



**20
23**

**Sustainability
Report**



Letter from the President

The CONAI system, based on extended producer responsibility, continues to lead the way in Europe. Italy is one of the countries that recycles the most and at a lower cost, with a very high level of transparency. This transparency is, as always, the basis of our new Sustainability Report and its figures.

Presenting this new Report, the first of my term as President of the Consortium, brings both emotion and responsibility. Following the conclusion of the most acute phase of the pandemic, we are now going through a delicate phase, which seems to be evolving without coming to an end. The climate and energy crisis is linked to the difficult international situation marked by the war in Ukraine and now the conflict in the Gaza Strip: a conjuncture that affects world economies and prolongs the uncertainty in which they must operate.

It is a scenario in which CONAI has continued and continues to guarantee the recycling of stable quantities of packaging waste. In fact, the first half of 2022 saw a marked acceleration in release for consumption and recycling activities, and a slowdown in the second half. However, despite a more restrictive calculation method, which adopts the new calculation method provided by EU Decision 2019/665, moving the point of measurement of recycled quantities further downstream, Italy gave a second life to 71.5% of the packaging placed on the market: 10.4 million tonnes.

A great result, especially in a country as poor in raw materials as ours. And, as the new Report shows, an important contribution to the need to withstand the impact of the climate and energy crisis:

recycling makes it possible to reduce carbon dioxide emissions and contribute to energy saving.

This edition of the Report also contains several new features compared to previous editions.

We wanted to include the Environmental Statement, which defines the EU Eco-Management and Audit Scheme EMAS. We have also taken the first steps towards the new European Corporate Sustainability Reporting Directive.

In addition, we wanted to enhance the document with a new in-depth study on “Scenarios and perspectives for the decarbonisation of the sector”, produced with Italy for Climate.

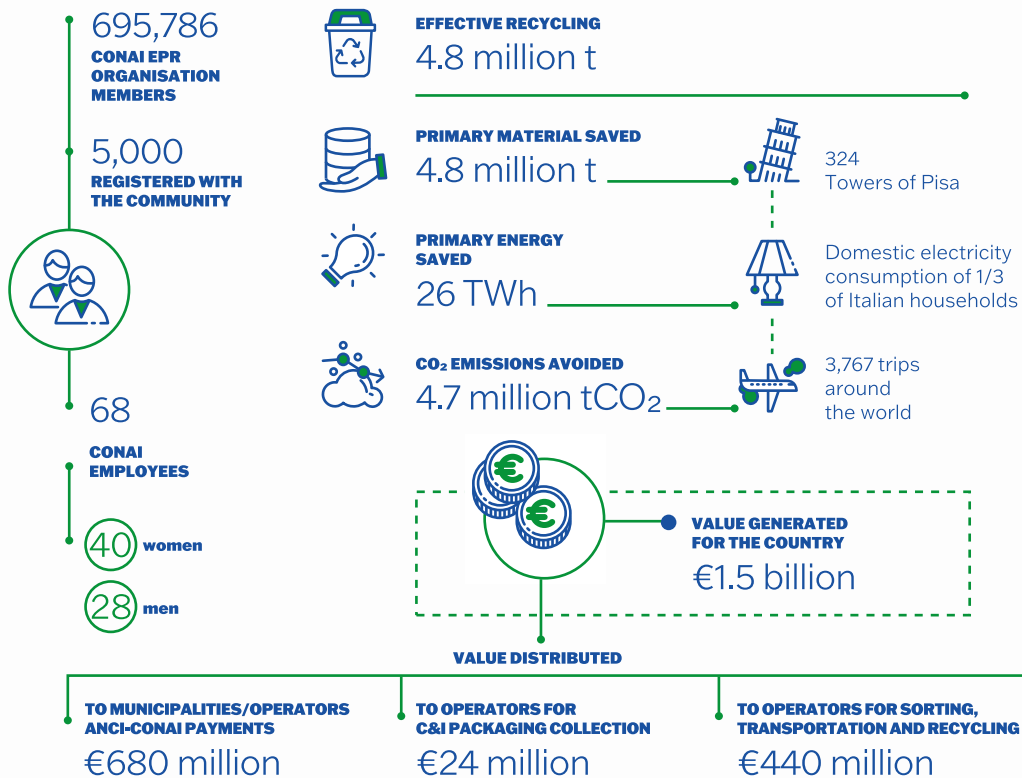
A comprehensive document, therefore, created through a process verified at every stage: a starting point towards increasingly participatory reporting. In some ways, it is a reflection of the commitment that the CONAI EPR organisation has been pursuing for over twenty-five years: not only to ensure that Italy reaches and exceeds the recycling targets called for by the European Union, but also to spread an environmental awareness that includes the protection of the Planet and its resources and the use of increasingly clear and reliable data and information.

Ignazio Capuano
CONAI President

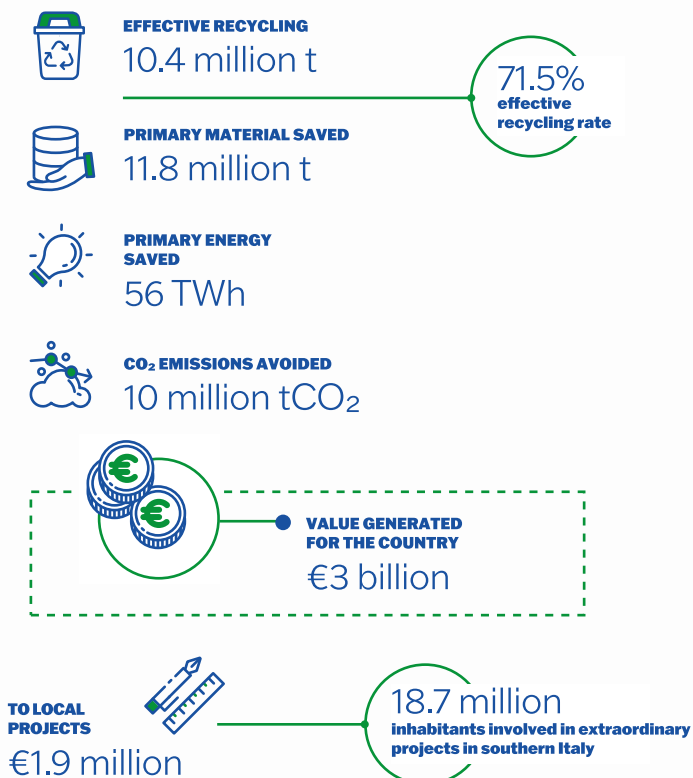


CONAI in figures

CONAI System



National System



PLACED ON THE MARKET
14.5 million t



TOTAL RECOVERY
(recycling + energy recovery)
11.7 million t

80.5%
of packaging placed on the market



CONAI Sustainability Report

Much more than a Report

3 LEVELS OF REPORTING



NATIONAL
system



CONAI
system



ORGANISATION

A SINGLE DOCUMENT FOR ALL STAKEHOLDERS



**Sustainability
Report**



**Environmental Statement
2022-2025**
according to Regulation (EC)
1221/09 (EMAS) as amended



**Voluntary non-financial
statement**
according to Legislative Decree
254/2016 And first references to the
new Directive (EU) 2022/2464
(CSRD)

CERTIFIED REPORTING



GRI 2021
“GRI – with reference to” option

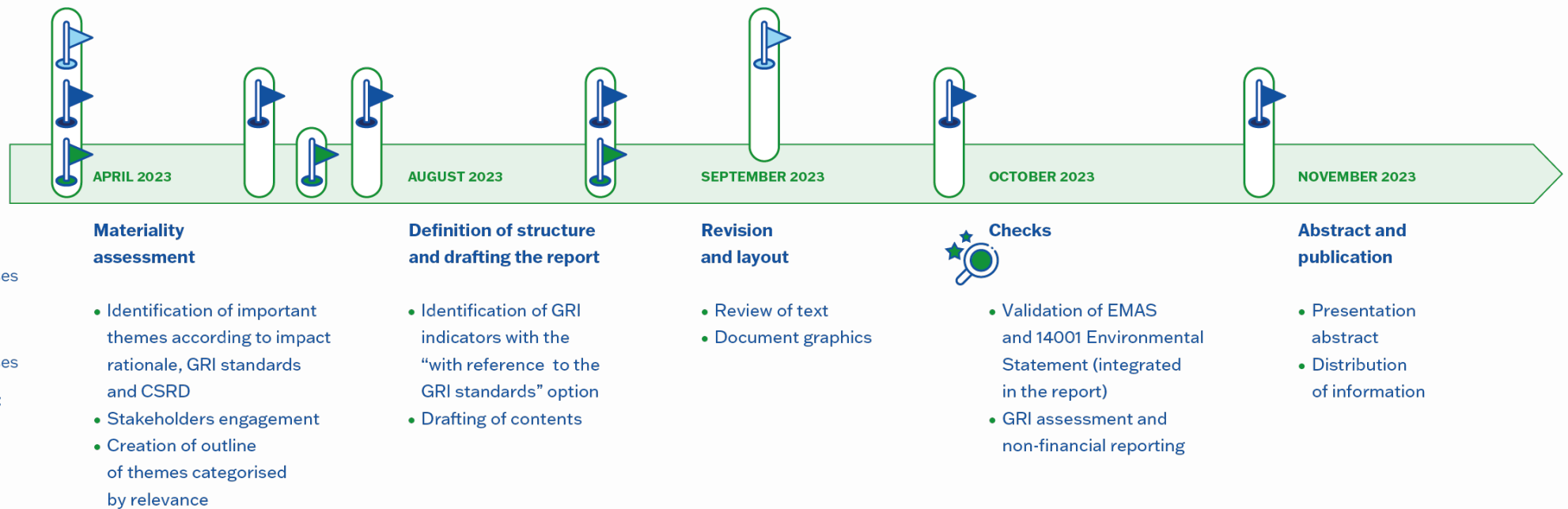


Technical assurance
performed by
RINA Service SpA



CONAI Sustainability Report

A participatory process verified at every stage





Contents

1. Consorzio Nazionale Imballaggi

- 1.1 CONAI: what it is and what it does
- 1.2 The CONAI bodies
- 1.3 Packaging waste management
 - EPR systems
- 1.4 The national system of packaging waste management

2. CONAI and stakeholders

- 2.1 Reporting starts from the needs of the stakeholders
 - 2.2 Context and stakeholders
 - 2.3 Outline of themes categorised by relevance
-

3. CONAI in figures

- 3.1 Transparent reporting
- 3.2 National data validation programme
- 3.3 Italy among the best performers in Europe
- 3.4 National system
 - Packaging waste streams in Italy
 - CONAI Life Cycle Costing Tool
 - The benefits of packaging recycling in Italy
- 3.5 CONAI system
 - CONAI Environmental Contribution (CAC) and fee modulation
 - Economic results of system
 - “PENSARE FUTURO” (THINKING THE FUTURE)
 - CONAI Ecopack
 - Key tools
 - ANCI-CONAI deliveries
 - CONAI support for recycling
 - ANCI-CONAI call for local communication projects
 - Extraordinary activities to support EGATO operations and/or municipalities in relation to the PNNR
 - Industrial and commercial packaging
 - The CONAI system contribution
- 3.6 Organisation
 - The environmental results of the CONAI organisation

4. Innovation and research

- 4.1 Studies and research
- 4.2 Training and skills development projects

5. CONAI and its organisation

- 5.1. Guidance documents
- 5.2 Employee training and management

6. Environmental management system

- 6.1 Scope of reporting
- 6.2 Environmental Policy
- 6.3 Environmental Programme

7. Further reading

- 7.1 CONAI and the Sustainable Development Goals
- 7.2 The sector's contribution to combating climate change



1

**CONAI:
Consorzio Nazionale
Imballaggi**



CONAI: what it is and what it does

The first EPR system in Italy dedicated to packaging

CONAI – **Consorzio Nazionale Imballaggi** – is made up of **over 690,000 firms** producing and using packaging.

It is a **non-profit** consortium legally founded to implement the **extended producer responsibility** (EPR) principle for packaging producers/users.

CONAI has been entrusted with significant **duties** by law.



Ensuring the achievement of the packaging waste recovery and recycling objectives currently in force, overseeing the cooperation of Consortia and other economic actors.



Reducing the amount of packaging waste going to landfill by promoting recovery alternatives.



Working in accordance with the principle of subsidiarity, taking over from separate collection service managers in the event of the inadequacy of the separate collection systems set up by local governments, in order to achieve recovery and recycling objectives.



Organising information, training and awareness-raising campaigns aimed at packaging users and consumers in particular.



Incentivising recycling and recovery of secondary raw materials by promoting the market for them.



Promoting and coordinating the separate collection of packaging waste in accordance with efficiency, effectiveness and affordability criteria.



Acquiring data relating to packaging flows into and out of the country and from the economic operators involved and supplying the data and information requested by the Ministry of Environment and Energy Security (MASE).



Entering into a national framework programme agreement with ANCI, the Union of Italian Provinces (UPI) or the sector authorities, with a view to guaranteeing implementation of the principle of management co-responsibility between producers, users and local governments (authorities).



Ensuring compliance with the “polluter pays” principle as regards producers and users by means of EPR environmental contribution fee calculation.



Promoting environmental packaging and packaging waste impact prevention, through study and research into the production of environmentally friendly, reusable and recyclable packaging.



1.2

The CONAI bodies

The governance of the Consortium is dictated by the Statute and Rules of CONAI.



MEMEBERS' ASSEMBLY

Represents all EPR organisation member firms that produce and use packaging. It elects 18 out of 19 members of the Board of Directors and 4 out of 7 members of the Board of Auditors.



BOARDS OF DIRECTORS

Made up of 19 members, holds office for three financial years and elects the President of the EPR organisation and two Vice-Presidents from among its members.



1 representative for **EACH PACKAGING MATERIAL**



2 representatives for the entire **CATEGORY OF PRODUCERS**



4 representatives* for the **RETAILERS/DISTRIBUTORS**



2 representatives* for the **FOOD USERS**




1 representative* for the **CHEMICAL USERS**



1 representative for the **MISCELLANEOUS USERS**



1 representative for **CONSUMERS** nominated by MASE and MIMIT

* + 1  **representative who rotates among the three components**



PRESIDENT AND TWO VICE PRESIDENTS

The **President** remains in office for three financial years and is responsible for representing the EPR organisation before third parties and in court. The office is alternately held by the category of producers and of users in the forms provided for by the Statute (article 25, paragraph 4).

The **2 Vice Presidents** have the legal representation of the EPR organisation within the limits of any powers delegated to them by the Board of Directors.



GENERAL MANAGER

Responsible for the running of the EPR organisation, directing it and providing for its ordinary activities. Assists the President in executing the resolutions of the EPR organisation bodies and attends the meetings of the Assembly and of the Board of Directors, but without voting rights.



BOARD OF AUDITORS

Supervises compliance with the law, the Articles of Association and the Rules and Regulations, respect for the principles of proper administration, and in particular the adequacy of the organisational, administrative and accounting structure adopted by the EPR organisation and its effective operation.



7 FULL MEMBERS

- 1 nominated by MASE
- 1 nominated by MIMIT
- 1 nominated by MEF



2 SUBSTITUTE MEMBERS



1.3

Packaging waste management EPR systems:

CONAI Packaging Material Consortia and Self-compliance EPR schemes

CONAI guides the work of the **seven packaging material consortia**, both private and non-profit, working in the collection and recycling/recovery of packaging waste in various materials **across the whole of Italy** and **in a market support role**.

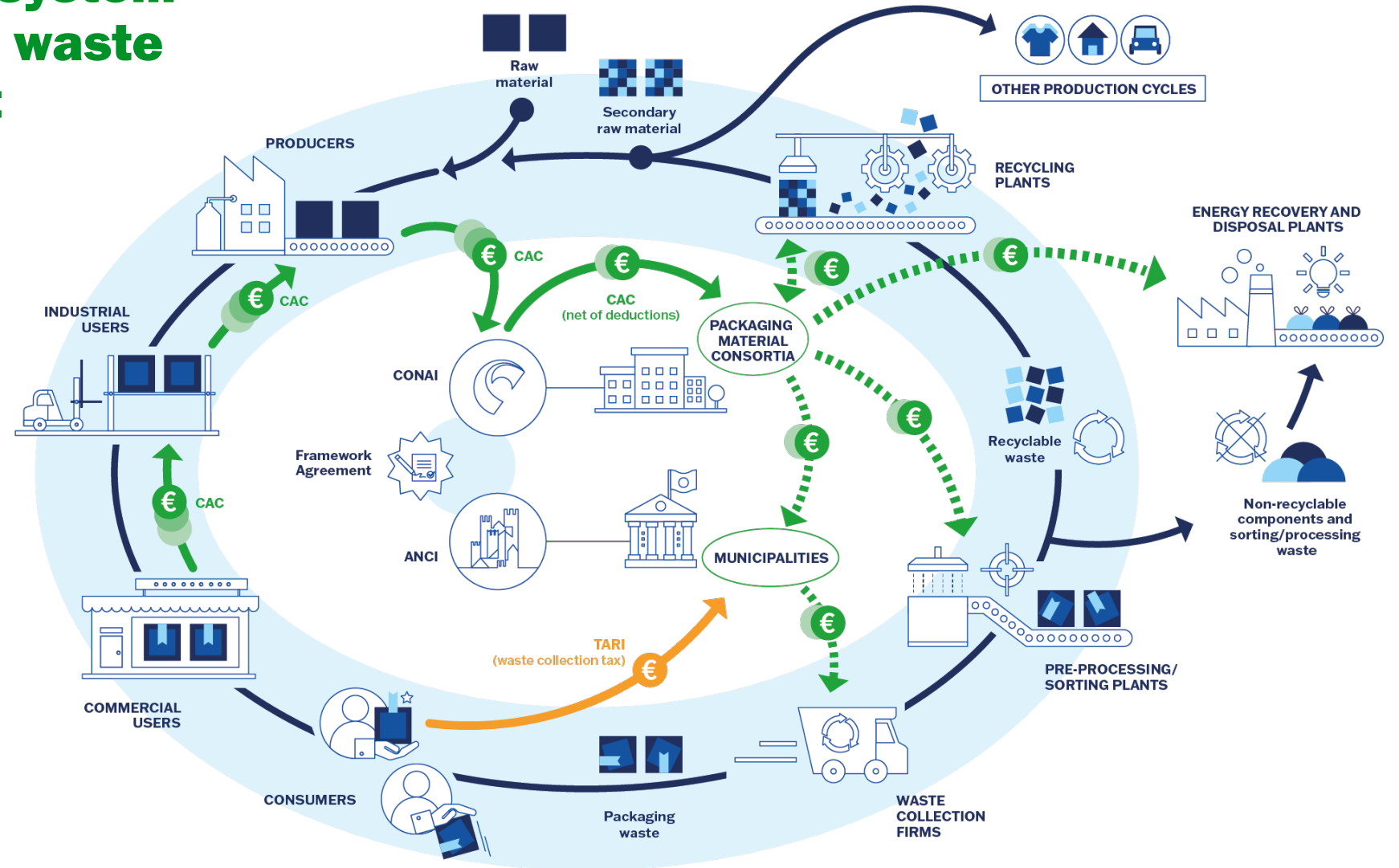
	Steel RICREA		Paper and Cardboard COMIECO		Glass COREVE
	Aluminium CIAL		Wood RILEGNO		
	Compostable Bioplastic BIOREPACK		Plastic COREPLA		

There are currently **three self-compliance EPR schemes** working to promote the recycling of **specific types of plastic packaging** and a new multi-material self-compliance EPR scheme **Erion Packaging** in operation from 2023.

	Aliplast P.A.R.I.		CONIP		CORIPET
	ERION Packaging				

1.4

The national system of packaging waste management





2

**CONAI and
stakeholders**



2.1 Reporting starts from the needs of stakeholders

CONAI's new outline of themes categorised by relevance

The process of determining the various material issues was carried out through an **assessment of activities, business relations, stakeholders and their interactions at all levels of reporting**: National System, CONAI System, Organisation.

This process was carried out in an integrated manner, updating the Environmental Analysis and Risk Matrix to determine the significant environmental aspects of ISO 14001 and EMAS Regulation.

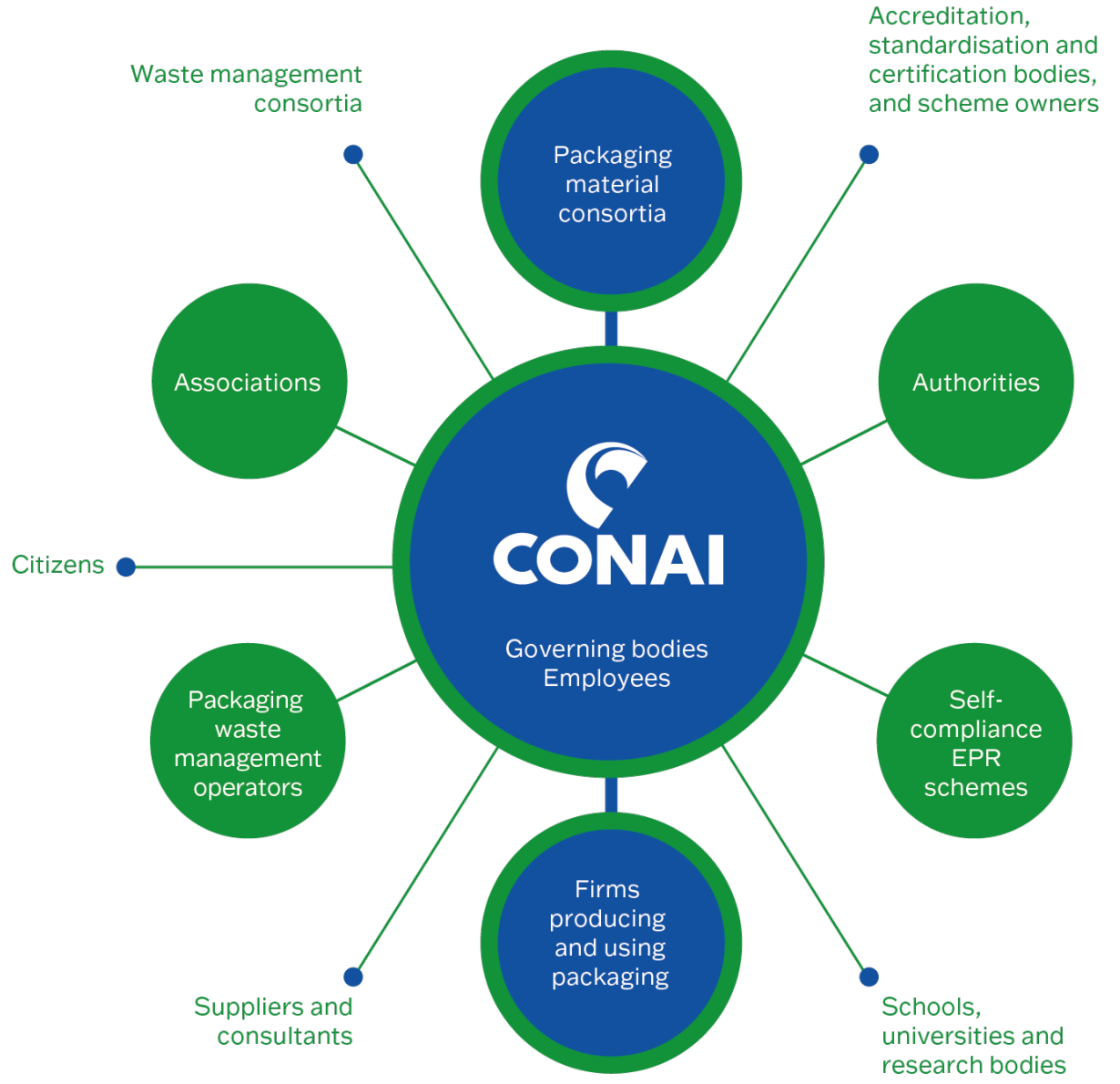


2.2

Context and stakeholders

New: inclusion of new stakeholders

- Biorepack Consortium for the management of biodegradable and compostable plastic packaging
- Additional reference institutions such as UPI and ANEA
- Accreditation, standardisation and certification bodies, and scheme owners
- Self-compliance EPR schemes
- Citizens
- Additional associations





Outline of themes categorised by relevance

The important themes reflect impacts, activities and interactions at all levels of the Consortium’s reporting.

The themes are categorised as **priority, high and neutral importance** according to the findings of the risk assessment.

The topics of anti-corruption, respect for human rights, and health and safety of workers were placed at an ‘overarching’ level because they were deemed relevant to the current context.





3

CONAI
in figures

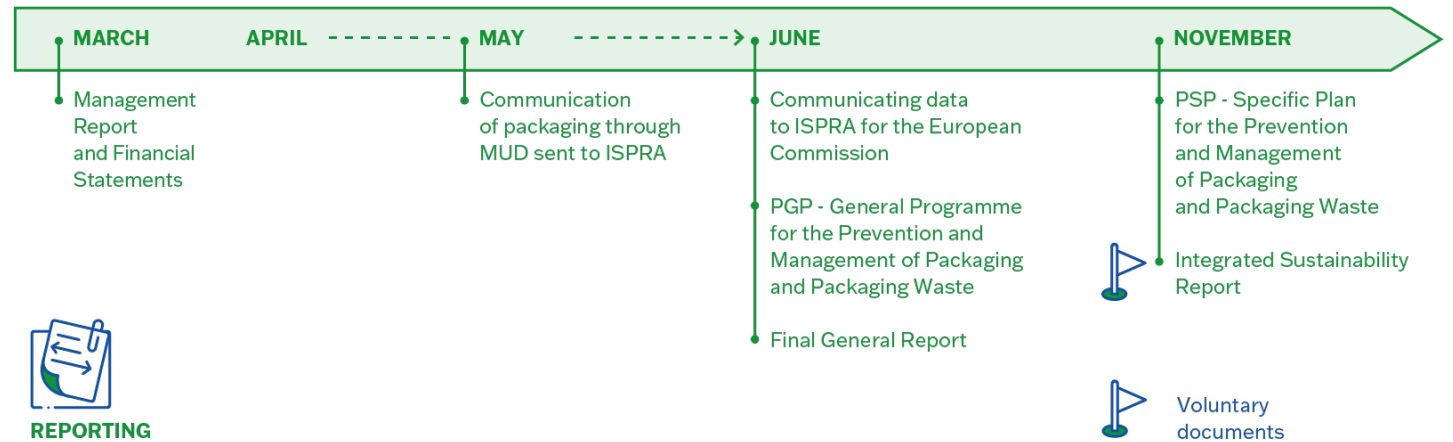


3.1

Transparent reporting

CONAI's institutional tasks include:

- drafting documentation that is required by law
- necessary liaison and coordination functions between public administrations, packaging material consortia and other economic operators
- organising information campaigns
- collecting and transmitting recycling and recovery data to the competent authorities





3.2

National data validation programme

The management system, originating from a voluntary project shared by CONAI, packaging material consortia and the CONIP self-compliance EPR scheme, now has its own technical standardisation.

On 20 June 2023, the **UNI 11914 standard** was published, entitled “**Management System for Determining the Quantities of Packaging Waste Produced, Recycled and Recovered with Energy Production**”.

It defines a standard process for validating the procedures for **determining input, recycling and recovery data for packaging waste from EPR systems**, and thus guarantees the highest quality of the data provided in conformity with current legislation.

It was the result of a project coordinated by UNI’s “packaging and environment” working group, on a project put forward by CONAI based on the experience of the “Obiettivo riciclo” project.

2022 ACTIVITIES

ON-SITE VERIFICATIONS
(documentary)

9

WITNESS VERIFICATIONS
(field)

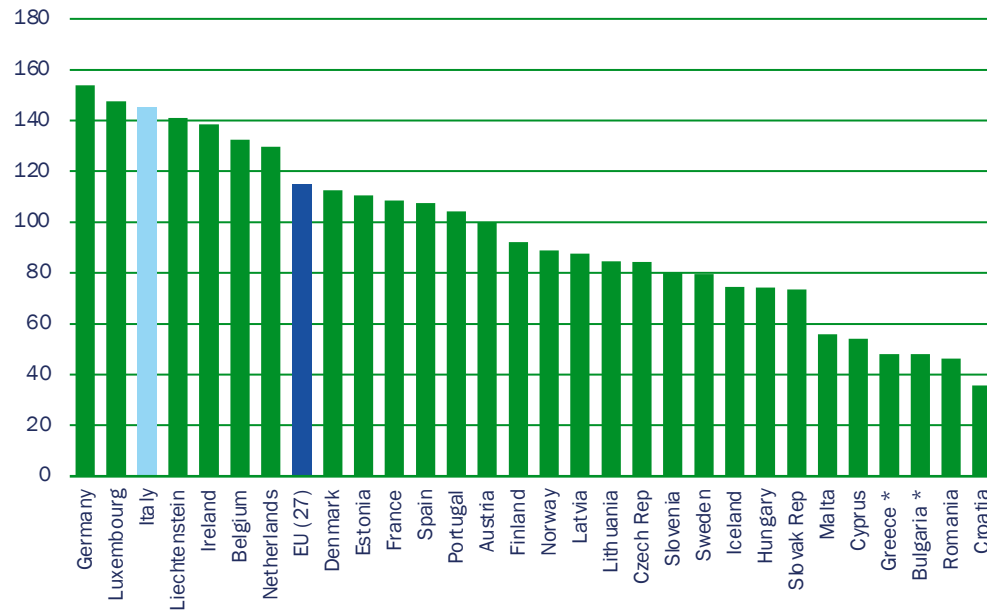
13



3.3

Italy among the best performers in Europe

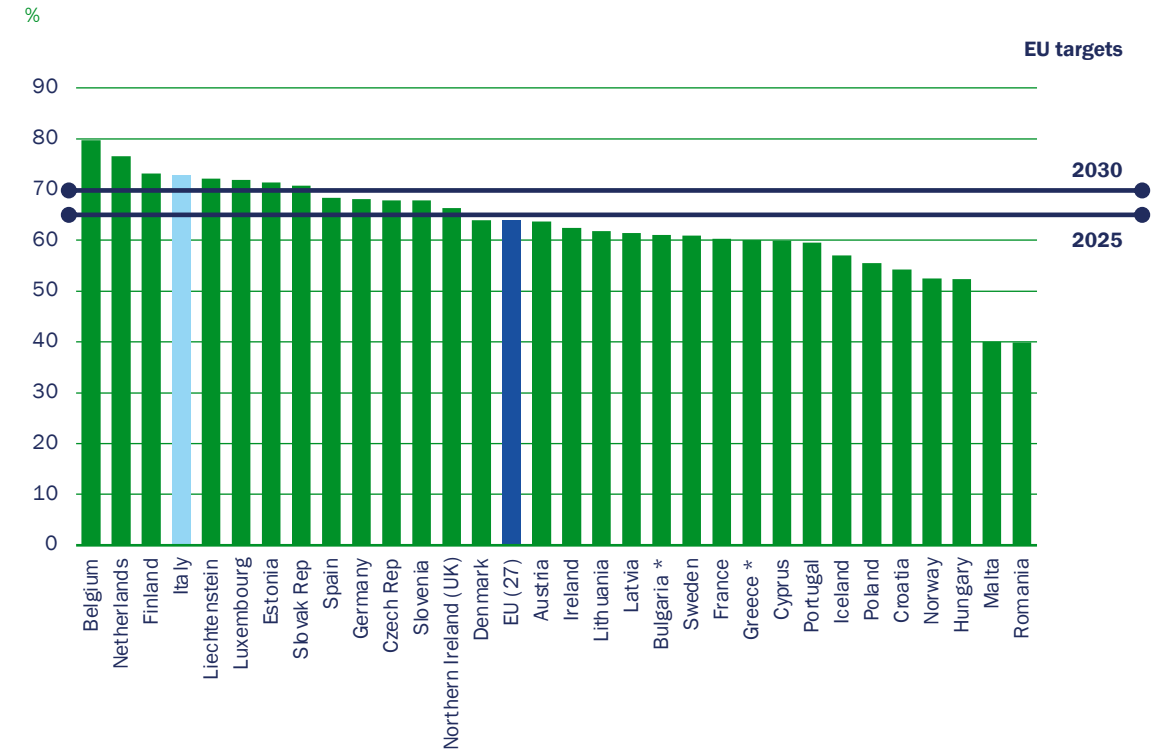
RECYCLING PER CAPITA IN EUROPE 2020



SOURCE: Eurostat 2020 (updated March 2023).

* 2019 data.

RECYCLING PERCENTAGE RESULTS EUROPE 2020





3.4

**National
system**



**NATIONAL
system**



Packaging streams in Italy

Placed on the market

Includes the “de minimis” and “free riding” corrections introduced by Commission Implementing Decision (EU) 2019/665 of 17 April 2019, amending Decision 2005/270/EC of 22 March 2005.

PACKAGING PLACED ON THE MARKET

Material	2021 ktonnes	2022 ktonnes	Annual change %
Steel	556	519	6.65%
Aluminium	81	82	0.99%
Paper	5,301	5,309	0.16%
Wood	3,450	3,422	-0.82%
Plastic and bioplastic	2,271	2,309	1.68%
Glass	2,850	2,838	-0.40%
Total	14,509	14,479	-0.2%

SOURCE: Data generated by CONAI Research Centre based on institutional documents by packaging material consortia and self-compliance EPR schemes (May – 2023).

Steel

Return to normal values after the sharp increase in 2021.



Aluminium

Significant growth driven by beverage cans.



Paper

Stable following growth in 2021, driven by new consumer habits (e.g. e-commerce), and a preference for cellulosic packs.



Wood

Stable following the 2021 rebound, 75% of the packaging placed on the market is comprised of pallets (new and used).



Plastic

Slight growth, with 76.8 ktonnes of biodegradable and compostable plastic packaging.



FINAL RESULTS 2022	Placed on the market ktonnes
Total plastic	2,232.0
Remit of Corepla	1,907.4
Remit of PARI	13.8
Remit of CONIP	81.8
Remit of Coripet	229.0
Total bioplastic	76.8
Remit of Biorepack	76.8
Total plastic and bioplastic	2,308.8

Glass

Stable, 290 ktonnes returnable glass bottles in 2022.





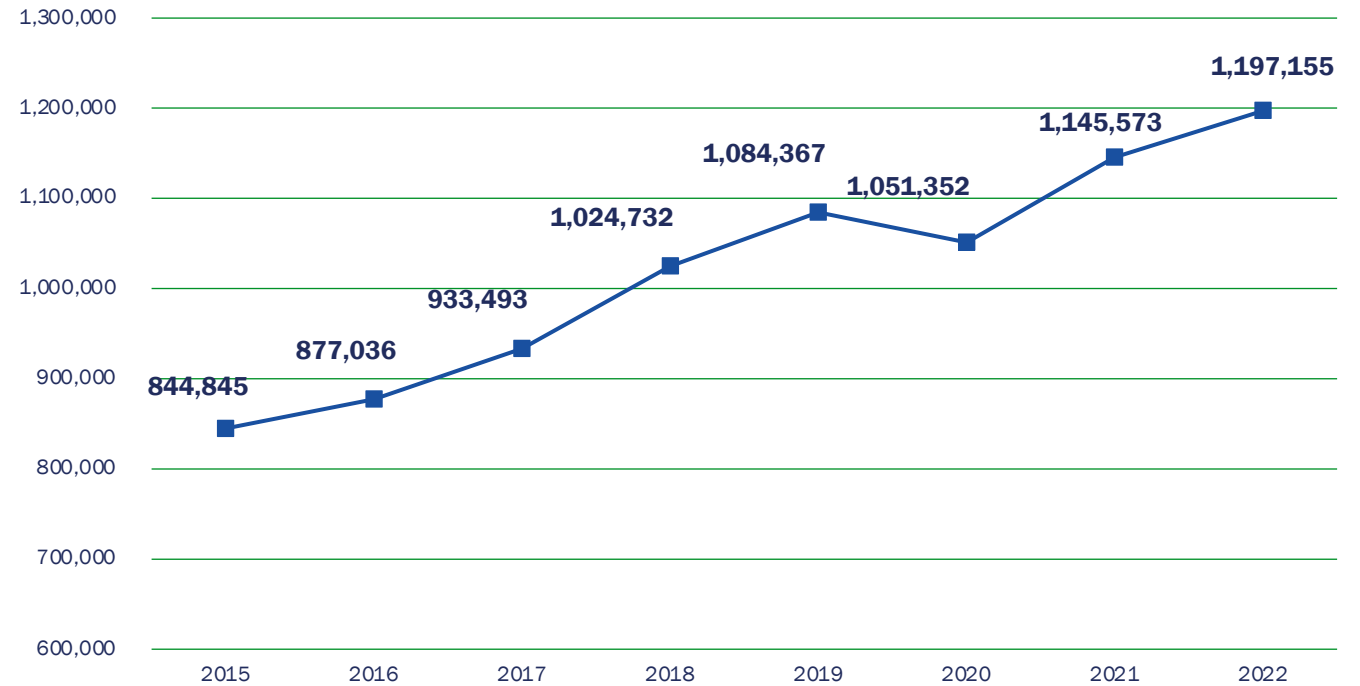
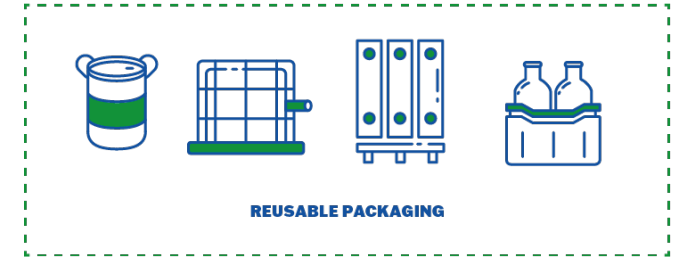
Packaging streams in Italy

Reuse

1.2 million tonnes of reusable packaging declared to CONAI

CONAI devotes special attention to packaging designed for multi-year use: since 2012, it has introduced incentives and simplified contributions for reusable packaging which it has constantly updated.

After falling in 2020, as a result of contractions in the B2B sector (which typically uses this type of packaging) following on from the economic situation, **in 2022 volumes of packaging reused via CONAI incentive procedures continue the upward trend which resumed in 2021.**



SOURCE: Data generated by CONAI, Programme for the Prevention and Management of Packaging and Packaging Waste 2022.



Packaging streams in Italy

Recycling

EFFECTIVE RECYCLING

	2021	2022	Annual change
Material	ktonnes	ktonnes	%
Steel	390	418	7.3
Aluminium	58	60	3.4
Paper	4,485	4,311	-3.9
Wood	2,203	2,147	-2.6
Plastic and bioplastic	1,081	1,129	4.5
Glass	2,183	2,293	5.0
Total	10,400	10,358	-0.4



EFFECTIVE RECYCLING

10.358 million t

-0.4% compared to 2021



EFFECTIVE RECYCLING RATE

71.5%

-0.2 percentage points compared to 2021

PERCENTAGE OF MATERIAL PLACED ON THE MARKET WHICH WAS EFFECTIVELY RECYCLED

	2021	2022	Annual change
Material	%	%	% points
Steel	70.1	80.6	10.5
Aluminium	71.8	73.6	1.8
Paper	84.6	81.2	-3.4
Wood	63.9	62.7	-1.1
Plastic and bioplastic	47.6	48.9	1.0
Glass	76.6	80.8	4.2
Total	71.7	71.5	-0.2

SOURCE: Data generated by CONAI Research Centre based on institutional documents by packaging material consortia and self-compliance EPR schemes (May - 2023).



Packaging streams in Italy

Recycling

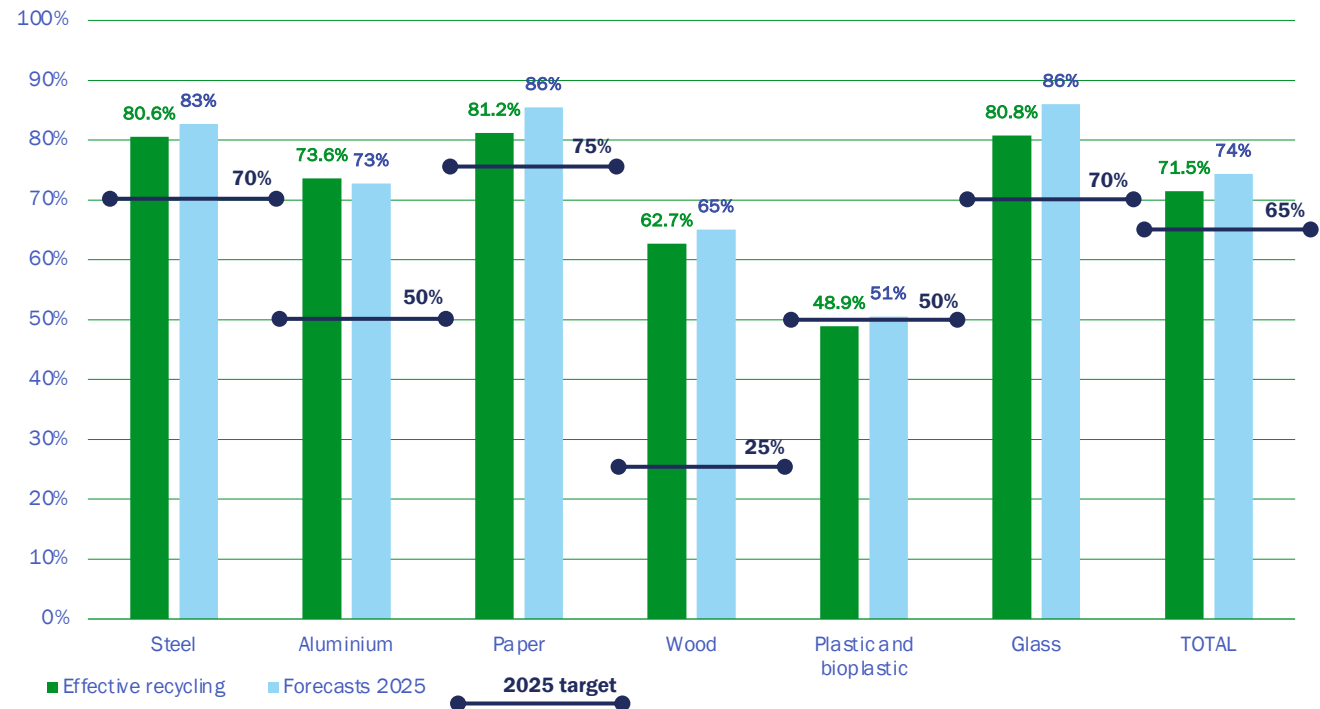
According to the European Commission's specific report of 8 January 2023, Italy is not one of the countries at risk with regard to recycling targets.



Current projections predict that **2025 targets will be achieved for all packaging supply chains**, and place Italy in a positive position for the 2030 targets.

2025 recycling target already exceeded, and sector-specific targets well within reach.

ACHIEVED RESULTS (EFFECTIVE RECYCLING) COMPARED WITH 2025 TARGETS AND 2025 FORECASTS



SOURCE: Projection by the CONAI Research Centre.



Packaging streams in Italy

Recycling

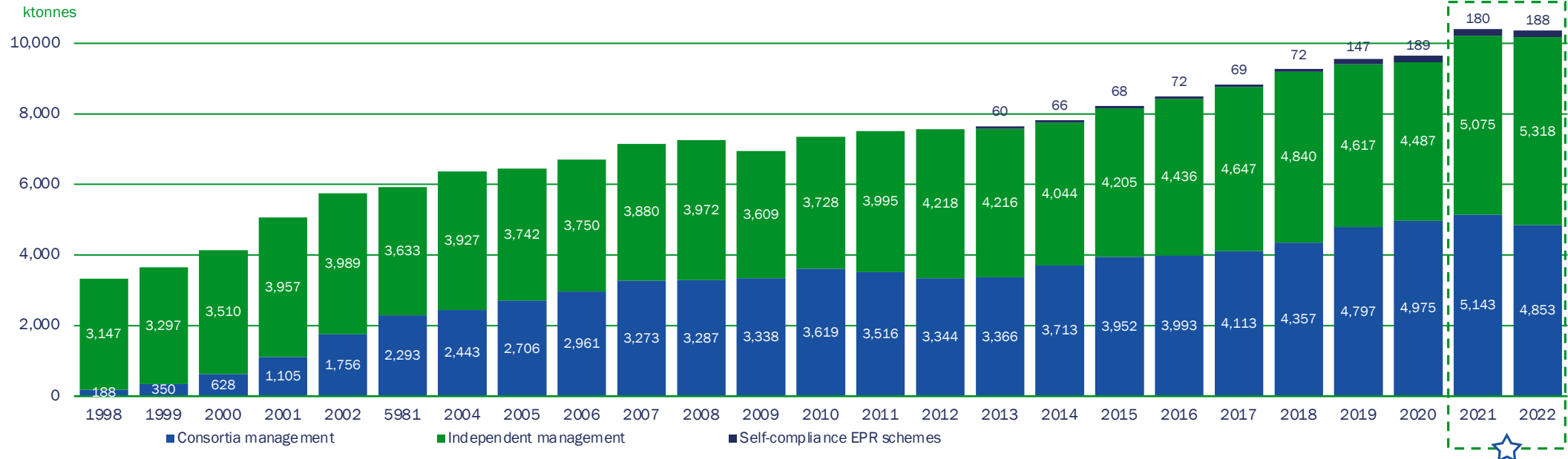
The contribution to national recycling by packaging material consortia, self-compliance EPR schemes, and the market.

The CONAI EPR organisation acts in a **MARKET SUPPORT** role and guarantees free competition in the market for secondary raw materials.

Positive market trends have resulted in a decrease in the recycling managed by the CONAI EPR organisation for wood, plastic and glass material.

The new calculation methodology provided by Decision (EU) 2019/665 and applied to the 2022 data also required the 2021 data to be rectified.

MANAGEMENT OF PACKAGING WASTE SENT FOR RECYCLING FROM 1998 TO 2022



SOURCE: Data generated from historical data by the CONAI Research Centre.



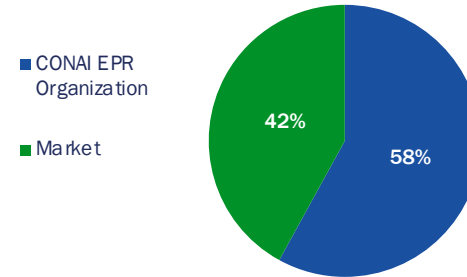
Packaging streams in Italy

Recycling

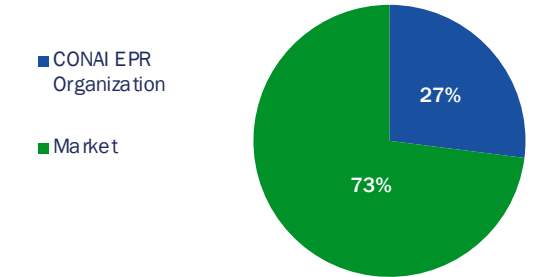
The contribution of packaging material consortia to recycling by material.

SOURCE: CONAI, General Programme for the Prevention and Management of Packaging and Packaging Waste 2022.

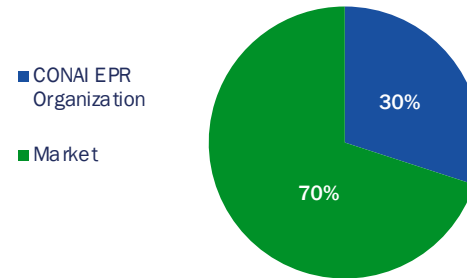
STEEL
Total: 418 ktonnes



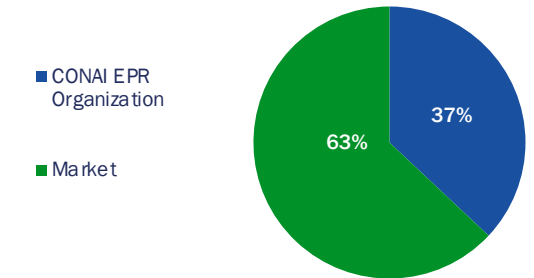
ALUMINIUM
Total: 60 ktonnes



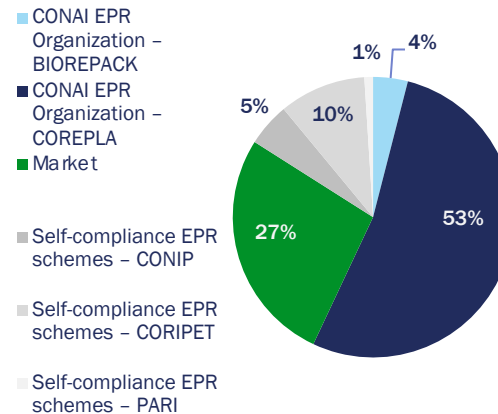
PAPER
Total: 4,311 ktonnes



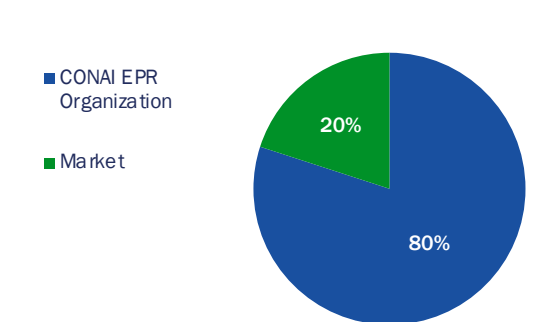
WOOD
Total: 2,147 ktonnes



PLASTIC AND BIOPLASTIC
Total: 1,129 ktonnes



GLASS
Total: 2,293 ktonnes





Packaging streams in Italy

Recycling

The contribution of packaging material consortia to recycling by material.



STEEL

Total: 418 ktonnes

Quantity: +7.3%, bringing the effective recycling result to 80.6%. Direct management by the RICREA consortium accounts for 58% of the total recycled.



ALUMINIUM

Total: 60 ktonnes

Quantity: +3.4%, effective recycling result of 73.6% also due to the inclusion of the incineration bottom ash recovery stream. Management by the CiAI consortium accounts for 27%.



PAPER

Total: 4,311 ktonnes

Quantity: -3.9%, 81.2% effective recycling result. Management by the Comieco consortium accounts for 30%.



WOOD

Total: 2,147 ktonnes

Quantity: -2.6%, 62.7% recycling result, with 903 ktonnes from regenerated packaging. Management by the Rilegno consortium accounts for 37%.



PLASTIC AND BIOPLASTIC

Total: 1,129 ktonnes

PLASTIC

Quantity: +4.5%, 48.9% recycling result. New recycling streams for mixed plastics and film. Management by the Corepla consortium accounts for 53%.



BIODEGRADABLE AND COMPOSTABLE PLASTICS

61% recycling in the organic waste stream in the Biorepack consortium's second year of operation. They contribute to 4% of Italy's total recycling of plastic packaging.



GLASS

Total: 2,293 ktonnes

Quantity: +5%, 80.8% recycling result, including through the use of secondary raw material (glass sand). Management by the CoReVe consortium accounts for 80%.



Packaging streams in Italy

Energy recovery



62
in 2022

Data derived from:

- residual components of treatment of packaging waste managed by packaging material consortia or self-compliance EPR schemes
- packaging waste present in municipal waste sent for energy recovery through waste-to-energy and secondary solid fuel production plants

PACKAGING WASTE FOR ENERGY RECOVERY

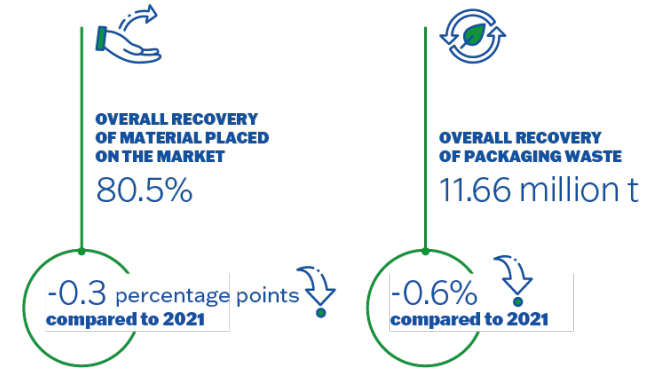
	2021	2022	Annual change
Material	ktonnes	ktonnes	%
Steel	0	0	0
Aluminium	3.7	3.4	-8.1%
Paper	333.8	305.5	-8.5%
Wood	69.2	59.0	-14.7%
Plastic	925.1	933.9	0.9%
Glass	-	-	
Total	1,331.8	1,301.8	-2.3%

SOURCE: Data generated by CONAI Research Centre based on institutional documents by packaging material consortia and self-compliance EPR schemes (May - 2023).



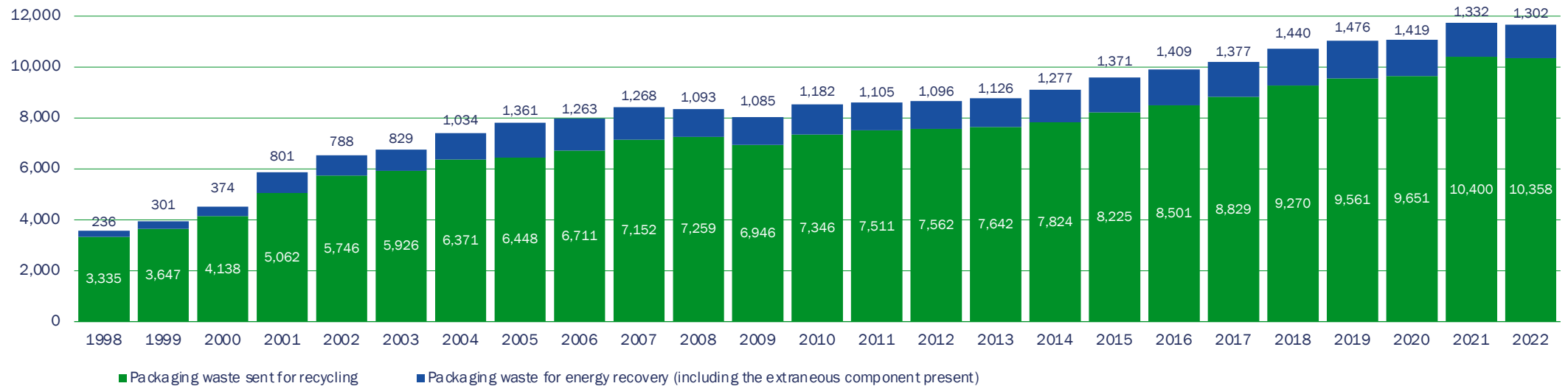
Packaging streams in Italy

Total recovery



PACKAGING WASTE SENT TO RECYCLING AND ENERGY RECOVERY IN ITALY FROM 1998 TO 2022

ktonnes

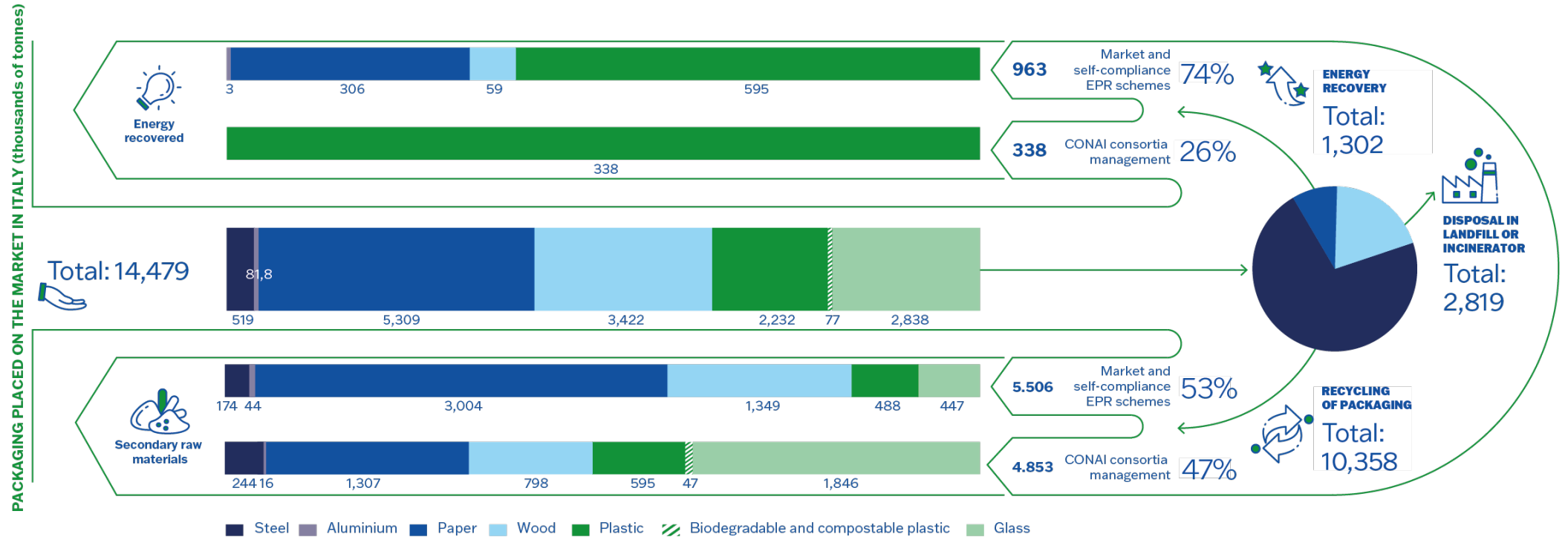


SOURCE: Data generated by CONAI - Research Centre, from historical data.



Packaging streams in Italy

Overall figures for material and management in 2022



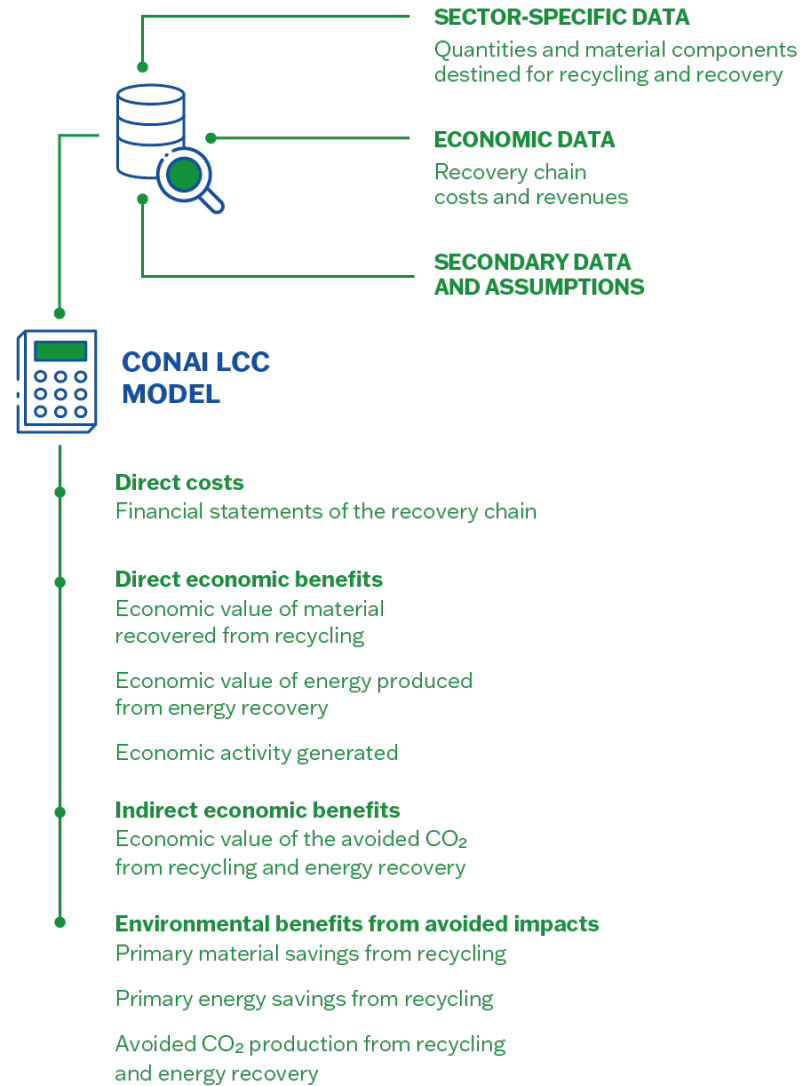
SOURCE: Data generated by CONAI - Research Centre, from historical data.

DATA: Thousands of tonnes.



CONAI Life Cycle Costing Tool

The CONAI Life Cycle Costing Tool (LCC) allows the costs/benefits to be quantified at the national level for the entire sector.





The benefits of packaging recycling in Italy



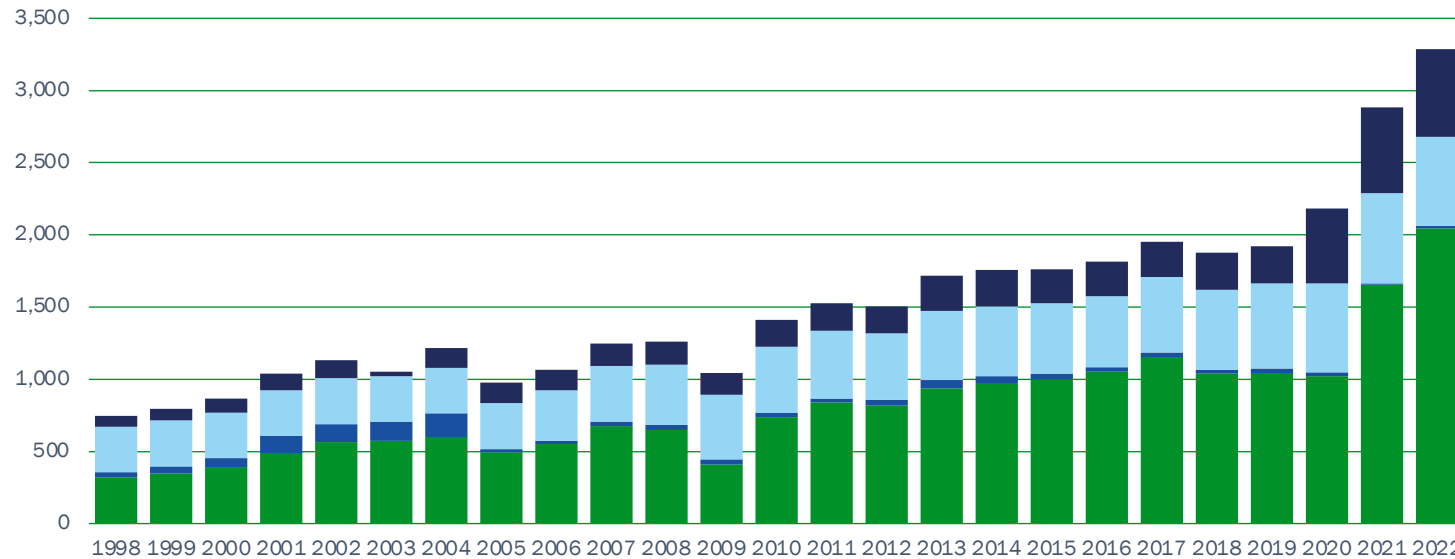
in 2022
OVERALL TOTAL
 € 3 billion

in 25 years
OVERALL TOTAL
 over € 38 billion

Economic benefits

ECONOMIC VALUES GENERATED BY THE NATIONAL SYSTEM

€ million



- **Economic value of primary material saving:** the economic value of the amount of **primary material saving**.
- **Economic value of energy produced from energy recovery:** the economic value obtained from the amount of energy produced from the energy recovery of packaging waste.
- **Economic activity generated:** the economic value of activities taking into account those working in collection and preparation of packaging recycling.

SOURCE: Data generated by CONAI Research Centre, from LCC Tool data in partnership with Studio Fieschi.



The benefits of packaging recycling in Italy



in 25 years

**MATERIAL SAVED BY USING
SECONDARY RAW MATERIALS**
obtained from waste
from various sectors

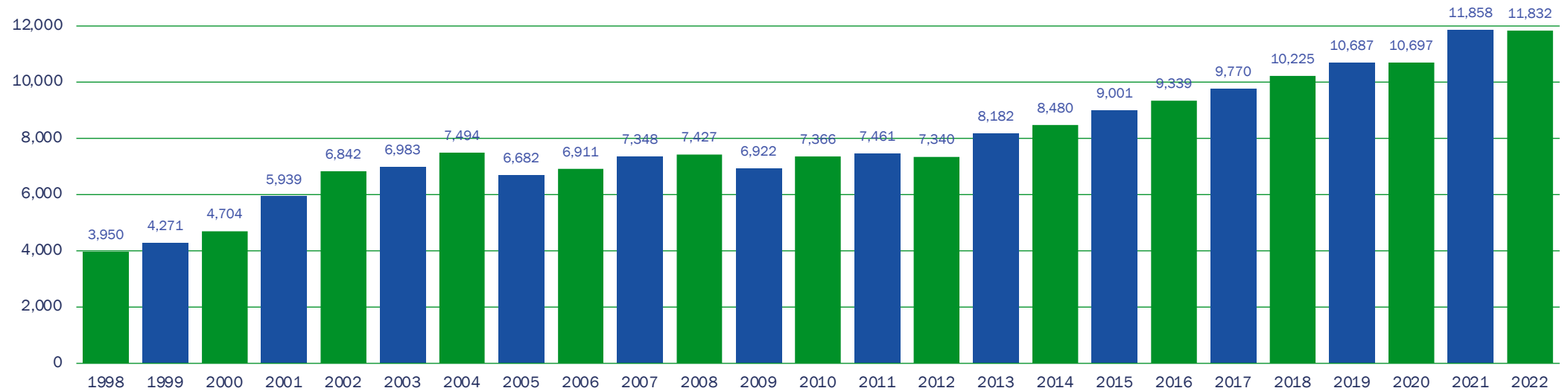
200 million
tonnes

Primary material savings *

* The primary material savings from recycling refers to the amount of primary material that has been avoided due to the recycling of packaging.

PRIMARY MATERIAL SAVINGS

ktonnes



SOURCE: Data generated by CONAI Research Centre, from LCC Tool data in partnership with Studio Fieschi.



The benefits of packaging recycling in Italy



in 25 years
CO₂ EMISSIONS
AVOIDED

160 million
tonnes of CO₂eq

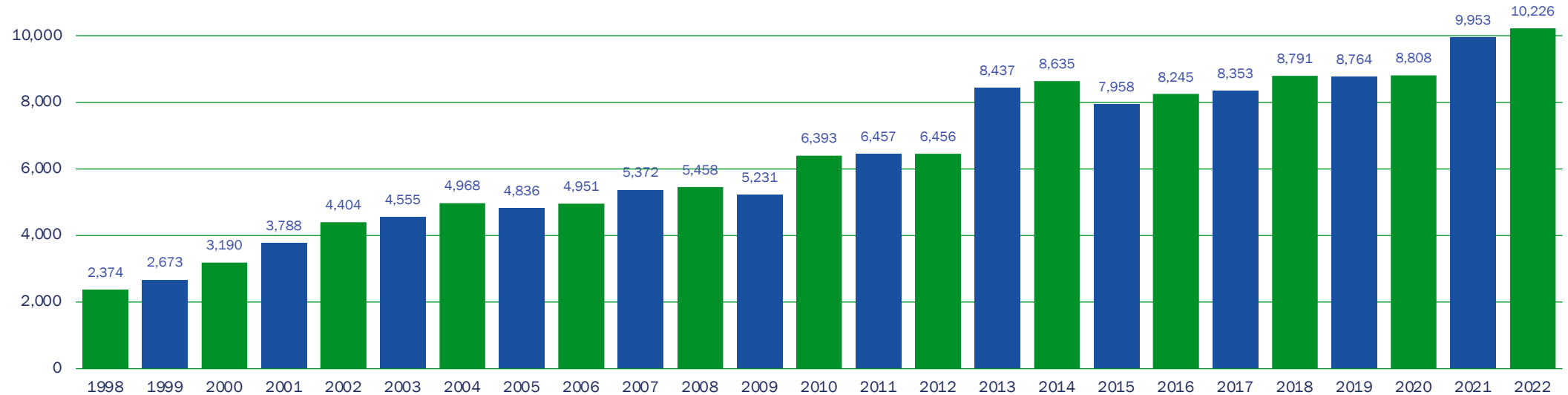
Avoided CO₂eq production from recycling *

* The avoided production of CO₂ from recycling is the difference between the saved production of greenhouse gases due to the avoided production of primary material and the greenhouse gas emissions from preparation operations for packaging recycling

(transport and processing to convert packaging waste into new raw material). Greenhouse gases are all gases (such as CO₂) that have a global warming effect if emitted into the atmosphere.

AVOIDED CO₂ PRODUCTION FROM RECYCLING

ktonnes CO₂eq



SOURCE: Data generated by CONAI Research Centre, from LCC Tool data in partnership with Studio Fieschi.



The benefits of packaging recycling in Italy



in 25 years

ENERGY SAVINGS
from packaging recycling

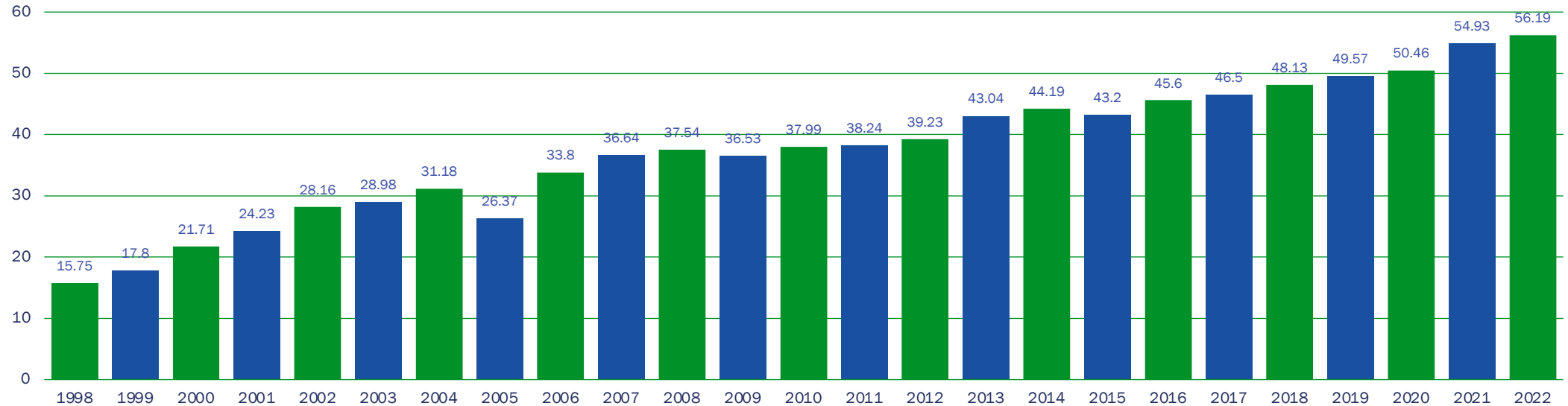
936 TWh

Primary energy savings from recycling *

* The primary energy savings from recycling refer to the amount of primary energy from fossil fuels avoided due to recycling.

PRIMARY ENERGY SAVINGS FROM RECYCLING

TWh

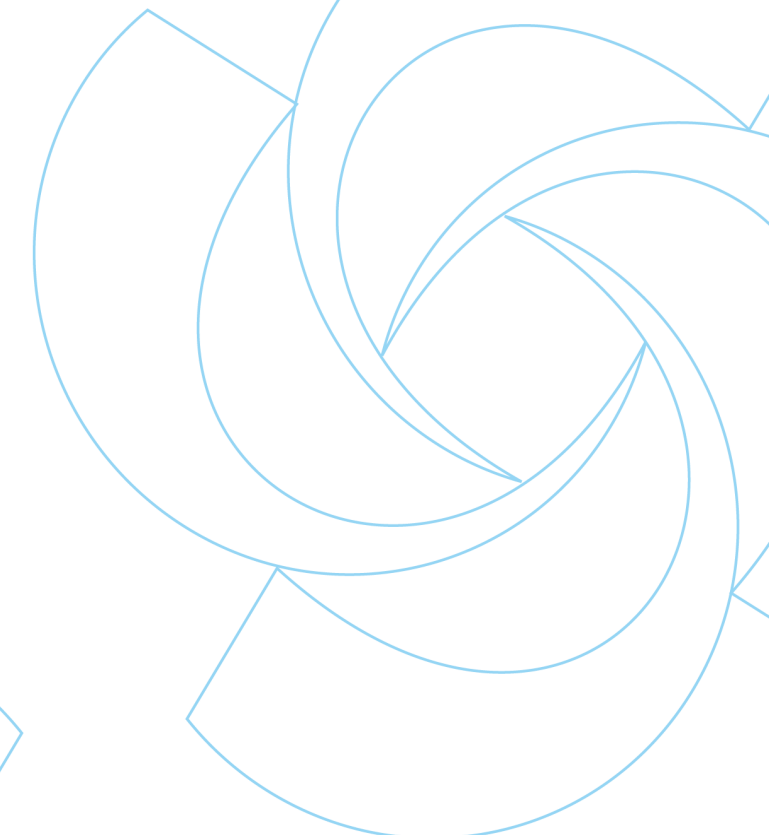
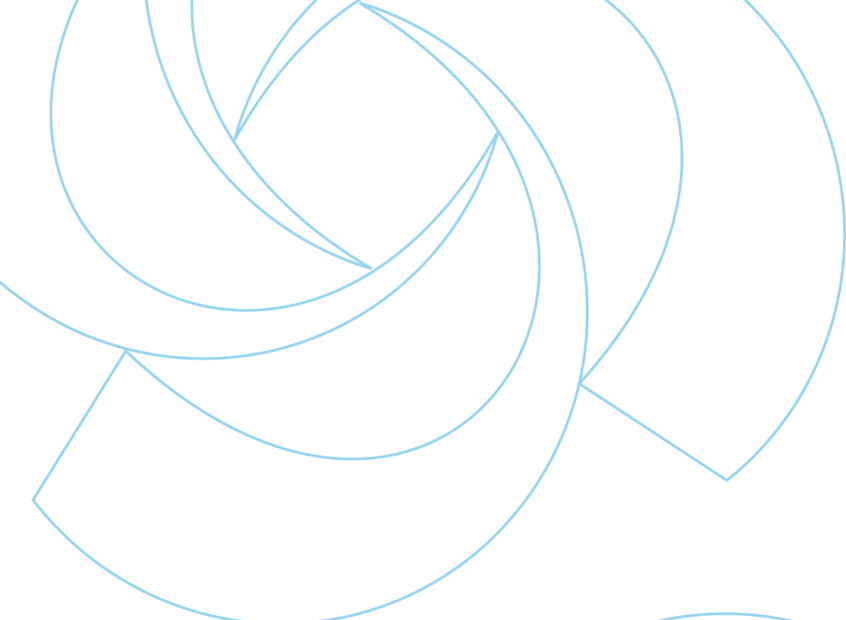
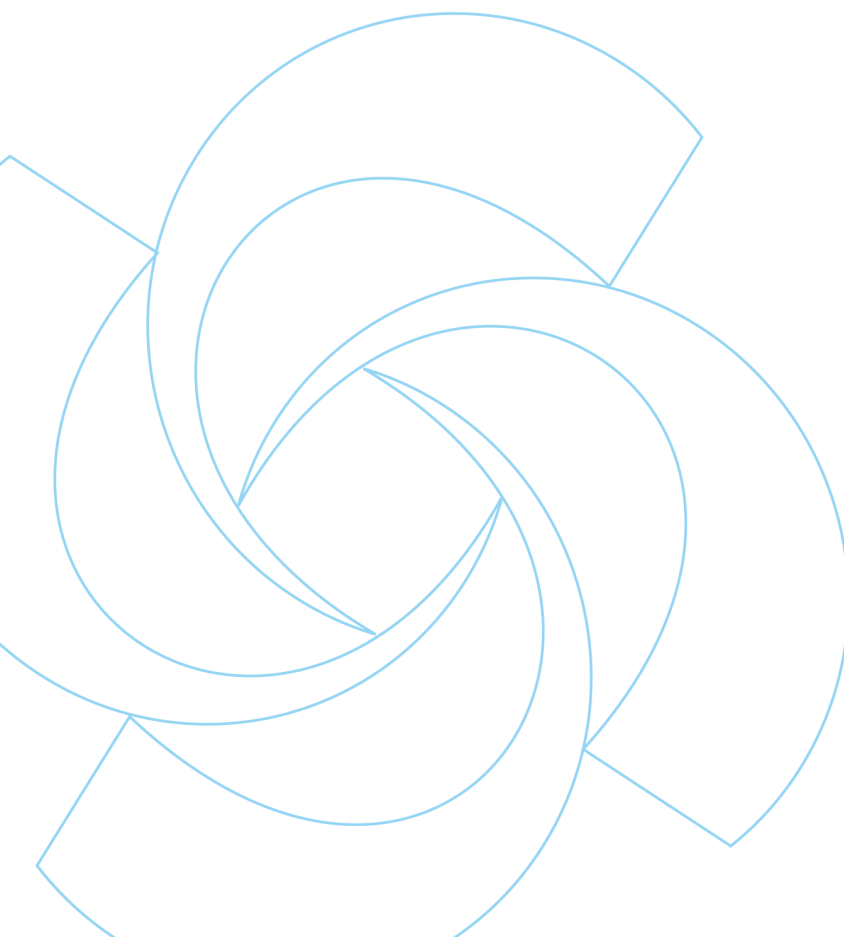


SOURCE: Data generated by CONAI Research Centre, from LCC Tool data in partnership with Studio Fieschi.



3.5

**CONAI
system**

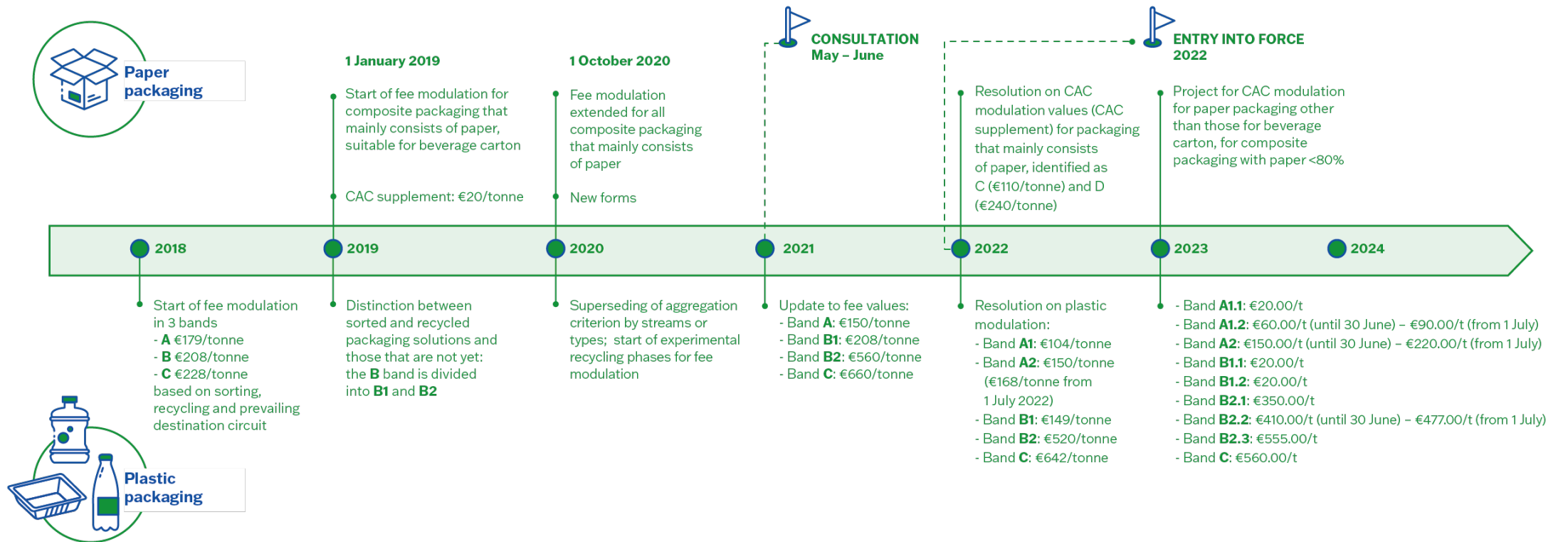


CONAI
system



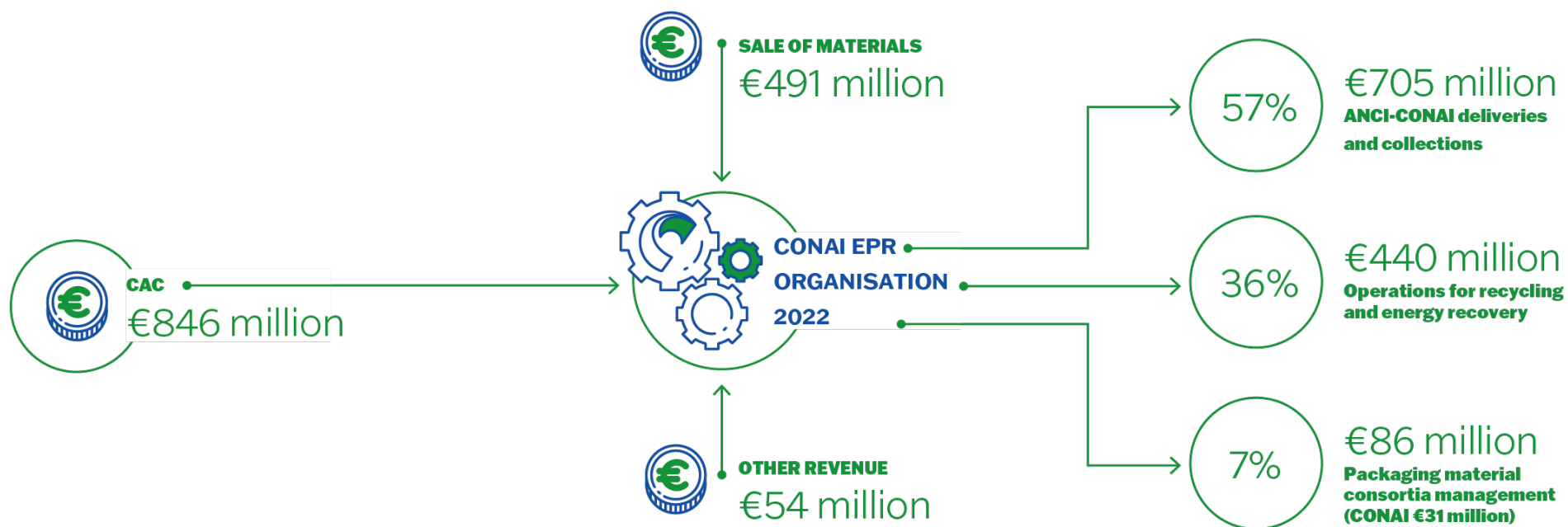
CONAI Environmental Contribution (CAC) and fee modulation

2022 – CAC supplement for paper packaging other than those for beverage carton Enhancements to modulation criteria for plastic packaging





Economic results of system



€160 million in reserves generated in 2022 as a result of the lower quantities handled by the CONAI EPR organisation and the continuation of positive trends in secondary raw material listings. By late 2022, there was a reversal in trend for both values.

SOURCE: Data summary generated by CONAI from Management Report and Financial Statements 2022 data.



Economic results of system

CAC



CONAI EPR ORGANISATION 2022



CAC €846 million

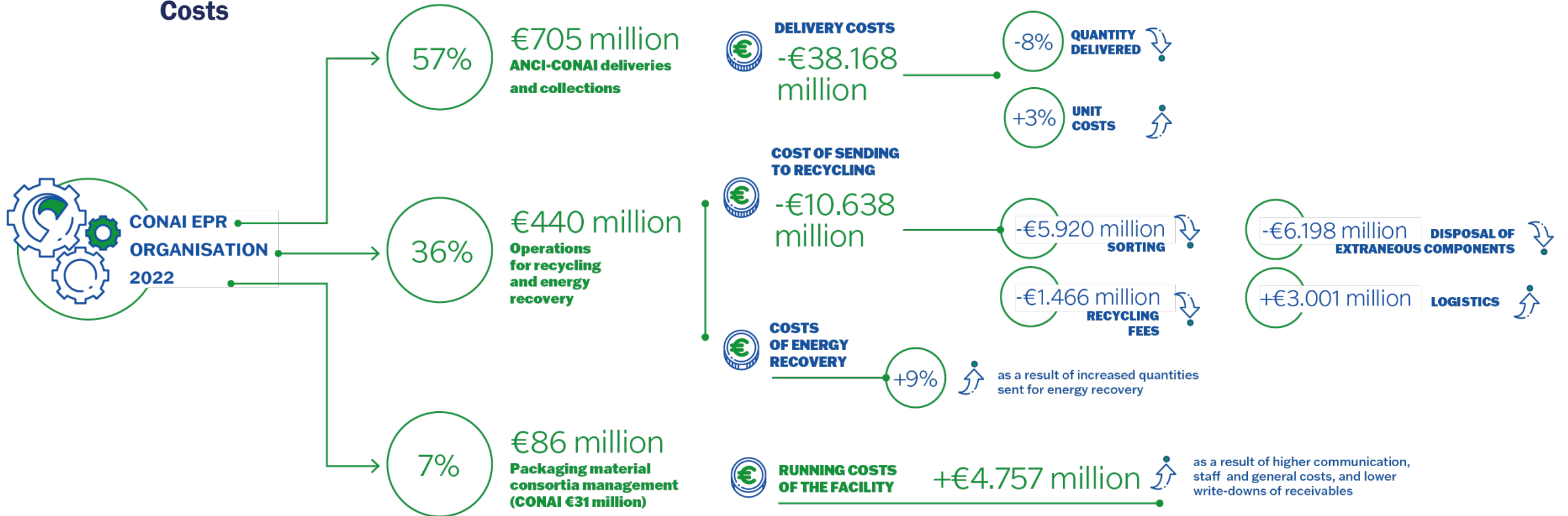


SOURCE: Data summary generated by CONAI from Management Report and Financial Statements 2022 data.



Economic results of system

Costs

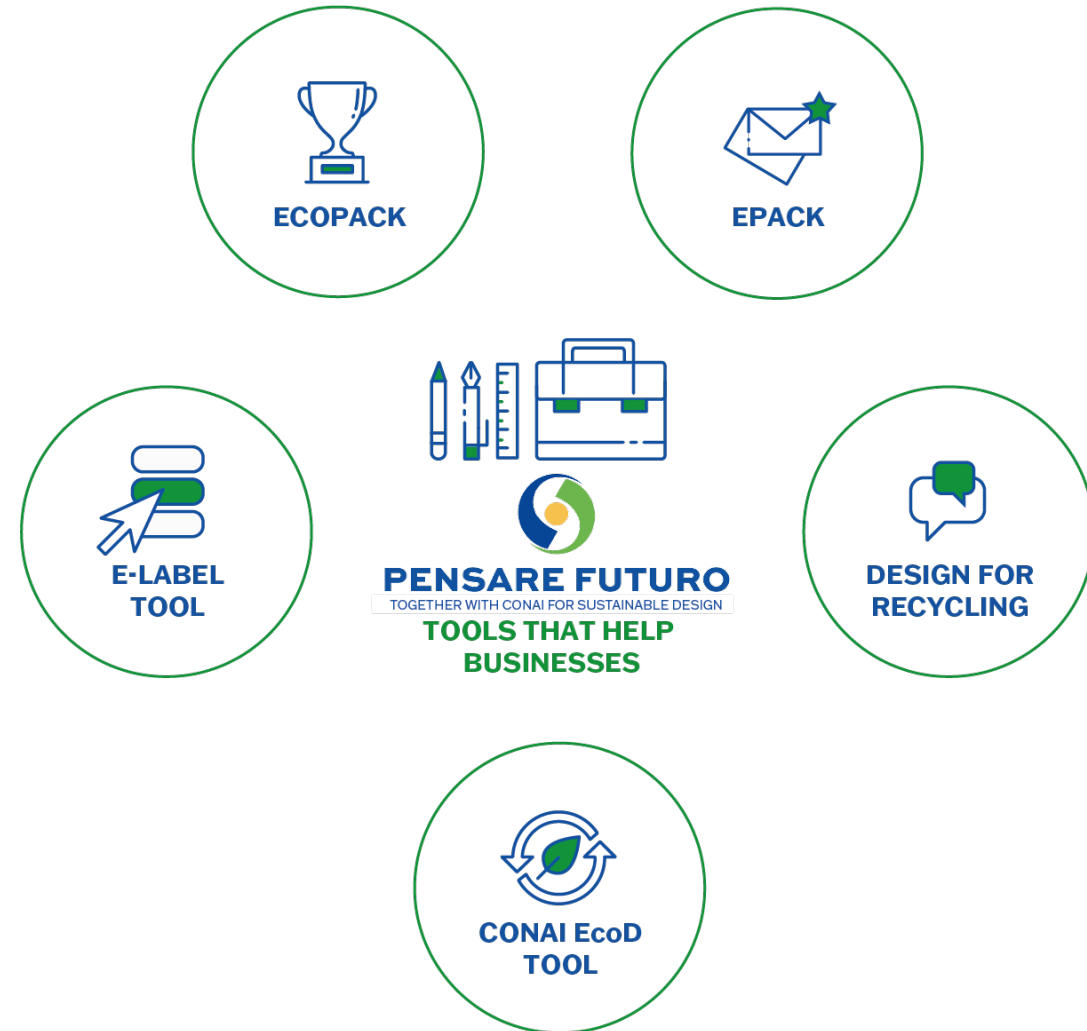


SOURCE: Data summary generated by CONAI from Management Report and Financial Statements 2022 data.



“PENSARE FUTURO” (THINKING THE FUTURE)

Eco-design for increasingly sustainable and recyclable packaging.





CONAI EcoPack

Designed to reward the most sustainable packaging solutions.

For each type of packaging, the average environmental benefits generated through “amplification” of eco-design levers were calculated for all packaging in the typical basket placed on the market in Italy. These improvements were then multiplied by the number of units sold, based on an analysis of packaging placed on the market by material and product category for the year 2022.

PREVENTION HAS SIGNIFICANT POTENTIAL IN TERMS OF THE ENVIRONMENTAL BENEFITS IT CAN BRING

PRIMARY MATERIAL SAVED ————— ●
7.75 million tonnes



The weight of
527 Towers of Pisa

WATER SAVED ————— ●
235 billion litres



94,000 Olympic-sized
swimming pools

ENERGY SAVED ————— ●
90 TWh



The average annual
electricity consumption
of 24 million Italian
households

EMISSIONS AVOIDED ————— ●
18 million tCO₂



The emissions generated
by 43,000 return flights
between Rome and New York

SOURCE: Data generated by Life Cycle Engineering from CONAI data.



Key tools

Two key tools of consortium management for the proper end-of-life of packaging and increasing its recycling rate:



ANCI-CONAI FRAMEWORK AGREEMENT ON URBAN ORIGIN SEPARATE COLLECTION STREAMS

Also encompasses extraordinary support projects for the local authorities which have lagged most behind, to narrow the gap between different areas of the country.



PLATFORMS FOR THE MANAGEMENT OF INDUSTRIAL AND COMMERCIAL PACKAGING AND PACKAGING WASTE

Consists of incentives to repair packaging, regenerators, and a packaging waste interception network.



ANCI-CONAI deliveries

ITALY

Decreasing quantities due to the positive trend of the secondary raw materials market, in line with the Agreement's subsidiarity principle.

ANCI-CONAI DELIVERIES

Material	FINAL RESULTS 2022		Delta vs 2021
	ktonnes	kg/person	%
Steel	131	2.6	-16.7
Aluminium	16.5	0.354	-7
Paper	1,307	23.8	-16.5
Wood	n/a	n/a	n/a
Plastic	1,292	22.13	-1
Biodegradable and compostable plastic	42.9	1.13	30.1
Glass	2,118	37.06	-0.7
Total	4,908		-6.3

SOURCE: CONAI, General Programme for the Prevention and Management of Packaging and Packaging Waste 2022.



ANCI-CONAI DELIVERIES

4,908 ktonnes

-6.3%

compared to 2021



PAYMENTS MADE TO MUNICIPALITIES

€680 million

€727 million

in 2021



MUNICIPALITIES SERVED

7,665



POPULATION COVERED

99%



CONAI support for recycling

Payments made to municipalities

The payment made to municipalities – through the packaging material consortia – is the most important instrument through which CONAI promotes the growth of separate collection of packaging waste.

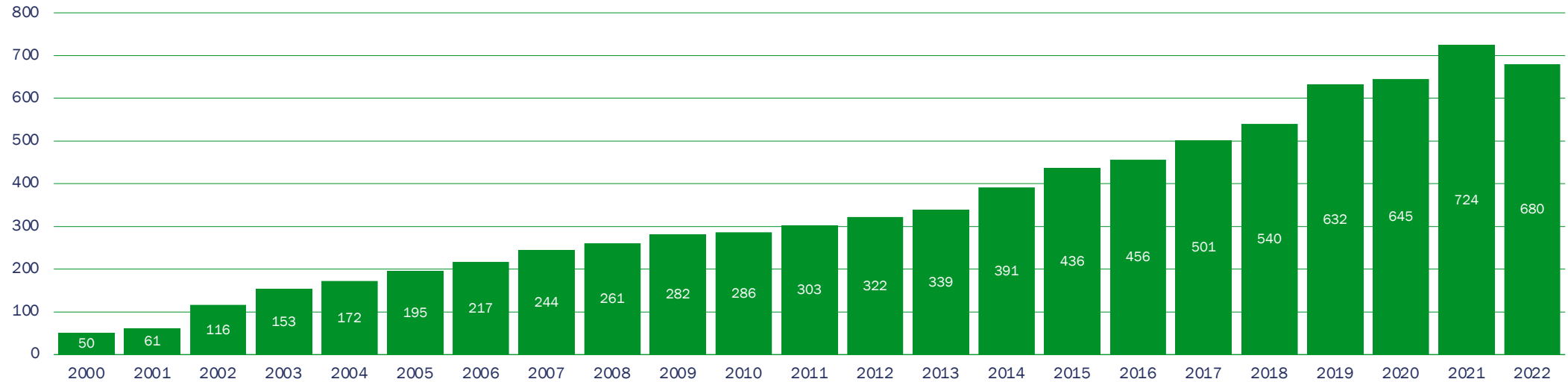


in 21 years
OVERALL TOTAL
over €8 billion

paid by the CONAI EPR organisation to municipalities/managers to support separate collection

PAYMENTS SUPPORTING SEPARATE COLLECTION

€ million



SOURCE: Data generated by CONAI – Research Centre, from historical data.



CONAI support for recycling



in 21 years
OVERALL TOTAL
almost €5 billion

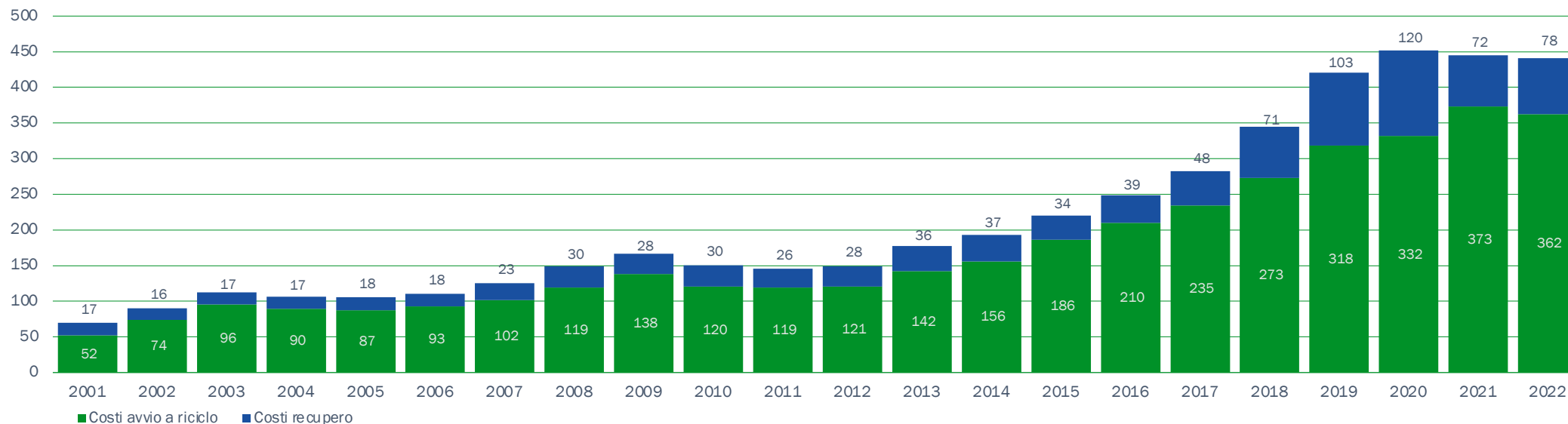
paid by the CONAI EPR organisation to cover the costs of recycling and recovery of packaging

Recycling and energy recovery contribution

The contribution made to sector operators – through the packaging material consortia – is the instrument through which CONAI promotes the development of the sector for recycling and recovery of packaging waste.

RECYCLING AND RECOVERY CONTRIBUTION

€ million



SOURCE: Data generated by CONAI – Research Centre, from historical data.



CONAI support for recycling



in 16 years
OVERALL TOTAL
almost €40 million

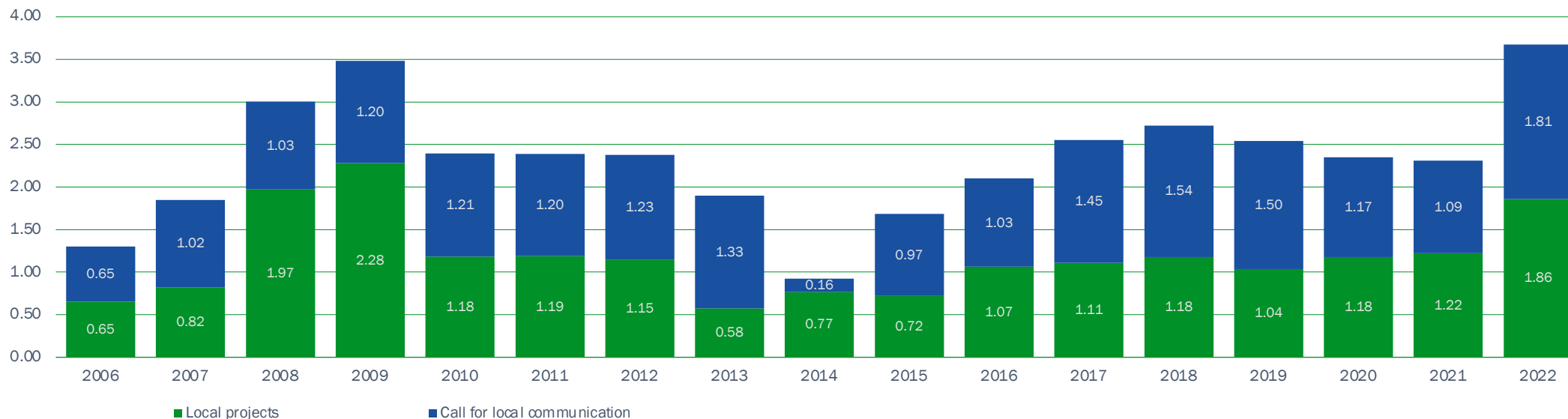
paid by the CONAI EPR
organisation
to local projects

Local projects

ANCI and CONAI have agreed, within the Framework Agreement and with specific reference to the management of packaging waste, to support the local development of the most effective and efficient municipal waste management methods, with a particular focus on the areas of the country that are lagging furthest behind.

LOCAL PROJECTS

€ million



SOURCE: Data generated by CONAI – Research Centre, from historical data.



ANCI-CONAI call for local communication projects

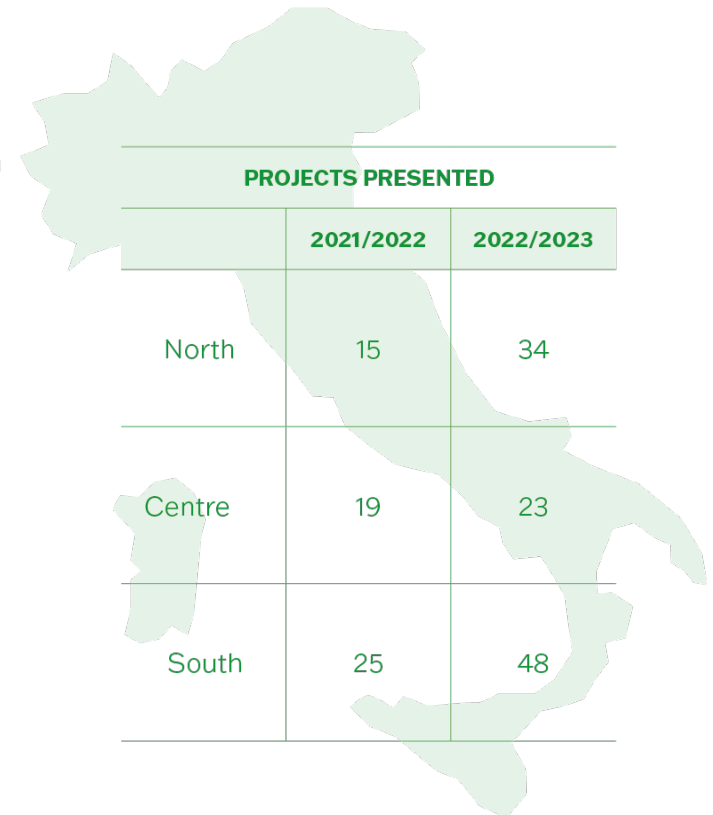
The instrument by which individual or associated municipalities, government bodies and/or waste service managers appointed by them, can obtain a co-financing contribution in order to implement local communication projects that they have developed.

Closing of assessments for 2021/2022 edition

- **€1,200,000** of allocated funding +9%
- **44 projects** co-funded +7%
- **7.5 million inhabitants** involved -25%

Launch of 2022/2023 edition

- **105 projects** presented



SOURCE: CONAI, General Programme for the Prevention and Management of Packaging and Packaging Waste 2022.



Extraordinary activities to support EGATO operations and/or municipalities in relation to the PNNR

Total projects presented – PNNR



4.7 million inhabitants reached by CONAI action



189 total municipalities involved*

* of which 185 approved for funding



1,775 project type solutions



€115 million value of projects developed

CITIES INVOLVED



1,290 **SPT - A1**
Mini intelligent recycling centres (on fenced-off publicly-owned land)



100 **SPT - C**
Implementation of hardware and software tools and fast billing



82 **SPT - A2**
Mini intelligent apartment block / neighbourhood recycling centres (on unfenced-off publicly-owned land)



76 **SPT - D1**
Small municipal collection centres (2,400 m²)



220 **SPT - B**
Supplies of Digital Recycling stations or Ecoboxes



7 **SPT - D2**
Large municipal collection centres (3,600 m²)

SOURCE: CONAI, General Programme for the Prevention and Management of Packaging and Packaging Waste 2022.



Industrial and commercial packaging

The CONAI system offers a second-instance industrial and commercial waste packaging service, performing strictly a guarantee function.

SOURCE: Abstract, General Programme for the Prevention and Management of Packaging and Packaging Waste 2022.

Consortium	Reuse	Regeneration	Recycling	Assimilation
RICREA		<ul style="list-style-type: none"> • Drums and tanks: 34 ktonnes 	<ul style="list-style-type: none"> • Non-regenerable hazardous drums: 12 ktonnes • Non-hazardous non-reusable: 125 ktonnes • Strapping: 29 ktonnes 	
COMIECO			<ul style="list-style-type: none"> • Collection at business premises and other small and medium-sized businesses (UND) • Network of 142 platforms 	<ul style="list-style-type: none"> • Cardboard boxes from households in combined separate collection and non-domestic-use in selective separate collection
RILEGNO	<ul style="list-style-type: none"> • Weight abatement on CAC for reusable packaging: 908 ktonnes benefited from CAC reduction 	<ul style="list-style-type: none"> • Recovered cistern bases: 9 ktonnes per 31 plants • Pallet retreatment project: 133 ktonnes of regenerated pallets from 65 EPR organisation members 	<ul style="list-style-type: none"> • Network of 378 platforms: 797 ktonnes 	
COREPLA		<ul style="list-style-type: none"> • Drums and tanks (PIFU): 24.5 ktonnes per 32 plants 	<ul style="list-style-type: none"> • PEPS – expanded polystyrene packaging recycling platform: 10.3 ktonnes per 28 plants • Network of 53 platforms in partnership with CARPI consortium affiliated plants: 180.6 ktonnes 	<ul style="list-style-type: none"> • Film: 142.7 ktonnes



The CONAI system contribution

Economic benefits

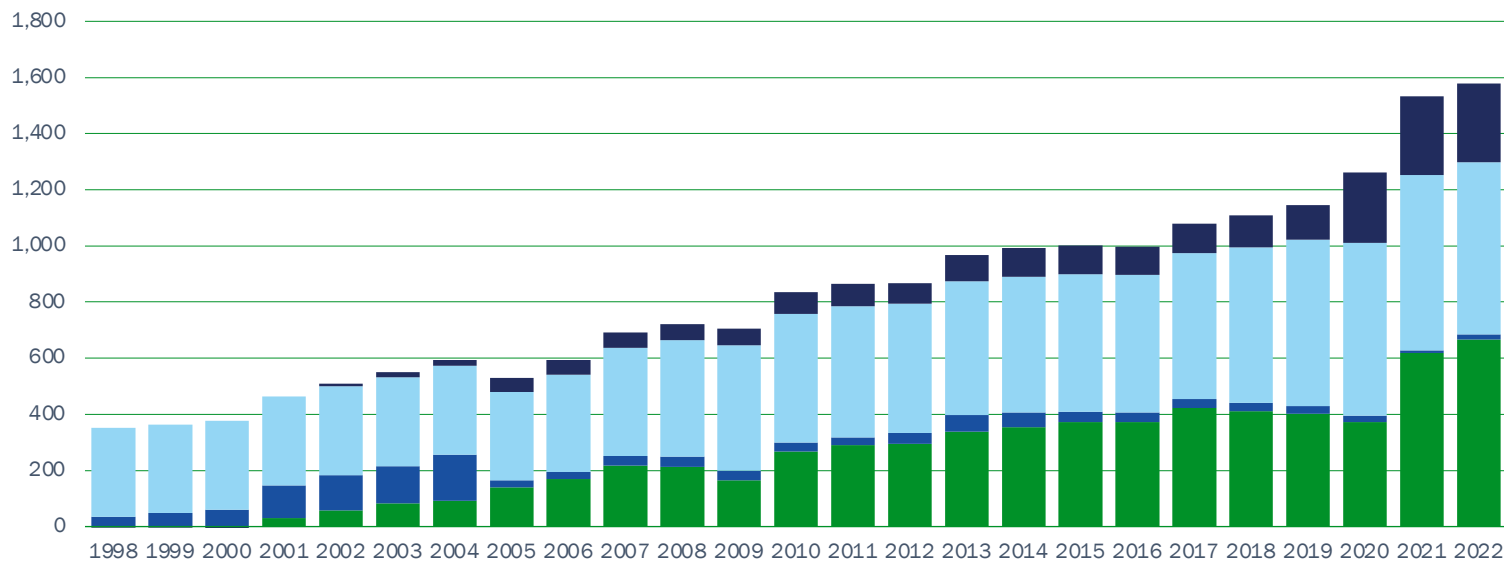


in 2022
OVERALL TOTAL
€ 1.5 billion

in 25 years
OVERALL TOTAL
over € 20 billion

ECONOMIC VALUES GENERATED BY THE CONAI SYSTEM

€ million



SOURCE: Data generated by CONAI Research Centre, from LCC Tool data in partnership with Studio Fieschi.

- Economic value of primary material saving:** the economic value of the amount of **primary material saving**.
- Economic value of energy produced from energy recovery:** the economic value obtained from the amount of energy produced from the energy recovery of packaging waste.
- Economic value of the avoided CO₂ from recycling and energy recovery:** the indirect economic value calculated from reduced greenhouse gas emissions due to recycling and energy recovery.
- Economic activity generated:** the economic value of activities taking into account those working in collection and preparation of packaging recycling*.

* The estimated figure includes the total indirect benefits of economic activity generated as presented in 'The benefits of packaging recycling in Italy'.



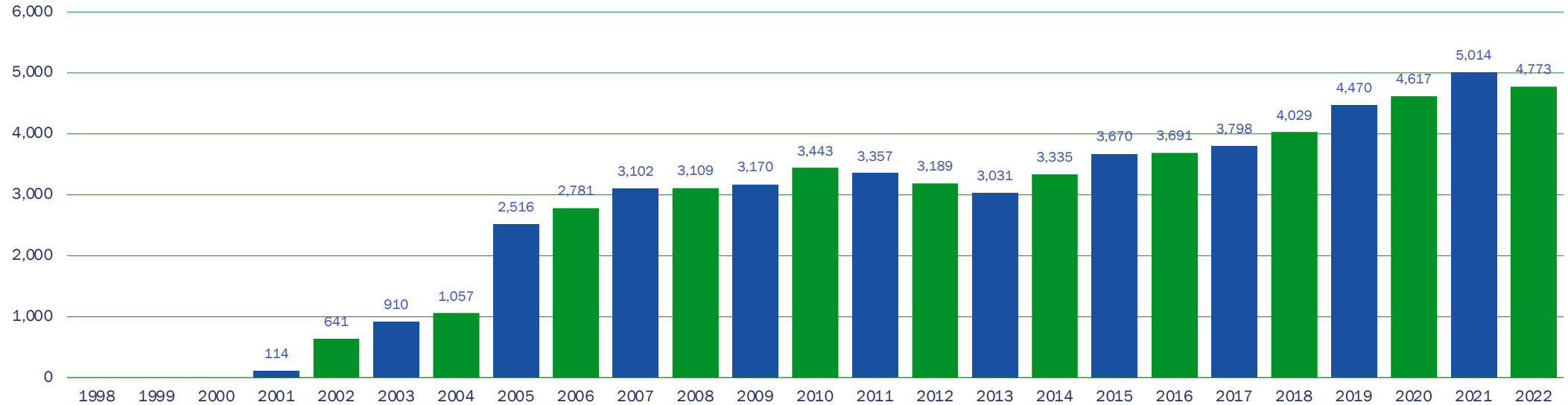
The CONAI system contribution

Primary material savings

Using the LCC Tool, CONAI has estimated the amount of material, derived from virgin raw materials, that is saved through the use of secondary raw materials obtained from waste sent for recycling by the various supply chains over 25 years of activity.

PRIMARY MATERIAL SAVINGS

ktonnes



SOURCE: Data generated by CONAI Research Centre, from LCC Tool data in partnership with Studio Fieschi.



in 25 years
MATERIAL SAVED DUE TO
THE USE OF SECONDARY
RAW MATERIALS
68 million
tonnes



in 2022 alone
MATERIAL SAVED DUE TO
THE USE OF SECONDARY
RAW MATERIALS
obtained from waste
from various sectors
= the weight
of 324 Towers
of Pisa*



* Tower of Pisa estimated at 14,700 t



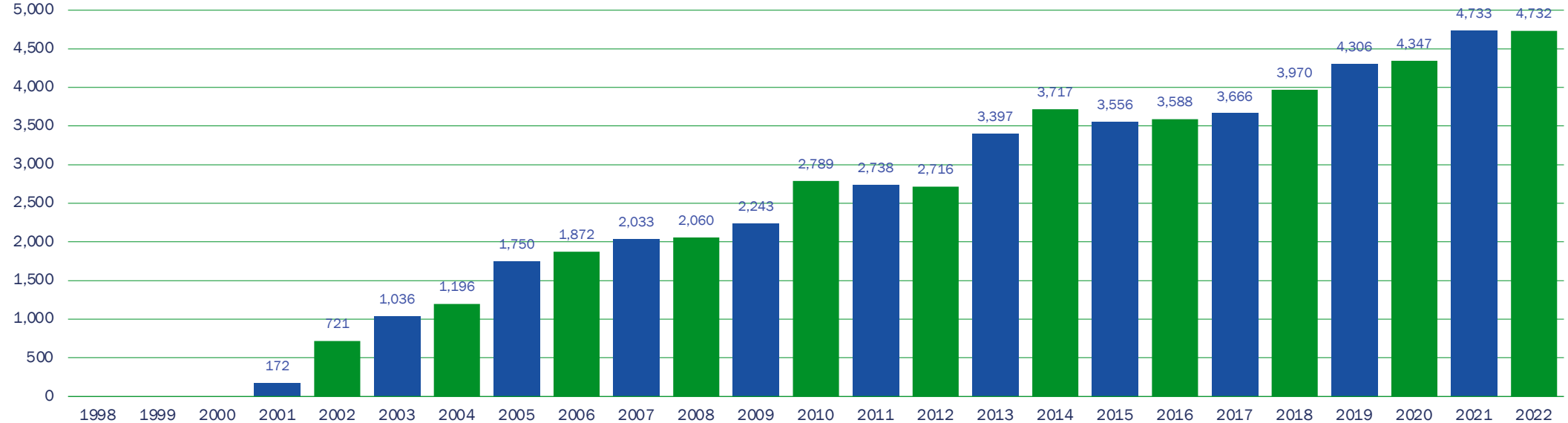
The CONAI system contribution

Avoided CO₂eq production from recycling *

* The avoided production of CO₂ from recycling is the difference between the saved production of greenhouse gases due to the avoided production of primary material and the greenhouse gas emissions from preparation operations for packaging recycling

AVOIDED CO₂ PRODUCTION FROM RECYCLING

ktonnes CO₂eq



SOURCE: Data generated by CONAI Research Centre, from LCC Tool data in partnership with Studio Fieschi.



in 25 years
CO₂ EMISSIONS AVOIDED
61 milioni
tonnes
of CO₂eq



in 2022 alone
CO₂ EMISSIONS AVOIDED



= emissions
of 3,767 flights
around the world*

* Estimated emissions for a flight of 40,000 km and emissions of 1,256 tCO₂eq/flight

(transport and processing to convert packaging waste into new raw material). Greenhouse gases are all gases (such as CO₂) that have a global warming effect if emitted into the atmosphere.





The CONAI system contribution

Primary energy savings from recycling *

* The primary energy savings from recycling refer to the amount of primary energy from fossil fuels avoided due to recycling.


in 25 years
ENERGY SAVINGS from
recycling of packaging
in Italy

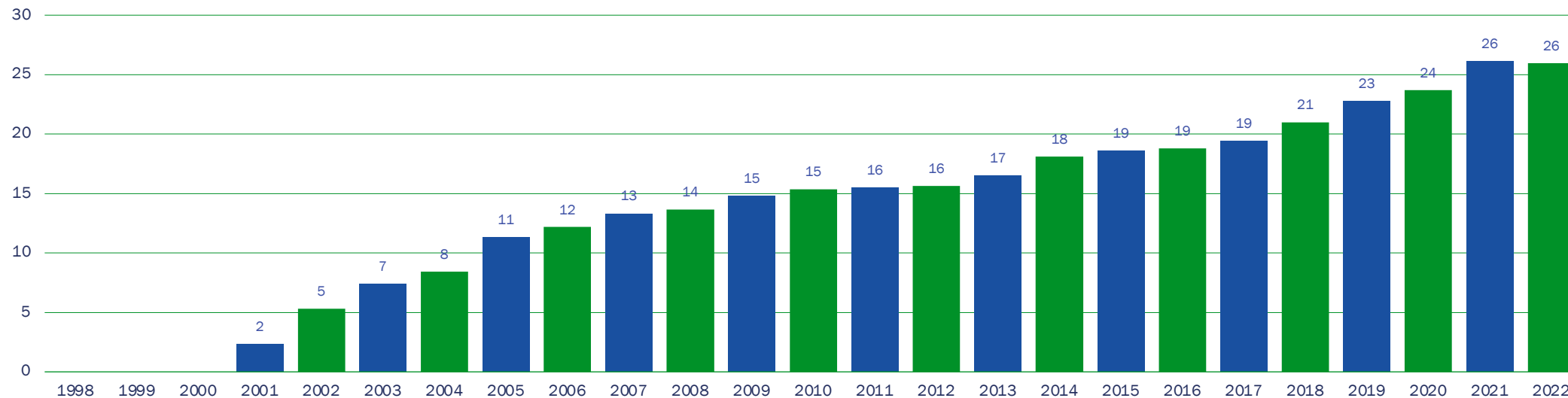
346 TWh


in 2022 alone
ENERGY SAVINGS
 = electricity consumption
of around 1/3 of Italian
households*

* Consumption of fossil fuels per household estimated
at 3.78 MWh/household per year

PRIMARY ENERGY SAVINGS FROM RECYCLING

TWh



SOURCE: Data generated by CONAI Research Centre, from LCC Tool data in partnership with Studio Fieschi.



3.6

Organisation



ORGANISATION



The environmental results of the CONAI organisation

in 2022
PRODUCTION OF WASTE -59%*
 * Estimate may be higher than actual production due to difficulties of measurement

since 2018
 reduced **PURCHASE OF PAPER**

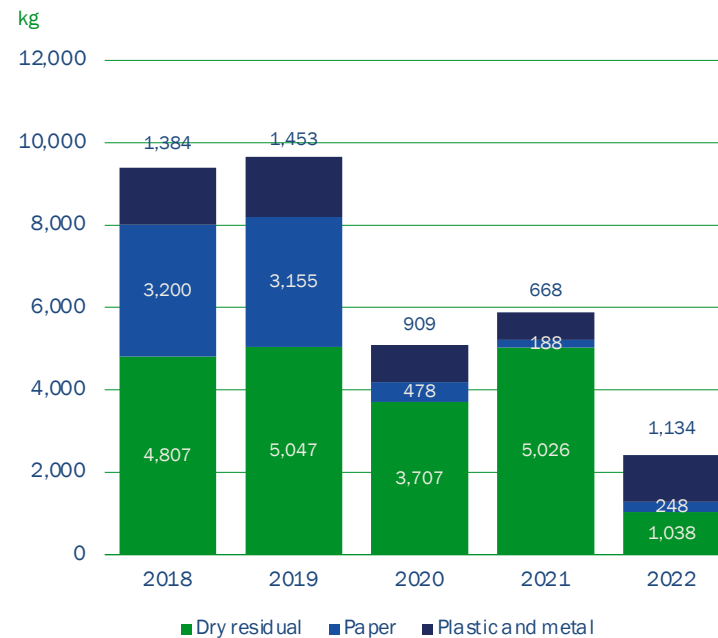
Material and waste management in offices

The **reduction in waste production** is mainly attributed to:

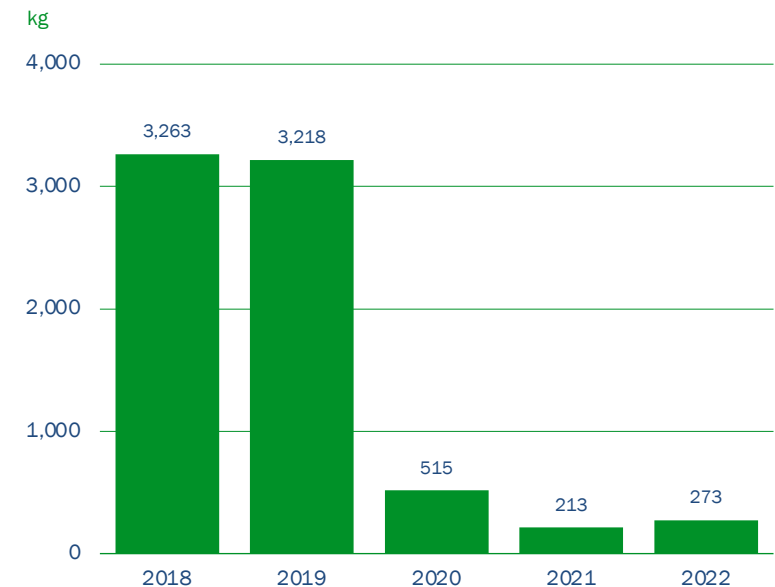
- updated conversion factors
- timely measurement of waste disposal from office bins during the year

The **fluctuations in paper purchased** over the years can be attributed not only to actual changes in consumption, but also to inventory dynamics.

WASTE PRODUCED IN OFFICES IN MILAN



PAPER PURCHASED IN OFFICES IN MILAN AND ROME



SOURCE: Data generated by CONAI Research Centre, from Environmental Management System data.



The environmental results of the CONAI organisation



in 2022
ENERGY FROM RENEWABLE SOURCES
38.1%

ENERGY CONSUMED
662 MWh

59% from electricity consumption

41% from methane gas for heating

GENERATED CO₂
188 tonnes

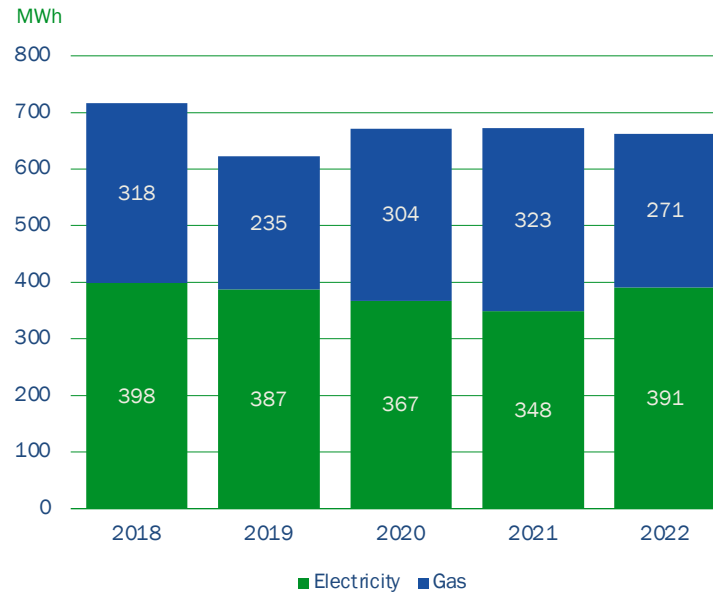
61% from electricity consumption

39% from methane gas for heating

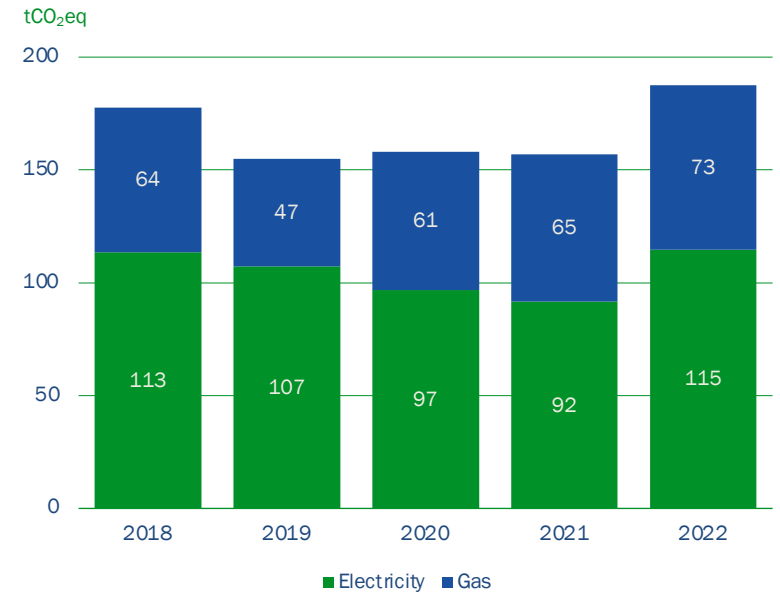
Managing energy consumption and emissions in offices

The increase in recorded emissions is mainly attributable to updated emission factors.

FINAL ENERGY CONSUMPTION IN OFFICES IN MILAN AND ROME



GREENHOUSE GASSES PRODUCED BY OFFICES IN MILAN AND ROME



SOURCE: Data generated by CONAI Research Centre, from Environmental Management System data.

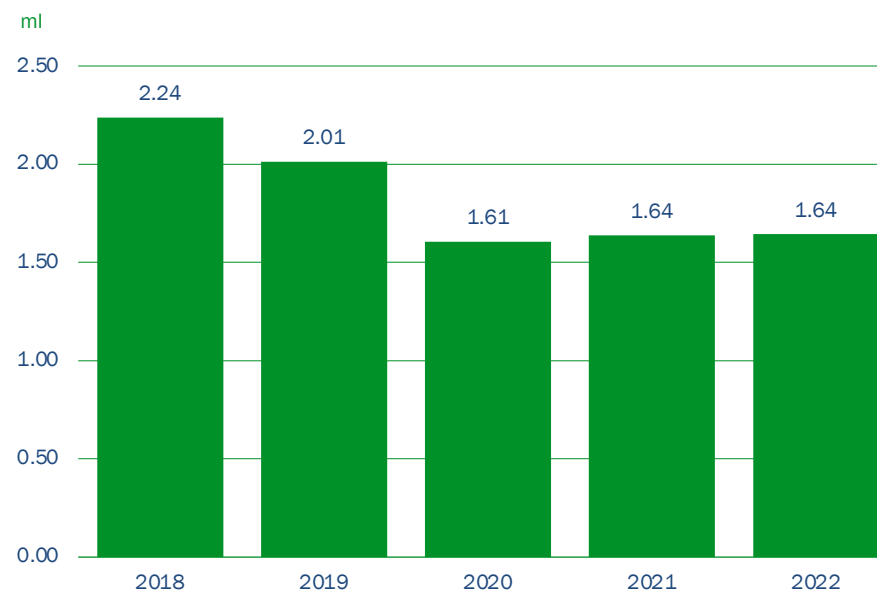


The environmental results of the CONAI organisation

Managing water consumption in offices

Stable consumption in 2022, confirming the substantial **reduction** compared to levels before the start of the pandemic.

WATER CONSUMPTION IN OFFICES IN MILAN

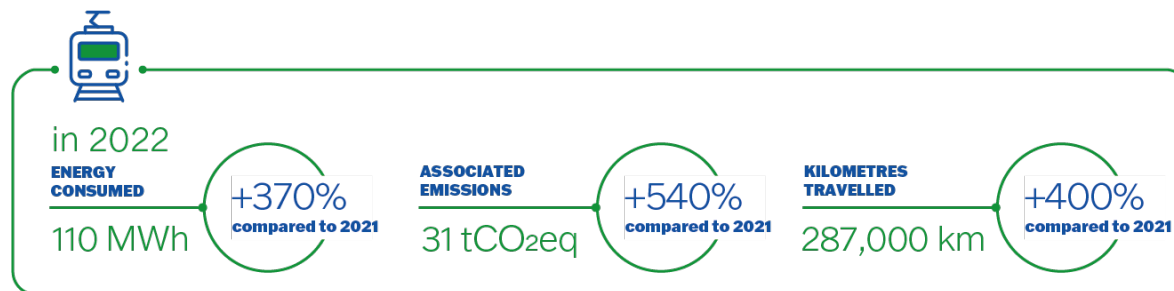


SOURCE: Data generated by CONAI Research Centre, from Environmental Management System data.

The 2021 figure, the same as the 2022 figure, is not yet final. It is determined through the service manager's average annual consumption calculated as established in article 10 of annex A (TIMSII) of ARERA Resolution 218/2016/R/IDR.

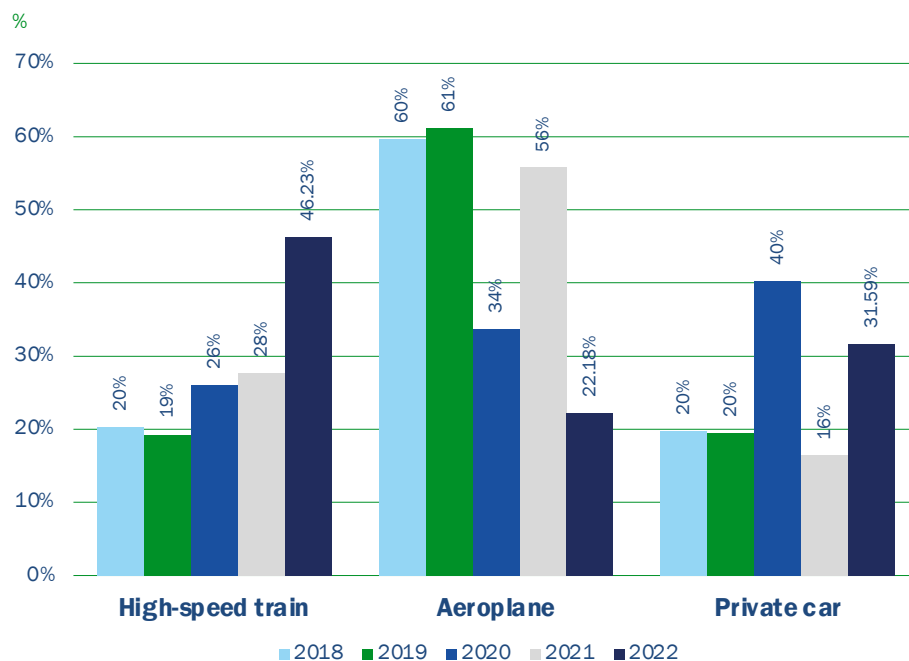


The environmental results of the CONAI organisation



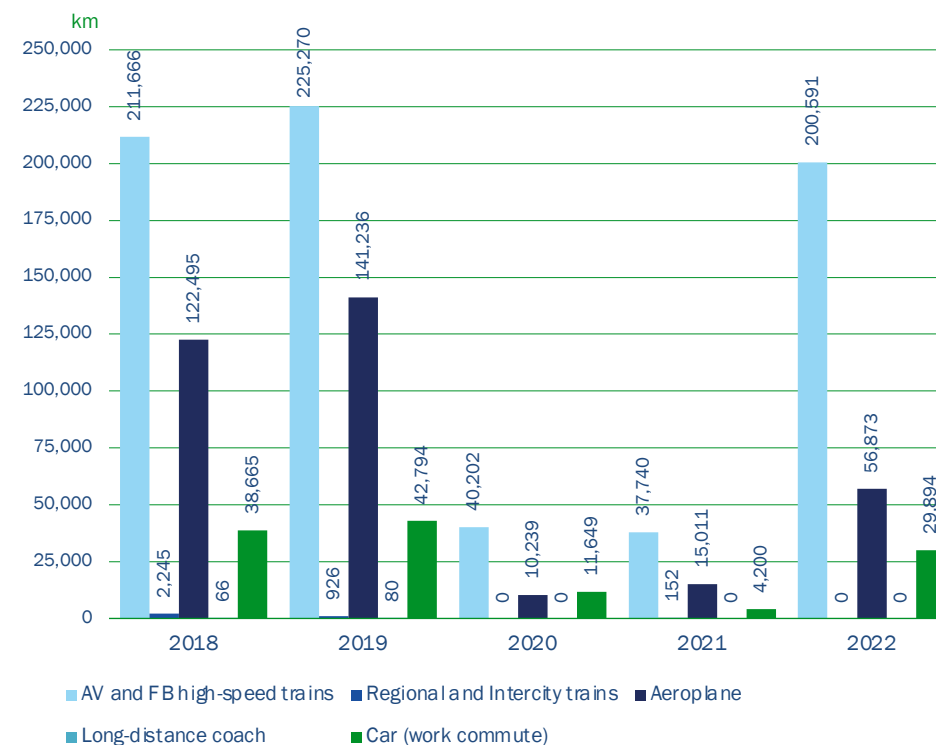
Employee transport

EMISSIONS



SOURCE: Data generated by CONAI Research Centre, from Environmental Management System data.

JOURNEYS



The background features a repeating pattern of stylized, interlocking circular shapes. Each shape is composed of two overlapping semi-circles, one in a vibrant green and the other in a light blue, creating a sense of depth and movement. The patterns are scattered across the white background, with some appearing larger and more prominent than others.

Innovation and research

4



4.1

Studies and research



OBSERVATORIES 2023

Regulations and market

CESISP

Economia e regolazione dei servizi, dell'industria e del settore pubblico

REF Ricerche

Laboratorio e supporto regolatorio

AGICI Finanza d'impresa

Utilities e strategie di governance

Prevention

Scuola Superiore Sant'Anna Progetto SCELTA

Osservatorio sulle iniziative di prevenzione a livello sociale

Reporting

Prometeia

Analisi e previsioni immesso al consumo e MPS

Istituto Italiano Imballaggio

Monitoraggio immesso al consumo e importazioni

Plastic Consultant

Monitoraggio flussi specifici

Strategy& PwC

Presidio prescrizioni applicabili

IPLA

Monitoraggio imballaggi destinati a recupero energetico da flusso indifferenziato



PUBLICATIONS 2022

UNIVERSITÀ CATTOLICA

Analisi sulle differenti tipologie di architettura istituzionale di riciclo di Europa

AGICI FINANZA D'IMPRESA

Strategie degli operatori e assetti di governance regionali nel settore dei rifiuti

SCUOLA SUPERIORE SANT'ANNA

Progetto SCELTA - Osservatorio sulle tendenze di acquisto dei consumatori

CONAI

FARE CIRCOLARE

PLASTIC CONSULT

Potenzialità di impiego dei combustibile solido secondario da rifiuti (CSS)



OBSERVATORIES 2023

Local entities

SUSDEF

Green City Network

SUSDEF

Italia del Riciclo

International

EXPRO

Confronto, studi e collaborazioni tra Sistemi EPR



PUBLICATIONS 2022

CONAI - TUTTOAMBIENTE

Cessazione della qualifica di rifiuto, vademecum per le imprese

SUSDEF

Green City Network
Le principali novità normative in materia di gestione dei rifiuti urbani
Aggiornamento per le amministrazioni locali

REMADE

Indagine sull'utilizzo di materiale riciclato nell'industria del packaging e sul Green Public Procurement in Italia

UNIVERSITÀ BOCCONI

Screening the EU packaging waste management: Producer Responsibility Organisation efficiency and effectiveness

EGEN PNO GROUP

Mapping DRS, Deposit Refund System for Re-use and for Recycling in Europe

WUPPERTAL INSTITUTE

Packaging EPR FEE in UE

UNIVERSITÀ BOCCONI

Valutare delle opportunità dei Sistemi di Deposit Return System (DRS) per i rifiuti di imballaggio in Italia

CENTRO MATERIA RINNOVABILE

Packaging EU EPR Organisations: Grado di responsabilità Operativa



4.2

Training and skills development projects

CONAI's involvement in circular economy skills training is growing.

PROMOS RESEARCH UNIVERSITY CONSORTIUM AND LOCAL GOVERNMENT SCHOOL (UNIVERSITY OF CAMPANIA)

Two editions of the 1-month "Green Jobs" advanced training course for 160 recent graduates.

THREE-YEAR PARTNERSHIP WITH ENEA

1st edition of call for 6 dissertations (over 3 years) on circular economy and waste management.

- €3,000 for each dissertation
- Series dedicated to dissertations

TUSCIA UNIVERSITY

- Training seminar cycle for students (5 weeks)
- 1st edition of UNITUS-CONAI graduate prize for 2 dissertations on eco-design and circular economy

CIRCULAR SOUTH

Fostering project planning and entrepreneurship in the circular economy.

- 80 students and recent graduates involved
- 3 winning teams

PRIMARY SCHOOL



6

classes awarded

SCHOOL PROJECT – "CLASS RECYCLING"

on separate collection and recycling of packaging waste.

- Academic year 2021/2022
- Theatre show "It depends on us"
- 395 participating classes
- 1,345 entries
- 9,800 students

SCHOOL OF ADVANCED STUDIES ECOLOGICAL TRANSITION

- 8-week e-learning course
- 28 "waste managers" involved



CONAI and its organisation



5.1

Guidance documents

HUMAN RIGHTS

- Organisational Model 231
- Code of ethics

In accordance with the regulations on the administrative liability of legal persons set out in Legislative Decree 231/2001 and consistent with its own ethical and social principles of fairness and transparency in the conduct of institutional activities, the CONAI Board of Directors has adopted an Organisation, Management and Control Model and a Code of Ethics.

Anti-corruption and anti-trust

- Organisational Model 231
- CONAI Anti-trust Compliance Programme

The CONAI Board of Directors approved the “CONAI Anti-trust Compliance Programme”, which is a clear expression of the Consortium’s intention to promote and implement the prevention of antitrust violations at every level of its structure.

HEALTH AND SAFETY

- Risk assessment document
- Participation of workers

CONAI has organised its prevention and protection service in accordance with current legislation.

5.2

Employee training and management

CONAI employees

In 2022, there was a further decline in the number of hours devoted to the professional development of workers. This less pleasing result compared to 2021 (-56.04%) was influenced by the many commitments focused on promoting the results of the 25th anniversary of the establishment of CONAI.

Type of contracts Permanent

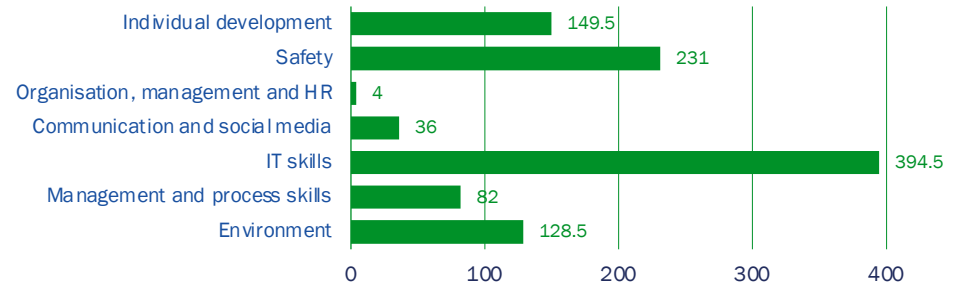
The Consortium's activities are performed by



COMPOSITION OF WORKFORCE

Level/age	Women	Men	Total
Executives	3	4	7
Managers	6	7	13
Level A	14	12	26
Level B	14	4	18
Level C	3	1	4
Level E	0	0	0
Total	40	28	68

DISTRIBUTION OF TRAINING HOURS BY SUBJECT AREA



TRAINING FOR WOMEN

512.50 hours

3.37 hours
on average

TRAINING FOR MEN

513.00 hours

4.35 hours
on average

5.3

Employee training and management

In 2022, CONAI attained the annual certification Great Place to Work®.

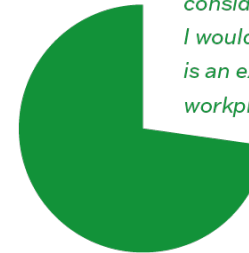


TRUST INDEX

69%



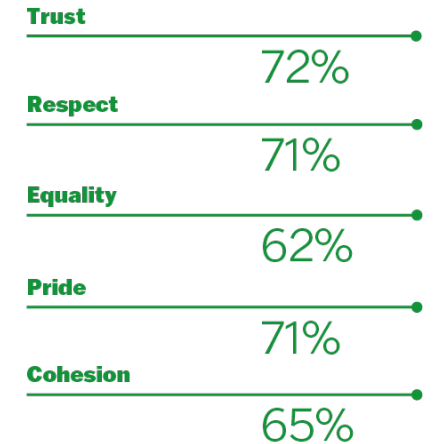
75%



"All things considered, I would say this is an excellent workplace"

RESPONSE RATE

97%





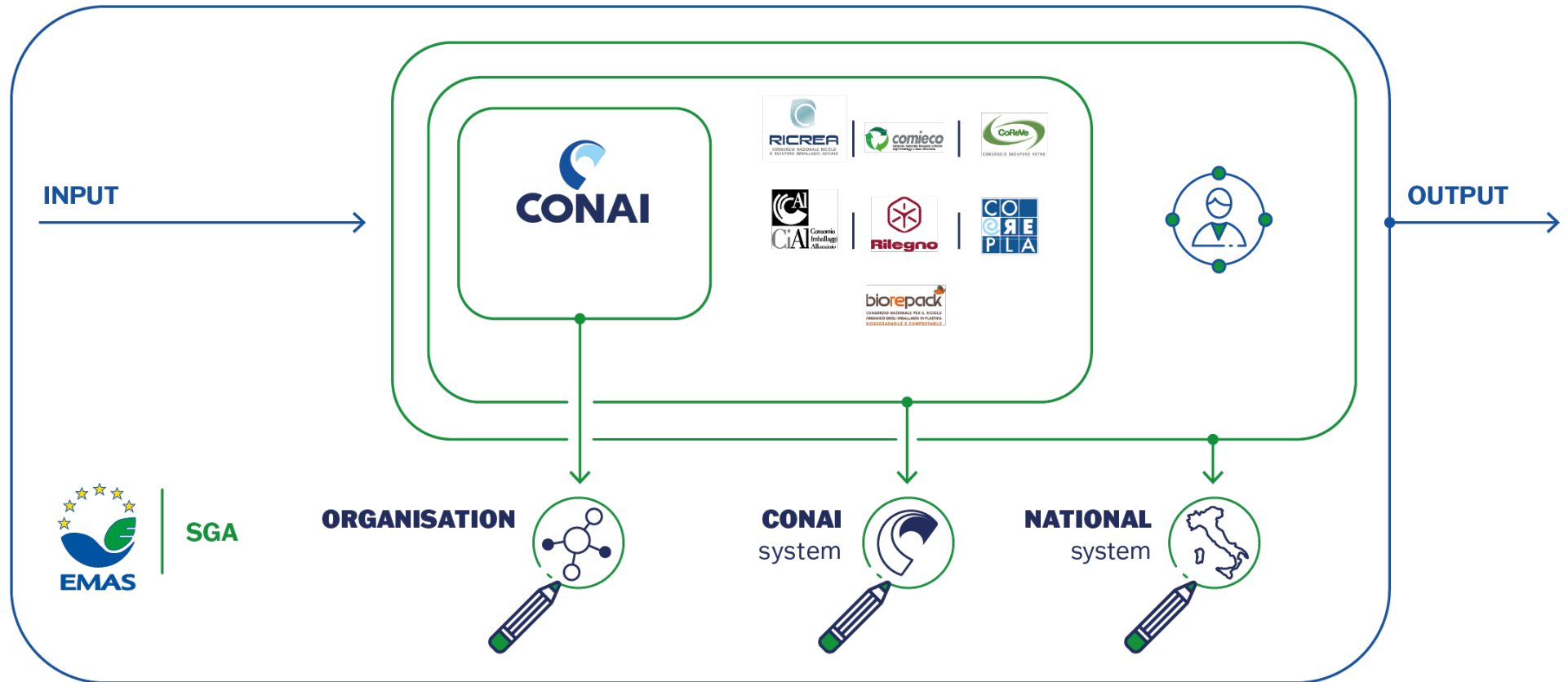
6

**Environmental
management
system**



6.1

Scope of reporting





6.2

Environmental Policy

Updated and amended in February 2022, the Environmental Policy, approved by CONAI's top management, is now fully implemented and is the main guiding document of the Environmental management system, adopted by CONAI in accordance with the requirements of Regulation (EC) 1221/2009 (EMAS III) and UNI EN ISO 14001.

Environmental Policy





6.3

Environmental Programme

The environmental objectives for the **three-year period 2022-2025** – some continuing from the previous three-year period – **were defined following principles and guidelines set out in the Environmental Policy.**

Environmental Programme

<p>1</p>  <p>Growing contribution to circular economy and environmental protection</p>	<p>2</p>  <p>Strengthening of stakeholder relations</p>	<p>3</p>  <p>Development of skills</p>
<ul style="list-style-type: none"> • Call for prevention • Tools for prevention • Fee modulation • Actions in support of local events • Call for local prevention • Carbon neutrality 	<ul style="list-style-type: none"> • Academy and community • Support for EPR organisation members • Institutional relations 	<ul style="list-style-type: none"> • Training and skills
<p>4</p>  <p>Compliance with mandatory and voluntary requirements</p>	<p>5</p>  <p>Accountability</p>	<p>6</p>  <p>Improvement of organisational processes</p>
<ul style="list-style-type: none"> • Guidelines and competences 	<ul style="list-style-type: none"> • Quality of data provided to institutions 	<ul style="list-style-type: none"> • Participation in SGA



7

Further reading



7.1 CONAI and the Sustainable Development Goals

Priority SDGs for CONAI



- Skills development: training, education, raising awareness among organisations, associations and citizens



- Promotion of innovation and research
- Secondary primary materials, EoW and circular economy



- Prevention of waste generation
- Achieving national recycling targets



- Consumption of raw materials
- Energy consumption
- Greenhouse gas emissions and climate change



- Support for disadvantaged areas



- Greenhouse gas emissions and climate change



- Accountability: traceability, reliability and robustness of data
- Direct and indirect economic benefits of packaging recovery
- Financial support to ensure effective functioning of the system



- Support for the qualitative and quantitative growth of separate collection



- Consumption of raw materials
- Energy consumption
- Skills development: training, education, raising awareness among organisations, associations and citizens



7.2

The sector's contribution to combating climate change

What are the responses to decarbonisation in the various sectors?



STEEL

Increase the use of scrap and green energy.



WOOD

Increase CO₂ natural stock and absorption.



ALUMINIUM

Increase the use of alternative fuels and green energy.



PLASTIC

Renewability of raw materials.



PAPER

Energy efficiency and biomass.



GLASS

Use of scrap and alternative energy sources.



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