



**20
24**

Sustainability Report



Letter from the President

CONAI's commitment to sustainability is not just a choice of responsibility: it is of course an institutional mandate, but it is also a vision of a future in which the planet's resources are used more efficiently while protecting the environment.

The new edition of our Sustainability Report aims to demonstrate this commitment, which the CONAI EPR Organisation has been pursuing for twenty-seven years, and its effects on the ecosystem.

For the first time, we have adopted a new calculation method to report the value generated by correct packaging management, which produces both economic and strictly environmental benefits.

The choice – and I emphasise that it is a choice, not just a possibility – of using second-use material instead of virgin raw material has a direct impact, also in terms of employment, with significant repercussions on our economic system.

Every euro of EPR Fee that Italian businesses invest through CONAI and Packaging Material Consortia in the careful management of end-of-life packaging has a multiplier of 4.6 in terms of value generated for the Italian economy.

The environmental indicators are new evidence of how reuse and

recycling can have a very positive impact on the ecosystem:

- saving raw materials continues to be essential, especially in a country like ours, which does not have an abundance of them;
- recycling is proven to be a major stakeholder in the fight against decarbonisation: the CO₂ not emitted thanks to the primary material not produced, net of that generated to prepare packaging materials for recycling, was equal to 8,000 flights around the world in 2023;

- the primary energy savings achieved through recycling are equivalent to the domestic consumption of half of all Italian households in one year. For the first time, this calculation introduces the primary energy consumption associated with preparing end-of-life packaging for recycling and transport throughout the supply chain.

I hope that these numbers will encourage analysis and evaluation that can stimulate the adoption of extended producer responsibility management models that truly contribute to the circular economy. The Italian packaging management model, which in Italy accounts for only about 8% of the waste produced, can set an example for other supply chains, so that an increasing number of materials enter a truly circular and sustainable flow.

Ignazio Capuano
CONAI President

Greeting from the General Manager

At the last edition of the Festival of Cultural Journalism, held every year in Urbino in the first week of October, I was discussing environmental information with several industry professionals. We were at the Festival to award the two winners of the CONAI Phoenix award for Young Environmental Journalism 2024: before presenting the statuettes, there was much talk not only about the role of women in promoting a culture of sustainability (the theme of the 2024 Festival was “The female gaze in cultural journalism”), but also about the value of correct and documented information, based on scientific foundations and not on perspectives of principle. These were highly interesting discussions, in which issues emerged on clarity, completeness of data, and accessibility.

For years, our Sustainability Report has been an important vehicle for a documented approach to the issue of environmental protection, based on numbers and results as well as on concrete prospects for improving the sustainable performance of the National system and the CONAI EPR Organisation. Sharing it, then, represents a moment of transparency that once again proves how much CONAI’s work can and, above all, desires to be measured and measurable, with a view to synergic sharing among all stakeholders in the supply chain.

Yet here we are not just talking about measuring results. I believe this is a deeper commitment: disseminating an environmental culture that permeates the CONAI EPR Organisation and its stakeholders, as well as the social fabric. This remains an essential component of the tasks assigned to us. Sustainability, after all, is made of goals to be achieved, but also of awareness and sensitivity. The 2024 Report recounts this aspect too. In some ways, this is testified by the revision of certain calculation methods, the progressive broadening towards a perspective that is increasingly national and less tied to consortium activities; the

space given to prevention actions that remind us that the management of packaging does not only mean intercepting it and separating it at the end of its life, but also making it less impactful throughout its life cycle.

It is a question (once more) of approach and language. Environmental culture must be promoted with the clarity that figures and their traceability make possible, but also with expressive codes that are precise without becoming incomprehensible. That is why every year the Report also speaks through equivalences and comparisons, such as the one comparing the material saved through recycling to the weight of several Towers of Pisa.

And this is why CONAI continues in its pursuit of speaking different languages and influencing them: the message of the need to protect the planet must reach more and more people.

The language used by journalism, which today bears great responsibility, is an example of this. But I also have in mind the language of art: for three years we have been promoting the Circular Art exhibition, inviting young artists to tell the story of sustainability through painting, sculpture and photography, and then awarding one of them the CONAI Prize.

These are languages and opportunities that I believe allow everyone to both observe and participate consciously in this path towards a more sustainable future, which should be a shared objective to strive for and not a subject of ideological opposition.

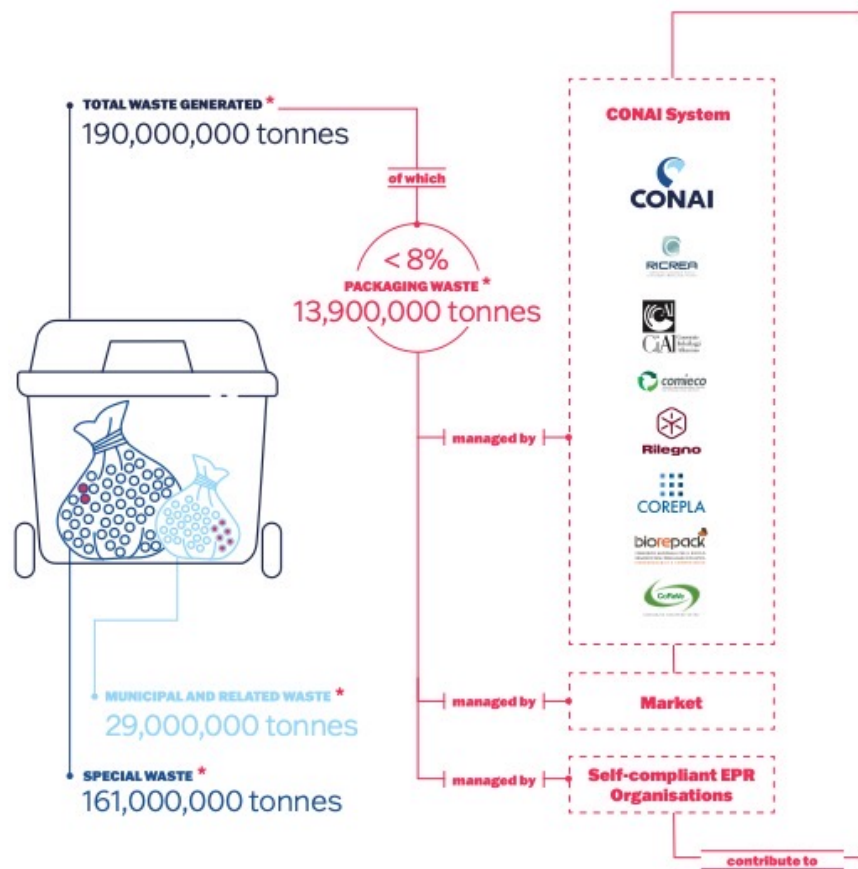
Simona Fontana
CONAI General Manager



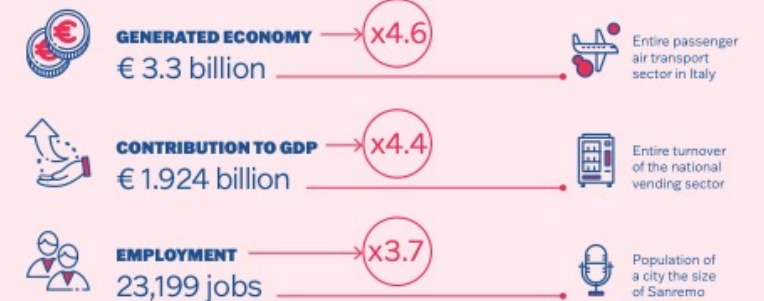
The S good

The packaging waste management sector stands out as one of the few sectors able to achieve the planned regulatory targets ahead of time.

However, it accounts for a limited share – around 8% – of the total waste produced annually at the national level.



THE CONAI SYSTEM HAS A MULTIPLIER EFFECT ON THE ITALIAN SOCIAL AND ECONOMIC FABRIC.



DISTRIBUTES ECONOMIC VALUE TO:



THE NATIONAL SYSTEM BENEFITS FROM:



*SOURCE: Eurostat 2022 data. The figure for packaging waste has been updated according to CONAI's 2023 reporting.



CONAI Sustainability Report

Much more than a Report

3 LEVELS OF REPORTING



NATIONAL
System



CONAI
System



ORGANISATION

A SINGLE DOCUMENT FOR ALL STAKEHOLDERS



GRI 2021

"GRI – with reference to" option



ESRS standards interoperability

Steps towards the new ESRS standards – laying the foundation for future alignment with the European standards.



Technical assurance

performed by RINA Service SpA



Environmental Statement

validation performed by DNV Business Assurance

CERTIFIED REPORTING



Sustainability Report



Environmental Statement

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



Approved

by the Board of Directors



Our Sustainability Report

The National Packaging System tells its story



ENVIRONMENT

+



SOCIAL

+



GOVERNANCE

=



CIRCULAR
ECONOMY



EE

**The value of the
packaging circular
economy**



“The matter that surrounds us – all matter, even that which appears most mundane to us – is a minor miracle of sorts. The mechanisms that allow elementary particles to organise themselves to form the stable structures we call atoms and molecules are the result of a delicate balance between fundamental forces of nature. Taking care of matter, protecting it and preventing its misuse also means protecting us, the living forms, who are closely dependent on this balance.”

- Guido Tonelli

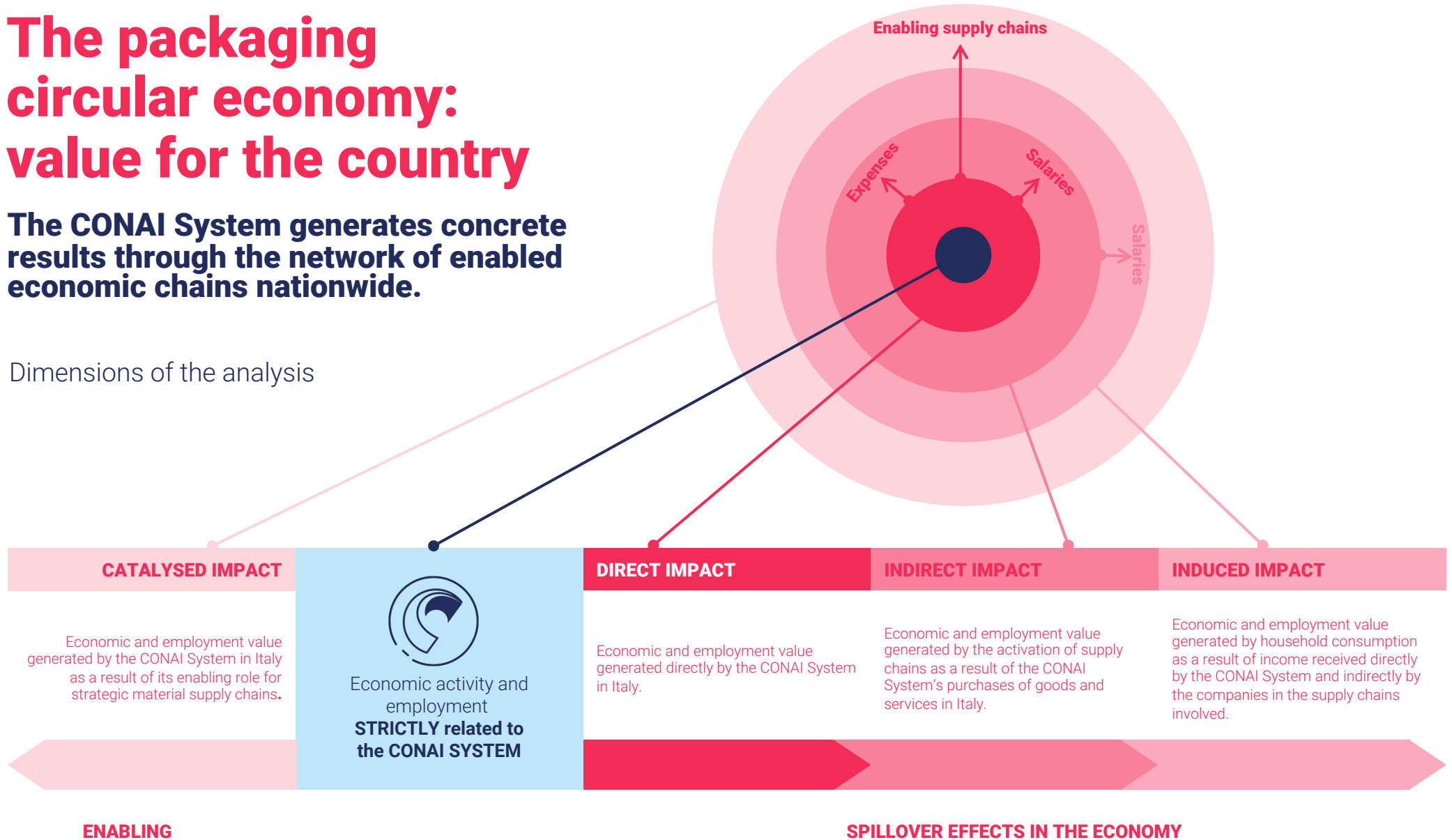
CERN Physicist



The packaging circular economy: value for the country

The CONAI System generates concrete results through the network of enabled economic chains nationwide.

Dimensions of the analysis



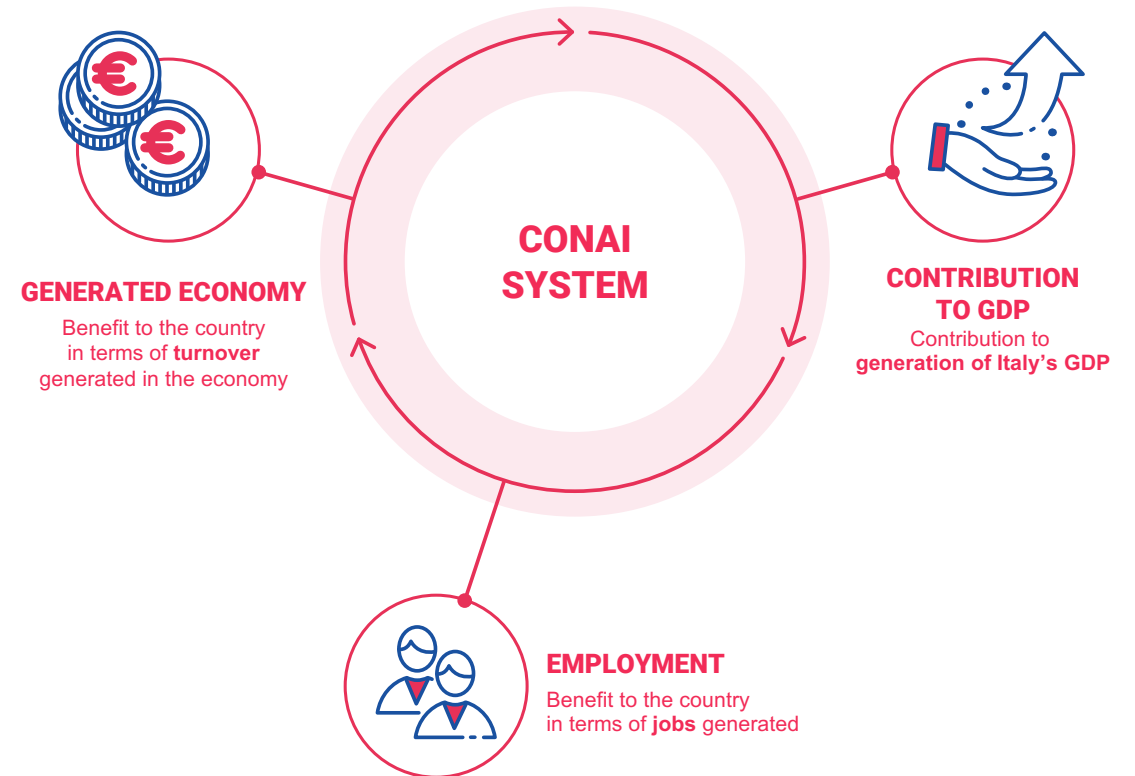


The packaging circular economy: value for the country

Analysis indicators

The methodological approach for calculating the direct, indirect and induced impacts involves the use of **input-output models**, based on ISTAT data, adjusted to measure **sectoral interdependencies** and calculate the economic value created by the Consortium's various activities.

This methodological framework makes it possible to calculate and measure the **contribution** of the CONAI System to the **national social and economic fabric**, in terms of turnover, contribution to GDP and employment, by reconstructing the various **economic components created** both upstream and downstream.





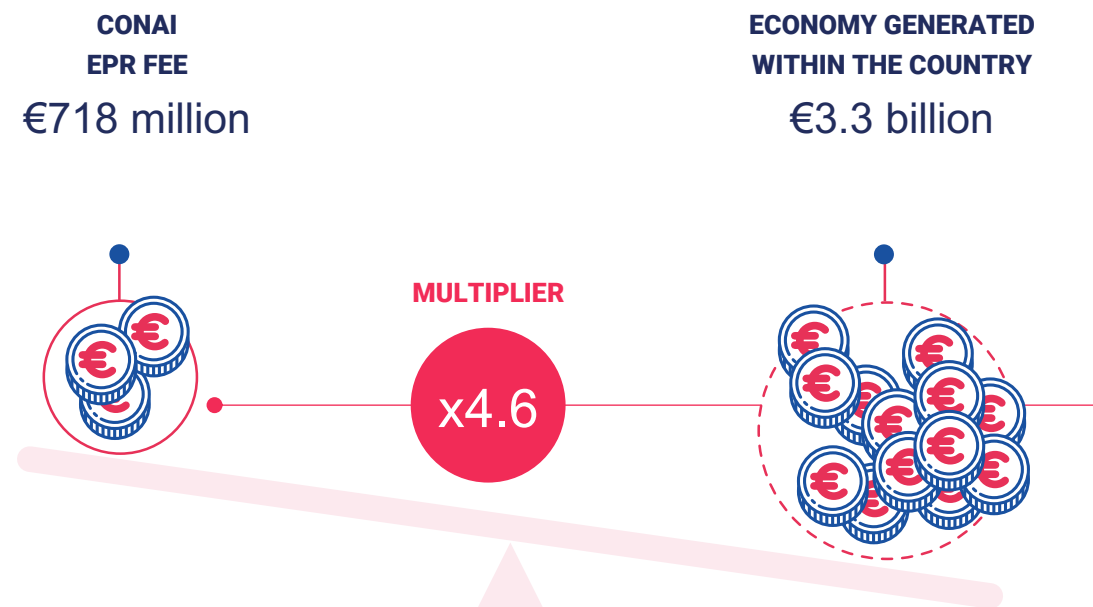
The packaging circular economy: value for the country

The value of the CONAI EPR Fee

The impact of the CONAI EPR Fee has a significant multiplier effect on the Italian social and economic fabric.

Through the activities of the CONAI System and the management of packaging waste, the EPR Fee has brought in a total turnover of €3.3 billion.

€1 of EPR Fee generates
€4.60 in Italy's economy



SOURCE: Data generated by The European House – Ambrosetti from CONAI data and tables of sectoral interdependencies (input-output) from ISTAT, 2024.



The packaging circular economy: value for the country

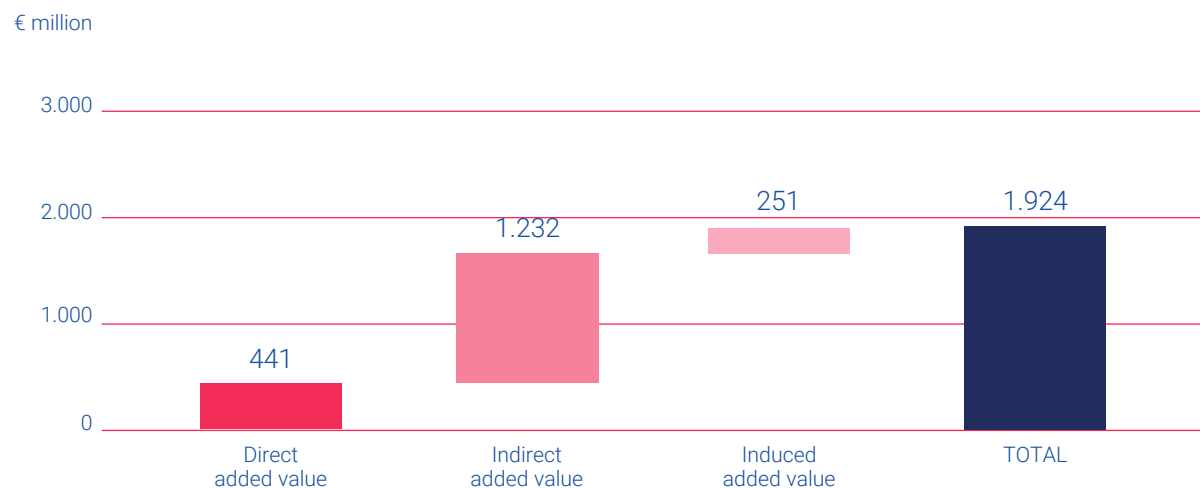
Economic impact – added value

Added value is the key measure of the contribution of the CONAI System to the Italian economy, returning the actual generated contribution to the national GDP. In 2023, the direct added value generated by the CONAI System reached €441 million.

This is a direct and tangible contribution that reflects the role of the CONAI System as an engine of economic growth through its operations. In addition to the direct impact, CONAI also generated a significant indirect impact in terms of added value amounting to €1.232 billion. Finally, the induced impact, the economic value generated by the expenses of workers involved in the direct and indirect activities of the CONAI System, generated additional added value of €251 million.

SOURCE: Data generated by The European House – Ambrosetti from CONAI data and tables of sectoral interdependencies (input-output) from ISTAT, 2024.

Every €1 of direct added value generated by the CONAI System in 2023 generated an additional €3.40 in the entire economic system, equal to the entire turnover of the national vending sector.



ECONOMIC MULTIPLIER



The packaging circular economy: value for the country

Employment impact

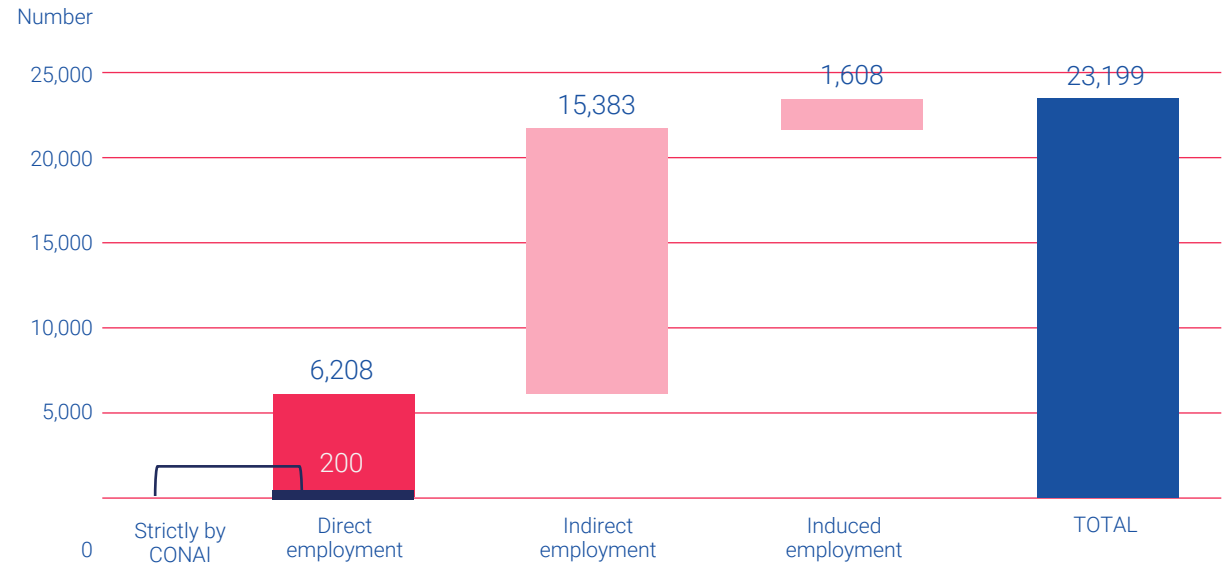
In 2023, the CONAI System supported 6,208* direct jobs. These are workers employed on a continuous basis within the structures and processes managed directly by the Consortium. In addition to direct employment, the CONAI System also had an important effect on indirect employment through the activation of related supply chains. In 2023, the indirect impact supported 15,383 jobs. Finally, the induced impact on employment resulted in 1,608 additional jobs.

These jobs are mainly in the waste management, industrial manufacturing, and logistics/transport sectors.

* This includes all persons directly involved in waste management and treatment operations, in the coordination of the CONAI EPR Organisation and in services related to these activities

SOURCE: Data generated by The European House – Ambrosetti from CONAI data and tables of sectoral interdependencies (input-output) from ISTAT, 2024.

For every employee directly related to the Consortium's activities, an additional 2.7 jobs are supported along the activated supply chains, comparable to the population of a city the size of Sanremo.



X3.7

EMPLOYMENT MULTIPLIER



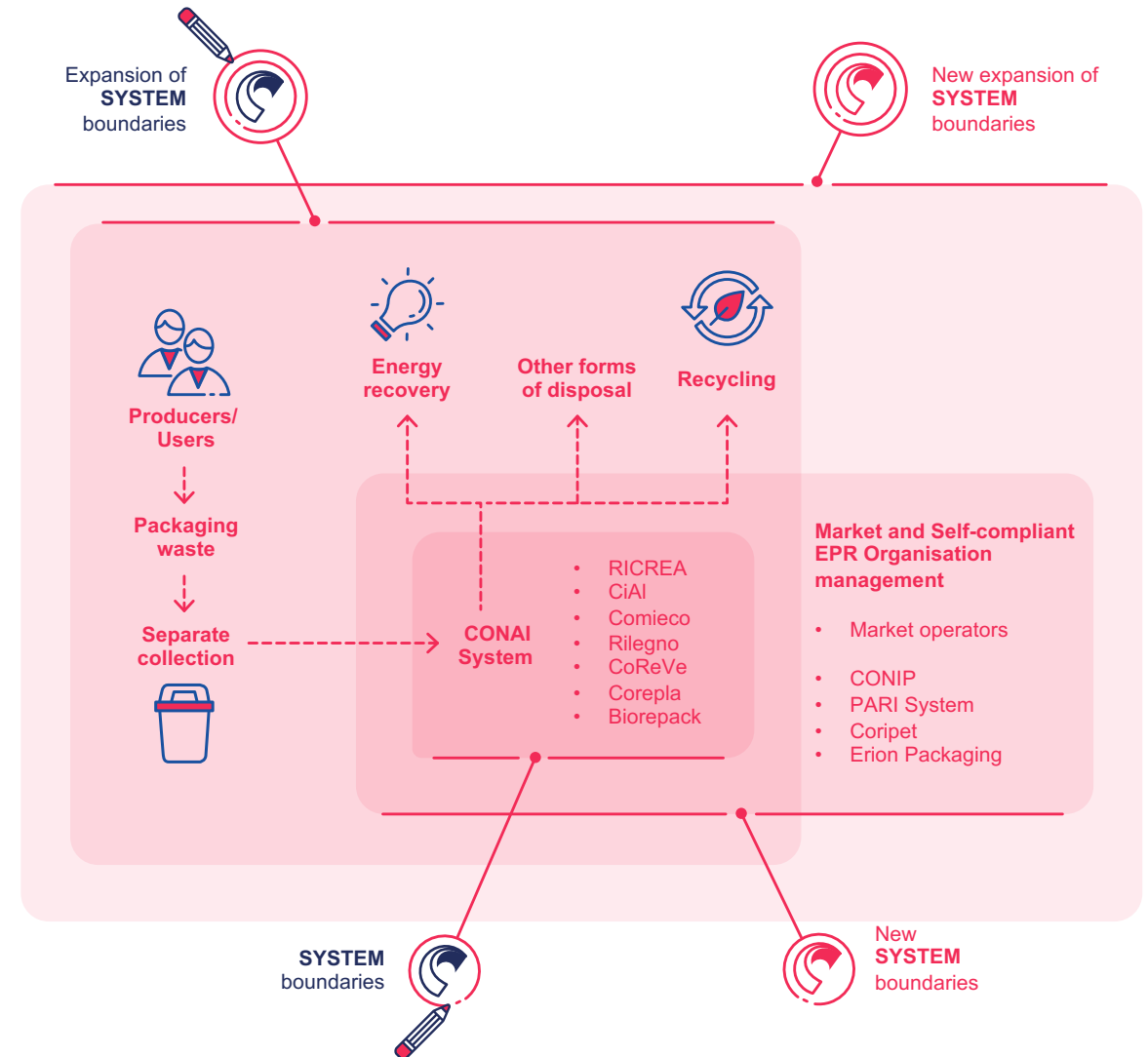
E

**CONAI for the
environment**



The environmental benefits of the CONAI System

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





The contribution of firms to protecting material

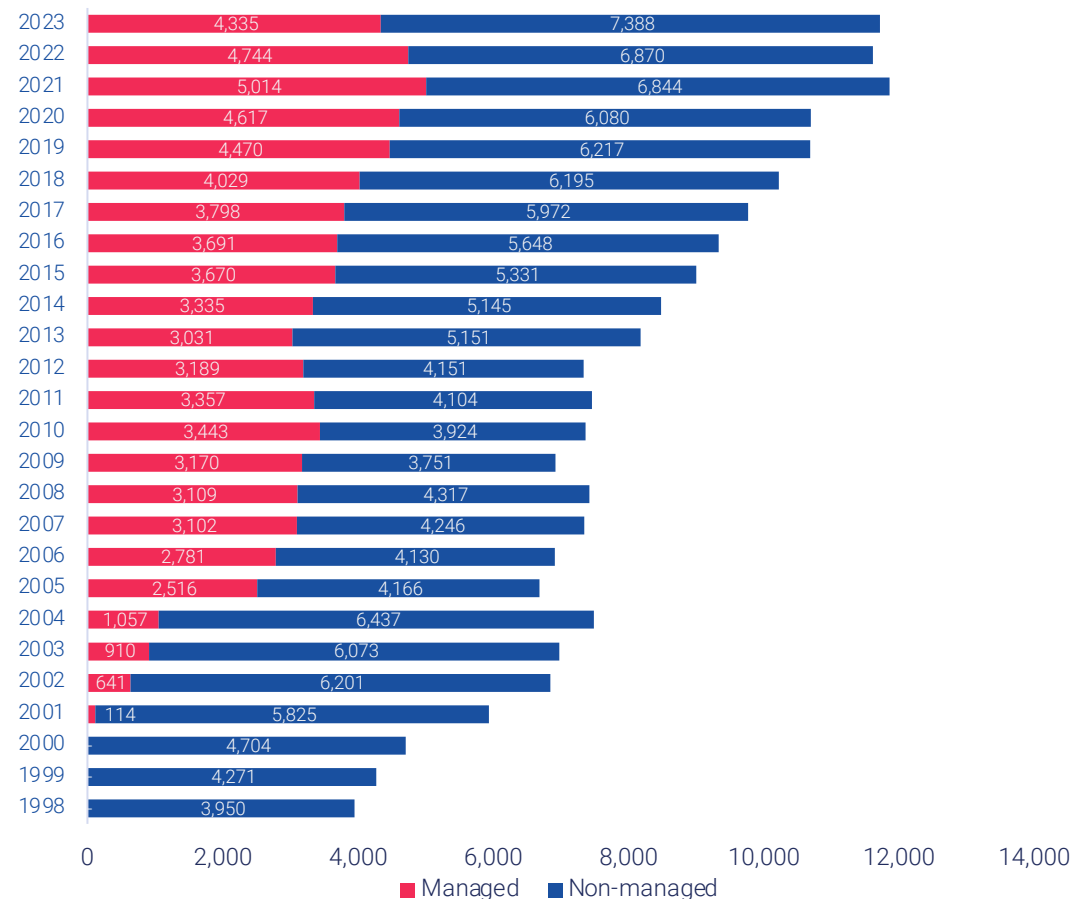
Primary material savings

Primary material savings from recycling are the amount of primary material that is not used to make packaging or other products due to the use of recycled packaging.

In 26 years
MATERIALS SAVED THROUGH THE USE OF SECONDARY RAW MATERIAL
210 million tonnes

In 2023 alone
MATERIALS SAVED THROUGH THE USE OF SECONDARY RAW MATERIAL obtained from waste from various supply chains
= the weight of 800 Towers of Pisa*
* Estimated weight of Tower of Pisa = 14,700 t

PRIMARY MATERIAL SAVED (kt)



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



The contribution of firms to managing energy resources



Primary energy savings from recycling*


Primary energy savings from recycling are the amount of energy generated from fossil sources that would be required to produce all the primary material saved.

As of 2023, the figure has been further refined by introducing into the calculation the primary energy consumption related to the preparation for recycling and transport of packaging waste along the supply chain.

In 2023 alone

ENERGY SAVINGS ACHIEVED

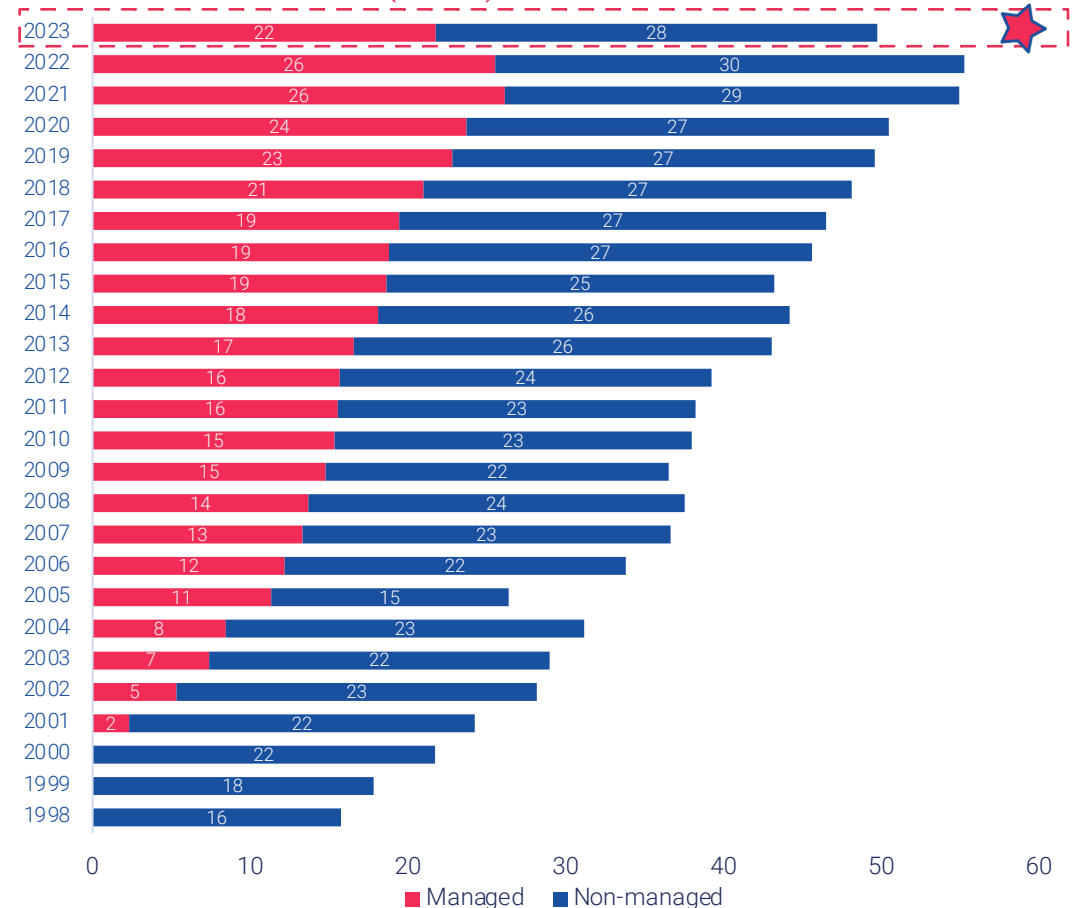
50 TWh



= electricity consumption of around half of all Italian households*

* Estimated fossil fuel consumption per family = 3.78 MWh/family per year

PRIMARY ENERGY SAVED (TWh)



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



The sector's contribution to combating climate change

Avoided CO₂eq production from recycling*

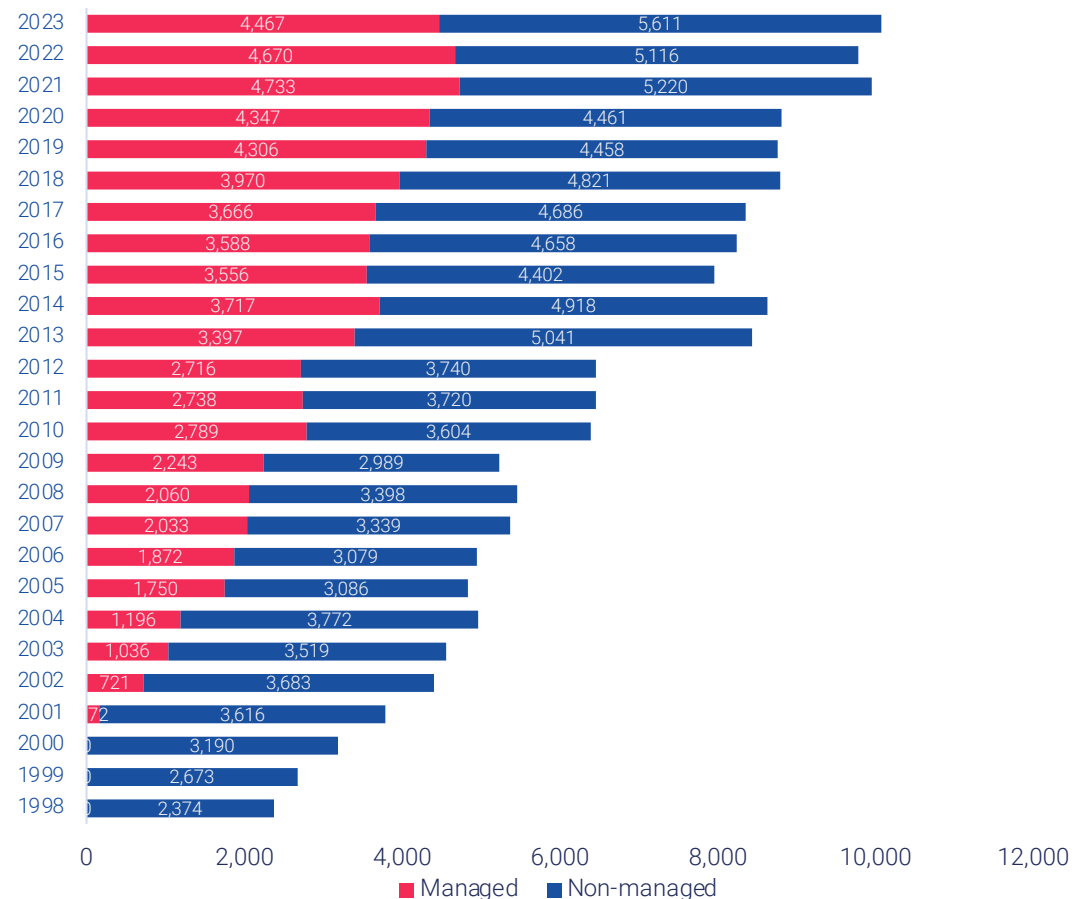
The avoided CO₂ production through recycling is achieved by subtracting the emissions avoided due to the non-production of new materials from the emissions generated by transporting and treating packaging waste.

In 26 years
CO₂ EMISSIONS AVOIDED
170 million tonnes of CO₂eq

In 2023 alone
CO₂ EMISSIONS AVOIDED
= emissions of **8,000 flights** around the world*

* Estimated emissions of a 40,000-km flight = 1,256 tCO₂ eq flight

AVOIDED PRODUCTION OF CO₂ FROM RECYCLING (KtCO₂eq)





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



The sector's contribution to combating climate change



Strategic levers for decarbonising supply chains

	The role of reuse and recycling	Other strategic levers
 Steel	The transition to secondary steel produced from scrap using electric arc furnaces already enables substantial emissions savings: up to 0.7 tonnes of CO ₂ per tonne of steel.	Promotion of zero-emission electricity generation systems, starting from renewable sources.
 Aluminium	Producing one tonne of primary aluminium requires 5.1 tCO ₂ eq, while the same amount of secondary aluminium requires 0.3 tCO ₂ eq.	Growth of renewable sources and the progressive reduction of carbon intensity.



The sector's contribution to combating climate change




Strategic levers for decarbonising supply chains

	The role of reuse and recycling	Other strategic levers
 Paper	Producing one tonne of pulp from waste paper requires about one third of the energy required to produce it from virgin wood.	Energy efficiency through combined heat and power (CHP). Use of energy carriers with low or zero CO ₂ emissions (biomass), electrification of processes and reuse of pulper waste for energy purposes.
 Wood	Wood preserves matter through reuse. It is among the most efficient carbon storage materials in nature.	Forest management policies are the main tool for getting the most out of forest harvest products.



The sector's contribution to combating climate change

Strategic levers for decarbonising supply chains

	The role of reuse and recycling	Other strategic levers
 Plastic	Recycling is the main decarbonisation lever in the supply chain. 1 tonne of recycled plastic = - 1.1/3.6 t CO ₂ eq.	Improvements to production processes, more effective recycling, new processing technologies, transition to circular raw materials.
 Compostable bioplastic	Bioplastic is a decarbonisation strategy in itself. It returns carbon to nature through composting processes.	Eco-design and dissemination of compostable biopolymers.
 Glass	The use of glass cullet significantly reduces energy consumption and CO ₂ emissions. 1 tonne of glass cullet = -0.67 t/CO ₂ .	Eco-design and replacement of fossil fuels with new alternative energy sources.



**Sustainability culture
according to CONAI**



“The circular economy is part of culture. CONAI contributes to this culture. The different recycling rates in the different areas of the country say a lot about their hopes, trust, expectations and cohesion – in other words, their history.”

- Carlo Bellavite Pellegrini

Professor of Corporate Finance

Director of the Centre for Applied Economics Studies (CSEA)

Università Cattolica del Sacro Cuore



Skills development

Training, education and awareness-raising among organisations, associations and citizens.



Environmental education in SCHOOLS

12 projects in primary and secondary schools and 6 reported activities for secondary schools, including the inter-consortium project Green Game, Recycling Class and Green Jobs? Green Future.

18
active projects
in 2023



Partnerships with UNIVERSITIES

8 collaborations activated by CONAI for the Green Jobs advanced training courses and the manual roadshow, 1 collaboration activated by CoReVe with the SMI Marketing Award and 1 by Coripet with LIUC.

10
activities
promoted in 2023



FIRMS AND ASSOCIATIONS

CONAI online training courses for member firms and trade associations on various topics: EPR Fee, environmental labelling, SUP, MUD, RENTRI, TARI, etc.

31
educational
webinars
in 2023



PUBLIC AUTHORITIES

7 regional in-person training sessions on the ANCI-CONAI Framework Agreement and 1 national event in Rome on the circular economy.

8
ANCI-CONAI
training sessions in 2023

SOURCE: CONAI and institutional documents of Packaging Material Consortia and Self-compliant EPR Organisations, May 2024.



Skills development

New
for 2023



Training, education and awareness-raising among organisations, associations and citizens.

Primary school

School project – “Class Recycling” on separate collection and recycling of packaging waste.

- Academic year 2022/2023
- Theatre show “It depends on us”
- **83** participating classes
- **1,578** students
- **15** schools



6 prize-winning classes

PCTO Project for Secondary Schools (Pathways for Cross-Curricular Skills and Orientation)



40-hour curriculum:

- for students aged 16-19 years
- available on the Scuola.net platform
- participation certificates issued

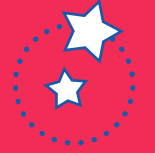
CONAI seminar – Journalists’ Association

- Educational credits for participants
- Cities involved: Trento and Florence



Skills development

New
for 2023



Green Jobs: CONAI and university education.

Partnership with ENEA for degree prizes

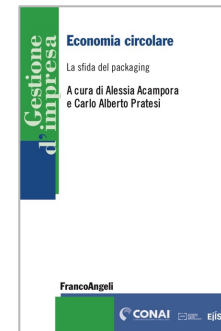
The first edition of the call for dissertations on circular economy and waste management has concluded.

- €3,000 each, for two dissertations
- Two special mentions

Circular South

Fostering project planning and entrepreneurship in the circular economy.

- 80 applications
- 1 winning startup



Academic manual: “Circular economy. The packaging challenge”

- Published by Franco Angeli
- Peer reviewed
- Promoted in a roadshow with 7 sessions at universities

Green Jobs Higher Education Training Project

4 weeks of online training.

Training courses in cooperation with:

- University of Catania (75 recent graduates involved)
- University of Bergamo and Brescia and ASA (80 young people involved)



Culture and language: Circular Art

CONAI values the role of culture and cross-disciplinary languages to reach citizens and involve them emotively as fundamental stakeholders in the circular economy.



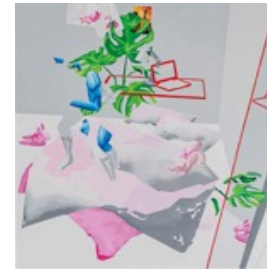
Ruth Beraha (2022)
The neverending story



Veronica Bisesti (2022)
Measuring device



Lucia Cantò (2022)
Sense of urgency (V.F.G.R)



Federica di Pietrantonio (2022)
So I'm deconstructing it and hiding it in my closet until I inevitably miss it again



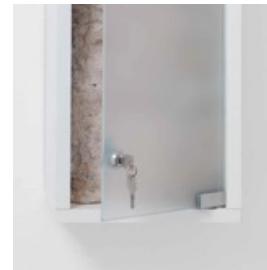
Antonio Fiorentino (2021-2022)
New mask



Valentina Furian (2019-2022)
Fall in love like trees fall



James Hillman (2022)
(Breath) Don't mistake my finger for the moon



Lucas Memmola (2022)
Haze



Francis Offman (2019)
Untitled



Serena Vestrucci (2022)
Sleepless night



Culture and language: CONAI Phoenix

The award dedicated to young journalists who have spoken about sustainability and environmental protection.



2022-23 Edition

“Ghost gear’ is fishing equipment that is lost or abandoned during fishing activities. These are gillnets, traps, creels, fish collection devices and other types of equipment that end up polluting the seabed and beaches. Between 500,000 and one million tonnes of ghost gear is left in the oceans each year, according to an FAO estimate.”



2023-24 Edition

“[...] In addition to practical initiatives, Tottenham’s commitment to the climate is also manifested through various formal actions, such as signing numerous memoranda and agreements with associations and institutions: for example, the club was one of the founding members of the 10:10 initiative, which called on individuals, companies, schools and other organisations to reduce their emissions by 10% in one year. Spurs also pledged to halve their carbon emissions by 2030 and become carbon neutral by 2040 by joining the United Nations’ Race to Zero campaign, which mobilised 449 cities, 21 regions, 992 companies, 38 major global investors and 505 universities. [...]”



G

**The Consortium's
ESG Governance**



“The culture of circularity encapsulates one of the many distinctive qualities of Italian expertise, because it means giving new life to what exists in the light of present needs: innovation within tradition. However, it requires a change in the consumption model that recognises that what is recycled has a greater value than what is new. The greater value is not in the processes or in the design, but in being the bearer of a future that is (still) possible, because it is sustainable.”

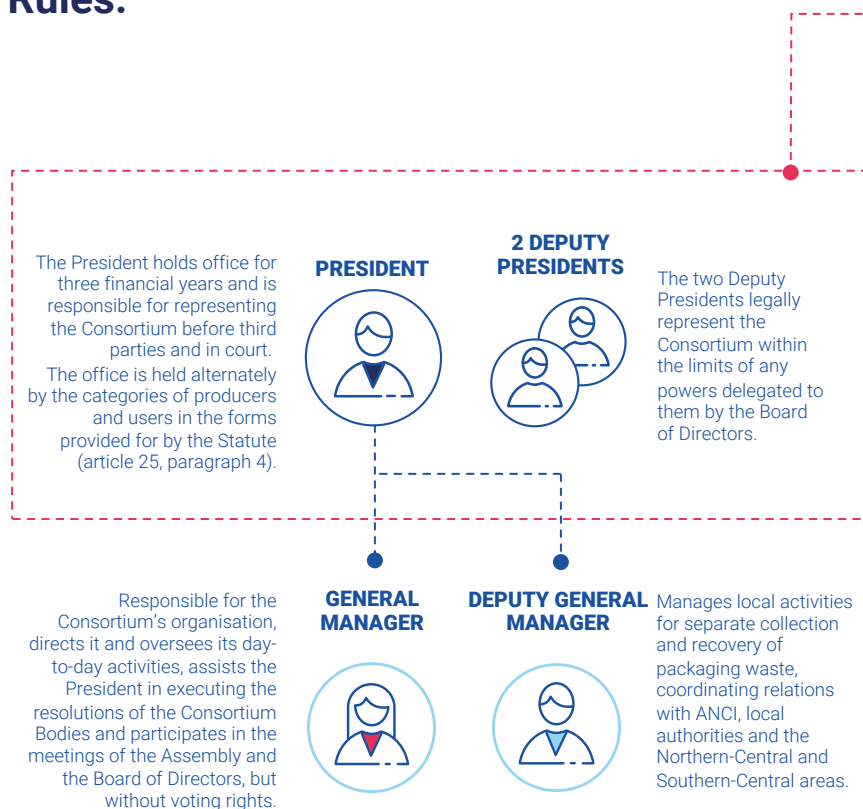
- Lara Ponti

Confindustria Deputy President for Environmental Transition and ESG Goals



CONAI bodies

The governance of the Consortium is governed by CONAI's Statute and Rules.



MEMBERS' ASSEMBLY



Represents all of the member firms that produce and use packaging. Elects 18 of the 19 members of the Board of Directors and 4 of the 7 members of the Board of Auditors.

BOARD OF DIRECTORS



Consists of 19 members, office held for 3 financial years, elects the Consortium President and two Deputy Presidents from among its members.

BOARD OF AUDITORS



Monitors compliance with the law, the Statute and the Rules, respect for the principles of proper administration and in particular the adequacy of the organisational, administrative and accounting structure adopted by the Consortium and its actual functioning.

19

full members

1 REPRESENTATIVE FOR each packaging material

2 REPRESENTATIVES FOR THE WHOLE category of producers

4 REPRESENTATIVES FOR THE traders/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

Supervisory Board



Responsible for supervising the operation of and compliance with the Organisation, Management and Control Model pursuant to Legislative Decree 231/2001 and for updating it.

7

full members

4 APPOINTED by the Members' Assembly

1 APPOINTED by MASE

1 APPOINTED by MIMIT

1 APPOINTED by MEF

2

supplementary members



ESG Policy

CONAI's commitment unfolds through several areas of action.

In observance of the principle of transparency, CONAI has decided to adopt an Environmental Management System and Gender Equality Management System. The documents have been made consistent with its current Policy and disseminated widely. The Environmental Management System is in line with the provisions of the UNI EN ISO 14001 technical standard and Regulation 1221/2009 as amended, and the Gender Equality Management System is compliant with reference practice UNI/PDR125:2022.

- 

1
Proactive support for the circular economy
- 

2
Services and tools to support local authorities with quality separate collection
- 

3
Linking businesses and institutions for the circular economy
- 

4
Promotion of circular economy culture
- 

5
Compliance with requirements
- 

6
Accountability
- 

7
Improvements to organisational processes
- 

8
Commitment to gender equality



Guidance documents

The policies and internal documentation adopted by CONAI to ensure regulatory compliance.

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 has 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.



CE

**The System
in figures**



“CONAI’s dedication to the Sustainability Report, which is particularly evident in its involvement of stakeholders and focus on future challenges, will be an important prerequisite to be maintained when reporting on commitments and targets that will result from implementing the new European Packaging Regulation.”

- Edo Ronchi

President of the Sustainable Development Foundation



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	2022 consolidated	2023	Annual change
Material	ktonnes	ktonnes	%
Steel	531.70	487.55	-8.3%
Aluminium	81.80	84.30	3.1%
Paper	5,413.92	5,062.20	-6.5%
Wood	3,421.70	3,332.67	-2.6%
Conventional plastic	2,251.08	2,212.03	-1.7%
Compostable bioplastic	76.80	77.92	1.5%
<i>Total plastic and compostable bioplastic</i>	2,327.88	2,289.95	-1.6%
Glass	2,838.42	2,642.43	-6.9%
Total	14,615.43	13,899.10	-4.9%

Steel

Decline in almost all types of packaging, primarily open top and steel drums.



Aluminium

Growth mainly driven by beverage cans.



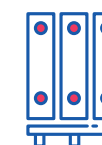
Paper

Decline due to accumulated inventories in 2022.



Wood

Decline after strong rebound in 2022.



Conventional plastic

Slight decrease due to strong rebound in 2022.



Compostable bioplastic

Slight growth driven by flexible packaging.



Glass

Decline due to the contrasting trend in consumption of glass products for domestic use.



SOURCE: Data generated by CONAI Research Centre based on institutional documents by Packaging Material Consortia and Self-compliant EPR Organisations (Management Report and Strategic Prevention Plans, May 2024).



Packaging streams in Italy

Placed on the market

Packaging placed on the market by supply chains together with the Self-compliant EPR Organisations.

The evaluations provided within the official documents received by CONAI from the Self-compliant EPR Organisations contribute to the overall placement on the market of the chain.

SOURCE: Data generated by CONAI Research Centre based on institutional documents by Packaging Material Consortia and Self-compliant EPR Organisations (Management Report and Strategic Prevention Plans, May 2024).



Data in kton

Paper	2022 consolidated	2023
COMIECO	5,413.92	5,055.00
Erion Packaging	-	7.20
Total	5,413.92	5,062.20



Wood	2022 consolidated	2023
RILEGNO	3,421.70	3,330.78
Erion Packaging	-	1.89
Total	3,421.70	3,332.67



Conventional plastic	2022 consolidated	2023
COREPLA	1,907.37	1,872.67
CONIP boxes	78.31	73.06
CONIP pallets	4.80	0.06
PARI System	13.84	13.08
Coripet	246.77	249.37
Erion Packaging	-	3.78
Compostable bioplastic		
BIOREPACK	76.80	77.92
Total plastic and compostable bioplastic	2,327.88	2,289.95



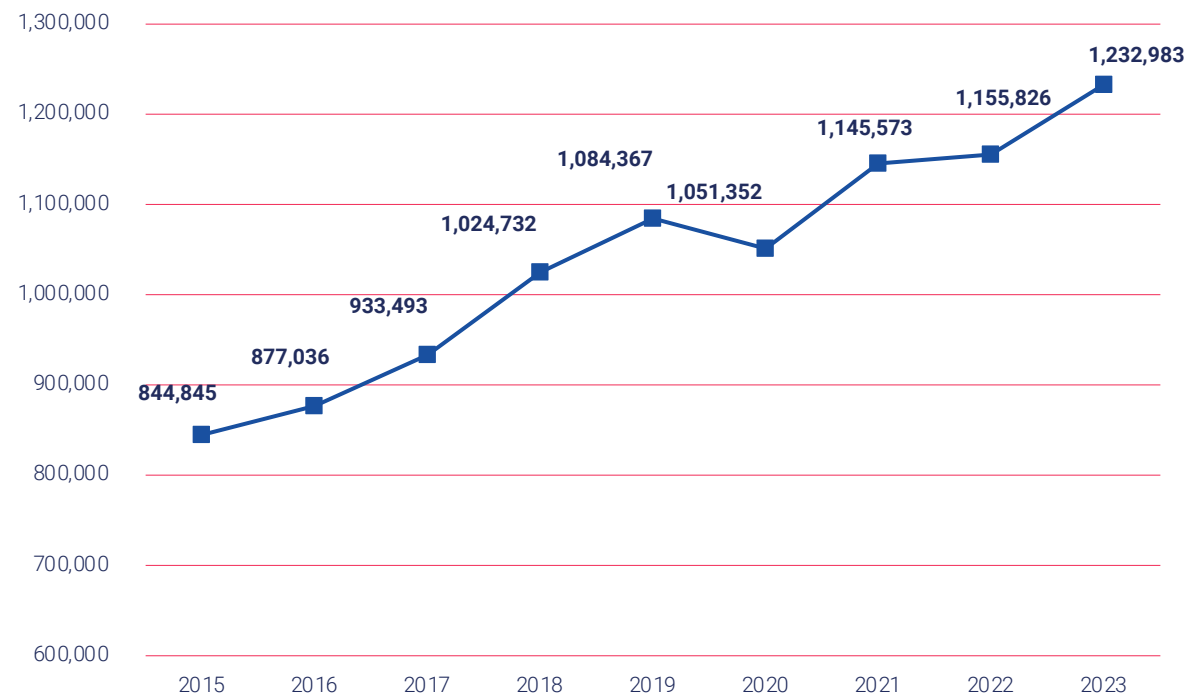
Packaging streams in Italy

Reuse

Reusable packaging benefiting from CONAI incentive procedures

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 2023 volumes of packaging reused via CONAI incentive procedures have continued the upward trend which resumed in 2021.**



SOURCE: Data generated by CONAI Research Centre based on institutional documents by Packaging Material Consortia and Self-compliant EPR Organisations (Management Report and Strategic Prevention Plans, May 2024).



Packaging streams in Italy

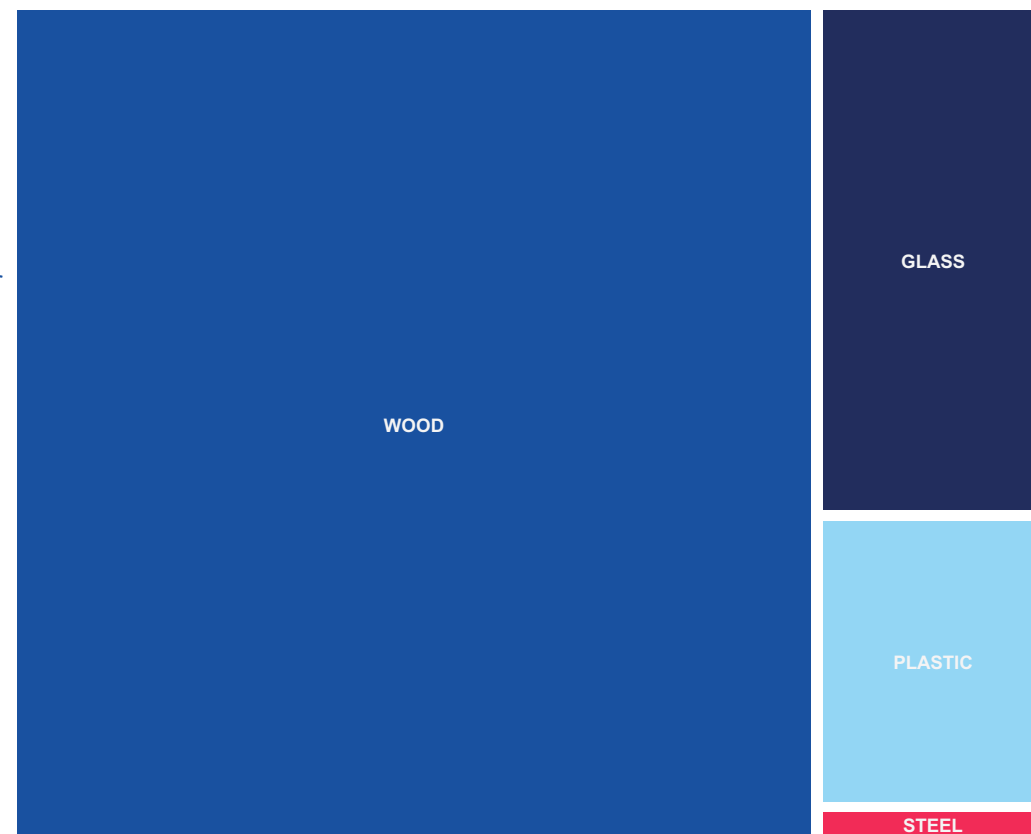
Reuse

Reusable packaging used in controlled and verified circuits 2023

The CONAI System supports the value of reuse by applying incentive criteria for calculation of the EPR Fee for reusable packaging.

The data sent to the Institutions for reusable packaging includes information on the quantity placed on the market and the number of rotations within a reuse system conforming to codified specifications, used in controlled circuits. This information is crucial to determine the share of reusable packaging out of the total that can be traced by the system.

WOOD	
Pallets conforming to specifications	(536,341)
Reusable pallets	(5,988)
GLASS	
Bottles within scope as per circular	(96,460)
Reusable bottles	(948)
PLASTIC	
Shopping and plastic bags	(38,088)
Reusable drums as per Procedure 6.20	(14,862)
CONIP pallets	(1,461)
STEEL	
Reusable drums	(6,356)



The CONAI System is the main promoter of packaging reuse at the national level (over 99%).

SOURCE: Data generated by CONAI Research Centre.



Packaging streams in Italy

Recycling



EFFECTIVE RECYCLING

10.470 million tonnes

+1.3%
over 2022



EFFECTIVE RECYCLING RATE

75.3%

+4.6 percentage points
over 2022

Effective recycling	2022 consolidated	2023	Annual change
Material	ktonnes	ktonnes	%
Steel	418.09	428.04	2.4%
Aluminium	60.20	59.30	-1.5%
Paper	4,332.50	4,673.54	7.9%
Wood	2,146.61	2,164.25	0.8%
Conventional plastic - mechanical and chemical recycling	1,039.46	1,054.66	1.5%
Compostable bioplastic - organic recycling	44.77	44.34	-1.0%
<i>Total plastic and compostable bioplastic</i>	1,084.23	1,099.00	1.4%
Glass	2,293.36	2,045.77	-10.8%
Total	10,334.99	10,469.89	1.3%

Percentage of effective recycling returned to the market	2022 consolidated	2023	Annual change
Material	%	%	% points
Steel	78.6%	87.8%	9.2
Aluminium	73.6%	70.3%	-3.2
Paper	80.0%	92.3%	12.3
Wood	62.7	64.9%	2.2
Conventional plastic - mechanical and chemical recycling	46.2%	47.7%	1.5
Compostable bioplastic - organic recycling	58.3%	56.9%	-1.4
<i>Total plastic and compostable bioplastic</i>	46.6%	48.0%	1.4
Glass	80.8%	77.4%	-3.4
Total	70.7%	75.3%	4.6

SOURCE: Data generated by CONAI Research Centre based on institutional documents by Packaging Material Consortia and Self-compliant EPR Organisations (Management Report and Strategic Prevention Plans, May 2024).



Packaging streams in Italy

Recycling

Recycled packaging by supply chains together with the Self-compliant EPR Organisations

The evaluations provided within the official documents received by CONAI from the Self-compliant EPR Organisations contribute to the overall placement on the market of the chain.

SOURCE: Data generated by CONAI Research Centre based on institutional documents by Packaging Material Consortia and Self-compliant EPR Organisations (Management Report and Strategic Prevention Plans, May 2024).



Paper	2022 consolidated	2023
COMIECO	4,332.50	4,667.26
Erion Packaging		6.27
Total	4,332.50	4,673.54



Wood	2022 consolidated	2023
RILEGNO	2,146.61	2,162.36
Erion Packaging		1.89
Total	2,146.61	2,164.25



Conventional plastic	2022 consolidated	2023
COREPLA	844.80	858.95
CONIP boxes	56.98	54.71
CONIP pallets	1.33	0.31
PARI System	13.84	13.07
Coripet	119.44	121.78
Coripet from Digital Recycling stations	3.07	4.28
Erion Packaging	-	1.55
Compostable bioplastic		
BIOREPACK	44.77	44.34
Total plastic and compostable bioplastic	1,084.23	1,099.00



Packaging streams in Italy

Recycling

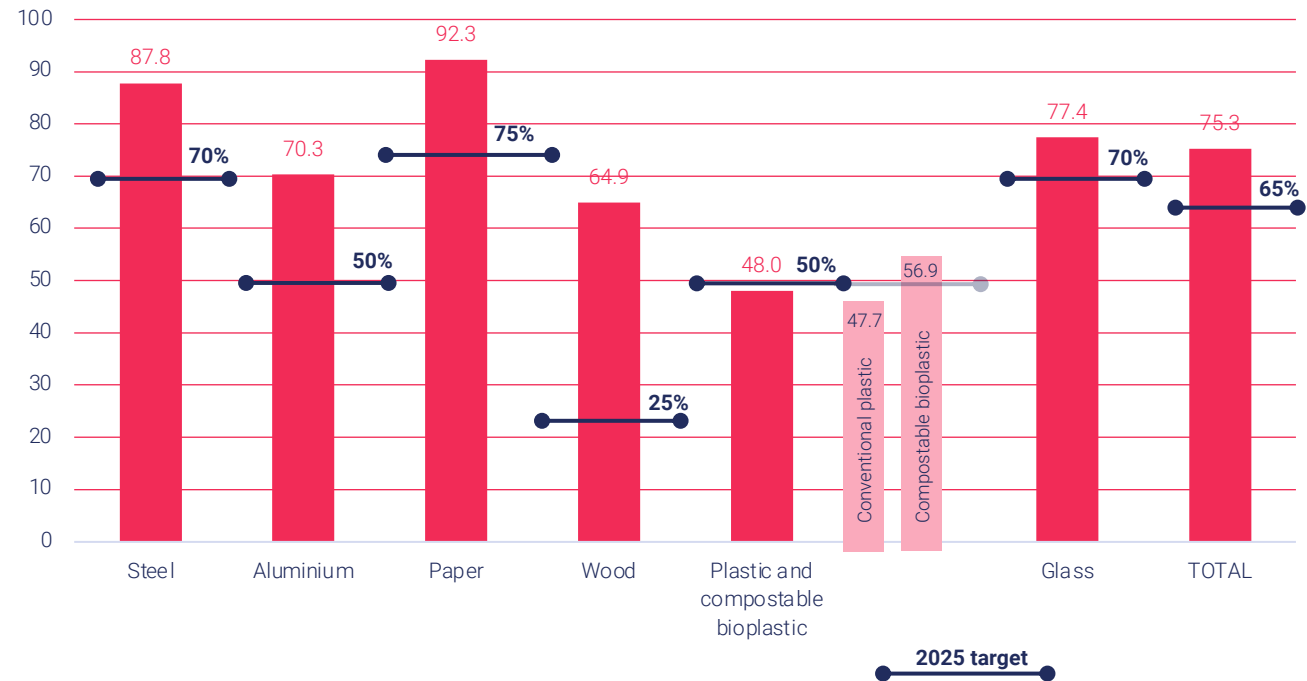
According to the European Commission's specific report of 8 January 2023, Italy is not one of the countries at risk in terms of meeting recycling targets.



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



SOURCE: Data generated by CONAI Research Centre based on institutional documents by Packaging Material Consortia and Self-compliant EPR Organisations (Management Report and Strategic Prevention Plans, May 2024).



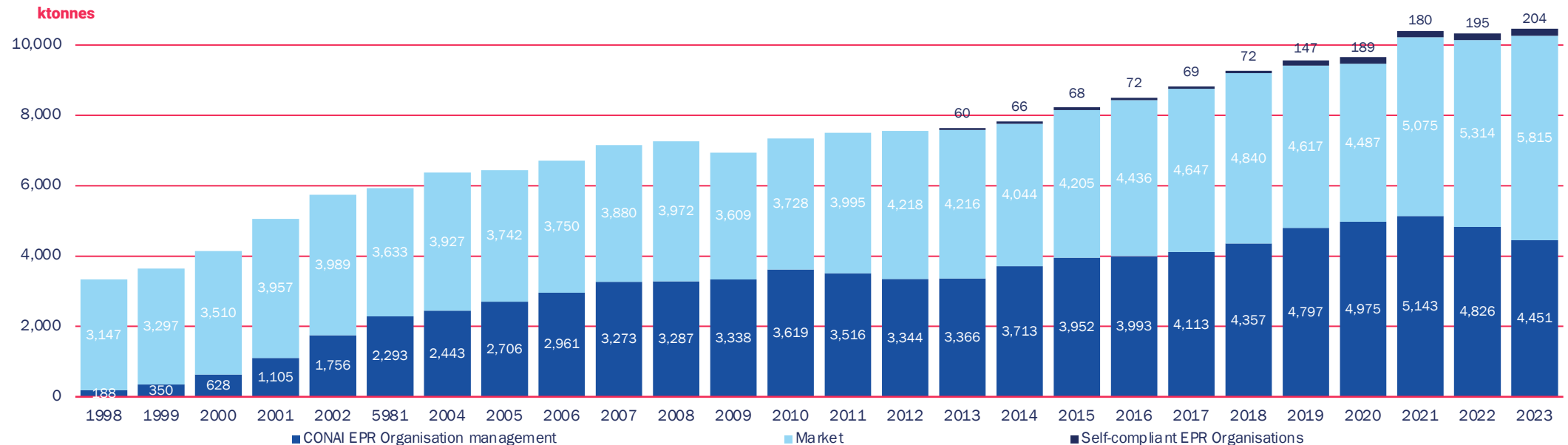
Packaging streams in Italy

Recycling

The contribution to national recycling by Packaging Material Consortia, Self-compliant EPR Organisations, and the market.

In the 26 years that the CONAI System has been in operation, there has been a steady growth of self-compliant and market-based management. This is the result of the market-support role of the System.

MANAGEMENT OF PACKAGING WASTE SENT TO RECYCLING AND RECYCLED FROM 1998 TO 2022



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



The CONAI System: The market-support role of the CONAI EPR Organisation

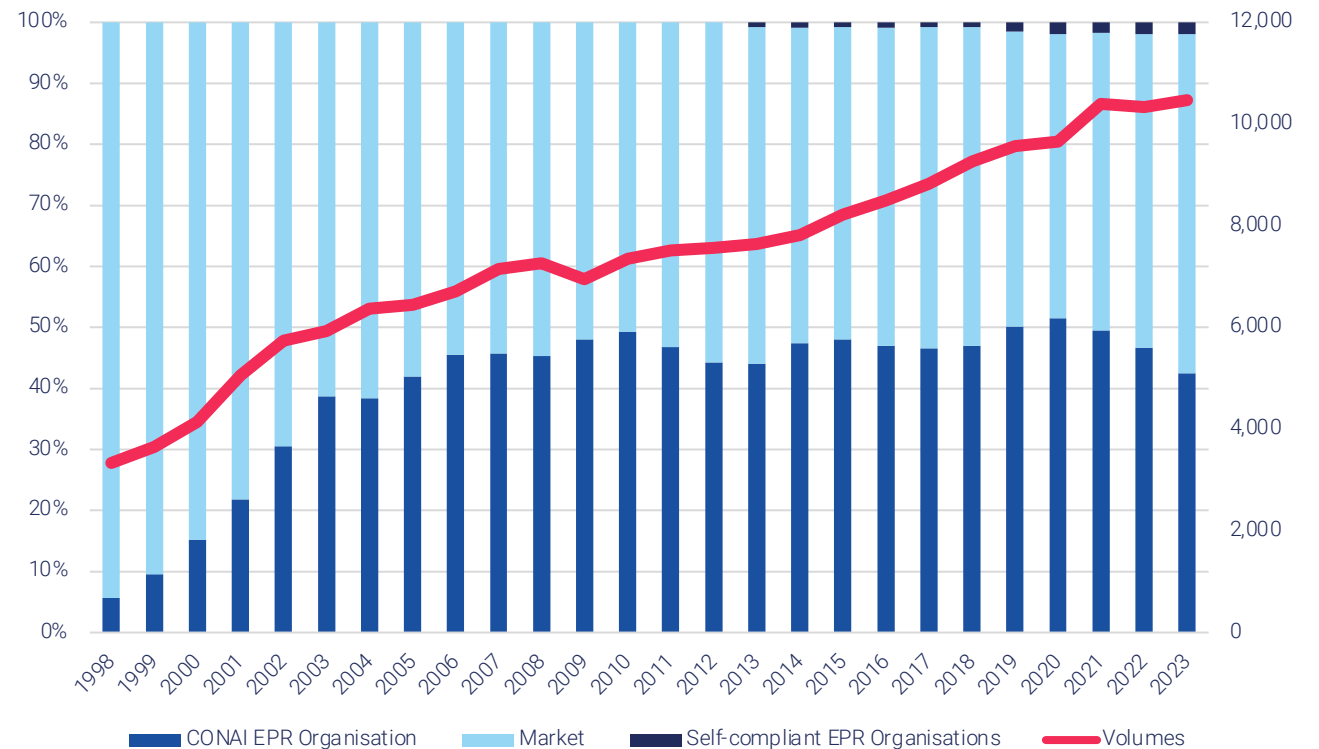
The CONAI EPR Organisation supports the growth of all operators and recycling.

Constant growth of the whole sector

CONAI, a private law body with a public mandate, plays a central role in coordinating the market and promoting the effective, efficient, economical and transparent management of packaging and packaging waste.

Through initiatives such as the Framework Agreement, support for local authorities and raising awareness of separate collection, CONAI proves that environmental protection and competition can coexist.

This is clearly evident from the data and results of packaging waste recycling, obtained through the combined management of the consortia and the market. In fact, in the 26 years that the CONAI System has been active, there has never been a reduction of volumes between these two dimensions. Instead, there has been constant growth that has enabled the country to achieve objectives set by the legislator ahead of time.





Packaging streams in Italy



MEMBER PLANTS

55
in 2023

Energy recovery

The energy recovery figure is determined by the packaging waste streams (processing waste from wood/cellulosic waste) managed directly by Packaging Material Consortia or Self-compliant EPR Organisations, as well as packaging waste present in municipal waste sent for energy recovery through waste-to-energy and secondary solid fuel production plants.

For the latter municipal waste flow, CONAI stipulates an agreement with the firms that own the plants, so that specialised third-party companies can carry out the necessary product analyses to determine the amount of packaging waste sent for energy recovery.

In 2023 there was an increase in the number of merceological analysis sessions at plants party to these agreements: 55 plants located mainly in Northern Italy (36), and to a lesser extent in the Central Italy (10) and Southern Italy (9).

Packaging waste sent to energy recovery and percentage	2022 consolidated	2023	Annual change
Material	ktonnes	ktonnes	%
Steel	0.00	0.00	-
Aluminium	3.40	3.20	-5.88%
Paper	305.55	292.14	-4.39%
Wood	59.01	58.20	-1.36%
Plastic	997.50	979.96	-1.76%
Glass	0.00	0.00	-
Total	1,365.45	1,333.50	-2.34%

SOURCE: Data generated by CONAI Research Centre based on institutional documents by Packaging Material Consortia and Self-compliant EPR Organisations (Management Report and Strategic Prevention Plans, May 2024).



Packaging streams in Italy

Total recovery



TOTAL RECOVERY AS A PROPORTION OF PLACEMENT ON THE MARKET

84.9%

+4.9 percentage points over 2022



PACKAGING WASTE TOTAL RECOVERY

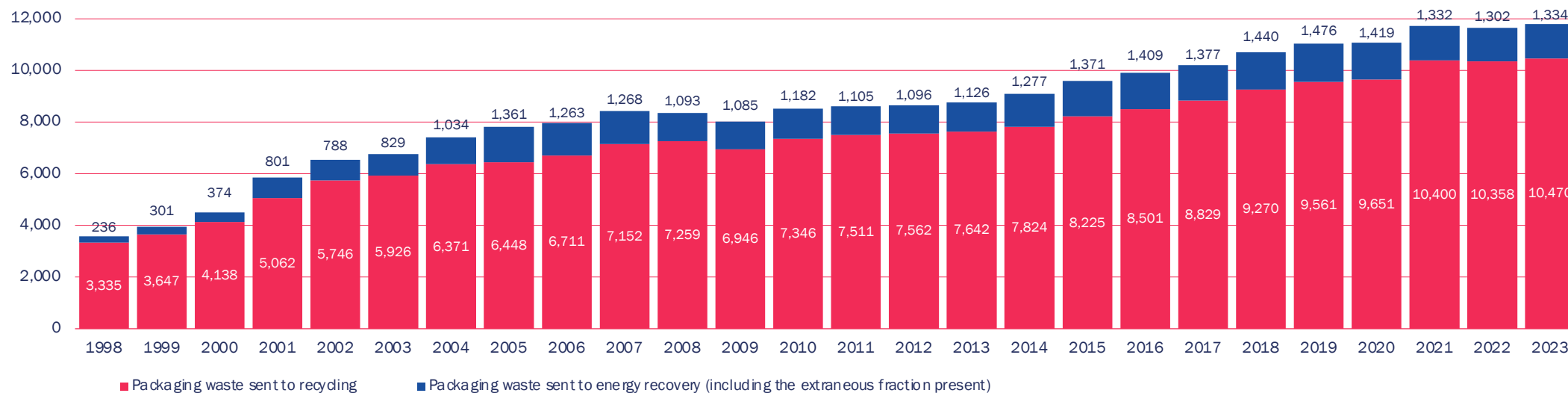
11.8 million tonnes

+0.9% over 2022



PACKAGING WASTE SENT TO RECYCLING AND ENERGY RECOVERY IN ITALY FROM 1998 TO 2023

ktonnes

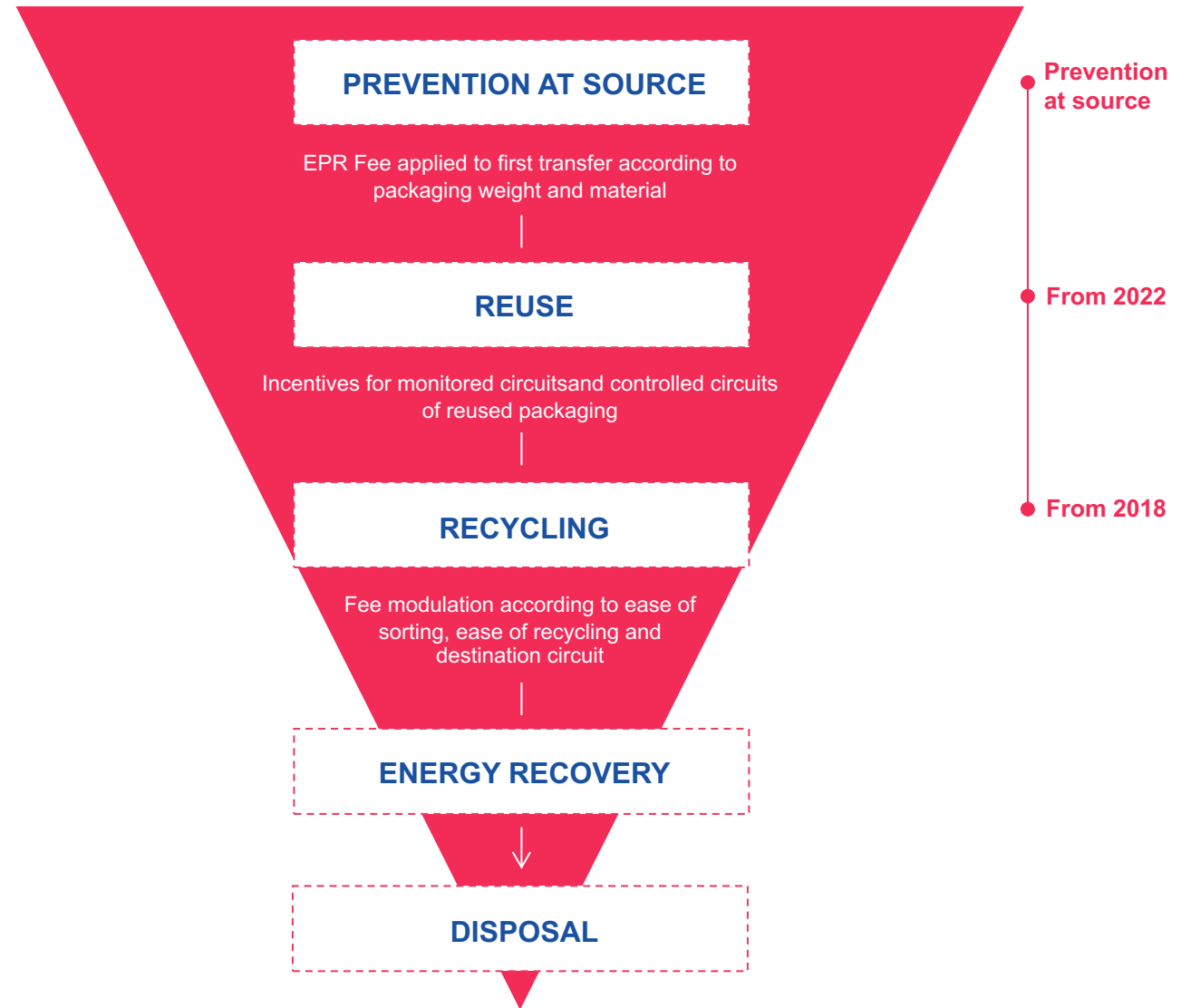


SOURCE: Data generated by CONAI Research Centre, from historical data.



Prevention of waste generation

Structural measures

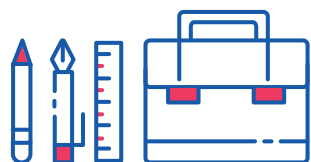




Prevention of waste generation

“Thinking the Future”

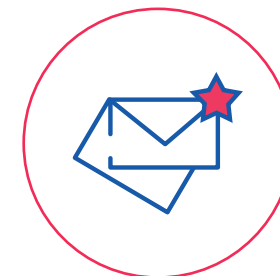
Tools to assist firms



DifferENTI



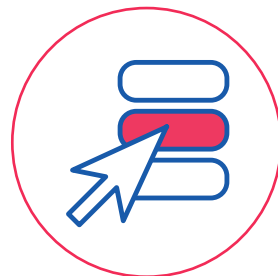
ECOPACK



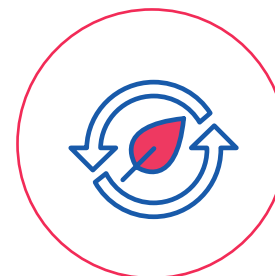
E-PACK



PENSARE FUTURO
INSIEME A CONAI PER LA PROGETTAZIONE SOSTENIBILE



LABELLING
WEBSITE



CONAI
EcoD TOOL



DESIGN FOR
RECYCLING



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

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



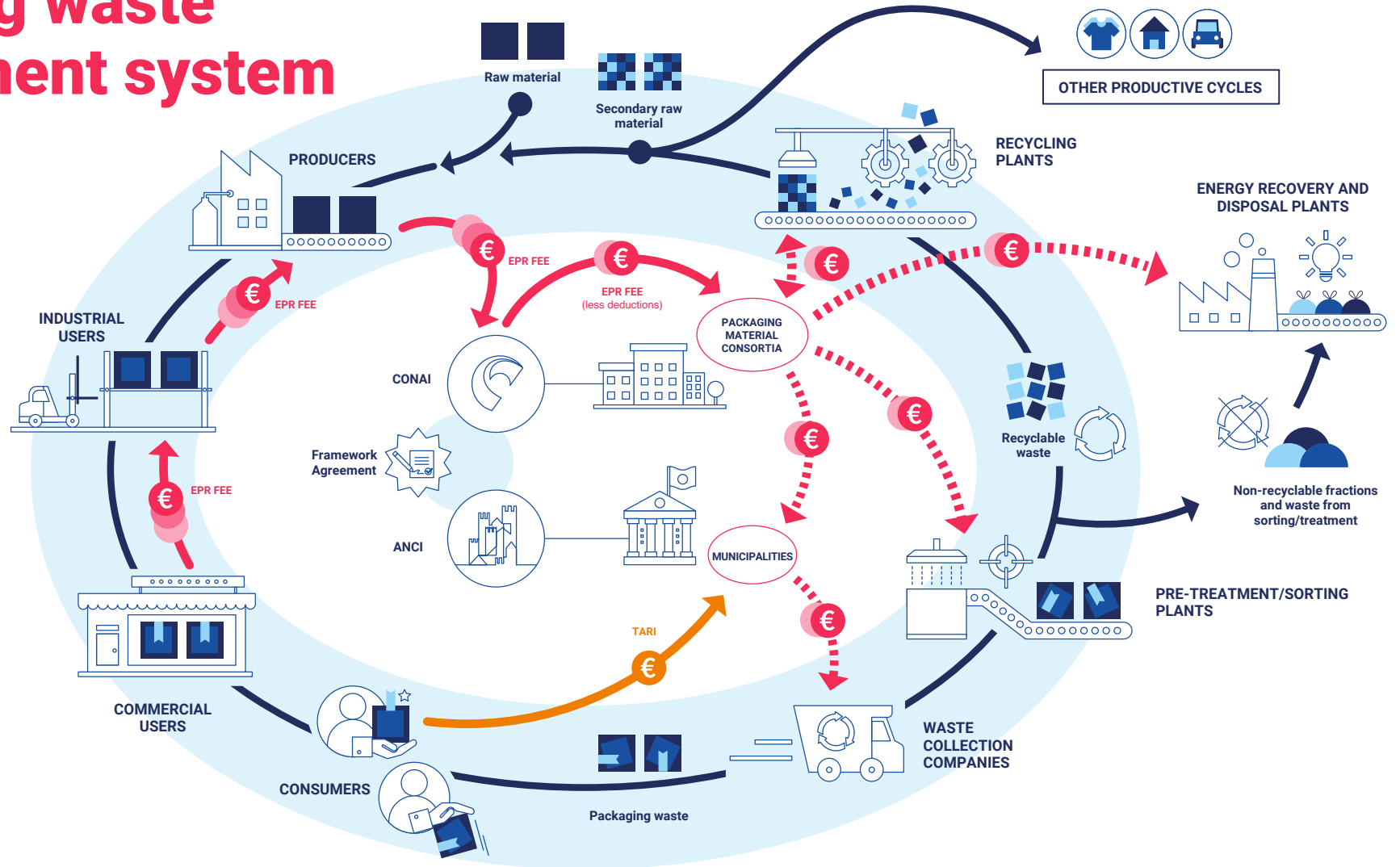
Platform for the management of packaging and industrial and commercial packaging waste

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





The national packaging waste management system





ANCI-CONAI deliveries in 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

Packaging Material Consortia	Final results 2023		Delta vs 2022
	ktonnes	kg/person	%
RICREA	144.4	2.88	9.9
CiAl	16.94	0.38	2.6
Comieco	1,517	27.04	16.1
Rilegno	n/a	n/a	n/a
Biorepack	43.86	0.78	2.2
Corepla	1,284.0*	22.81	0.2
CoReVe	1,660	37.05	-21.62
Total	4,666**		-4.72

* Quantities also include 4,315 tonnes of collection pertaining to the CONIP consortium.

** Net of the glass supply chain, deliveries to the CONAI EPR Organisation have risen compared to 2022.

SOURCE: Packaging Material Consortia.



ANCI-CONAI deliveries
4,666 ktonnes

-4.72%
over 2022



Payments made to municipalities
€676 million

€680 million
in 2022

In addition to the quantities managed directly by the Packaging Material Consortia, there are those collected by the Self-compliant EPR Organisations. For the plastics supply chain, the volumes managed by Coripet, based on its share, total 181,215 tonnes (of which 5,356 tonnes from selective collection).



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.



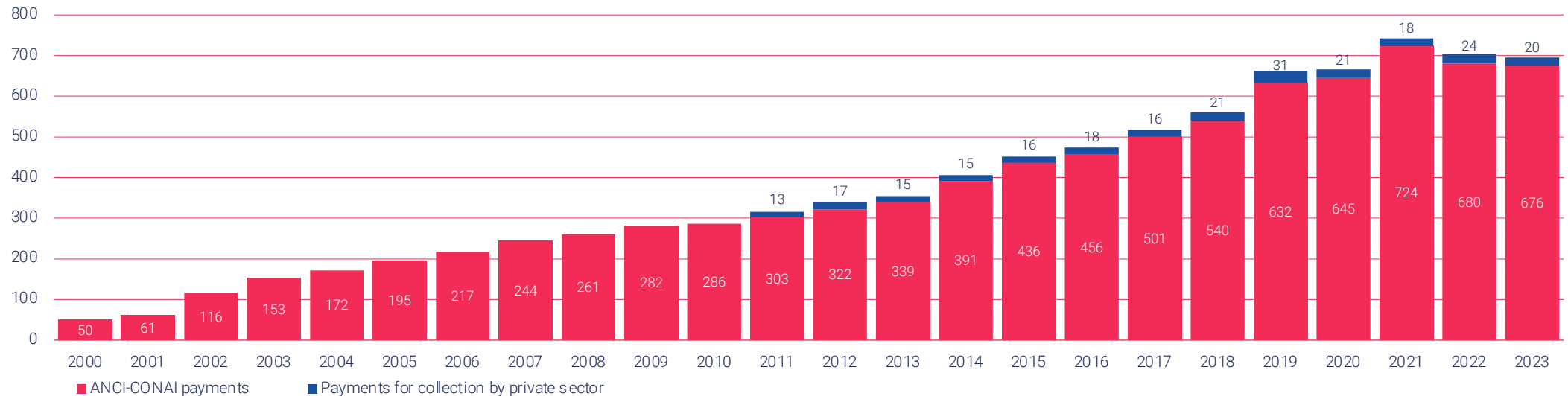
Between 2021 and 2023 paid from the CONAI System to Municipalities/Managers of public services to support separate collection

OVERALL TOTAL

more than €8.6 billion

PAYMENTS SUPPORTING SEPARATE COLLECTION

€ million



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



CONAI support for recycling

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. This item also includes costs incurred for new recycling streams and for experimental activities promoted by Consortia.



Between 2021 and 2023

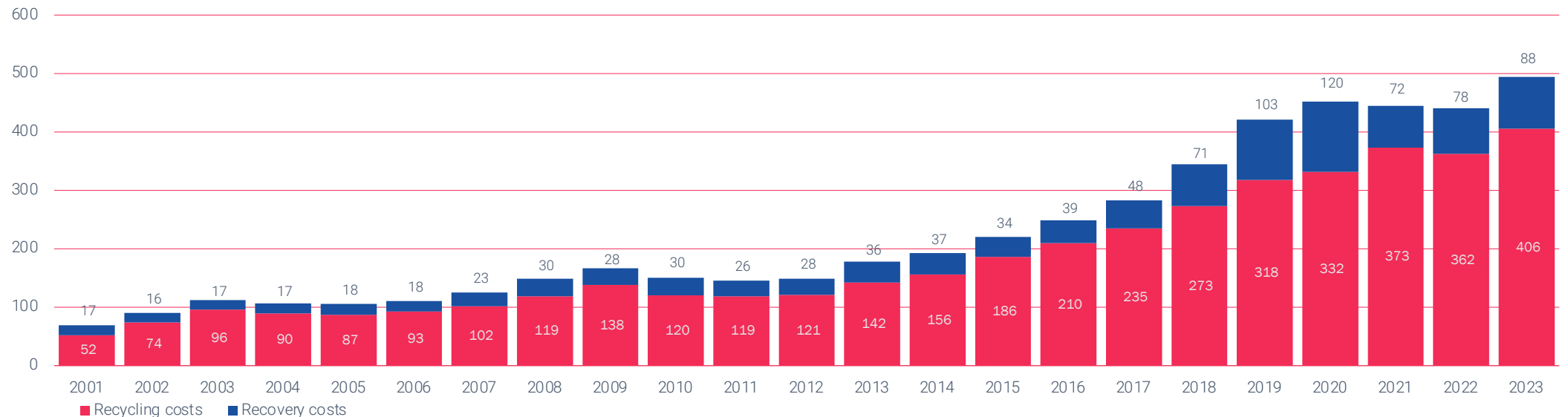
OVERALL TOTAL

more than €5 billion

paid from the CONAI System to cover the costs of recycling and recovery of packaging

RECYCLING AND RECOVERY CONTRIBUTION

€ million



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



CONAI support for recycling

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. The available resources are allocated to individual projects according to the requests for support coming from the local area, which are duly verified before acceptance.

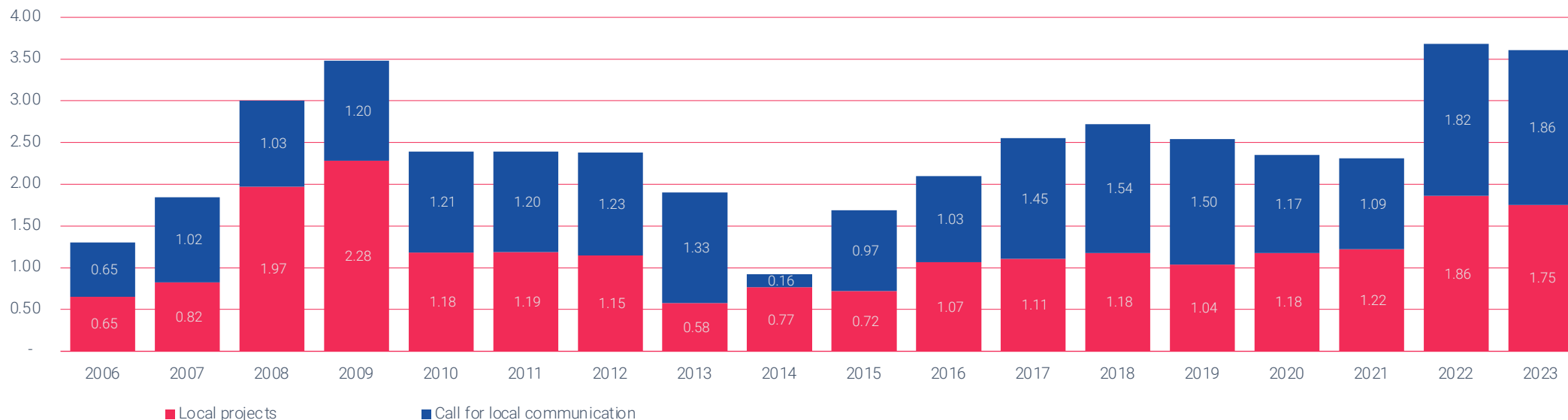


Between 2006 and 2023
OVERALL TOTAL
more than €40 million

paid from the CONAI System to local projects and Call for Local Communication projects

LOCAL PROJECTS

€ million

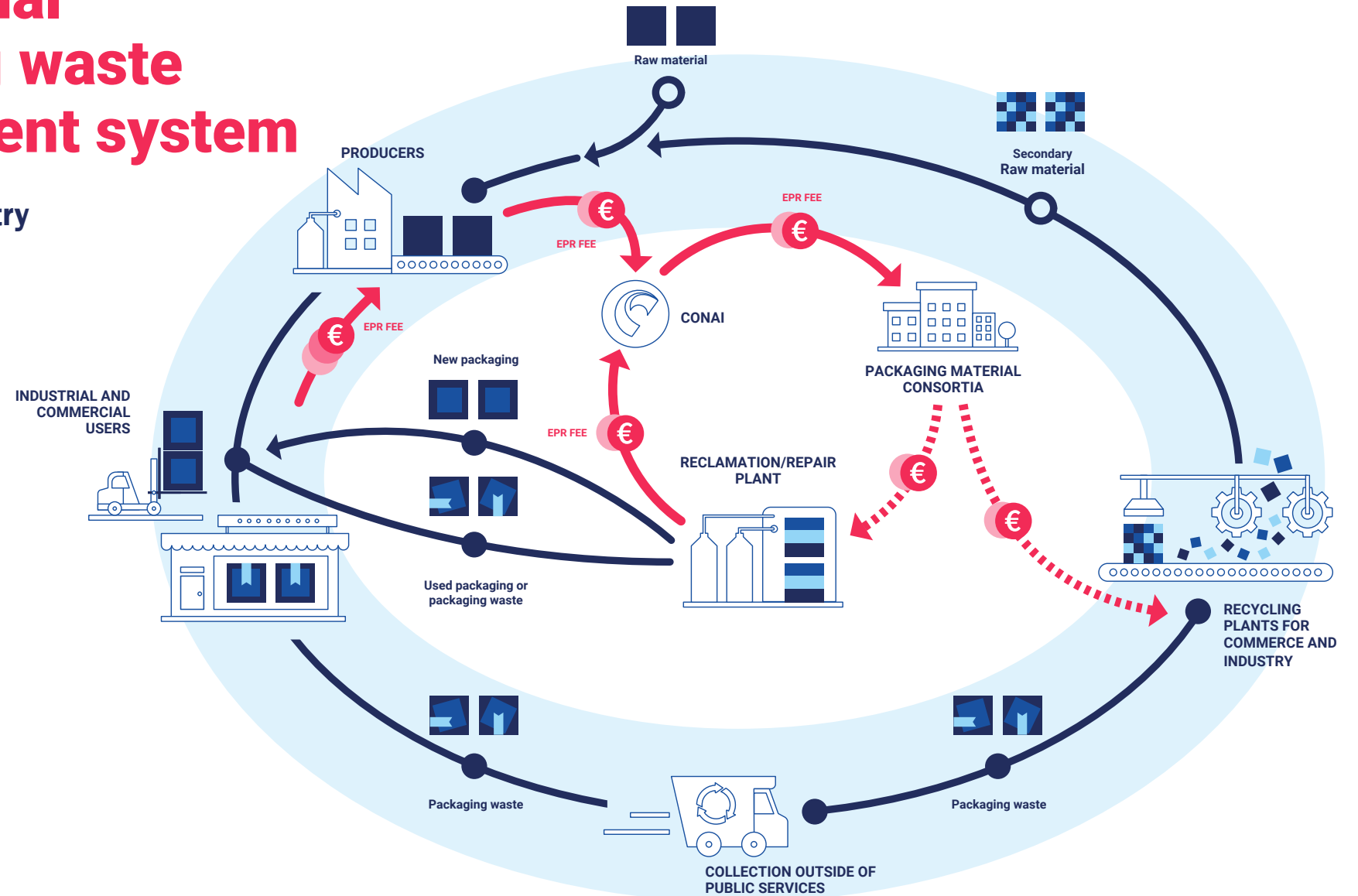


SOURCE: Data generated by CONAI Research Centre, from historical data.



The national packaging waste management system

Commerce & Industry





Industrial and commercial packaging

The CONAI system offers a second-instance industrial and commercial waste packaging service, performing strictly a guarantee function – starting with the **Rilegno Consortium**, which is most affected by packaging that falls into this category.

Consortium	Reuse	Regeneration II and III	Recycling II and III	Assimilation
RICREA		<ul style="list-style-type: none"> • Drums and tanks: 33 ktonnes 	<ul style="list-style-type: none"> • Non-hazardous non-reusable: 132 ktonnes • Strapping: 28 ktonnes 	
COMIECO			<ul style="list-style-type: none"> • Collection at business premises and other small and medium-sized businesses (UND) • Network of 117 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 EPR Fee for reusable packaging: 1,100 ktonnes benefited from reduction 	<ul style="list-style-type: none"> • Recovered cistern bases: 9 ktonnes per 28 plants • Pallet retreatment project: 127 ktonnes of regenerated pallets from 64 consortia 	<ul style="list-style-type: none"> • Network of 384 platforms: 1,646 ktonnes 	
COREPLA		<ul style="list-style-type: none"> • Drums and tanks (PIFU): 22 ktonnes per 32 plants 	<ul style="list-style-type: none"> • PEPS – expanded polystyrene packaging recycling platform: 10 ktonnes per 31 plants • Network of 57 platforms in partnership with CARPI consortium affiliated plants: 230.5 ktonnes 	<ul style="list-style-type: none"> • Film: 142 ktonnes

These CONAI EPR Organisation initiatives are supplemented by those of certain **Self-compliant EPR Organisations** operating on these circuits:

PARI System: in 2023 there are 554 collection points for LDPE flexible packaging waste nationwide

CONIP: in 2023 there are 62 collection points nationwide

SOURCE: Data generated by CONAI Research Centre based on institutional documents by Packaging Material Consortia and Self-compliant EPR Organisations (Management Report and Strategic Prevention Plans, May 2024).



Objectives, documentation and reporting

National Programme for Data Validation: transparency in the reporting of data provided to institutions.

The management system, originating from a voluntary project shared by CONAI, Packaging Material Consortia and the CONIP Self-compliant EPR Organisation, is run in accordance with UNI 11914.

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 verifying the procedures for determining market placement, 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.

As of 2024, all institutional documentation of the National Programme for Data Validation (PNVD) is drafted in accordance with the new UNI 11914 standard. In addition, the PNDV has been expanded with the introduction of an additional, optional activity for members: the "Focus Area". This specific assessment concentrates on a regulatory change or a topic of particular relevance, which will be monitored regularly with the aim of fostering continuous improvement.

2023 ACTIVITIES

ON-SITE CHECKS
(documentary)

9

WITNESS CHECKS
(on-site)

13

2024 ACTIVITIES

ON-SITE CHECKS
(documentary)

9

WITNESS CHECKS
(on-site)

13

FOCUS AREA

8



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