



General Programme for the Prevention and Management of Packaging and Packaging Waste

FINAL GENERAL REPORT 2021

June 2022



NEW DOCUMENT FEATURES

A **content sharing** trajectory with the main stakeholders involved in managing packaging waste has been launched for the first time. 8 meetings with CONAI's Board Of Directors and Executive Committee, Packaging Material Consortia, Self-compliance EPR schemes and ANCI.

CONTEXT

- Institutional relations regarding actions, **hearings, public consultations** and CONAI's in-depth analysis
- **BES Istat** report with CONAI tools in accordance with indicators
- Environmental situation with a focus on **IPCC** climate change report

FINAL GENERAL REPORT

Supplemented contents and modified structure relating to:

- **secondary and tertiary** packaging
- **skills** training and development
- **environmental policy**
- **study and research**
- plastic packaging data divided up in accordance with **EPR** systems

GENERAL PROGRAMME

for the prevention and management of packaging and packaging waste

An in-depth look at the SUP directive with analysis and action proposals.

CONAI: WHAT IT IS AND WHAT IT DOES

THE FIRST PACKAGING- SPECIFIC EPR SYSTEM IN ITALY

CONAI - **Consorzio Nazionale Imballaggi** - is made up of **736,000 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 Consortia and other economic operator co-operation.



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



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

123

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 Ecological Transition (MITE).



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



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



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



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



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 (optional).



Promoting environmental packaging and packaging waste impact **prevention**, by means of **environmentally friendly, reusable and recyclable packaging production study and research**.

Packaging waste management EPR systems: CONAI Packaging Material Consortia and Self-compliance EPR schemes

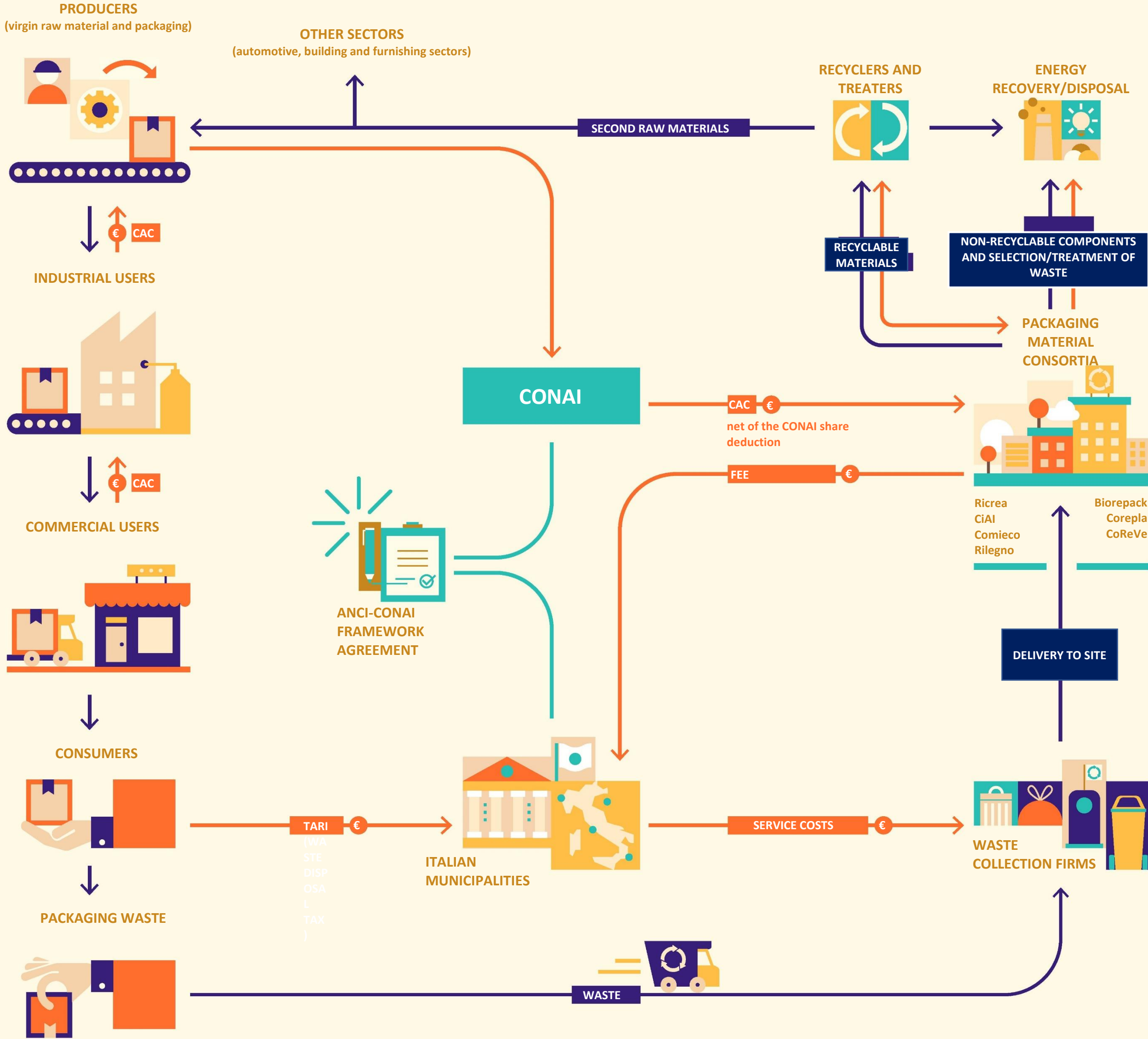


CONAI guides the work of the 7 Packaging Material Consortia, both private and non-profit, working in the collection of packaging waste in various materials and its recycling and recovery across the **whole of Italy** and in a market support role.



There are currently **3 autonomous consortia** working to promote the recycling of **specific types of plastic packaging**.

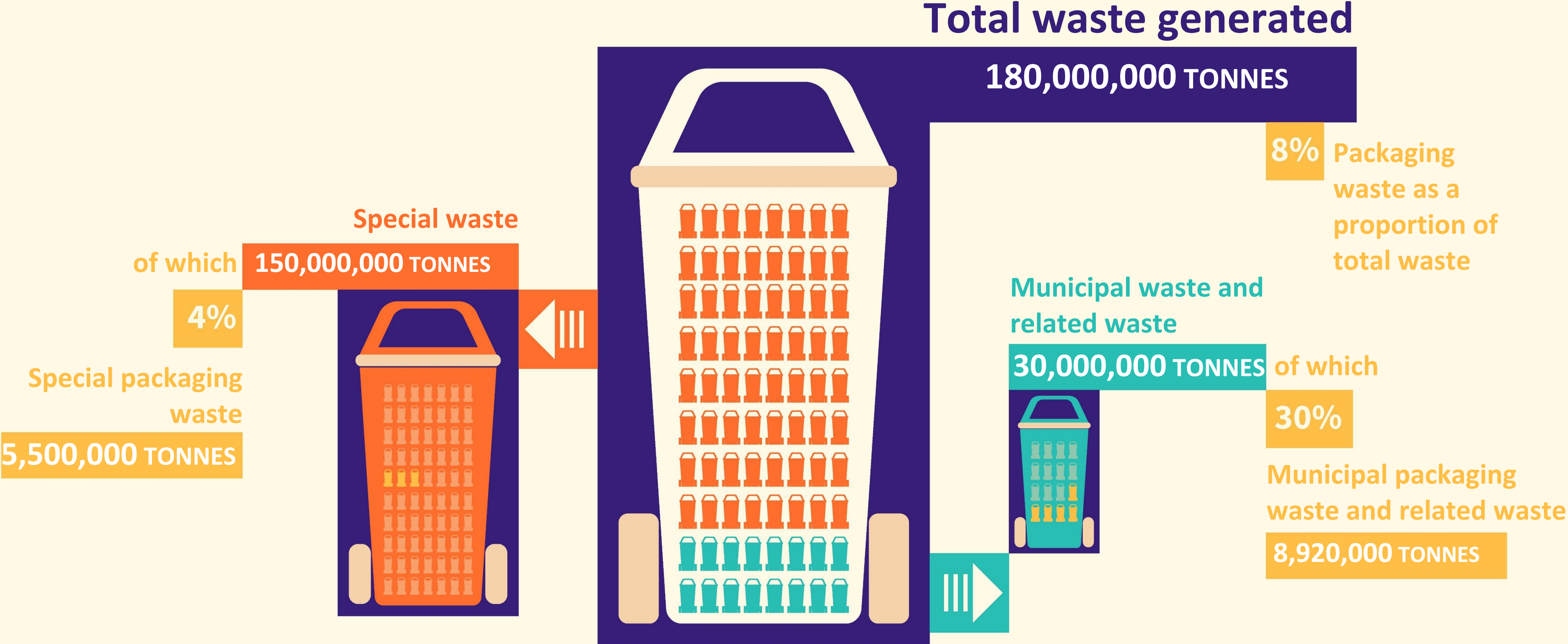
THE CONAI EPR ORGANIZATION FUNCTIONING MODEL



→ ECONOMIC FLOWS
→ WASTE/MATERIALS

WASTE IN ITALY AND CONAI

Annual averages in recent years.

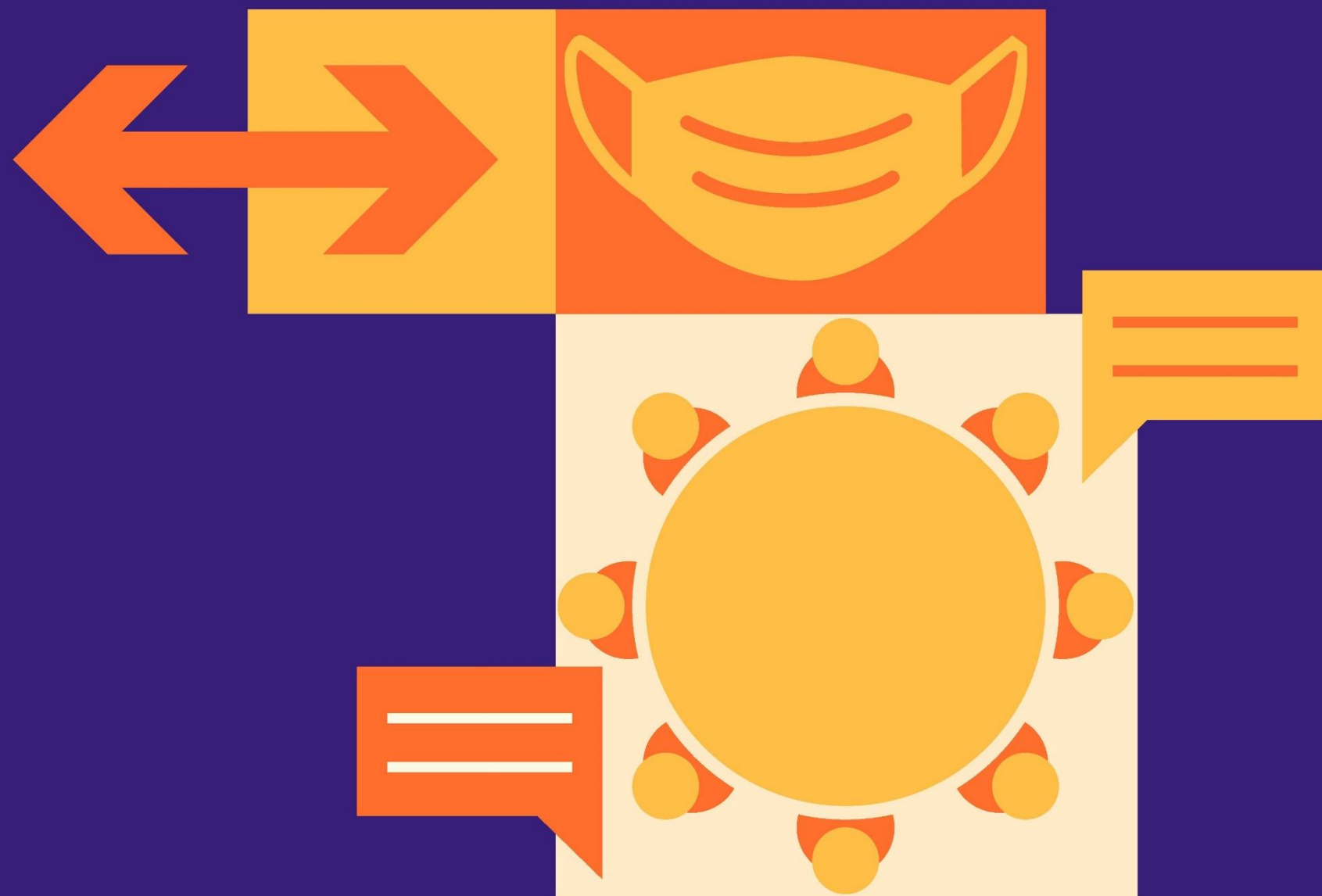


SOURCE: CONAI elaboration of the latest ISPRA data

THE CONTEXT

2021:

ANOTHER YEAR, DIFFERENT FROM THE PAST



The measures implemented by the Italian government to deal with the Covid-19 pandemic **did not bring CONAI's work to a halt.**

Furthermore the economy and consumer buying made for a better-than-expected **recovery.**

EUROPEAN REGULATIONS



The New Circular Economy Action Plan

Achievement of climate neutrality by 2050 and the uncoupling of economic growth from resource use

- Amendment of the Packaging Directive and the Waste Directive

Delegated acts of application of the 2019/904 SUP directive

EUROPEAN REGULATORY TRENDS

NEW FEATURES IN 2022

PACKAGING DIRECTIVE

30 May 2022 - presentation by the EU Commission of the outcome of its second Packaging Directive amendment impact assessment. The main new features are:

- Introduction of **packaging waste prevention targets** (5% in 2030 and 10% in 2040)
- **definition of recyclable packaging**
- introduction of minimum standards for **DRS deposit refund systems**
- introduction of **recycled content goals for plastic packaging**
- **labelling approach**



WASTE DIRECTIVE

- Launching of European Commission work on **EOW criteria for plastic waste**
- Publication of the 2022/162 Implementing Decision on **calculating, assessing and communicating reductions in the use of certain single-use plastic products** and the measures adopted by Member States to achieve such reductions



AMENDMENT OF REGULATION 282/2008 on recycled plastic for food contact use



NATIONAL REGULATIONS

Adoption of the SUP Directive

Leg. Decree no. 196 of 8 November 2021

(EU) Implementing Decision 2022/162

Use reduction calculations for specific single-use plastic products

Ministerial Decree 6 October 2021

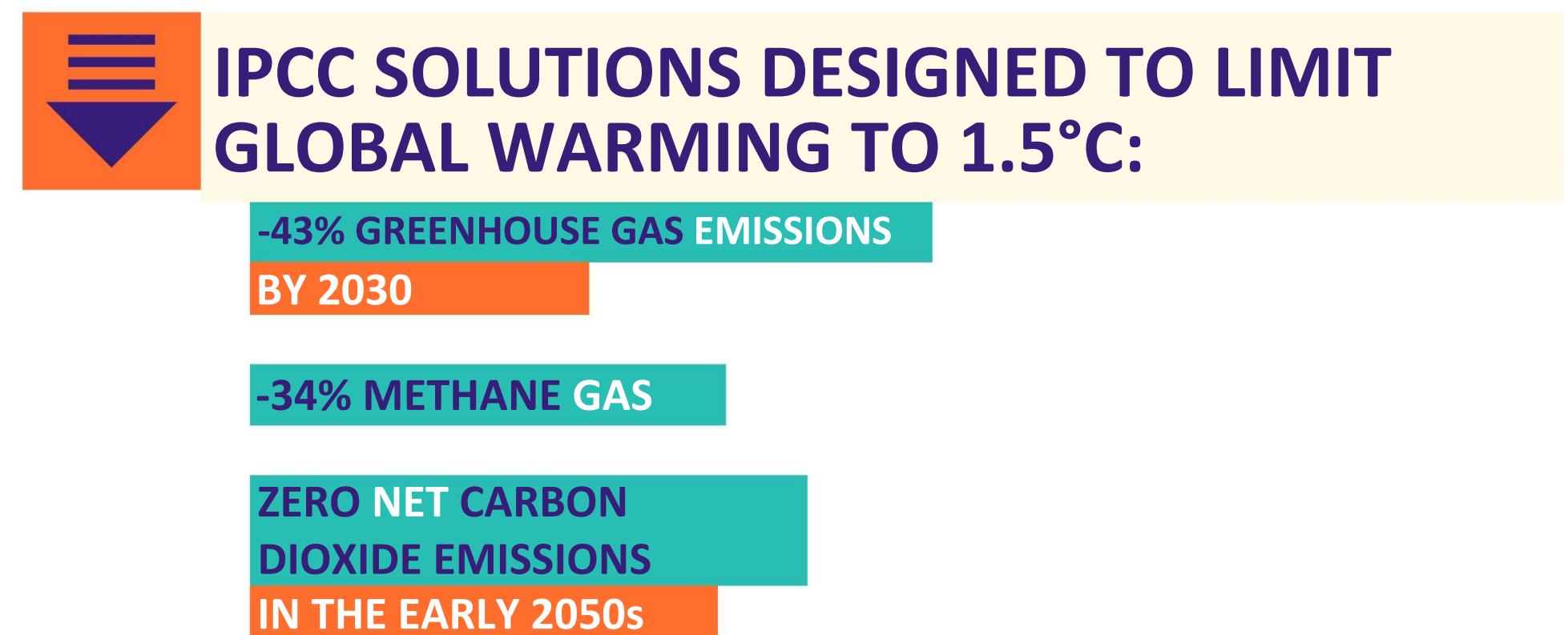
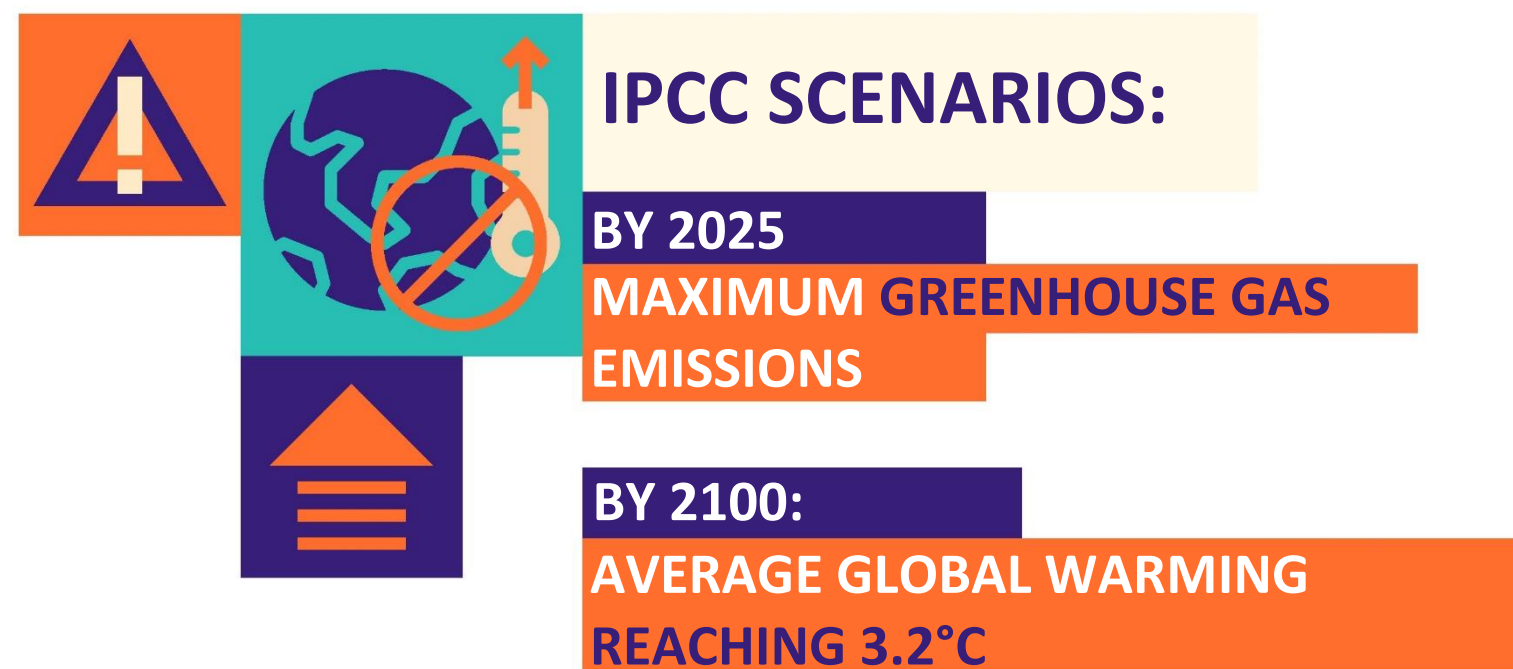
Recycled product bonus

PNRR

IPCC REPORT*

LIMITING GLOBAL WARMING TO 1.5°C REQUIRES CONCRETE STRATEGIES AND ACTIONS TO REDUCE GREENHOUSE GAS EMISSIONS RAPIDLY. CO-ORDINATION BETWEEN GOVERNMENTS AND THE INTERNATIONAL COMMUNITY IS CRUCIAL.

In the 2010-19 period average annual greenhouse gas emissions are acknowledged to be **higher** than ever before in human history.



* Part Three of the Sixth IPCC Assessment Report (AR6).

IPCC REPORT*

OPTIONS ARE AVAILABLE IN ALL SECTORS
CAPABLE OF AT LEAST HALVING EMISSIONS BY 2030.



Energy: reducing fossil fuel use and the adoption of new carbon stock solutions.

Industry: more efficient use of materials, re-use, recycling of products and waste reduction.

People: individual transport, food and energy consumption habits have the potential to put pressure on decision-makers to decarbonise society.



ACCORDING TO THE SWG OBSERVATORY, THE VAST MAJORITY OF ITALIANS WANT A GREATER FOCUS ON RENEWABLES AND ARE READY TO CHANGE THEIR HABITS TO AVOID WASTING ENERGY.**

* Part Three of the Sixth IPCC Assessment Report (AR6).

** Breen&Blue, Andrea Di Nicola.

THE WORLD MACRO-ECONOMIC CONTEXT

In 2021 industrial production and international business recouped their 2020 losses fully, despite a slowdown in the second quarter of the year.

Persistent inflationary pressures and the continuation of the pandemic are prompting forecasts of a slowdown in economic growth and trade worldwide.

The current conflict, whose outcome is presently unpredictable, is impacting negatively on growth and inflation forecasts: energy and food commodity prices which were already rising are skyrocketing and we are witnessing an increase in family and business uncertainty.

	2009	2021
GLOBAL GDP	-0.4	5.8
USA	-2.5	5.7
EMU	-4.5	5.2
<i>Germany</i>	-5.6	2.8
China	9.2	8.1
GLOBAL TRADE	-12.3	9.0

SOURCE: Prometeia, February 2022 Brief

THE CASE OF PACKAGING COMMODITIES

The bounce-back in metal, plastic and wood prices in the first half of 2021 was followed by even more marked increases in energy costs (first and foremost natural gas and electricity) in the third quarter, leading the Prometeia Index to close 2021 with a record increase (approx. +70%).

In 2022, average prices for packaging commodities are expected to consolidate to levels similar or slightly lower than in 2021, with the exception of aluminium (+36% in Euros) and cellulose (+10.5%), which involve more energy-intensive production processes.

COMMODITIES PRICES - % var., in Euro			
	Forecast 2021	Final 2021*	Forecast 2022
Wood	58.1	83.8	-4.4
Plastic	74.6	68.6	0.4
Steel	105.8	106.7	-0.7
Aluminium	41.9	40.6	35.9
Cellulose	38.9	40.5	10.5
Silica (glass)	3.5	2.8	-3.5

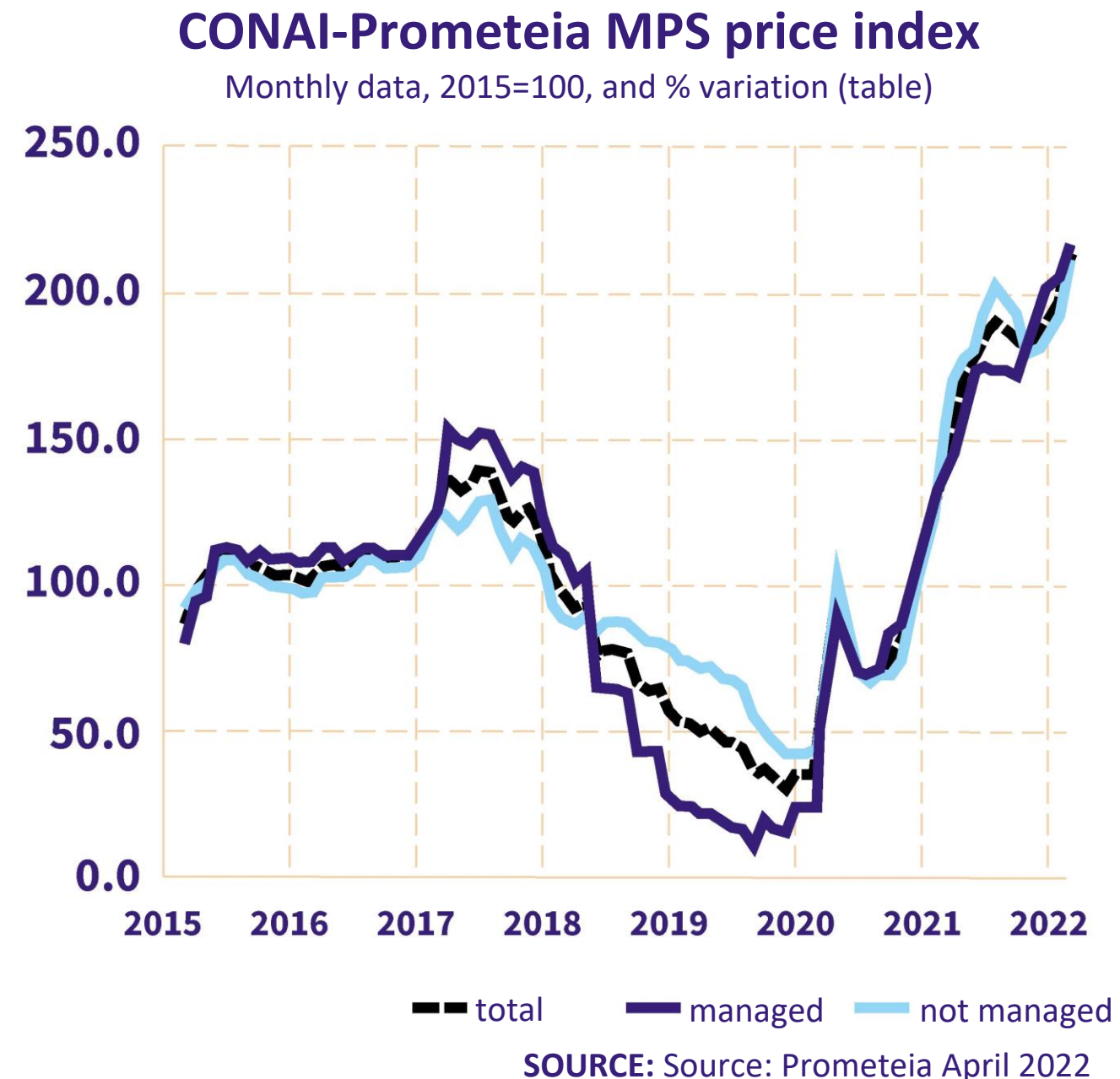
SOURCE: Prometeia, Commodity Price Analysis and Forecasts, March 2022 and September 2021

*variation over 2020

CONAI-PROMETEIA SECOND RAW MATERIAL INDEX

A summary of price trends in the main MPS sent to recycling in Italy.

A 146% price increase in 2021 as compared to 2020.



Factors contributing to index increases:

- **pulp prices**, which ended 2022 over 300% higher in Euro terms than in 2021 as a result of increased packaging input demand in both Italy and the rest of Europe.
- above average increases for **scrap glass** (+126% approx.) and for **'secondary' plastics**: in 2021 polyethylene prices increased more than 100%
- increased price trends for **scrap iron and aluminium** which – following on from price rises in the corresponding raw materials (primary aluminium and steel) – saw increases of approx. 66% and 78% respectively in Euros as compared to 2021

FINAL

GENERAL

REPORT

2021

2021 DATA

Despite the boom in packaging put on the market, the amount sent to recycling is further increasing.



14.4 MILLION
TONNES

put on the market

+ 8,5%

over 2020

+0.5 % POINTS

over 2020

73.3%

RECYCLING RATE



10.5 MILLION
TONNES

sent for recycling

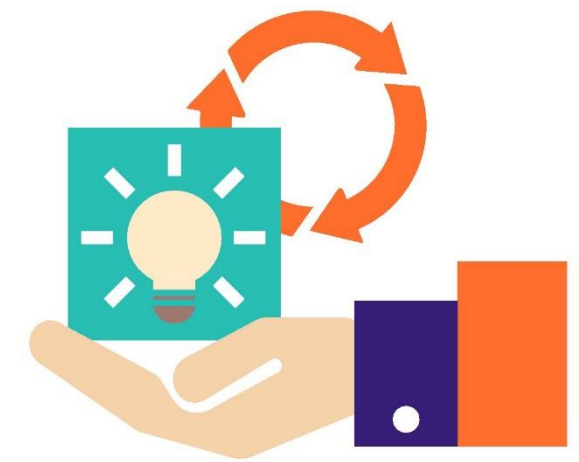
+ 9,3%

over 2020



50%

CONAI EPR Organization's
direct recycling
contribution



11.9 MILLION
TONNES

total recovery
(recycled + energy
recovery)

+7,5%

over 2020

FINAL 2021	PUT ON THE MARKET	SENT TO RECYCLING	
MATERIAL	KTONNES	KTONNES	%
Steel	542	390	71.9
Aluminium	78	53	67.5
Paper	5,243	4,460	85.1
Wood	3,394	2,198	64.7
Plastics and Bioplastics	2,274	1,264	55.6
Glass	2,850	2,183	76.6
TOTAL	14,381	10,548	73.3
Delta on 2020	+ 8.5%	+ 9.3%	+ 0.5 % points

Constantly increasing national recycling rates and lower exports, above all in the paper chain.



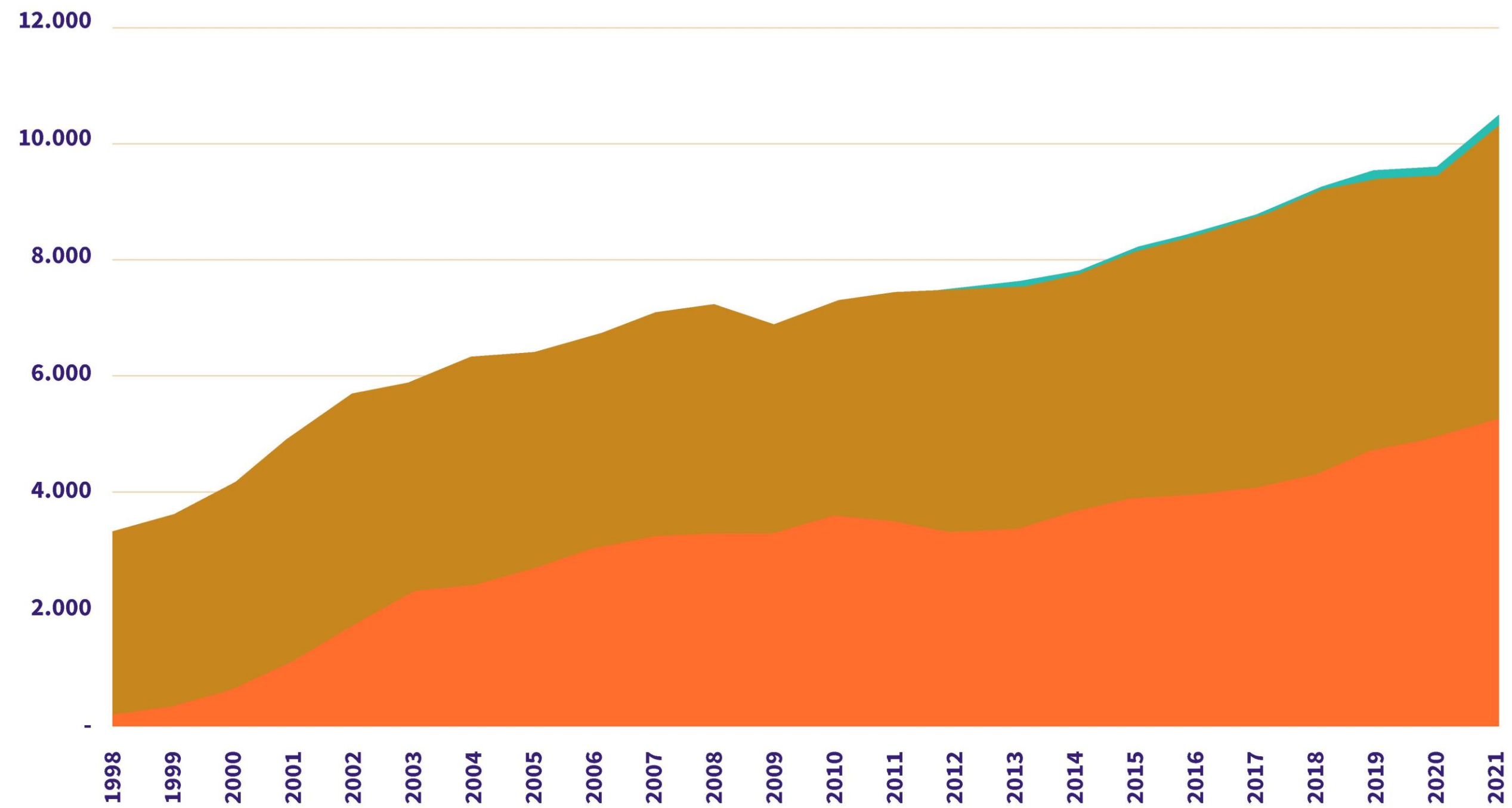
Recycling from private premises is also recovering as a result of economic recovery: **+7% urban recycling and +9% recycling from C&I**

FINAL 2021	KTONNES	ANNUAL VARIATIONS
Sent to energy recovery	1,332	- 5.2%
% of goods put on the market sent to energy recovery	9%	-1.3 % points
Total recovery	11,880	7.5%
total recovery as a % of goods put on the market	82.6%	-0.8 % points




CONTRIBUTION TO NATIONAL RECYCLING BY PACKAGING MATERIAL CONSORTIA AND SELF-COMPLIANCE EPR SCHEMES AND MARKET

The CONAI EPR Organization acts to **SUPPORT** the **MARKET** where the profit margin is lacking and guarantees free market competition in second raw materials (MPS).

MANAGEMENT OF WASTE SENT TO RECYCLING

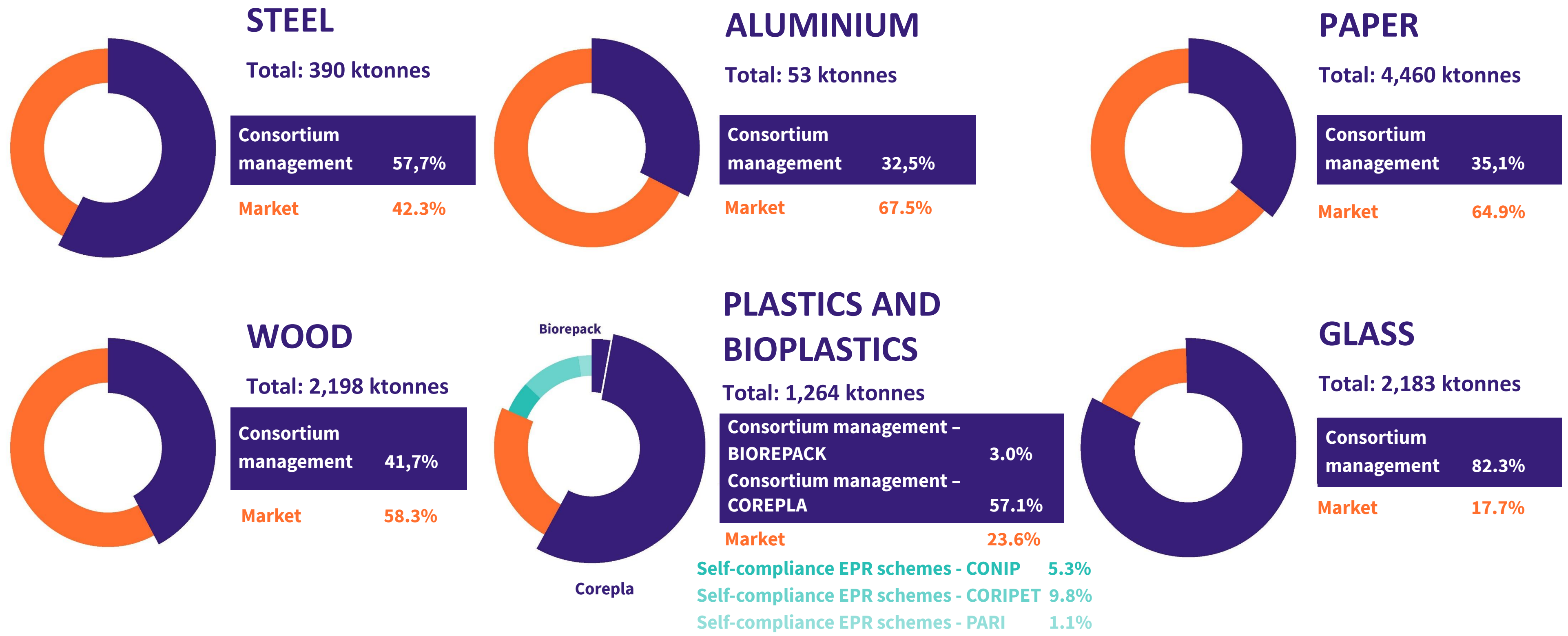


Drop in recycling managed by the **CONAI EPR Organization** for almost all materials as a result of positive market trends.

- 
2%
SELF-COMPLIANCE EPR SCHEMES
 (CONIP-CORIPET-PARI)
- 
48%
INDEPENDENT OPERATORS
 46% in 2020
- 
50%
PACKAGING MATERIAL CONSORTIA
 52% in 2020

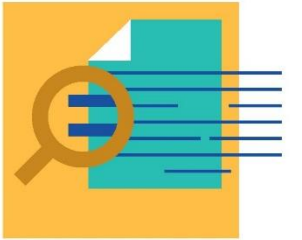
PACKAGING MATERIAL CONSORTIA CONTRIBUTION BY MATERIAL

From 32% for **ALUMINIUM** packaging to 82% for **GLASS** packaging



EUROPEAN SYSTEMS

COMPARED

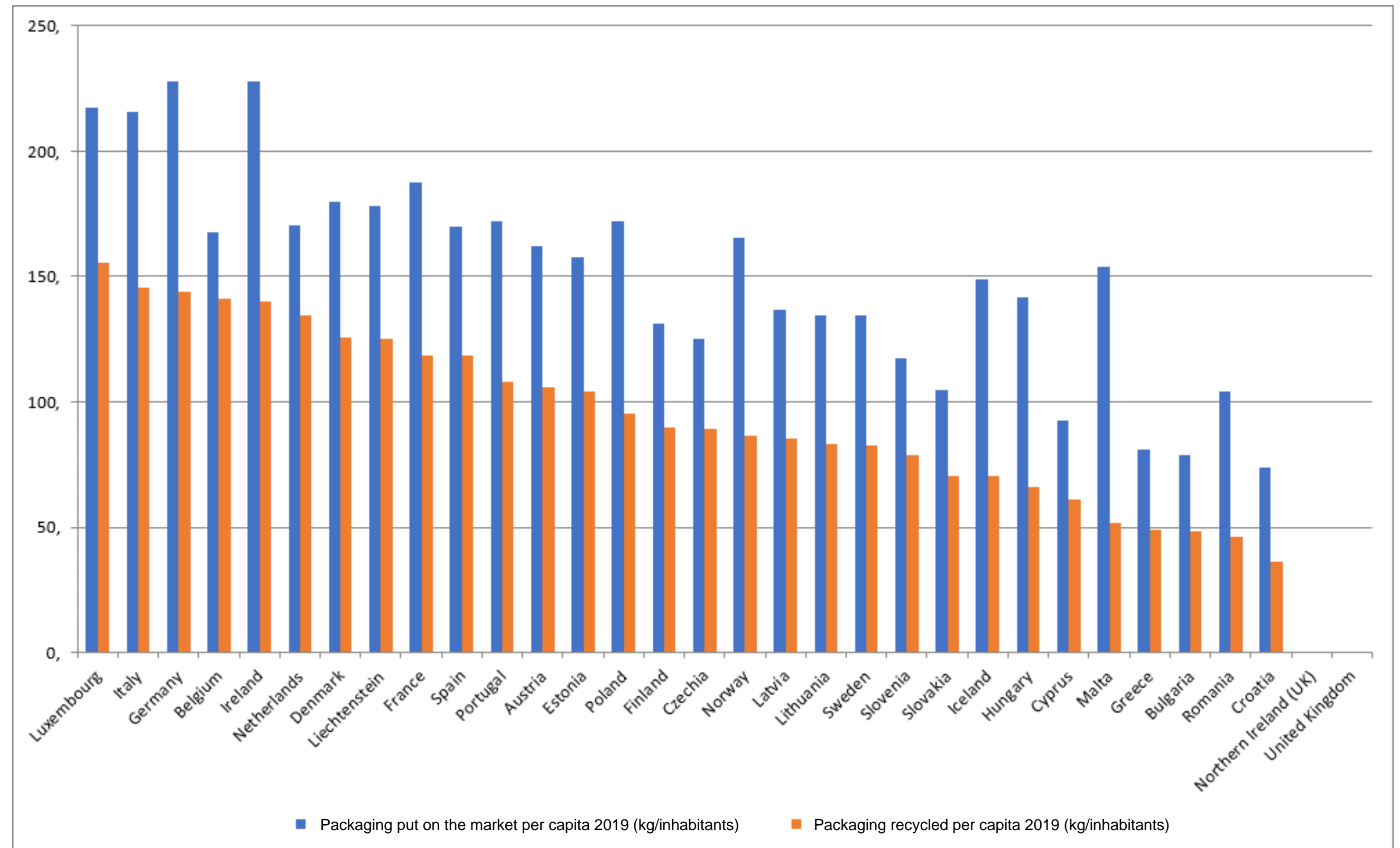


Italy ranks first amongst more densely populated nations



Italy ranks second in Europe for per capita packaging recycling, above Germany

Packaging waste put on the market and recycled (kg per capita)



CONAI IS THE MOST EFFICIENT OF THE PROs OF MORE DENSELY POPULATED NATIONS

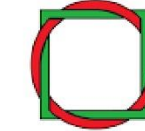
CONAI is the least expensive PRO amongst nations with populations of over 10 million.

KEY:
Depending on population figures we can distinguish between:

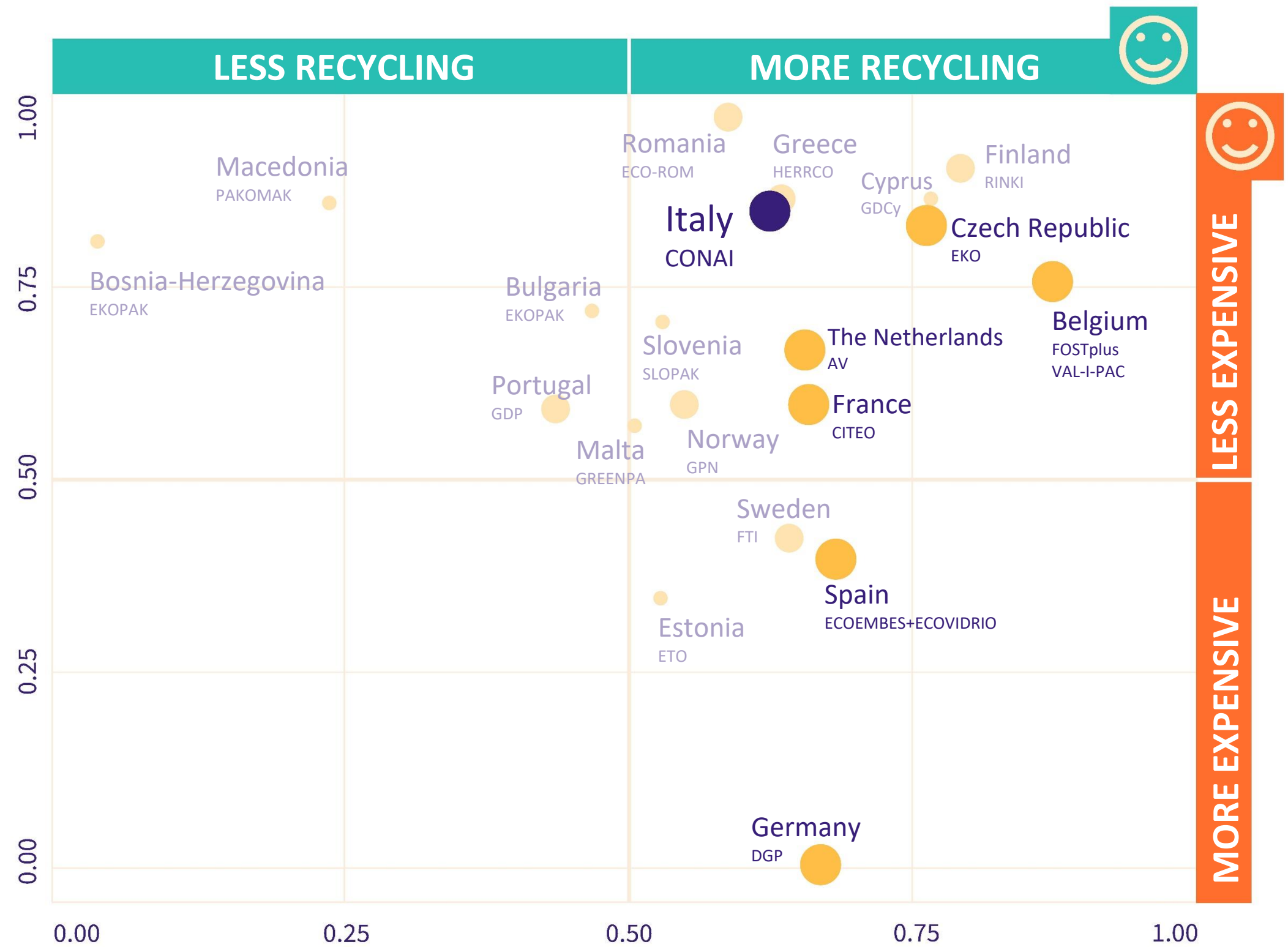
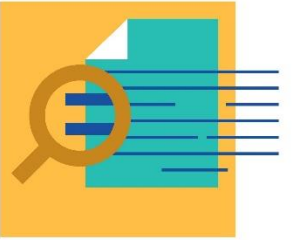
- small PRO
- medium-sized PRO
- large PRO



Università Bocconi
GREEN
Centre for Geography, Resources, Environment, Energy and Networks



Wuppertal Institut für Klima, Umwelt, Energie GmbH

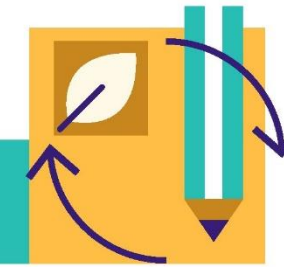


CONAI'S FLAGSHIP ACTIVITIES

Fee determination, modulation and management



Supporting firms with eco-design



Supporting local authorities with quality SC



Studies and research into circular economy themes



Training and green jobs



Transparent reporting



CAC AND FEE MODULATION

Intense Board of Directors CAC value amendment and fee modulation reinforcement work, in force since 1.1.2022

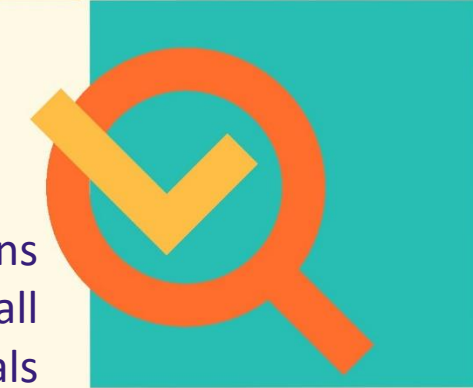
quantities declared as put on the market



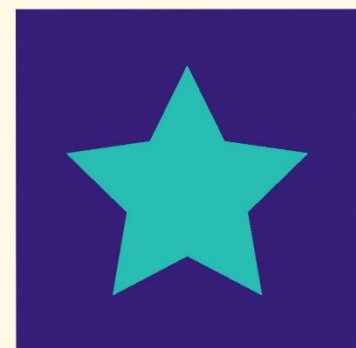
second raw material price lists



revision deliberations for CAC fall for all materials



NEW



PAPER

extension to all paper-based composite packaging materials with a lower than 80% paper component



WOOD

reinforced incentives for reusable packaging

PLASTIC



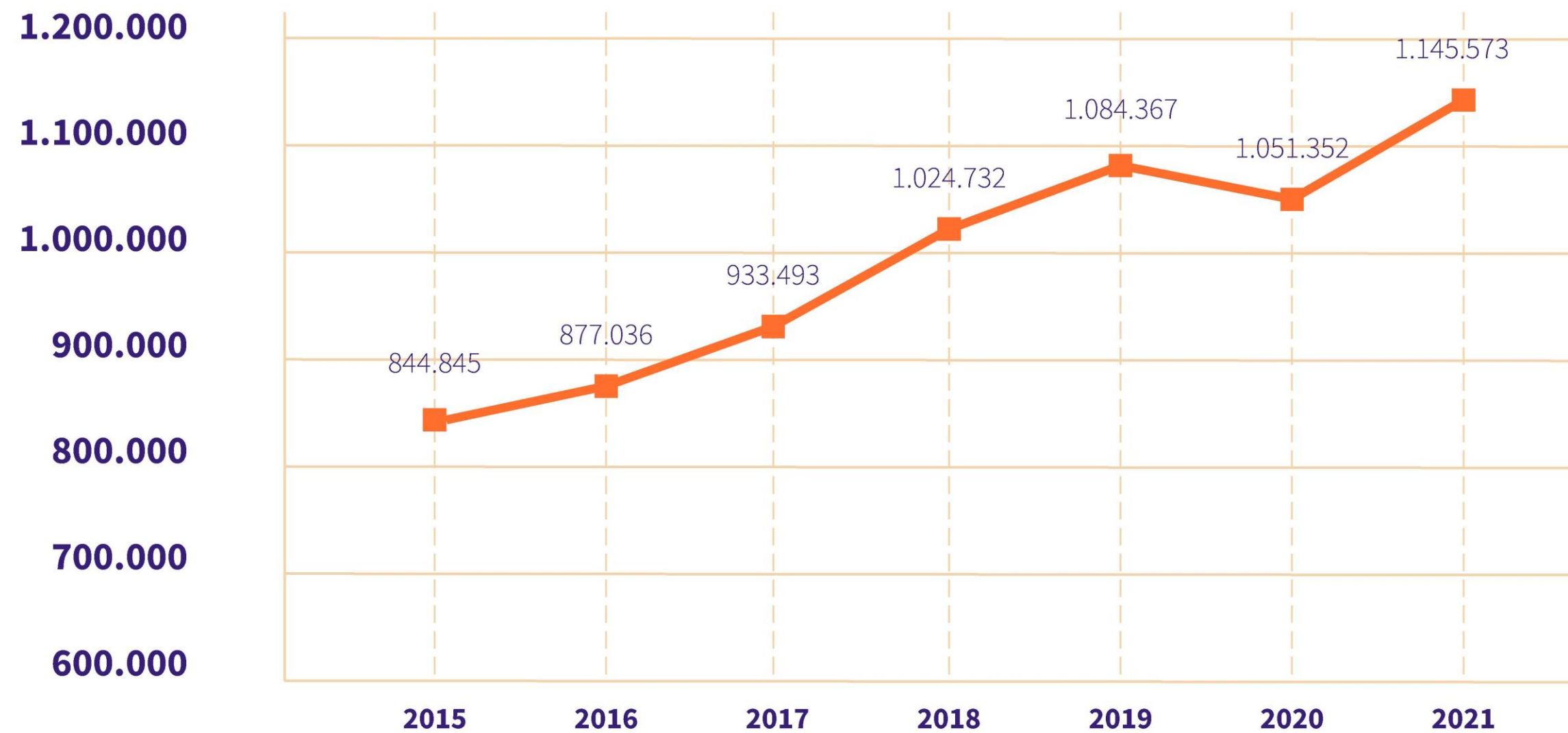
introduction of an economic criteria in CAC value determination by level (chain deficit or net management costs)

NEW

REUSABLE PACKAGING

1.1 million tonnes: 8% of packaging placed on the market. Growth of 9% over 2020.

CONAI devotes special attention to packaging designed for multi-year use. Constantly updated incentives and simplified contributions for reusable packaging* since 2012.



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 **2021 volumes of packaging reused via CONAI incentive procedures began growing again.**

* Procedures relating to: returnable glass bottles, plastic bottle boxes and baskets, pallets in used wood, repaired or simply selected and reused, pallets in new wood made in conformity with codified specifications and used in controlled circuits.

PENSARE FUTURO

Eco-design for increasingly sustainable and recyclable packaging.

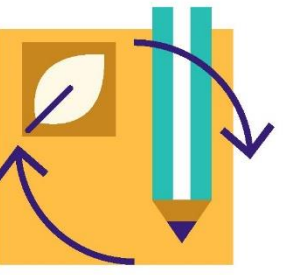
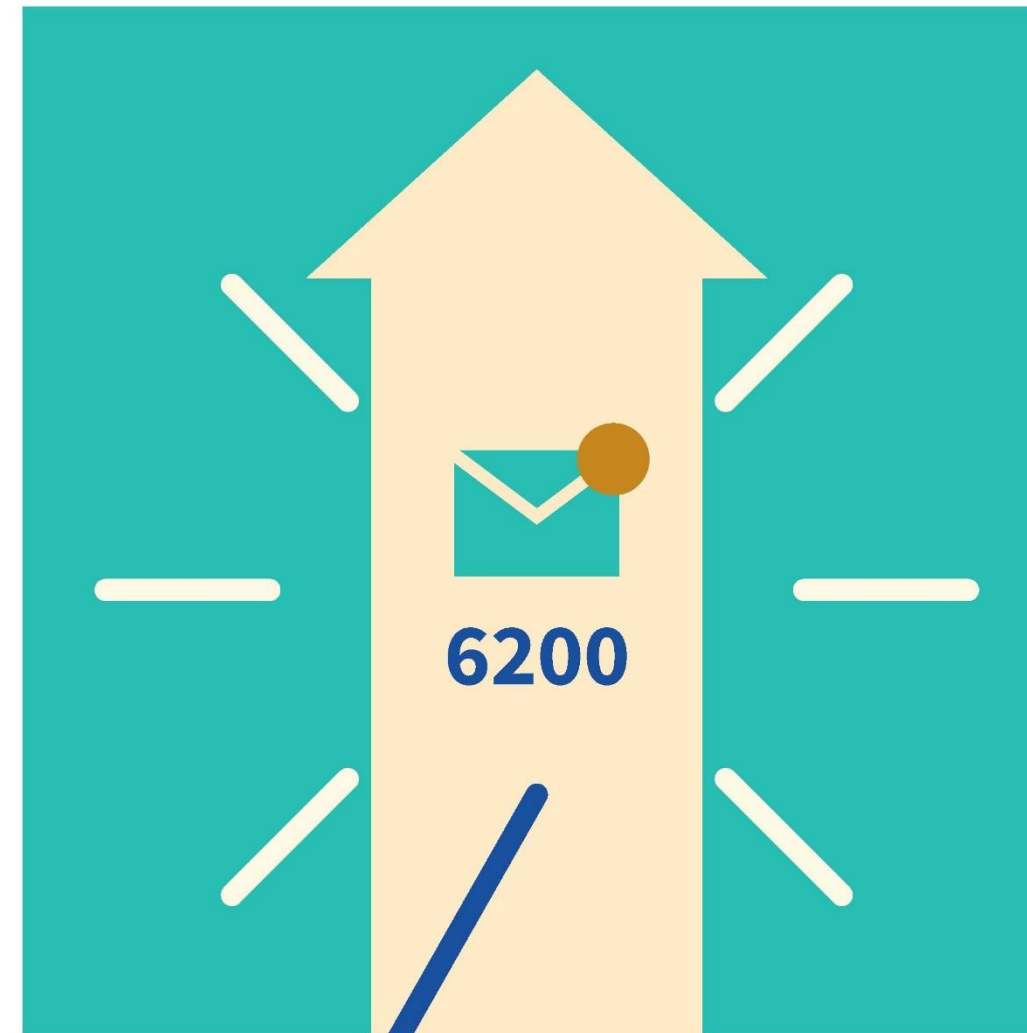


PENSARE FUTURO
INSIEME A CONAI PER LA PROGETTAZIONE SOSTENIBILE



E-PACK

Specific email address focusing on eco packaging design and environmental packaging labelling tools.



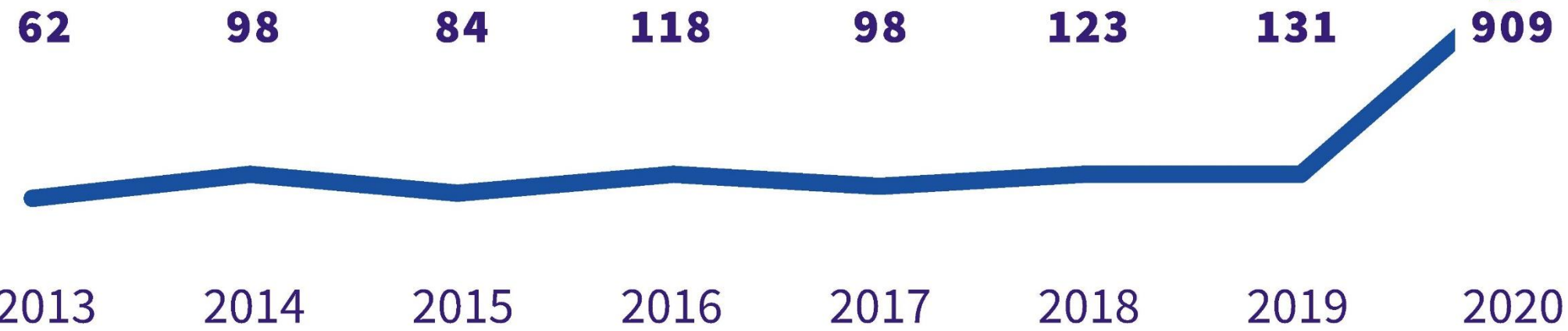
WHY?

Queries relating to the environmental packaging labelling requirement from 26 September 2020.

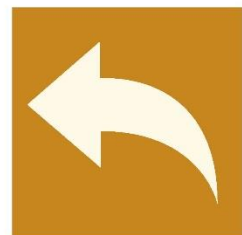
Deferred to 1 January 2023

DOUBTS RAISED

- Technical aspects
- Responsibility
- Who is covered by the requirement
- Compliance terms

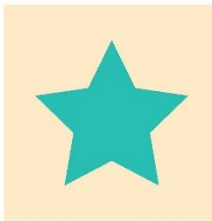


REQUESTS TO
epack@conai.org




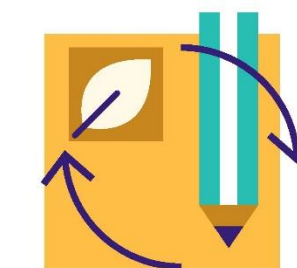
LABELLING CONAI'S ANSWERS

- Guidelines for the environmental labelling of packaging Updates


- Guidelines for voluntary environmental labelling NEW 

- E-tichetta tool 10,500 subscribers

- Website: Etichetta-conai.com (FAQ, Best Practices, list of experts, checklist) NEW 



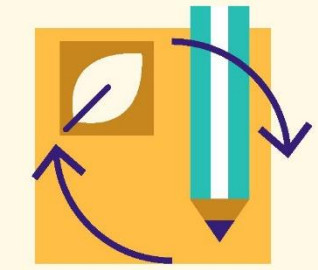
- CONAI Academy information webinars

- CONAI Academy Week NEW 

- Specific technical training promotion



DESIGN FOR RECYCLING



Promotion of a specific web platform (www.progettarericiclo.com) focusing on design for packaging recycling guidelines.



Guidelines to facilitate the recycling of packaging made predominantly from **paper**

published in 2020

Polytechnic University of Milan



Guidelines to facilitate the recycling of **aluminium** packaging

published in 2018

Polytechnic University of Turin



Guidelines to facilitate the recycling of **plastic** packaging

published in 2016

Iuav University of Venice



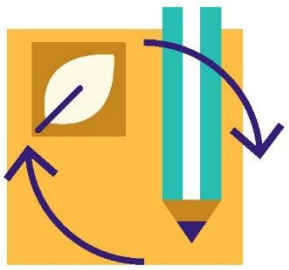
ECOD TOOL

Simplified LCA and packaging eco-design tool activated in February 2020.

■ **Performs** environmental packaging check-ups

■ **Suggests** potential eco-design drivers

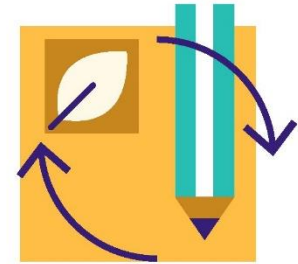
■ **Compares** packaging re-design projects





BANDO CONAI PER L'ECO-DESIGN

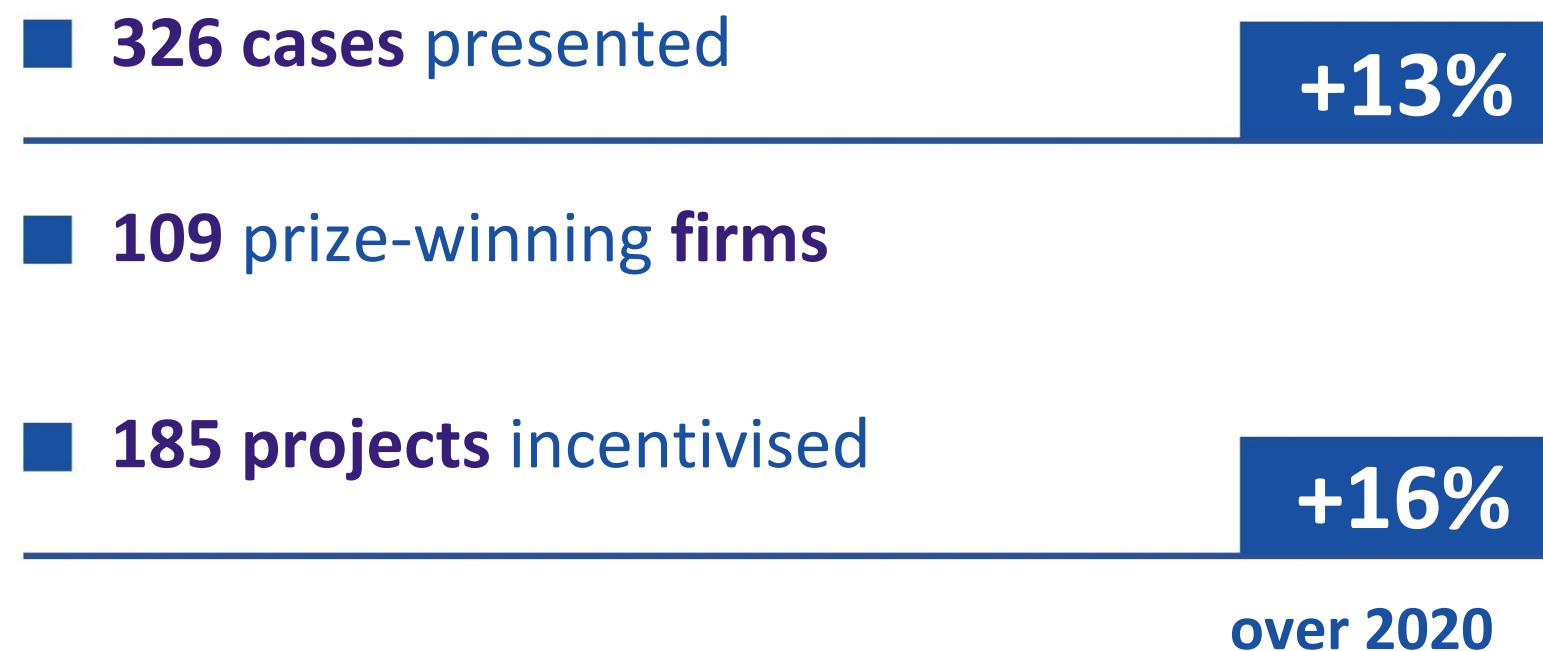
Eco-design call to reward the most sustainable packaging solutions.



ecoPACK 2021

BANDO CONAI PER L'ECODESIGN

2021 edition



■ Use of **recycled materials** has doubled

■ **Raw material savings** have dropped

■ Cases of **reuse** have tripled

★ **Legambiente** awarded a special mention to one of the five circular innovation winners

KEY TOOLS

2 key consortium management tools designed to facilitate appropriate end-of-life-cycle packaging processes and increase recycling rates:



ANCI-CONAI FRAMEWORK AGREEMENT ON URBAN ORIGIN SC FLOWS



It also encompasses extraordinary support projects for the local authorities who 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

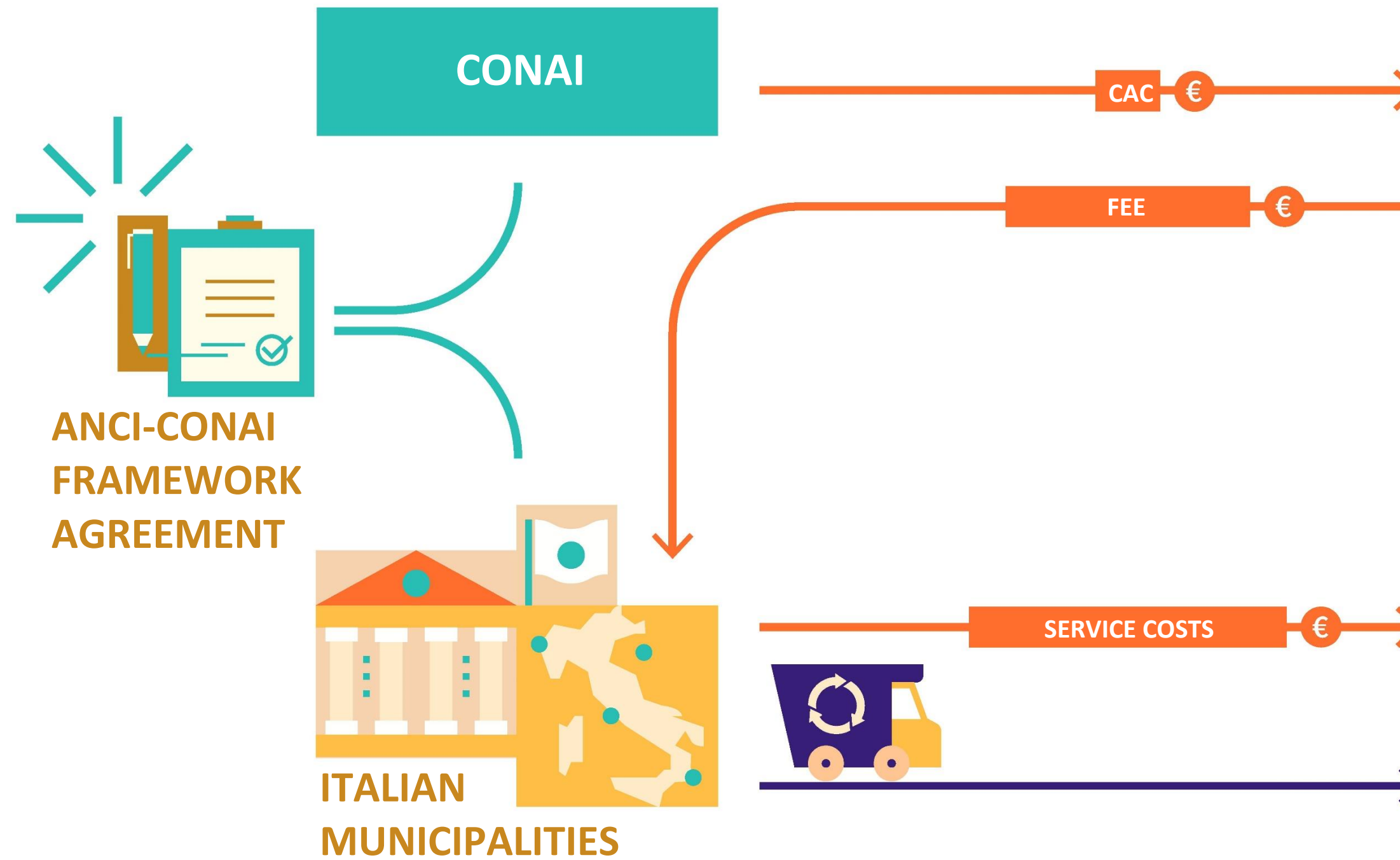
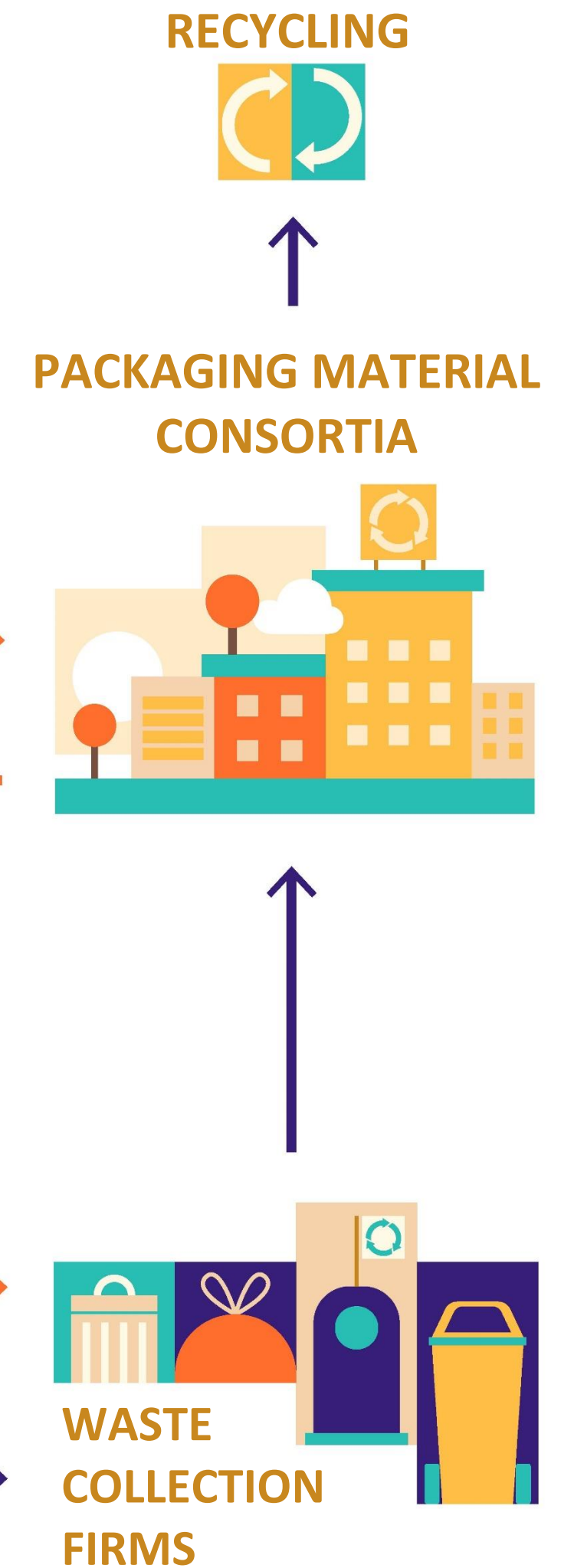
It consists of incentives to repair packaging and regenerators and a packaging waste interception network.

ANCI-CONAI FRAMEWORK AGREEMENT



STRUCTURE AND FUNCTIONING

For Italian municipalities it guarantees the destination of separately collected packaging waste and, subsequently, that waste being sent to recycling.





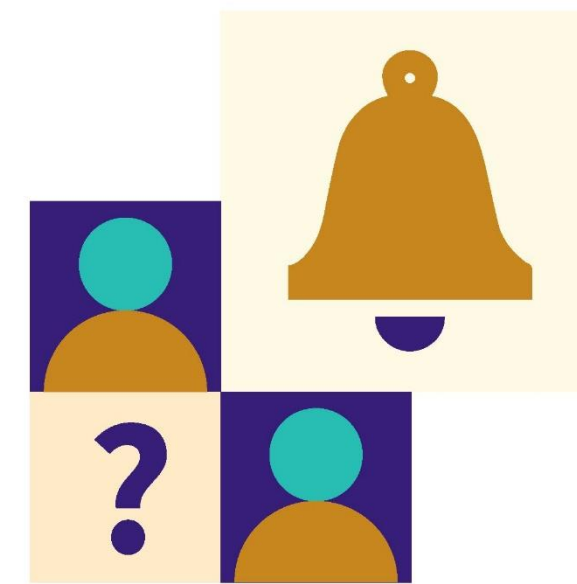
ANCI-CONAI FRAMEWORK AGREEMENT / NEW FEATURES FOR 2021

CONAI has continued its work bound up with the new system features and criteria set out in the current agreement.



The new ANCI-BIOREPACK technical annex for the delivery of biodegradable and compostable plastic packaging waste has been signed.

Important innovations as regards the extension of the CONAI Packaging Material Consortia system, however incomplete, also to encompass the collection of the organic fraction of municipal solid waste.



A **call for tender** to identify **third parties** with the support of the CRUI - Conferenza dei Rettori delle Università - and the ANCI partnership.



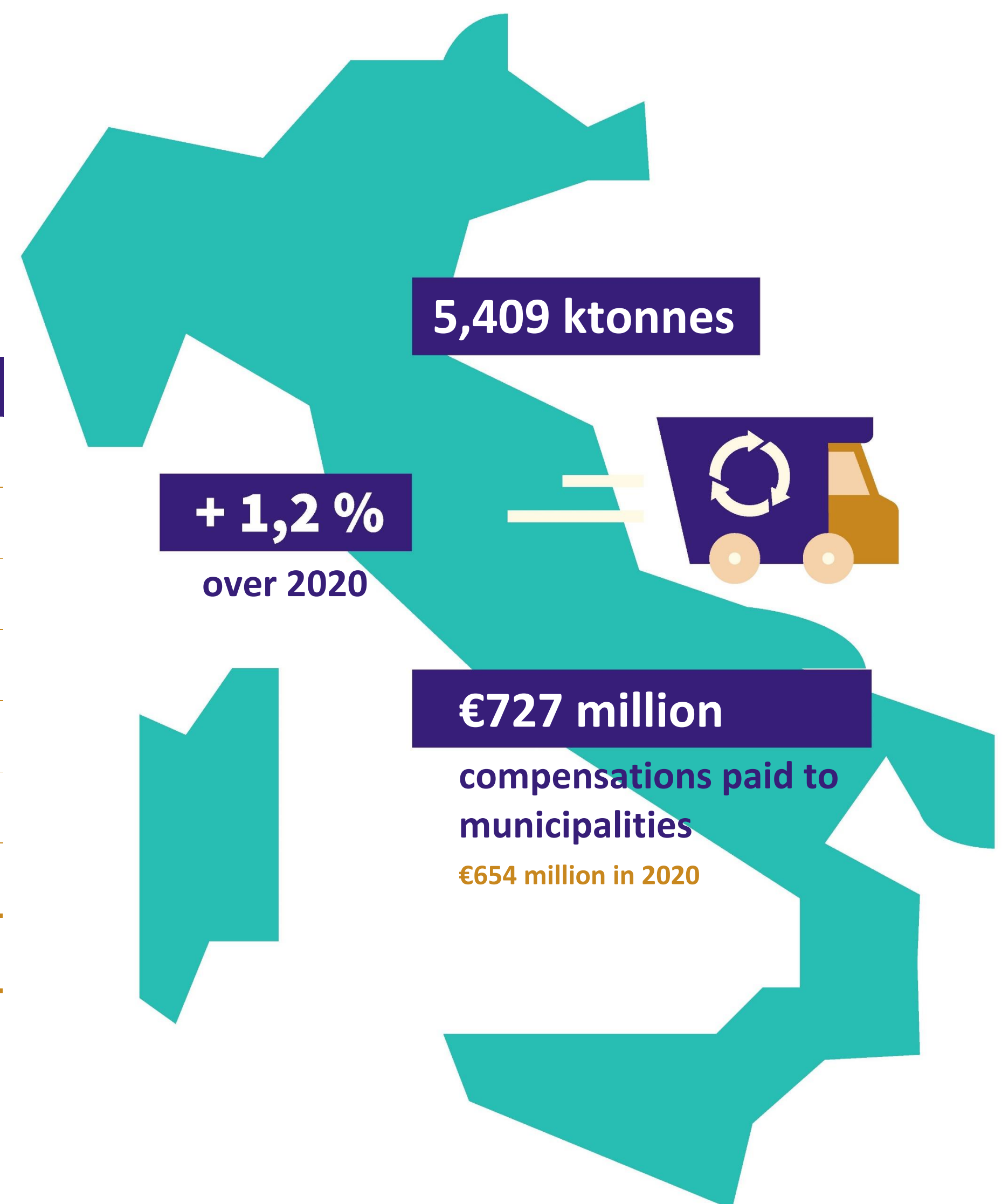
ANCI-CONAI FRAMEWORK AGREEMENT / 2021 DATA



ANCI-CONAI DELIVERIES

ITALY

ANCI-CONAI DELIVERIES	FINAL 2021		DELTA vs 2020
	Ktonnes	kg/inhabitants	%
Steel	158	3	-24
Aluminium	18	0.4	-1
Paper	1,566	28	8
Wood	24	1	-82
Plastic	1,476	25	3
Glass	2,134	37	1.4
TOTAL	5,409		+1.2

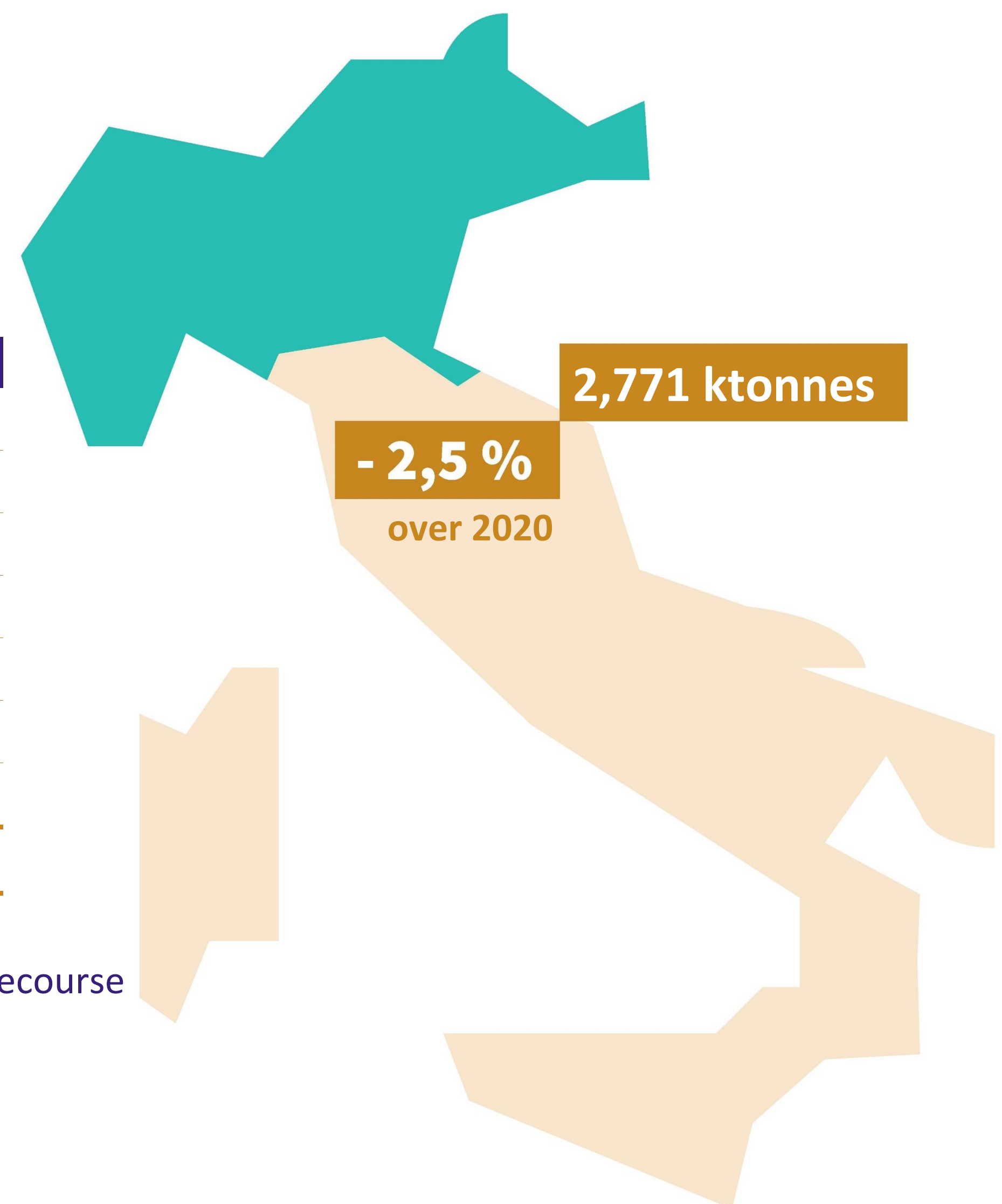


ANCI-CONAI DELIVERIES

NORTHERN ITALY

ANCI-CONAI DELIVERIES	FINAL 2021	DELTA vs 2020
Material	Ktonnes	%
Steel	76	-33.3
Aluminium	10	-7.4
Paper	779	6.5
Wood	19	-82.3
Plastic	696	0.4
Glass	1,191	3.3
TOTAL	2,771	-2.5

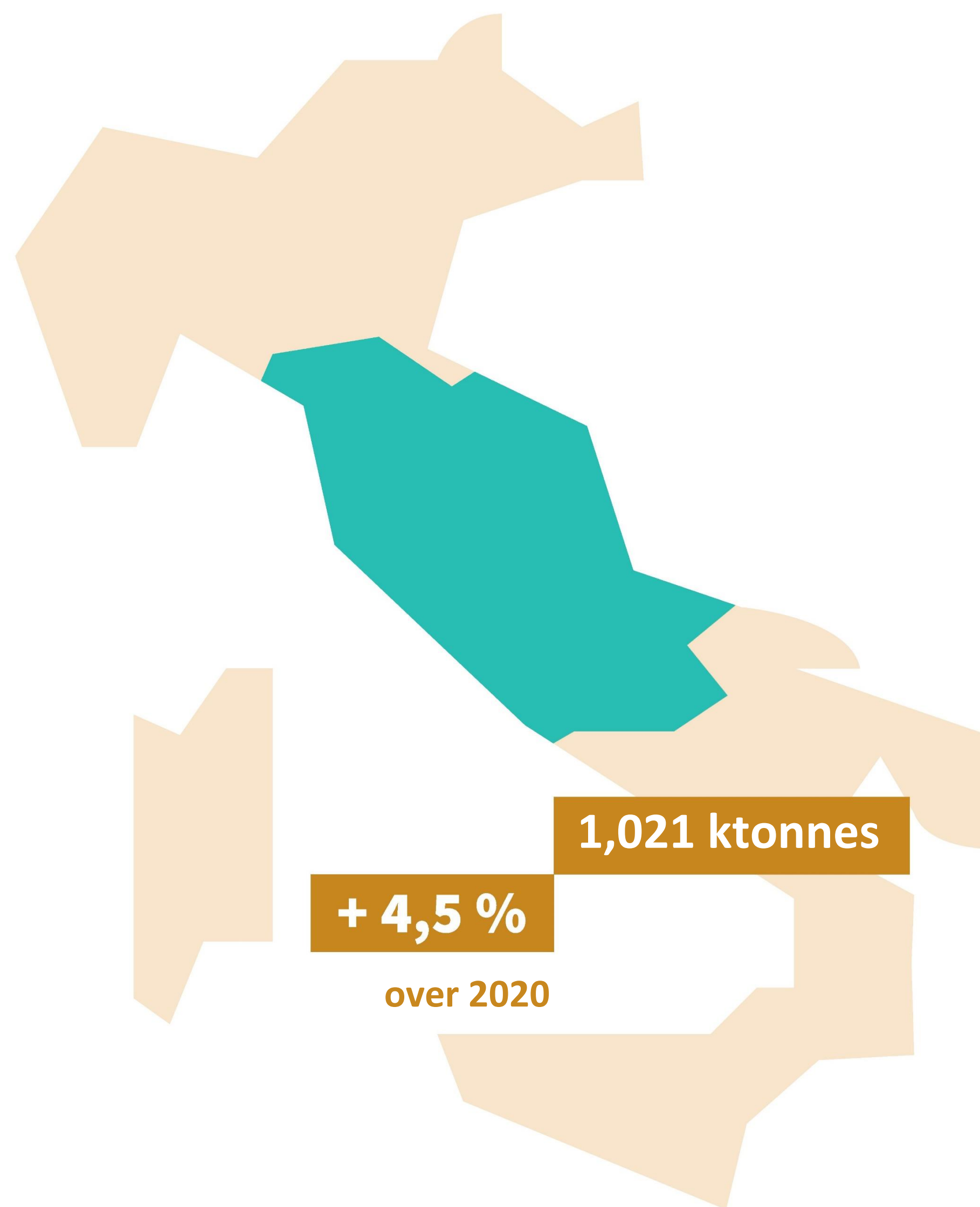
The north has experienced a contraction as a result of greater recourse to the market in an area characterised by more integrated management and consolidated flows.



ANCI-CONAI DELIVERIES

CENTRAL ITALY

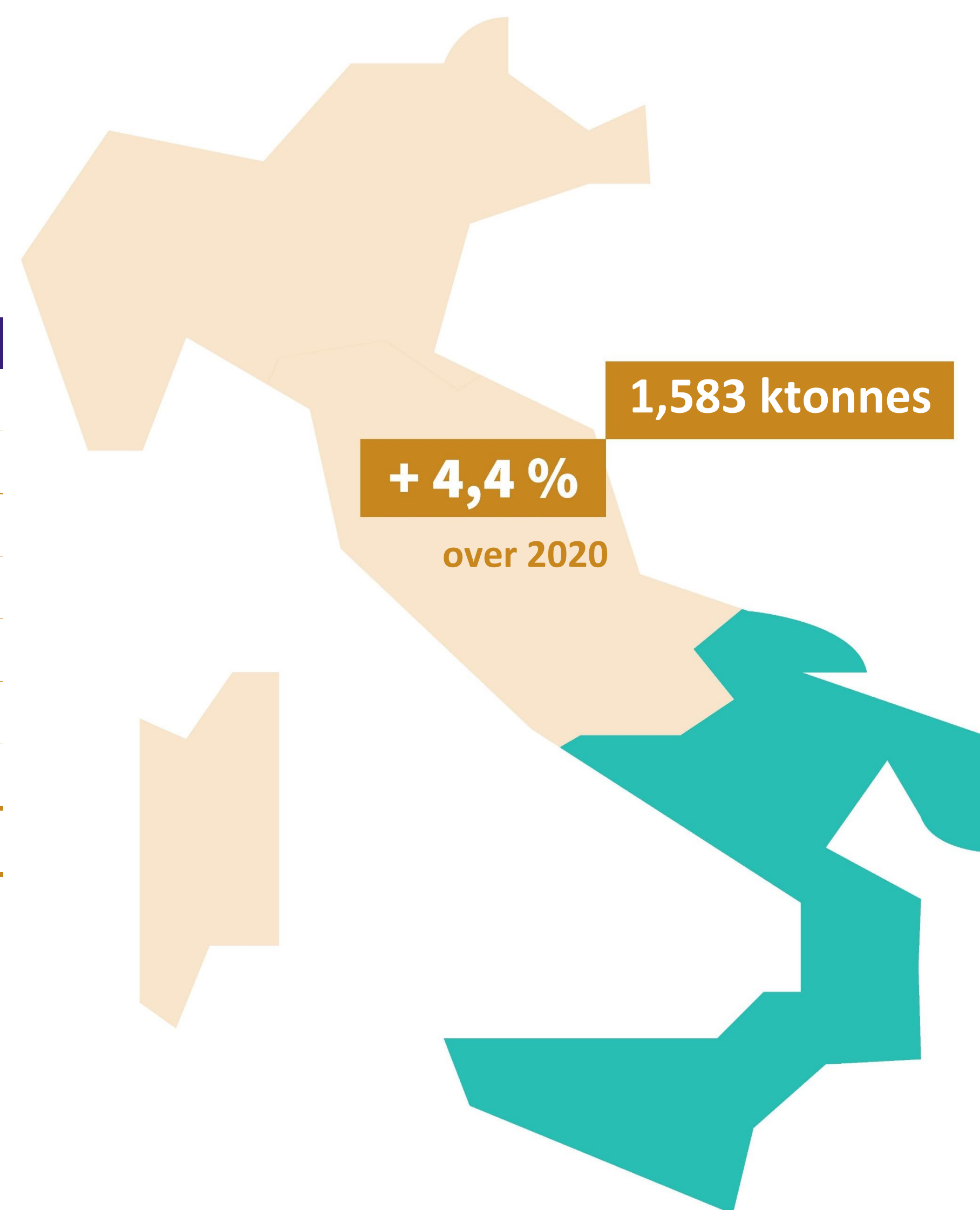
ANCI-CONAI DELIVERIES	FINAL 2021	DELTA vs 2020
Material	Ktonnes	%
Steel	33	-10.8
Aluminium	2	25.0
Paper	323	16.8
Wood	4	-81.1
Plastic	293	6.2
Glass	366	0
TOTAL	1,021	4.5



ANCI-CONAI DELIVERIES

SOUTHERN ITALY

ANCI-CONAI DELIVERIES	FINAL 2021	DELTA vs 2020
Material	Ktonnes	%
Steel	49	-14.0
Aluminium	6	3.7
Paper	463	7.3
Wood	1	-85.0
Plastic	487	5.2
Glass	577	4.7
TOTAL	1,583	4.4





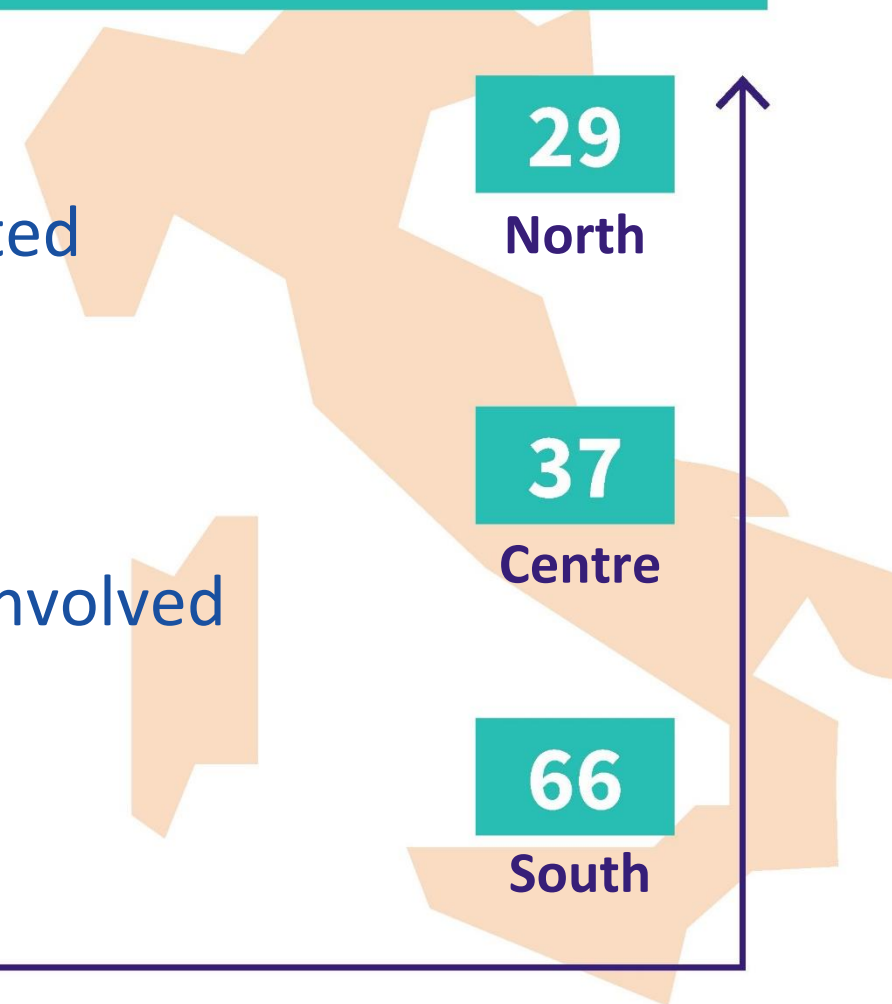
ANCI-CONAI local communication CALL



Objective: promoting local information on separate collection of packaging waste

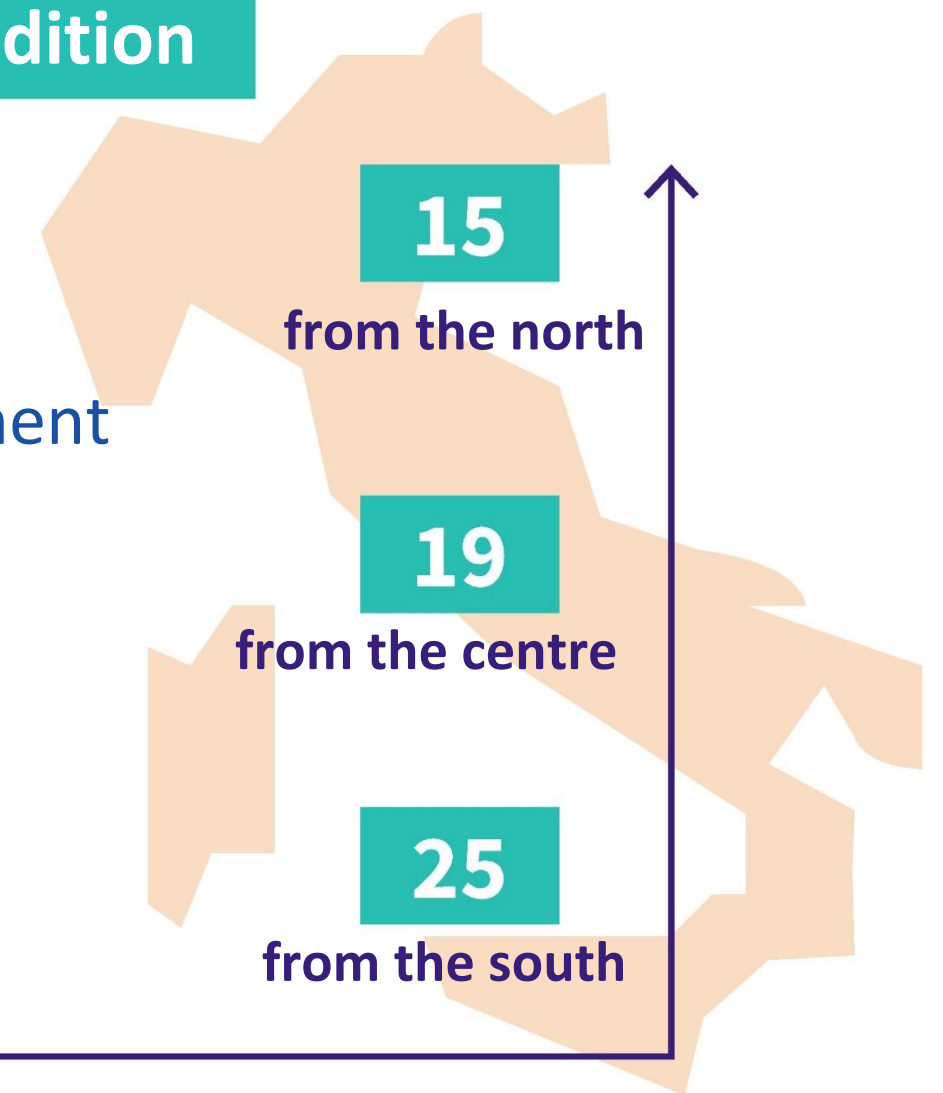
Closure 2020/2021 edition assessments

- **€1,100,000** of funding allocated
- **41 projects** co-funded
- **Over 10 million inhabitants** involved
- **132 projects** presented



Launch of the 2021/2022 edition

- New online project presentation and management platform
- **59 projects** presented



QUALITY SEPARATE COLLECTION DEVELOPMENT IN CENTRAL-SOUTHERN ITALY



Local activities

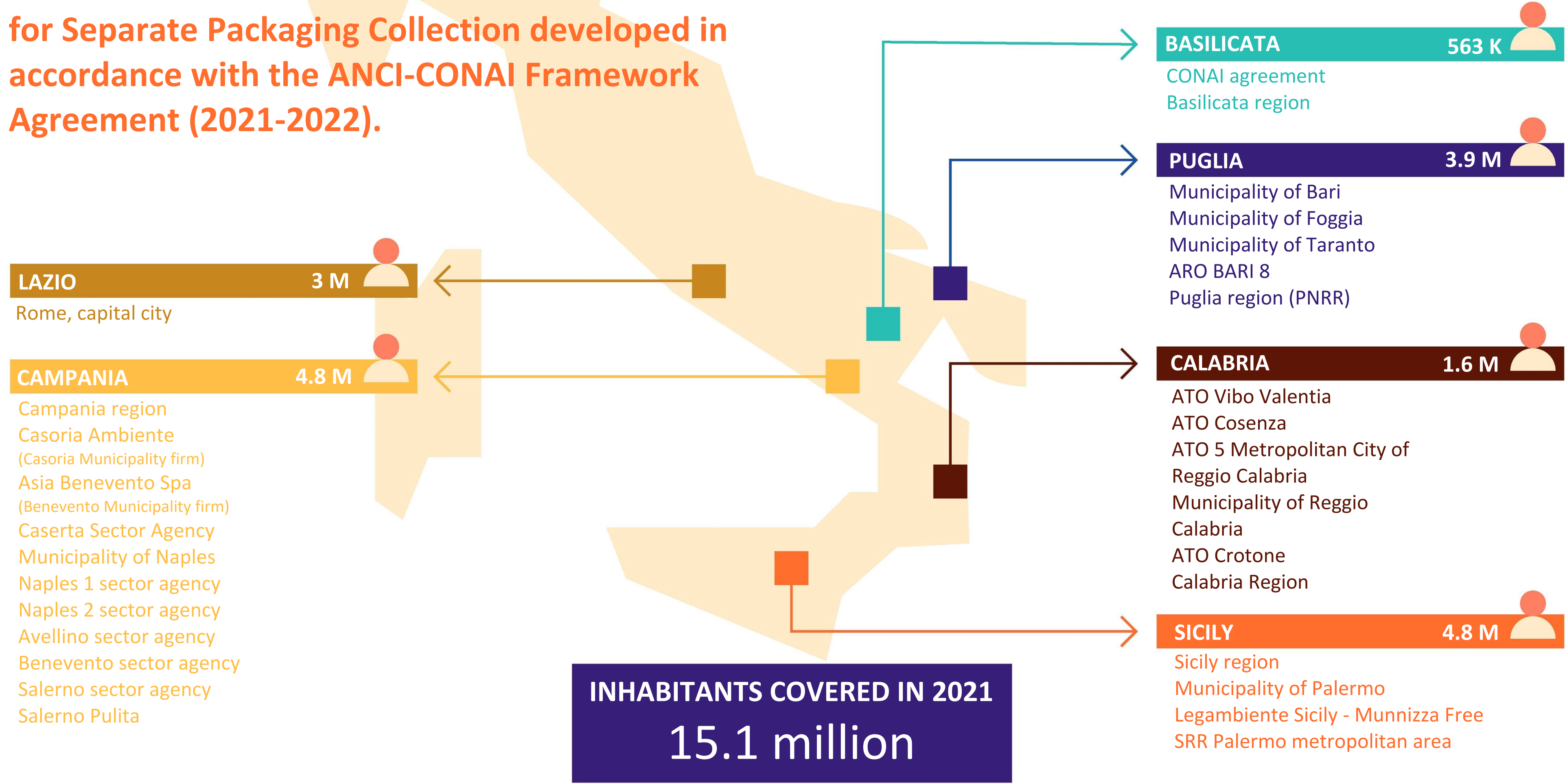


Working with the local authorities to foster the development of recycling-oriented waste management systems.

Resources supporting the development of **effective, separate collection systems** in regions which are lagging behind.

LOCAL PROJECTS

for Separate Packaging Collection developed in accordance with the ANCI-CONAI Framework Agreement (2021-2022).



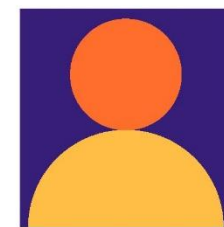
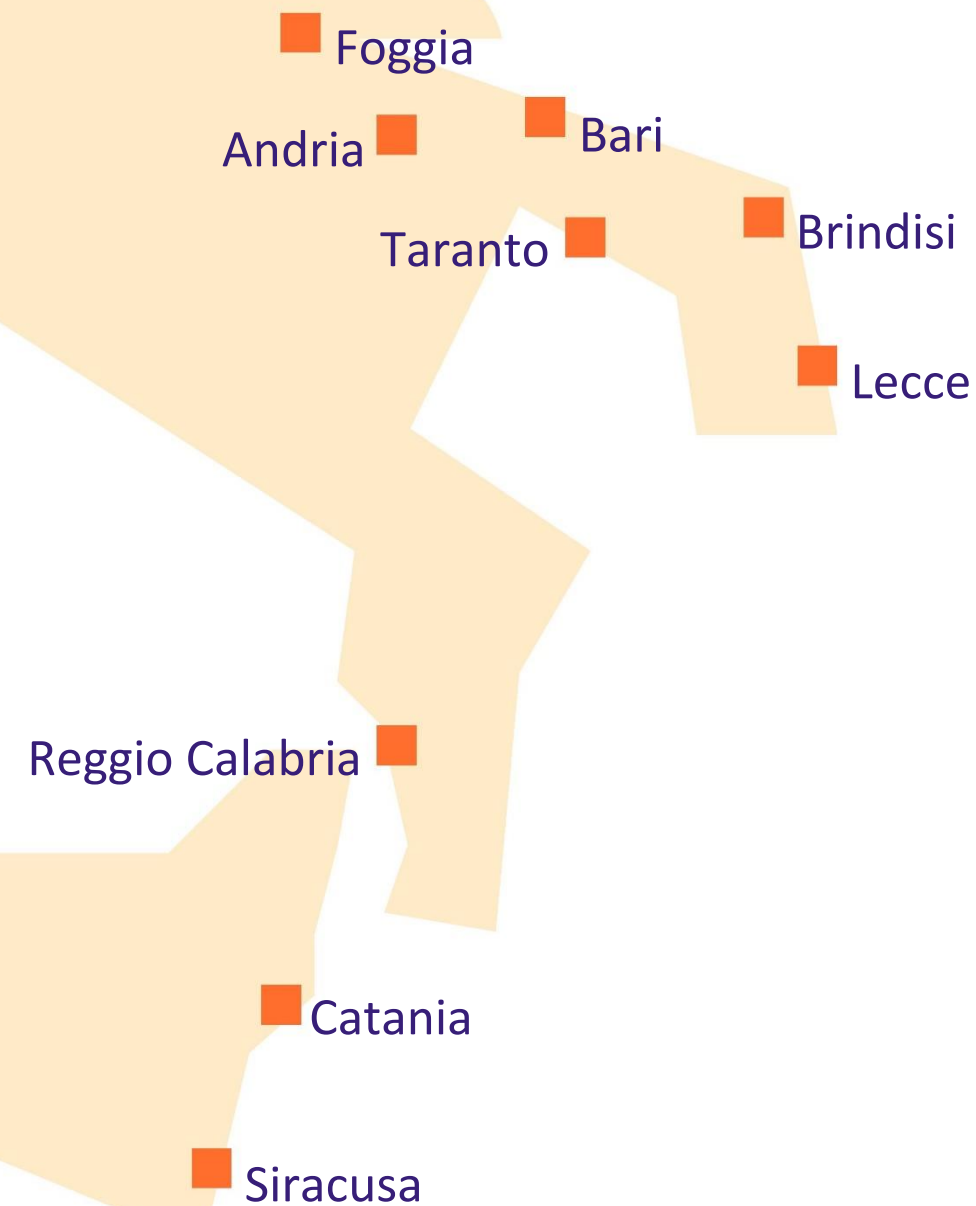
SPECIAL AND EXTRAORDINARY LOCAL CONAI PROJECTS



Objective: supporting EGATO bodies and – where these do not exist – Italian Municipalities both individually and jointly in central-southern Italy in their urban separate collection network improvement and mechanisation project proposals, Measure 1.1 line a) of Ministerial decree 396/2021.

TOTAL PROJECTS PRESENTED

TOWNS INVOLVED



4.7 M

inhabitants covered by CONAI action



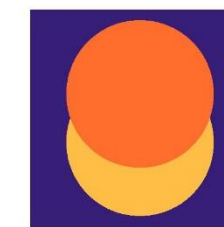
189

total municipalities involved



1.775

project solution type



115 M

value of projects developed



1.290

SPT - A1
Mini intelligent recycling centres (on fenced-off publicly-owned land)



82

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



220

SPT - B
Suppliers of Digital Recycling stations or Ecoboxes



100

SPT - C
Hardware and software tool implementation and prompt billing



76

SPT - D1
Small municipal collection centres, 2400 m²



7

SPT - D2
Large municipal collection centres, 3600 m²

PROJECT IMPACT



EMPLOYMENT AND SUPPLY FORECASTS 2023-2026

Type of action	Number of people hired
Work	183
Supply	198
Total	381



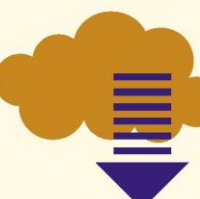
MANAGEMENT EMPLOYMENT FORECASTS 2023-2026

Type of action	Number of people hired
Municipal collection centres	257
Intelligent recycling centres	48
Total	305



SEPARATE WASTE COLLECTION FLOWS 2023-2026

Waste generated 2019 (t/year)	Separate waste collection increases over 2019 (over 2026) (t/year)	Average SC increase over 2019
2,355,256	735,579	32%



CO₂ EMISSIONS SAVINGS

Type of action	Km/year less overall	Kg of equivalent Co ₂ /year less	Kg of equivalent Co ₂ less, 2024-2026	Equivalent CO ₂ costs less, €/year	Equivalent CO ₂ costs less, 2024-2026 €/year
Municipal collection centres	29,930,000.00	5,986,000.00	17,958,000.00	478,880.00	1,436,640.00
Intelligent recycling centres	34,835,600.00	6,967,120.00	20,901,360.00	557,369.60	1,672,108.80
Total	64,765,600.00	12,953,120.00	38,859,360.00	1,036,249.60	3,108,748.80

COMMERCIAL AND INDUSTRIAL PACKAGING



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

FOUR PACKAGING MATERIAL CONSORTIA ARE DIRECTLY INVOLVED IN MANAGING INDUSTRIAL AND COMMERCIAL PACKAGING WITH DIVERSE MANAGEMENT METHODS.

CONSORTIUM	RE-USE	REGENERATION	RECYCLING	ASSIMILATION
RICREA		<ul style="list-style-type: none"> ■ Drums and tanks: 35 ktonnes 	<ul style="list-style-type: none"> ■ Non-regenerable hazardous drums: 12 ktonnes ■ Non-hazardous non-reusable: 130 ktonnes ■ Strapping: 23 ktonnes 	
COMIECO			<ul style="list-style-type: none"> ■ Collection at business premises and other small and medium-sized businesses (UND) ■ Network of 126 platforms 	Domestic-use cardboard boxes in combined SC and non-domestic-use selective SC
RILEGNO	Weight abatement on CAC for reusable packaging: 908 ktonnes benefited from CAC reduction	<ul style="list-style-type: none"> ■ Recovered cistern bases: 10 ktonnes per 31 plants. ■ Pallet retreatment project: 134 ktonnes of regenerated pallets from 63 consortia 	<ul style="list-style-type: none"> ■ Network of 394 platforms: 916 ktonnes 	
COREPLA		<ul style="list-style-type: none"> ■ Drums and tanks (PIFU): 27 ktonnes per 33 plants 	<ul style="list-style-type: none"> ■ PEPS - expanded polystyrene packaging recycling platform: 10 ktonnes per 30 plants ■ Network of 43 platforms jointly with CARPI consortium member plants: 155 ktonnes 	Film : 136 ktonnes



The industrial and commercial packaging waste platform network

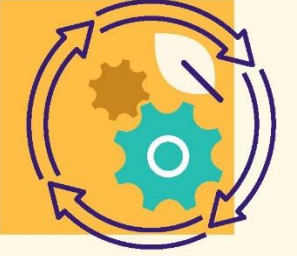
579 plants for the management of industrial and commercial packaging waste.

Industrial, commercial, artisan and service sector **firms can deliver their packaging waste free of charge.**

REGION	NO. OF PLANTS*	PAPER	WOOD	PLASTIC	STEEL
Emilia Romagna	55	13	41	11	1
Friuli Venezia Giulia	10	2	7	2	0
Liguria	20	3	16	2	1
Lombardy	97	20	46	32	16
Piedmont	42	8	26	11	6
Trentino Alto Adige	17	5	12	1	0
Valle d'Aosta	2	1	1	0	0
Veneto	56	11	37	13	3
NORTH	299	63	186	72	27
Lazio	48	7	42	2	1
Marche	18	2	17	0	0
Umbria	11	2	8	4	0
Tuscany	26	3	19	9	2
CENTRE	103	14	86	15	3
Abruzzo	17	2	12	3	0
Basilicata	5	1	3	2	0
Calabria	27	8	22	0	0
Campania	40	20	19	6	1
Molise	3	0	2	1	0
Puglia	26	7	17	6	0
Sardinia	9	3	0	6	0
Sicily	50	8	40	4	0
SOUTH	177	49	115	28	1
TOTAL	579	126	387	115	31

* a single plant can manage packaging waste made up of multiple materials.

STUDY AND RESEARCH



Partnerships with universities and experts set up for the purposes of collecting qualitative and quantitative information useful in strategic assessments and for a better understanding of context have been stepped up.

EUROPEAN

Bocconi University — Comparative analysis of the **economic efficiency** and effectiveness of EPR organisations in the EU.

Centro Materia Rinnovabile — Comparative analysis of the **diverse organisational solutions** adopted by **18 European countries** in their attempts to conform to the obligations set out in the Packaging Directive.

EGEN-PNO GROUP — Comparative and financial-management analysis on currently **applicable deposit refund systems applying to packaging recycling and reuse**.

STUDY AND RESEARCH

Partnerships with universities and experts set up for the purposes of collecting qualitative and quantitative information useful in strategic assessments and for a better understanding of context have been stepped up.



ITALIAN

[Sant'Anna School of Advanced Studies Management Institute](#) - Progetto SCELTA **consumer purchase trend** observatory.

[Observatory on local level prevention initiatives](#) - **Mapping local authority** waste reduction initiatives.

[Fondazione per lo Sviluppo Sostenibile](#) - **Green City**: projects on **city waste management state of the art and the new circular economy directives** in the nation's 3 macro areas (north, centre, south).

[Waste Watcher International Observatory](#) on the food waste theme.

[Prometeia](#) - **forecast models for packaging put on the market** and second raw material prices.

OBJECTIVES, DOCUMENTATION AND REPORTING

CONAI's task is to
guarantee:

The **achievement** of recycling and
recovery goals **in Italy**

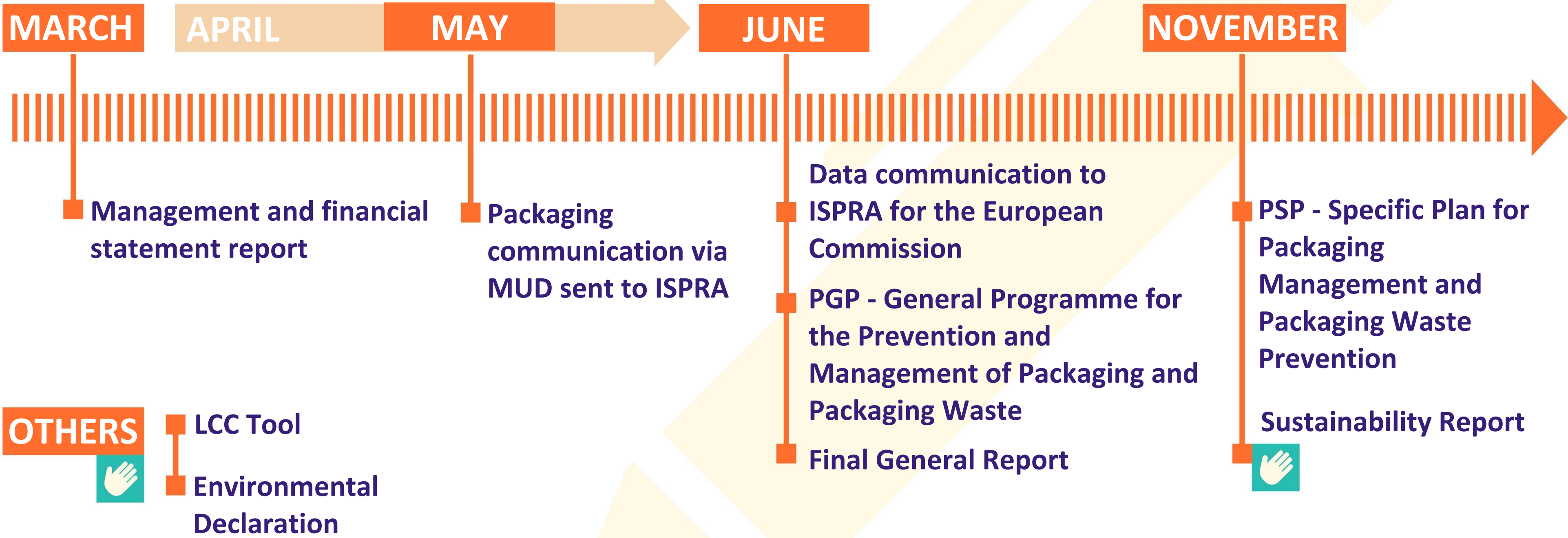
Transparency in the data and information **reporting**
on the chain supplied to the institutions



2+2=4



REPORTING



ENVIRONMENTAL POLICY

Updated and aligned to the General Prevention and Management Programme with a view to constantly increasing the coherence and integration of the various reporting tools implemented by CONAI to ensure transparency in the achievement of the aims it acts as guarantor for.

Since 2022 the sustainability report, which is already GRI referenced, will also comply with non-financial reporting requirements.



1
Growing circular economy and environmental safeguard contribution



2
Reinforced stakeholder relations



3
Skill development



4
Conformity with mandatory and non-mandatory requirements



5
Accountability



6
Organisational process improvement

COMMUNICATION



Firms

- **CONAI Academy**
11 webinars
19,173 participants
- **CONAI Academy Week**
(labelling)
9 webinars
6,768 participants
- **CONAI Academy Community** (digital networking environment)
3,000 subscribers



Institutions

Events, meetings and **webinars** on environmental sustainability themes involving CONAI and the institutions (Rimini meeting, G20 Environment meeting, Green Symposium 2021, Ecomondo).



Citizens

- **Biorepack campaign** on correct delivery of biodegradable and compostable plastic packaging
- **Zero Waste campaign** against food waste
- **Partnerships** with PoliMi, Giffoni Hub and Vogue for creative sustainability



Press relations

- **Social media activity development** (Twitter, LinkedIn, Facebook, Instagram, YouTube)
- **Press office** (interviews, press releases and notes, activity promotion and results achieved)

GREEN JOBS AND UNIVERSITY TRAINING

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



Palermo University

4 weeks of specialised training for 80 new graduates.

Mediterranea University of Reggio Calabria

Online specialist course for 85 new graduates.

Consorzio universitario Promos Ricerche and Scuola di Governo del Territorio (Campania)

Launching of a 4-week training course for 80 new graduates (2022).



Tuscia University

- Training seminar cycle for students
- 2 prizes for graduation theses on the packaging circular economy theme

Three-year partnership with ENEA

The writing of 6 experimental graduation theses on the waste management and circular economy themes.

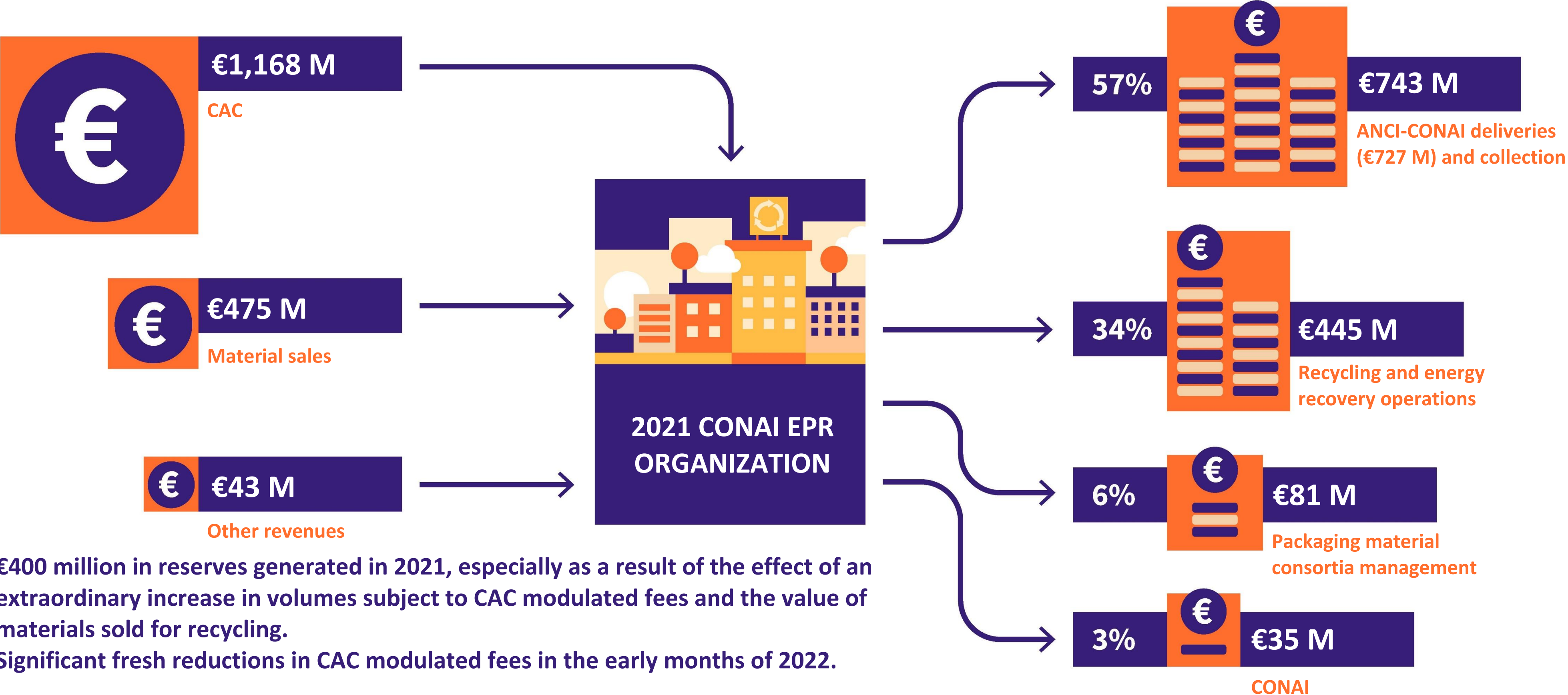


CONAI ACADEMY

2021 MEETINGS

SUBJECT	DATE	TARGET	NO. REGISTERED	NO. PARTICIPANTS
New Guide to CONAI Environmental Contribution 2021 features - Dialogue with the associations	9/2/2021	Associations	684	500
New Guide to CONAI Environmental Contribution 2021 features - Dialogue with firms	11/2/2021	Companies	5,288	3,900
Environmental labelling - help us to help you	17/2/2021	Associations	200	95
Environmental labelling - CONAI responds	17/2/2021	Companies	3,482	2,500
CONAI eco-design call presentation	18/3/2021	Companies	599	480
Guidelines for the voluntary labelling of packaging	20/5/2021	Companies	4,173	3,823
Plastic CAC modulated fee + design for recycling guidelines	26/5/2021	Associations	100	87
Webinar on new mandatory labelling standards developments	23/6/2021	Companies	2,700	1,300
Fee modulation for packaging and design for recycling	8/7/2021	Companies	4,982	4,203
Environmental labelling for packaging: 2021 innovations	26/7/2021	Companies	2,319	1,900
ANCI-Biorepack technical annex presentation	20/10/2021	Companies	232	385

SYSTEM ECONOMIC RESULTS



€400 million in reserves generated in 2021, especially as a result of the effect of an extraordinary increase in volumes subject to CAC modulated fees and the value of materials sold for recycling.
 Significant fresh reductions in CAC modulated fees in the early months of 2022.

GENERAL PROGRAMME

for THE PREVENTION

and MANAGEMENT OF

PACKAGING and

PACKAGING WASTE



FEE DETERMINATION, MODULATION AND MANAGEMENT

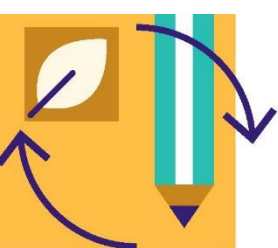
Monitoring and attention to factors influencing the fee **determination** and **modulation** for environmental safeguard purposes will continue to ensure **prompt action** on CAC values.

Factors determining CAC values and subdivision into levels for modulated fee purposes:

- Costs incurred by producers and users
- Economic aspects
- MPS market values and related profits from the sale of materials for recycling
- Longevity
- Repairability
- Sortability
- Reusability
- Recyclability
- Potential presence of hazardous substances

Two action approaches:

- **Promotion of incentive formulas** for specific types of packaging or flows within the context of the simplification WG
 - **Link CAC values increasingly to effective recyclability, the destination circuit and chain deficits** in the context of the CAC modulated fee diversification WG
- **2022 → fall in CAC modulated fees for all materials and amendments to the plastic packaging list in contribution levels with further segmentation from 2023 (9 levels)**



SUPPORTING FIRMS WITH ECO-DESIGN



OBJECTIVES

Nurturing and developing the recycling industry.



TOOLS

Development and promotion of eco-design tools for firms



Design for recycling: new steel and glass packaging Guidelines

EcoD Tool: more user-friendly tool and indicators, extension to additional users, results communicability

E Pack

Database on local level collection

Promotion of circular design culture in conformity with the law



SUP Guidelines

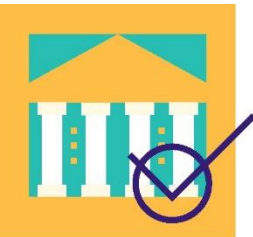
Environmental labelling observatory

Study and research

Business networking creation



CONAI Academy and expert network



SUPPORTING LOCAL AUTHORITIES WITH QUALITY SC

CONAI will continue to implement the activities and commitments set out in the currently applicable ANCI-CONAI Framework Agreement.



THIRD-PARTY CALL FOR TENDER:

With a view to guaranteeing the implementation of the co-responsibility principle in the management of packaging waste between producers, users and local authorities.



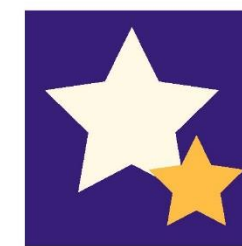
NEW FRAMEWORK PROGRAMME AGREEMENT:

Continued dialogue across the various round tables for the drawing up of a new agreement before mid-2023.



DETERMINATION OF EFFICIENT COVERAGE COSTS FOR PACKAGING EPR REQUIREMENTS:

Activation of in-depth technical studies involving a range of actors with a view to defining a set of values and key reference indicators for the efficient service costs covered by EPR for packaging.



NEW EXTRAORDINARY PROJECTS:

Digital Recycling Station Project, Italian Port Waste Management Guidelines, Event Sustainability Guidelines.



STUDIES AND RESEARCH INTO CIRCULAR ECONOMY THEMES

CONAI will promote ad hoc studies and the updating of research already underway.

- Circularity levels in Italian **firms** (Sant'Anna School of Advanced Studies in Pisa)
- Circular economy purchasing trends amongst Italian **consumers** (Sant'Anna School of Advanced Studies in Pisa)
- Updating of the **Prevention Observatory** promoted by **local and central authorities**
- Activities in conjunction with **Green City Network**
- **GPP** and **CAM** evolution
- Studies and research for the development and promotion of the circular economy in Italy (Susdef, Symbola)
- Promotion of the **second raw material** market (ReMade in Italy)
- In-depth studies on **EoW** and the potential of **secondary fuels**
- Observatory on the **Utilities strategy** in the waste sector
- **Role** of the various economic operators in **public utility services**

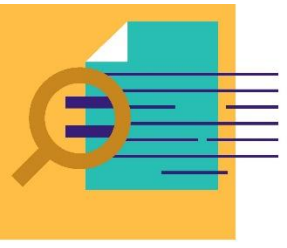


TRAINING AND GREEN JOBS

CONAI will further develop environmental training in the skills required for the achievement of waste recycling objectives.

Various training initiatives are already underway and target:

- **Journalists** (*training seminars for registered journalists*)
- **Government employees** (*ANCI-CONAI webinars on the Technical Annexes to the Framework Agreement and local government technician training*)
- **Association and firm** technical reference individuals (*labelling and packaging expert training*)
- **University** students (*Green Jobs, experimental theses - ENEA, MAs/MSCs, Circular South*)
- **New graduates**
- **Primary and secondary school pupils** (*class recycling and study orientation trajectories*)



TRANSPARENT REPORTING

- Consolidate reliable Recycling Objectives (in the direction of UNI standards)
- Sustainability report for non-financial reporting Currently compliance with GRI, SdG and GER reporting achieved
- Institutional reporting pursuant to 2005/270/CE



Continuation of dialogue with all Packaging Material Consortia, Self-Compliance EPR schemes, in alignment with ISPRA via the setting up of various study round tables, especially on:

- Remedial action regarding goods on the market
- **Recycling** determination (plastic, biodegradable and compostable packaging waste and recovery of metals from ash)
- **Composite** accounting, both those placed on the market and as recycling

COMMUNICATION

CONAI as an authoritative player in the circular economy, making the most of its unique and distinctive features such as its ability to 'act as the meeting point between the public and private sectors'.



OBJECTIVES

Collecting and disseminating best practices

Supporting areas in lagging

Contributing to the debate on the role played by industrial development policies supporting recycling

Generating a separate collection, eco-design and recycling culture

Ensuring the achievement of national level objectives



TOOLS

Company targets

- Webinars
- Community
- Focused publishing partnerships
- Participation in sector trade fairs

Institutional-citizen targets

- Presentation of consumer and food waste studies
- Participation in circular economy, sustainability and innovation events
- Information-giving advertising campaigns

Press relations

- Multiple events focusing on journalists
- Meetings with the press
- Educational trips to plants for journalists
- Increasing CONAI's visibility in regional media
- Social media

25 YEARS OF CONAI

Testimony and awareness raising on its constant commitment as precursor.



Launch event

Rome, CONAI meets the institutions and explains the role of the CONAI EPR organization in environmental transition.

Book '25'

CONAI's history told through its activities and principal projects and campaigns over time, promoting sustainability and the circular economy.

Manual

A study and training tool for university students.

Documentary

Narrating CONAI's journey and the role it plays in the changes underway.

Journalism prize: Fenice CONAI for young environmental journalists

A prize for journalists writing articles and producing radio or TV broadcasts on circular economy and recycling themes.

Website

Creation of a mini history archive institutional website.

Environmental Renaissance exhibition

Fourteen short videos commenting portraits of the 7 packaging materials, balancing historic reconstruction, irony and an invitation to safeguard the planet.

Brussels institutional event

European Parliament, presentation of the results of Italy's CONAI system and an EPR system in Europe benchmark study.

Creation of social media contents in conjunction with Giffoni Innovation Hub and Academy

Instant movie making for social network channel promotion.

Innovation Summit + Recycling Art (17 and 18 May - Palazzo Taverna)

CONAI Circular Art Exhibition

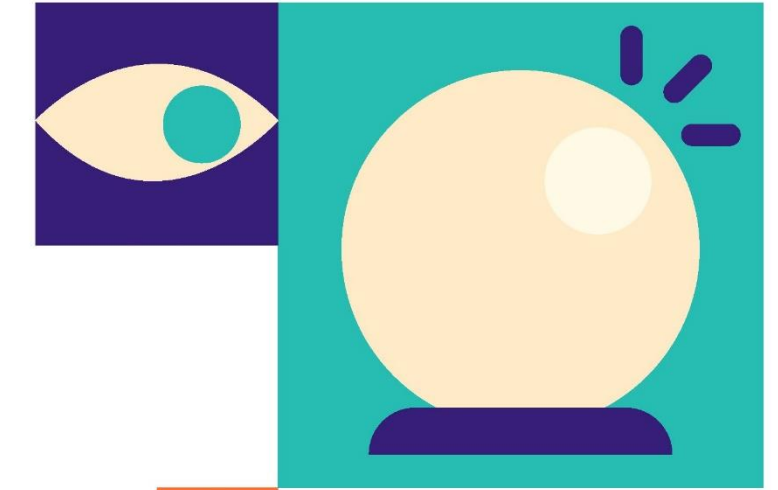
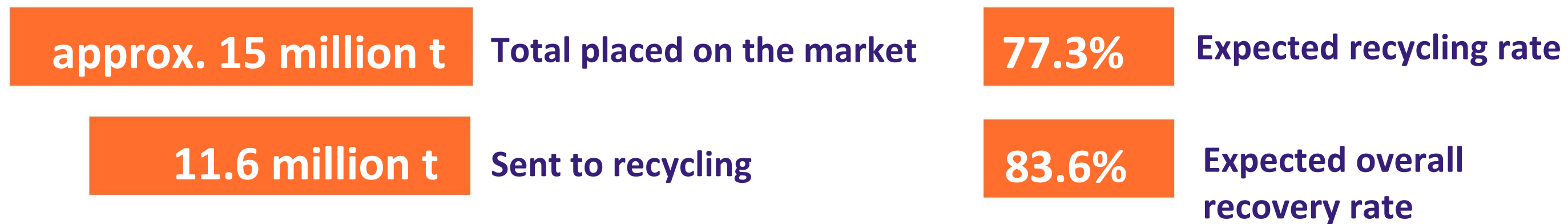
FORECASTS

An increase in overall recycling across all material categories is expected.

If the growth in **second raw materials** continues, this may **potentially lead to a reduction in the share of recycling managed by the CONAI EPR Organization** in favour of an increased **market and self-compliance EPR scheme** role.

Current paper, steel and aluminium trends in 2022

2024 FORECASTS (CURRENT CALCULATION METHODS)



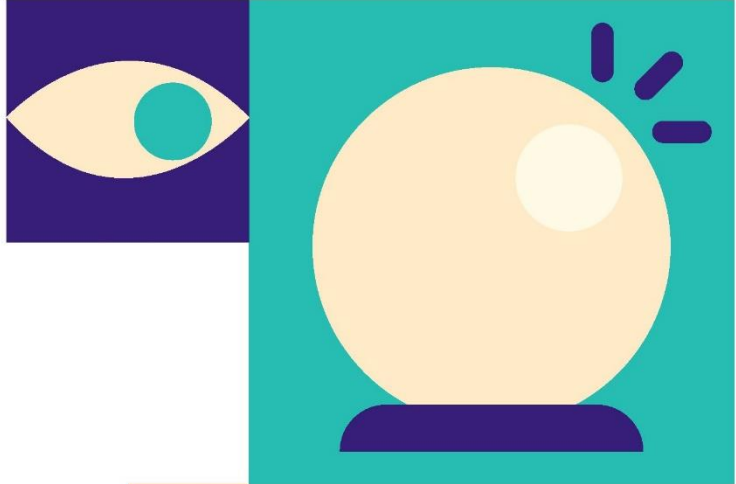
ATTENTION!
Potential market unpredictability in assessments



FORECASTS with the new calculation method,

2025 first objective year for the new recycling targets!

Forecasts and assumptions currently possible relating to the impact of the **new calculation method** on the results regarding waste sent to recycling expected for 2025-26 by the Packaging Material Consortia and the Self-compliance EPR schemes have prompted the belief that **all chains will exceed 2025 targets** and that we will be **close to**, perhaps even above, **2030 targets**.



ATTENTION!
Potential market unpredictability in assessments

MATERIAL	PRELIMINARY RECYCLING % FORECASTS FOR 2025	2025 OBJECTIVES	2030 OBJECTIVES
Steel	78.9%	70%	80%
Aluminium	73.0%	50%	60%
Paper	86.7%	75%	85%
Wood	66.0%	25%	30%
Plastics and Bioplastics	54.8%	50%	55%
Glass	85.6%	70%	75%
TOTAL	76.6%	65%	70%



ADOPTION OF THE SUP DIRECTIVE

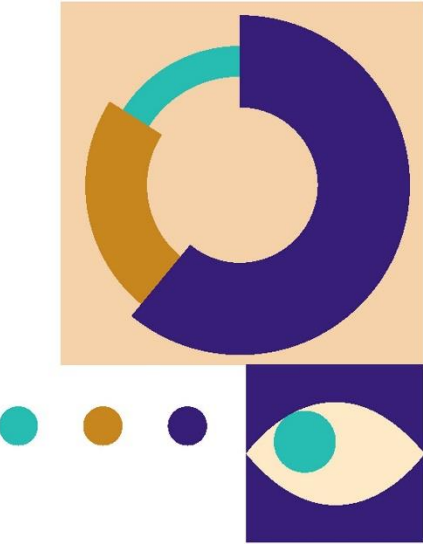
New objectives within the remit of the EPR packaging system.

CONAI acts as **co-ordinator** and **planner** for the action needed to **ensure** that these **objectives**, too, are achieved in time and **efficiently** for packaging manufacturers and users and supporting the national institutions.

TYPE	TARGET	DESCRIPTION	IMPLEMENTATION TIMELINE
QUANTITATIVE	Consumption reductions	<ul style="list-style-type: none"> Reducing consumption of certain single-use plastics (e.g. cups, food containers) 	<p>EU implementing decision 2022/162 set out the calculation methods to be used</p>
	CPL ² collection	<ul style="list-style-type: none"> CPL² collection rate definition (2025 and 2029)³ 	
	Specific planning requisites	<ul style="list-style-type: none"> Recycled material share definition for PET bottles (2025 and 2030) 	
	Awareness raising measures	<ul style="list-style-type: none"> Informing consumers and incentivising them Implementing measures proportional to the objective 	
QUALITATIVE	Littering	<ul style="list-style-type: none"> Reducing litter on public soil: a focus on beach and marine littering (fishing equipment) 	n.a.
	Market bans	<ul style="list-style-type: none"> A ban on the use of certain single-use plastics (e.g. plates and expanded polystyrene containers) on the market 	2022
	Post-consumption management requisites	<ul style="list-style-type: none"> EPR⁴ regime endorsement to cover costs relating to the articles restricted 	2024
	Specific planning requisites	<ul style="list-style-type: none"> Drinks containers³ in plastic issued only with lids and tops which attach to their containers 	2025
	Marking requisites	<ul style="list-style-type: none"> Presence of marking (on products and/or packaging) supplying information on waste management methods 	2021

1: SUP: Single-Use Plastic. 2: CPL: Liquid containers 3: Limited to containers with an up to 3 litre capacity. 4: EPR: Extended Producer Responsibility. SOURCE: SUP directive (2019/904), analysis PwC Strategy&.

AREAS OF GREATEST IMPACT FOR EPR SYSTEMS



DATA MONITORING

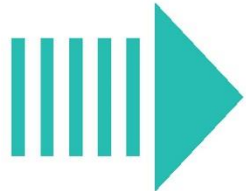
- Reducing packaging on the market
- Planning requisites



COST COVERAGE

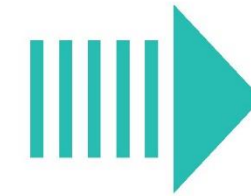
- Awareness raising measures
- Collection network and infrastructure
- *Littering*

The EPR systems most affected and impacted by the adoption of SUP are:



SUP OBJECTIVES

require a minimum collection for recycling growth rate for PET bottles under 3 litres: from 77% in 2025 to 90% in 2029.



The **2025 target** has nearly been reached/is reachable and action is needed to fill the recycling collection gap for **2029**.



There are two potential approaches on the national level

1

A selective collection model to supplement the current system

Confirming the current differentiated collection model for PET bottles under 3 litres with selective collection to fill the potential gap alone (estimated at **100 ktonnes** in 2029).

2

The Deposit Refund System (DRS) model replacing the current system

Introducing a deposit refund system for the recycling of PET bottles under 3 litres implementing it **for all PET bottles under 3 litres placed on the market** (400-500 ktonnes) and leaving separate collection in place for all other packaging waste including plastic.

SUP OBJECTIVES

CONAI has developed a number of hypotheses with the support of PWC and Bocconi University and based on national and international studies and research.



Analysis

on the basis of available data and information and scenario building.



Evaluation

on the basis of potential funding under Decree of the Ministry of Ecological Transition no. 243/2021.

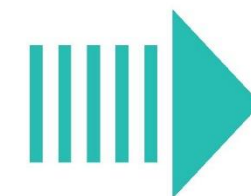


Mapping

of the various options cross-referenced with infrastructure efficacy parameters.

IN CONSIDERATION OF:

- Current interception rates of 69%
- One of the most efficient national packaging management models in Europe
- Investment and operational cost estimates relating to the two possible approaches
- The costs involved in the selective collection model are 10 times lower than a DRS model



CONAI believes that the best option is the **selective collection model to supplement the current system** which implies targeted coordination between EPR systems.



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