEWORK

- Protection, preservation and improvement of the quality of the environment and protection of human health
- Sustainable development
- Carbon neutrality
- Circular economy
- Efficient use of natural resources
- Renewable energy use
- Energy efficiency
- Reducing the EU's dependence from imported resources
- Strategy for biowaste
- Strategy for plastics
- Food waste reduction

Internacional

Comunitário

Nacional

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PREVIOUS PLANNING MODEL

**National Waste Management Plan
PNGR**

Specific Waste Management Plans

Industrial Waste PESGRI	Healthcare Waste PERH	Municipal Waste PERSU

Waste Prevention Programmes

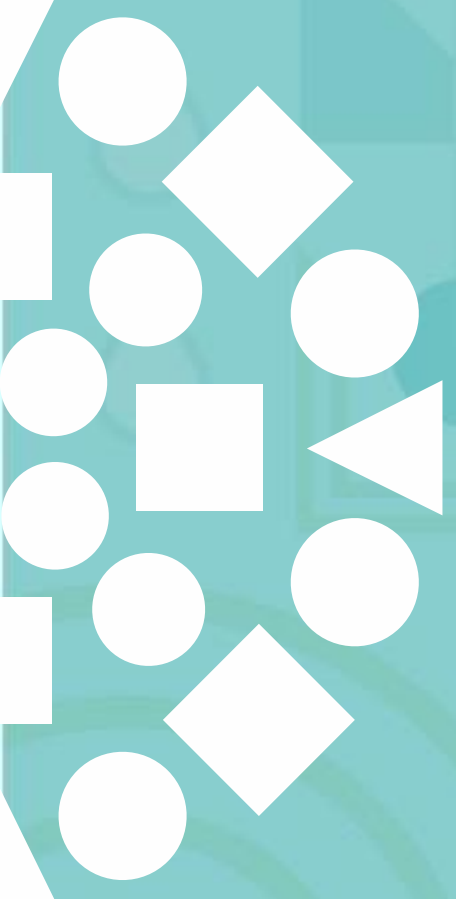| Municipal Waste PPRU	Industrial Waste PNAPRI

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NEW PLANNING MODEL

National Waste Management Plan PNGR 2030

Strategic Plan for Municipal Waste PERSU 2030

Strategic Plan for Non Municipal Waste PERNU 2030

Prevention Waste Programmes included in Plans

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PNGR 2030 – National Waste Management Plan

PNGR 2030 – STRATEGIC OBJECTIVES

SO1
- Prevent waste production in terms of quantity and hazardousness

SO2
- Promote resource efficiency, contributing to a circular economy

SO3
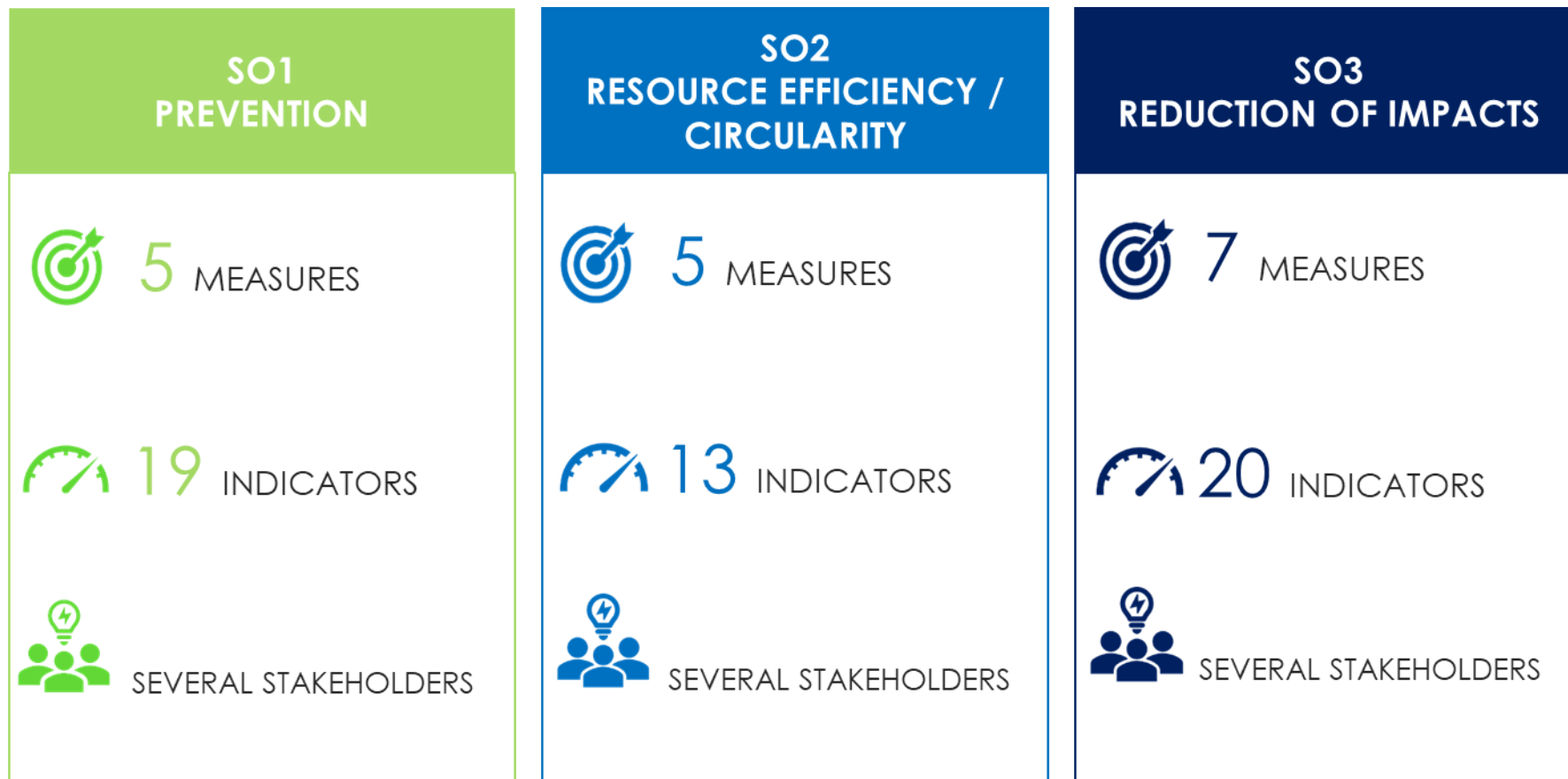- Reduce negative environmental impacts through an integrated and sustainable waste management

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PNGR 2030 – TARGETS

Strategic Objective 1 - Prevent waste production in terms of quantity and hazardousness					
Target	**Indicator**	**Reference value (2018)**	**Target 2023**	**Target 2027**	**Target 2030**
1. Reduce waste generation	Waste generation (value in 2018 = index 100)	100	96,8	89,6	86,8
2. Reduce generation of hazardous waste compared to total waste generation	Hazardous waste generation/Waste generation (%)	7,1	5,1	4,8	4,4
Strategic Objective 2 - Promote resource efficiency, contributing to a circular economy					
Target	**Indicator**	**Reference value**	**Target 2023**	**Target 2027**	**Target 2030**
1. Decouple economic growth from material consumption	Gross domestic product/Domestic consumption of materials (k€/t)	1,18	1,25	1,51	1,67
2. Decouple economic growth from waste generation	Wate generation/Gross domestic product (t/k€)	0,079	0,073	0,063	0,059
3. Increase the availability of waste for the economy	Recovery (non-energy)/Waste generation (%)	65,9	73,1	77,4	80,5
Strategic Objective 3 - Reduce negative environmental impacts through an integrated and sustainable waste management					
Target	**Indicator**	**Reference value**	**Target 2023**	**Target 2027**	**Target 2030**
1. Reduce the amount of waste sent for disposal	Waste sent for disposal	100	85,0	56,5	41,5
2. Reduce GHG emissions from the waste sector	Mt $CO_{2eq.}$ emissions from waste sector	6,50	5,28	4,86	4,55

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SO1 PREVENTION	SO2 RESOURCE EFFICIENCY / CIRCULARITY	SO3 REDUCTION OF IMPACTS
5 MEASURES	5 MEASURES	7 MEASURES
19 INDICATORS	13 INDICATORS	20 INDICATORS
SEVERAL STAKEHOLDERS	SEVERAL STAKEHOLDERS	SEVERAL STAKEHOLDERS

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PNGR 2030 - MEASURES

SO1
Prevent waste generation in terms of quantity and hazardousness

Examples:

OE1.M1. Foster sustainable product design and production and reduce the placing on the market and consumption of single-use products/packaging

OE1.M3. Promote public and private procurement, with sustainability criteria that prevent waste production and encourage reuse

OE1.M4. Promote the reduction of food waste, throughout the entire value chain

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PNGR 2030 - MEASURES

SO2
Promote resource efficiency, contributing to a circular economy

Examples:

OE2.M2. Ensure an optimized and comprehensive separate waste collection network that allows for the subsequent appropriate treatment aiming at obtaining quality materials

OE2.M4. Simplify procedures for end-of-waste mechanisms and expand the scope of secondary raw materials covered by them, encouraging reintroduction into the economy

OE2.M5. Propose legal regulation and economic-financial instruments that encourage waste recycling and the use of recycled products and materials, in replacement of raw materials

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SO3
Reduce negative environmental impacts through an integrated and sustainable waste management

Examples:

OE3.M1. Promote self-sufficiency, competitiveness and sustainability of the waste sector

OE3.M3. Ensure simplification of administrative services related to the waste sector, ensuring dematerialization, contributing to the reduction of bureaucratic obstacles

OE3.M5. Improve communication on waste and "urban cleaning", making data available to citizens and companies, in order to promote knowledge and transparency

OE3.M7. Enhance the interaction between stakeholders involved in waste management, namely between regulatory entities of supervision, regulation, inspection and licensing, acting in an integrated way to protect the environment

❏ Portuguese Environment Agency – as National Authority for Waste is responsible for preparing the PNGR2030

❏ Administration support group – representatives from:

- National Innovation Agency
- Agency for Competitiveness and Innovation
- Directorate-General for Economic Activities
- Directorate-General for Agriculture and Rural Development
- Directorate-General of Food and Veterinary
- Regional Directorates of Agriculture and Fisheries
- Directorate-General for Natural Resources, Safety and Maritime Services
- Regional Government of the Autonomous Regions of the Azores and Madeira

❑ Advisory Committee – representatives from:

- National Association of Portuguese Municipalities
- Confederation of Portuguese Business
- Portuguese Commerce and Services Confederation
- Confederation of Portuguese Farmers
- Confederation of Portuguese Tourism
- National Confederation of Agricultural Cooperatives and Agricultural Credit of Portugal
- Association for Waste Management
- Portuguese Renewable Energy Association
- Association of Entities of Energy Recovery from Municipal Solid Waste
- Association of Organic Recovery Companies
- Engineers Order
- Association of Urban Cleaning
- EGF - Environmental Global Facilities
- Association of Portuguese Companies in the Environmental Sector
- Portuguese Confederation of Environmental Defense Associations

❑ Public consultation - through the online platform PARTICIPA

PNGR 2030 - GOVERNANCE

❑ Stategic level - Government areas that contribute to the achievement of measures and objectives set out in the Plan:

- Internal Administration
- Agriculture
- Environment and Climate Action
- Science, Technology and Higher Education
- Territorial Cohesion
- Economy and Digital Transition
- Education
- Finances
- Infrastructure and Housing
- Sea
- Modernization of the State and Public Administration;
- Foreign affairs
- Planning
- Health
- General Secretariat of the Presidency of the Council of Ministers
- Autonomous Regions of the Azores and Madeira

❑ Operational level: - Entities involved in the implementation/execution of the recommended measures, including competent authorities for licensing, regulation, inspection, waste management sector, sectorial associations, consumers and NGOs.

PERNU 2030 - Strategic Plan for Non Municipal Waste
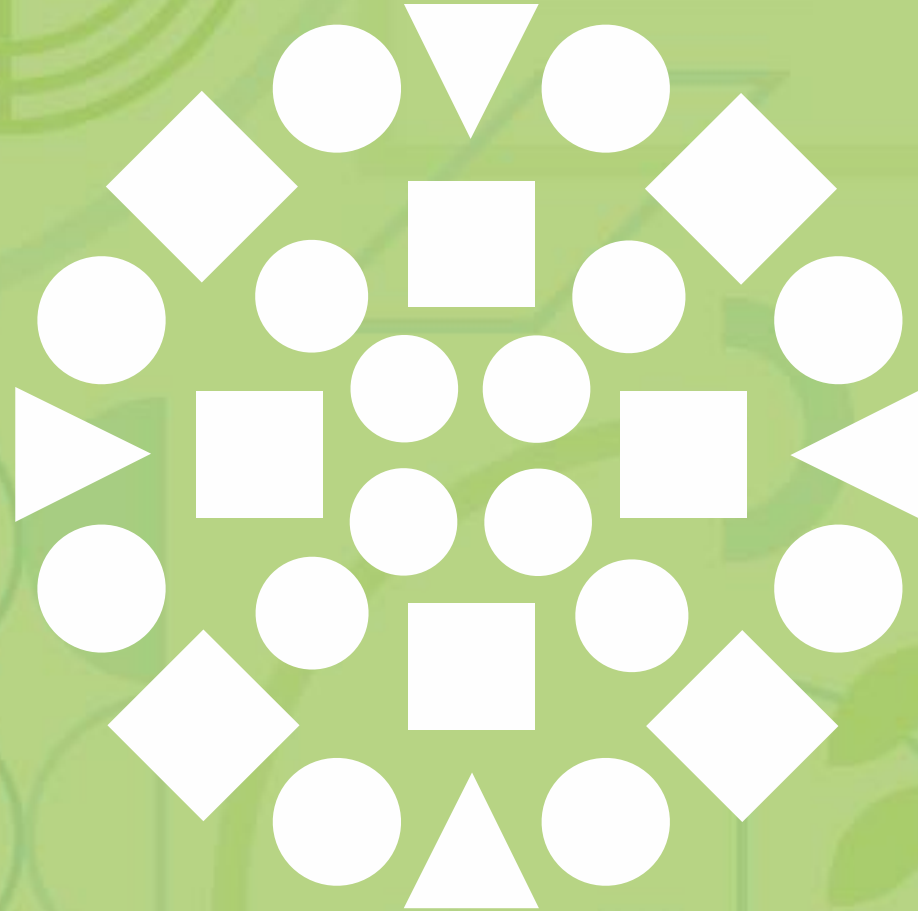
PERNU 2030 - OBJECTIVES

Promote prevention and waste management integrated into the products life cycle, centered on a circular economy and ensuring greater efficiency in the use of natural resources

OP1
- Prevent waste generation in terms of quantity and hazardousness

OP2
- Reduce environmental impacts from waste management

OP3
- Raise awareness, train and disseminate, at academic and organizational level, on prevention and management waste

OP4
- increase investment capacity and expenditure on R&D+I directed at prevention and waste management

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Objectives	Target	Indicator
OP1, OP2, OP3	Reduce non-municipal waste generation	Non-municipal waste generation
	Decrease in quantity and representativeness the generation of non-municipal hazardous waste	Non-municipal hazardous waste generation
OP2, OP3	Decouple economic growth from material consumption	Gross domestic product/Domestic consumption of materials
	Decrease the ratio between waste generation and Gross Domestic Product	Non-municipal waste generation/Gross Domestic Product
	Reintroduction of waste into the economy	Recovery (non-energy) of non-municipal waste/Non-municipal waste generation
	Maintain the growing trend in the representativeness of recovery operations	Recovery (including energy) of non-municipal waste/Non-municipal waste generation
OP2, OP3	Decrease the amount of non-municipal waste sent to disposal operations	Non-municipal waste sent to disposal
OP4	Increase total expenditure and respective representativeness of R&D investments with environmental socio-economic objectives	Expenditure on R&D with environmental objectives/Total expenditure on R&D

Indicator	Reference value 2019	Target 2023	Target 2027	Target 2030	Unit
Non-municipal waste generation	11 427 435	10 210 698	9 611 428	**9 320 010**	t
Non-municipal hazardous waste generation	1.066.055	812 555	677 130	**599 261**	t
Gross domestic product/Domestic consumption of materials	1,181	1,253	1,507	**1,666**	k€/t
Non-municipal waste generation/Gross Domestic Product	0,056	0,049	0,043	**0,040**	t/k€
Quantidade de resíduos sujeitos a operações de eliminação	1.751.501	1 272 452	975 592	**811 087**	t
Recovery (non-energy) of non-municipal waste/Non-municipal waste generation	82,7%	85,9%	88,5%	**90,2%**	%
Recovery (including energy) of non-municipal waste/Non-municipal waste generation	84,7%	87,5%	89,8%	**91,3%**	%
Expenditure on R&D with environmental objectives/Total expenditure on R&D	6,4%	9,1%	13,1%	**17,1%**	%

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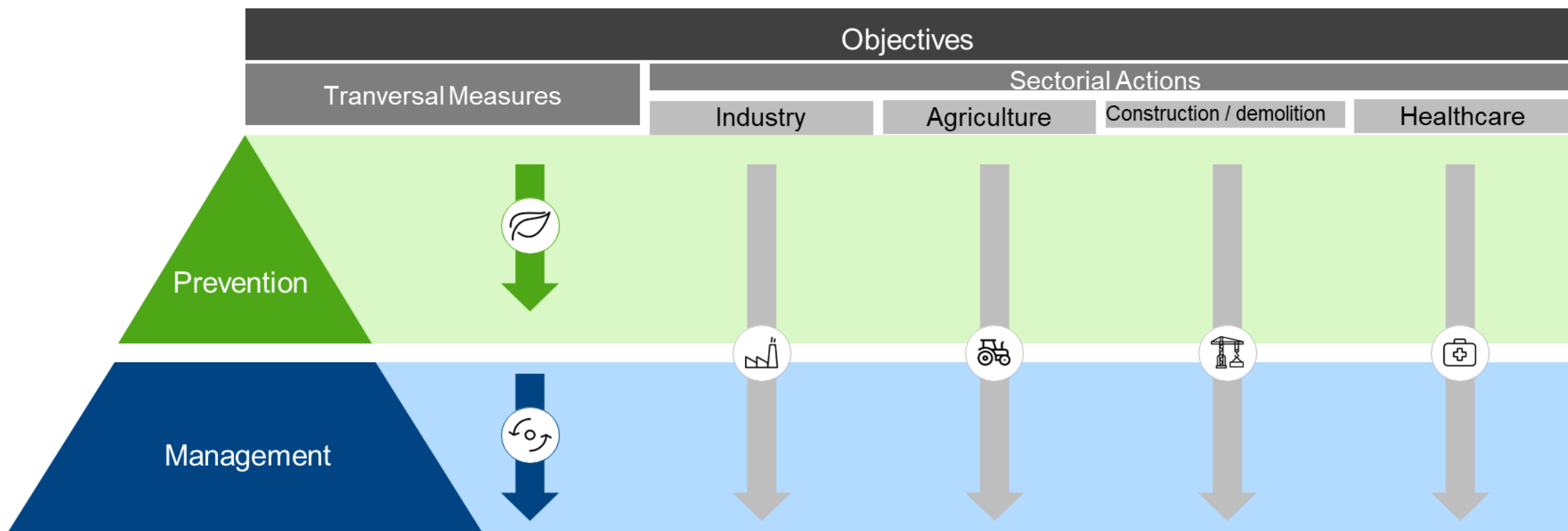
TRANSVERSAL

PREVENTION

- 3 MEASURES
- 14 ACTIONS
- 29 INDICATORS

MANAGEMENT

- 6 MEASURES
- 27 ACTIONS
- 40 INDICATORS

SECTORIAL

- 19 ACTIONS
- 39 INDICATORS

❑ Portuguese Environment Agency – as National Authority for Waste is responsible for preparing the

PERNU2030

❑ 4 Workshops directed to the sectors: industry, agriculture, construction/demolition and healthcare,

with the participation of representatives of administration entities, private stakeholders, NGOs

❑ Public consultation - through the online platform PARTICIPA

❑ Strategic Environmental Assessment

PERNU2030 - GOVERNANCE

❑ Strategic level - Government areas that contribute to the achievement of measures and objectives set out in the Plan:

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- Science, Technology and Higher Education
- Territorial Cohesion
- Economy and Digital Transition
- Education
- Finances
- Infrastructure and Housing
- Sea
- Modernization of the State and Public Administration;
- Planning
- Health
- Autonomous Regions of the Azores and Madeira

❑ Operational level: - Entities involved in the implementation/execution of the recommended measures, including competent authorities for licensing, regulatory, inspection, waste management stakeholders, sectorial associations, R&D centers, consumers and NGOs.

# PERSU 2030 - Strategic Plan for Municipal Waste
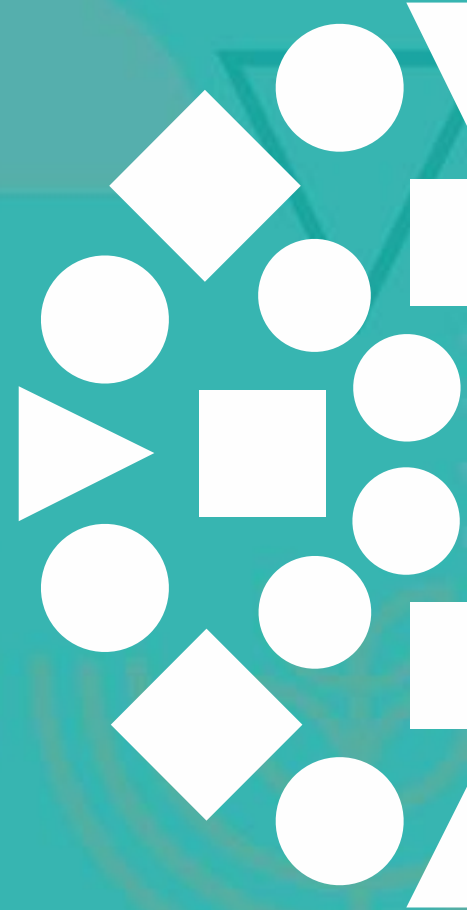
Waste generation:

Indicator	2013	2017	2018	2019
Municipal waste generation (Mt)	4,608	5,007	5,213	5,281
Municipal waste generation per capita (kg/inhab.year)	441	483	507	513
Municipal waste generation per capita (kg/inhab.day)	1,21	1,32	1,39	1,41

Waste treatment:

Preparation for reuse and recycling and direct disposal of municipal waste
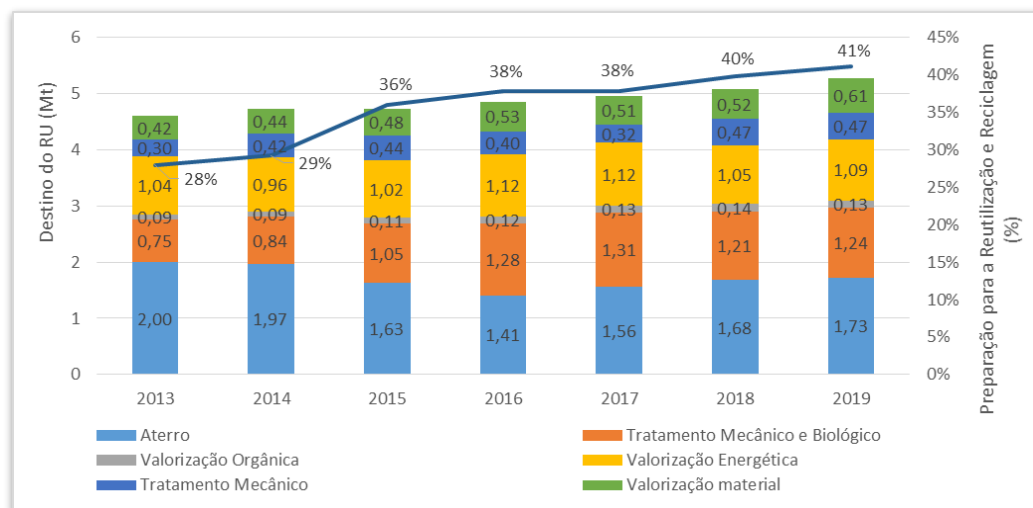
Municipal waste final treatment operations
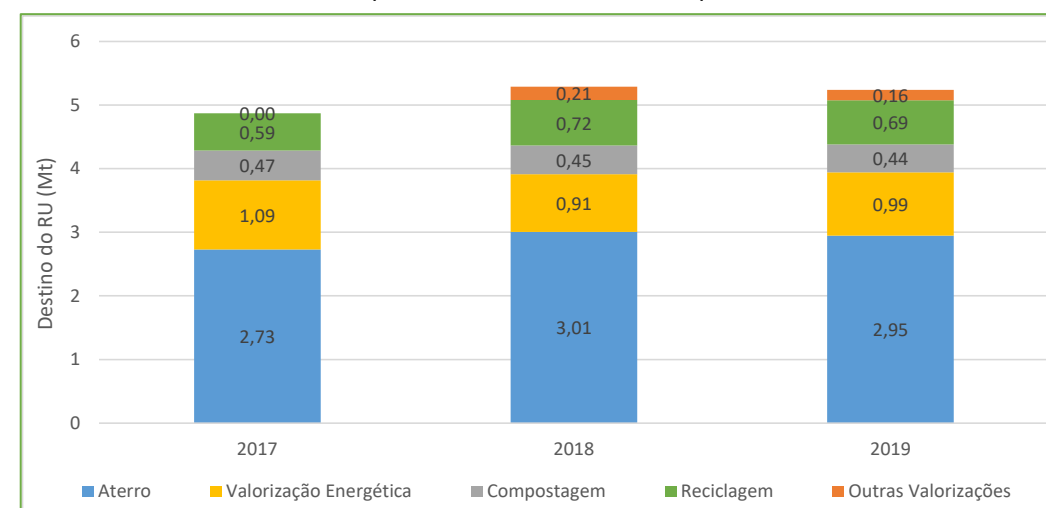
PERSU 2030 - STATUS

Organisational aspects:

- 23 municipal waste management entities (SGRU), which

  ensure the treatment of municipal waste

- 278 municipalities

Treatment Infrastructures	No.
Sorting Units	29
Mechanical Treatment	5
Mechanical Biological Treatment	18
Biological Treatment (biowaste separate collection)	5
Refuse derived-fuel facilities	4
Energy Recovery	2
Landfils	32

	2019	2020	2025	2029	2030	2035
Municipal waste prepared for re-use or recycled	41%	50%	55%		60%	65%
Municipal biodegradable waste landfilled	45%	35%				
Separate collection for recycling	48 Kg/inhab.year	47 Kg/inhab.year				
Reduction of municipal waste landfilled						10%
Packaging waste recycling			65%		70%	
Separate collection of single-use plastic beverage bottles			77%	90%		
Reduction of food waste generation (indicative)			30%		50%	

PREVENTION

Prevention Target		Reference value 2019	Year			
			2023	2025	2027	2030
TARGET ACHIEVEMENT SCENARIO	Kg/inhab.year	511	501	476	454	436
BUSINESS AS USUAL SCENARIO	Kg/inhab.year	511	511	511	511	511

PREPARE FOR REUSE AND RECYCLING

Preparing for Re-use and Recycling Target	Reference Value 2019	Year			
		2023	2025	2027	2030
TARGET ACHIEVEMENT SCENARIO	42%	40%	55%	53%	60%
BUSINESS AS USUAL SCENARIO	42%	29%	38%	35%	39%

Prevention

Waste management

Operationalization

PERSU 2030 - STRUCTURE

AXIS I PREVENTION	AXIS II WASTE MANAGEMENT	AXIS III OPERATIONALIZATION
1 OBJECTIVE	2 OBJECTIVES	3 OBJECTIVES
15 MEASURES	36 MEASURES	48 MEASURES
20 INDICATORS	40 INDICATORS	54 INDICATORS

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AXIS I
PREVENTION

OB1.Reduction of municipal waste generation and hazardousness

Product design

Consumption

Reuse

End-of-Waste mechanisms

AXIS II
WASTE MANAGEMENT

OB2. Promotion of separate collection and proper treatment

- Packaging
- Biowaste
- Textiles
- Hazardous waste

- Batteries
- WEEE
- Other recoverable

OB3. Economic valorization of municipal waste treatment outcomes

- Biogas
- Compost/fertilizer
- Refuse derived fuel

- Slags
- Packaging

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PERSU 2030 - OBJECTIVES

AXIS III
OPERATIONALIZATION

OB4.Strengthening of economic and financial instruments

- European funds
- Waste management
- Other instruments

OB5.Sustainability and capacity of the sector

- Energy / Biogas
- Governance
- Capacity

- Accountability
- Information

OB6.Strategy communication and monitoring

- Communication
- Monitoring

Dashboard, as a tool for disclosing information regarding the monitoring of the main performance indicators, and, consequently, of the measures implementation

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waste management plans

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- Directorate-General for Energy and Geology
- Regional Coordination and Development Commissions
- Regional Directorates of Agriculture and Fisheries
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❑ Strategic Environmental Assessment

THANK YOU
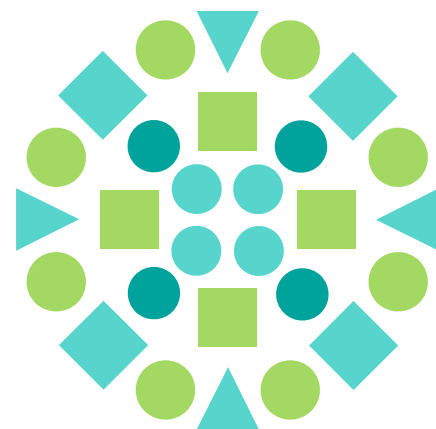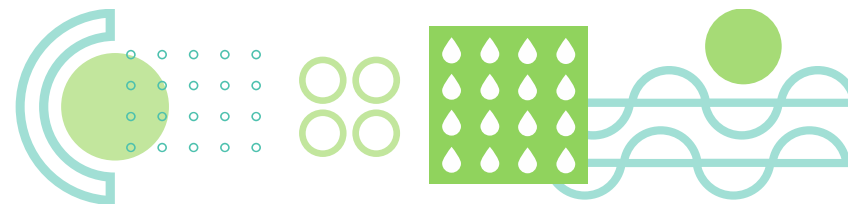
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