RECYCLING & EPR AROUND THE WORLD

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69 countries!

Country specific information on:
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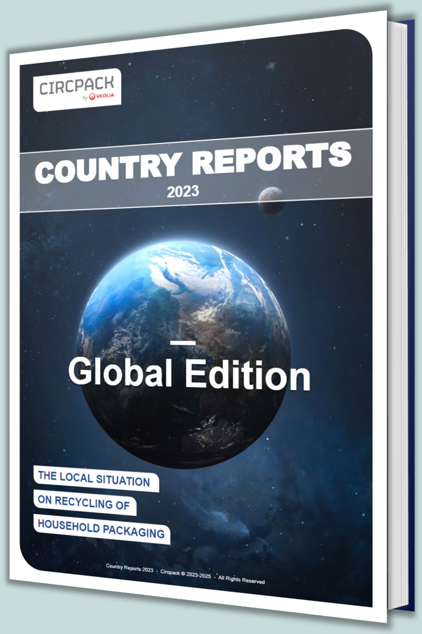
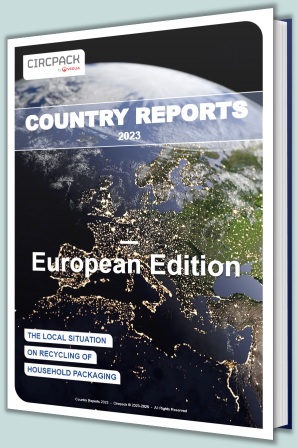
- Extended Producer Responsibility
- EPR-fees & calculation
- Taxes
- Collection Systems
- Deposit Systems
- Sorting
- Reprocessing





CIRCPACK by VEOLIA

Country Overviews 2023

Why this report ?

This report provides clarity on the situation in different countries. It helps brand owners, packaging experts, retailers & packaging companies to make informed decisions on packaging and packaging design.

- **Recyclability of packaging is in the spotlight. Consumers & retailers demand smart, ecological and recyclable packaging.**
- **There are huge differences in collection, sorting & reprocessing per country.**
- **A lot of countries have Extended Producer Responsibility (EPR) systems in place, each with its own fees and specifics.**
- **Specific national legislation and/or deposit systems are in place.**

Topics covered per country:

1. COUNTRY HIGHLIGHTS:

- Waste information
- Legislative background
- Extended Producer Responsibility
- Recent Developments

2. EPR - fees & taxes:

- EPR fee per type of material
- Calculation methodology
- Example calculations for different packaging formats
- Thresholds
- Bonuses & Eco-modulation
- Other packaging taxes?
- Who pays the fees?

3. COLLECTION:

- Collection activities
- Labelling requirements
- Deposit return Scheme (DRS)

4. SORTING:

- Sorting activities
- Glass
- Metals
- Paper & Cardboard
- Plastics

5. REPROCESSING:

- Reprocessing activities
- Glass
- Metals
- Paper & cardboard
- Plastics

6. RECYCLING RESULTS:

- National Results
- EuroStat data
- Deposit Return Sytem Results

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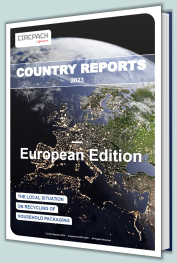
Country Overviews 2023

European Edition



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- Cyprus
- Czech Republic
- Denmark
- Estonia
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- Greece
- Hungary
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- Latvia
- Lithuania
- Luxembourg
- Malta
- Norway
- Poland
- Portugal
- Romania
- Russia
- Serbia
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- Sweden
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  - Northern Ireland
  - Scotland
  - Wales

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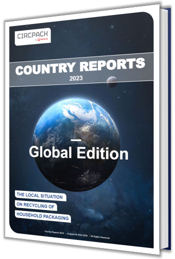

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35 European countries

&

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- Malaysia
- Mexico
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Country Overviews 2023

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- **International retailers**
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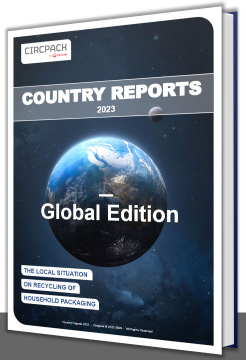

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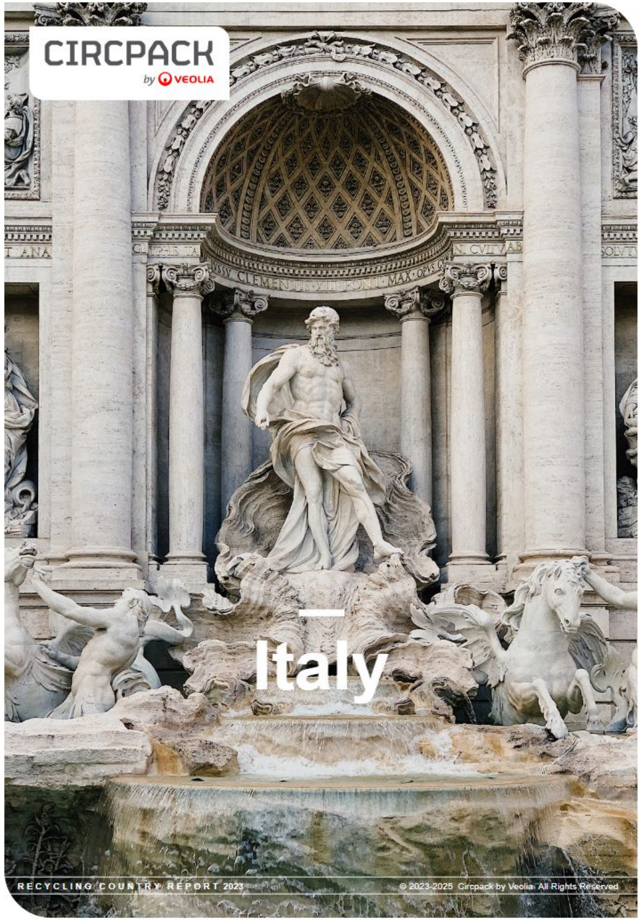
Sample report

Italy



ITALY HIGHLIGHTS

This is one of 27 members of the European Union. Activities in the country are subject to the following Union-level legislation:

- The Packaging & Packaging Waste Directive
- The EU Circular Economy Package
- The Single Use Plastics Directive
- *Packaging & Packaging Waste regulation (soon)*

Population of 59.2 million	EPR fees & taxes are applicable
71% urban population	National recycling results available
29.0 Mt annual MSW production	Deposit Return Scheme not in place
National EPR system in place	Separate collection in place

1 Country overview

Italy is a developed country situated in Southern Europe with a total population of nearly 60 million people, of which 71% live in urban environments. This results in a relatively high overall population density of 197 people per km2. The country is a parliamentary republic, and is divided into 20 generally autonomous administrative regions.

1.1 Waste information

The country produced **29 million tonnes of solid waste in 2020**, or ±1.3 kg/day per capita, falling just below the EU average of 1.42 kg/day per capita. In 2021, 73% of packaging was recycled, well above the average in Europe. Italy has a highly developed capacity for reprocessing, with the average Italian living within 20km of a reprocessing facility. The country places significant focus on the materials allowed within the national market, limiting materials that are difficult to reprocess.

The country's total MSW breakdown in was estimated to be:

39%	19%	9%	12%	2%
Organic waste	Glass	Mixed plastics	Paper & cardboard	Metal

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Sample report Italy

1.2 Legislative background

The first significant consolidation of legislation regarding the management and recycling of packaging waste in Italy took place in 1997 with the passing of the **Ronchi Decree**. The decree implemented early European Commission directives concerning the recycling and management of waste, and established national producer obligations, recycling targets, and a national packaging consortium, **CONAI** (*Italian: Consorzio Nazionale Imballaggi*).

Legislative Decree no. 152/2006	*is the primary legislation regulating environmental management in Italy*
Legislative Decree no. 116/2020	*transposed the EU WFD 2018/851 and its EPR requirements in Italy*
Legislative Decree no. 196/2021	*implemented the European Single-Use Plastic Directive (SUPD) in Italy*

Legislative Decree No. 152/2006, or the **ECA** (Environmental Consolidated Act) (*Italian: Norme in materia ambientale*), is the primary legislation regulating environmental management in Italy. This legislation regroups several different environmental laws under one decree and covers several topics, including eco-modulation and the collection, transport, recovery, and disposal of waste in Italy. Additionally, manufacturers and importers of packaged products are responsible under the ECA for ensuring that their packaging is designed and produced in a way that minimises waste and environmental impact.

Legislative Decree No. 116/2020 moved the EU Revised Waste Framework Directive 2018/851 and its Extended Producer Responsibility requirements into Italian law. The legislative decree described several new registration requirements for producers, alongside strict labelling requirements. The decree also establishes the *CONAI Environmental Contribution*.

Legislative Decree No. 196/2021 implemented the European Single-Use Plastic Directive (SUPD) and imposed return obligations on plastic bottles. However, the Italian incorporation of the SUPD is not fully aligned with the European Directive. The decree delays the ban on prohibited single use plastics requested by the European Commission and exempts biodegradable and compostable materials alongside a less direct definition of plastic, which excludes low weight plastic coatings.

1.3 Extended Producer Responsibility (or relevant 3rd parties)

CONAI is the Italian national packaging consortium responsible for the implementation of EPR.

CONAI is the Italian national packaging consortium responsible for the implementation of EPR. It connects otherwise autonomous administrative regions in Italy and guarantees that any materials collected via separate waste collection are fully reprocessed according to national standards. Producers and direct users of packaging are obligated to join the consortium, which manages the prevention, recovery, and recycling of plastic, paper and cardboard, glass, aluminium, steel, and wood.

1.3 Extended Producer Responsibility (or relevant 3rd parties) *continued*

CONAI was given the power to levy the *CONAI Environmental Contribution* by **Decree no. 116/2020**, which are fees associated with the use of packaging materials. These support the costs associated with separate waste collection and reprocessing, and are distributed to producers and users of packaging in proportion with the amounts and values of packaging materials found on the national market.

1.4 Recent Developments

Italy's plastic packaging tax has been *indefinitely delayed* by the Italian government. The tax, aimed at single-use plastics, is set at 0,45€/kg and is applicable to manufacturers, importers, sellers and purchasers of plastic goods intended for final sale in the Italian market. Originally planned for 2020, the tax has received several revised implementation dates, with the most recent being January 1st, 2023. It is now unclear when the plastic tax will now come into effect.

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Sample report

Italy

2 EPR fees and taxes on packaging

EPR fees or taxes are **applicable**

2.1 EPR fees and calculation

The current calculation methodology for the *CONAI Environmental Contribution* is based on the characteristics of packaging materials. For paper and plastic packaging waste, CONAI has established a number of classifications which determine the amount of contribution required to be paid.

CONAI has historically updated their required environmental contribution figures on a bi-annual basis. The currently applicable rates are **bolded red**, and have changed since a significant decrease in July of 2022.

*For materials marked with an asterisk (*), a supplementary fee must be paid. This is described in sections **2.1 and 2.2**.*

Material:	Classification:	As of:			
		7/1/2023	1/1/2023	7/1/2022	1/1/2022
Steel	-	€5/t	**€5/t**	€8/t	12 €/t
Aluminium	-	€7/t	**€7/t**	€7/t	10 €/t
Glass	-	€23/t	**€23/t**	€29/t	33 €/t
Wood	-	€8/t	**€8/t**	€9/t	9 €/t
Paper	Group 1 - A/B	€5/t	**€5/t**	€5/t	10 €/t
	Group 2 - CPL	€25/t	**€25/t**	€25/t	30 €/t
	Group 3 - C*	€115/t	**€115/t**	€115/t	120 €/t
	Group 4 - D*	€245/t	**€245/t**	€245/t	250 €/t
Plastic	Group A 1.1	€20/t	**€20/t**	€60/t	104 €/t
	Group A 1.2	€90/t	**€60/t**	€60/t	104 €/t
	Group A 2	€220/t	**€150/t**	€150/t	150 €/t
	Group B 1.1	€20/t	**€20/t**	€20/t	149 €/t
	Group B 1.2	€20/t	**€20/t**	€20/t	149 €/t
	Group B 2.1	€350/t	**€350/t**	€410/t	€520/t
	Group B 2.2	€477/t	**€410/t**	€410/t	€520/t
	Group B 2.3	€555/t	**€555/t**	€410/t	€520/t
	Group C	€560/t	**€560/t**	€560/t	642 €/t
Bioplastic	-	€170/t	**€170/t**	€294/t	294 €/t

Both paper and plastic are subject to varying contributions, and are divided into classifications derived from their composition:

PLASTICS

Group	Level	Description
A	1.1	Rigid and flexible packaging with an effective and consolidated industrial selection and recycling chain, mainly managed in "Commerce & Industry" circuits
	1.2	Specifically relating to above items for which COREPLA recognizes a fee for the regeneration and recycling activities
	2	Flexible packaging with an effective and consolidated industrial selection and recycling chain, mainly from "Commerce & Industry" but significantly present in urban separate waste collection
B	1.1	HDPE packaging with an effective and consolidated industrial selection and recycling chain, mainly from the "Domestic Circuit"
	1.2	PET packaging with an effective and consolidated industrial selection and recycling chain, mainly from the "Domestic Circuit"
	2.1	Sortable/recyclable rigid polypropylene containers from "Domestic Circuit" and/or "Commerce & Industry"
	2.2	Sortable/recyclable rigid polyolefin-based items from "Domestic Circuit" and/or "Commerce & Industry"
	2.3	Created in 2023 to accommodate packaging with experimental and consolidated recycling chains, which come out of Group C
C	-	Packaging for which there are no recycling activities in progress or which cannot be sorted / recyclable in the state of current technologies

PAPER

Group	Level	Description
1	A	Paper represents more than 90% of the packaging by weight
	B	Paper represents more than 80% of the packaging by weight
2	CPL	Composite containers for liquids
3	C*	Paper represents between 60 - 80% of the packaging by weight. *This packaging is subject to a supplementary fee of €110/t alongside the standard fee.*
4	D*	Paper represents less than 60% of the packaging by weight, or packaging which does not clearly describe its paper component. *This packaging is subject to a supplementary fee of €240/t alongside the standard fee.*

** = subject to a supplementary fee*

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Sample report Italy

2.2 Example calculations of packaging formats

CIRCPACK uses standardised packaging formats to provide estimated calculations of eco-modulated fees and taxes in markets where applicable. These formats are as follows:

1. Rigid packaging example: PET bottle with loose PP cap and PE label
2. Flexible packaging example: PE/EVOH multilayer pouch with PP spout and direct print label
3. Beverage carton example: Paper/Aluminium/PE multilayer carton with loose bio-based PP cap
4. Laminated paper example: Paper pastry bag with PLA window

***CONAI** requires secondary and tertiary packaging to be accounted for under its eco-modulation scheme.*

***Validated:** These fee calculations from CIRCPACK have been verified as accurate by **CONAI.** As fees and methodologies will vary over time, we advise you to always check with the local EPR organisation for final confirmation. Our example fee calculations are therefore for informational purposes only.*

Example packaging format: ***Rigid polymer bottle with non-tethered cap and filmic label***

Primary packaging composition	Material type	Quantity (Grams)	Material class	Environmental Contribution	
				€ / tonne	€ total
Main body	PET	14.00	B1.2	€60/t	€0.00084
Cap	PP	1.50	B2.2	€410/t	€0.00062
Label	PE	1.00	C	€560/t	€0.00056
Adhesive	Water-soluble	0.05	-	-	-
Inks	Water-based	0.001	-	-	-

Example packaging format: ***Flexible spouted multilayer pouch***

Primary packaging composition	Material type	Quantity (Grams)	Material class	Environmental Contribution	
				€ / tonne	€ total
Main body 1	PE	8.00	B2.2	€60/t	€0.00048
Main body 2	EVOH	0.50	B2.2	€410/t	€0.00021
Spout	HDPE	2.62	B2.2	€410/t	€0.00107
Adhesive	Water-soluble	0.24	-	-	-
Inks	Water-based	0.15	-	-	-

2.2 Example calculations of packaging formats

continued

Example packaging format: ***Multilayer beverage carton with biodegradable cap***

Primary packaging composition	Material type	Quantity (Grams)	Material class	Environmental Contribution	
				€ / tonne	€ total
Main body 1	PE	5.25	CPL	€25/t	€0.00013
Main body 2	Aluminium	1.08	CPL	€25/t	€0.00003
Main body 3	Paper	20.18	CPL	€25/t	€0.00050
Cap	PLA	1.40	Bioplastic	€170/t	€0.00024
Adhesive	Water-soluble	0.13	-	-	-
Inks	Water-based	0.27	-	-	-

Example packaging format: ***Pastry bag with biodegradable window***

Primary packaging composition	Material type	Quantity (Grams)	Material class	Environmental Contribution	
				€ / tonne	€ total
Main body	Laminated paper	5.70	A/B	€5/t	€0.00003
Window	PLA	3.50	Bioplastic	€170/t	€0.00060
Adhesive	Water-soluble	0.10	-	-	-

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5/9

Sample report Italy

2.3 Thresholds

CONAI allows for contribution exemptions via two mechanisms:

1. A total required environmental contribution of *less than €200*, or
2. The total weight of packaging placed on the market, whether empty, filled, or imported, *under a certain amount per material*.

For material groups marked with an asterisk (*), a declaration must still be submitted if 10 tonnes of packaging are placed on the market, regardless of whether the environmental contribution is to be paid.

Material:	Classification:	2023 thresholds	
		Contribution	Weight of packaging
Steel	-	€200.00	40.00 tonnes*
Aluminium	-	€200.00	28,57 tonnes*
Glass	-	€200.00	8.70 tonnes
Wood	-	€200.00	25.00 tonnes*
Paper	*Group 1 - A/B*	€200.00	40.00 tonnes*
	Group 2 - CPL	€200.00	8.00 tonnes
	Group 3 - C	€200.00	1.74 tonnes
	Group 4 - D	€200.00	0.82 tonnes
Plastic	*Group A 1.1*	€200.00	10.00 tonnes*
	Group A 1.2	€200.00	3.33 tonnes
	Group A 2	€200.00	1.33 tonnes
	Group B 1.1	€200.00	10.00 tonnes*
	Group B 1.2	€200.00	10.00 tonnes*
	Group B 2.1	€200.00	0.57 tonnes
	Group B 2.2	€200.00	0.49 tonnes
	Group B 2.3	€200.00	0.36 tonnes
	Group C	€200.00	0.36 tonnes
Bioplastic	-	€200.00	1.18 tonnes

2.4 Bonuses

No direct bonus schemes related to the recyclability of packaging are offered in Italy.

Recyclable packaging is nationally incentivised by supplementary fees and raised environmental contributions for packaging which is difficult to reprocess.

2.5 Other fees or taxes in place?

All producers and users of packaging within the Italian market are obligated to join CONAI and pay a membership fee. This fee is a standard €5.16 plus a variable amount for companies whose total revenue is in excess of €500,000. This variable amount is calculated according to specific membership categories, and is never in excess of €100,000.

A definition of producers and users, membership categories, and exemptions for foreign companies can be found in the *CONAI Guide to Membership*

2.6 Who pays?

Registered producers and users of packaging are obligated to pay the *CONAI Environmental Contribution.*

A definition of producers and users can be found in the *CONAI Guide to Membership.*

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6/9

Sample report

Italy

3 Collection

Collection activities are **mature**

3.1 Collection activities

White/Brown	Green	Blue	Yellow	Black
Paper or organic waste	Household mixed waste or recyclables	Plastics and metal cans	Residual mixed waste or recyclables	Glass or residual waste

The collection of municipal and separated waste in Italy is managed at a municipal or *comune* level, and differs widely from area to area. In general, municipalities are obliged to ensure collection and local or national consortia ensure the withdrawal of collected reprocessable materials.

In most communes, separate collections are in place for plastic packaging, metal (ferro and non-ferro), paper and cardboard, glass, or mixed recyclables. Kerbside collection and drop-off points are common in the country, as well as bottle banks and communal containers in certain regions. There is no national standard for bin colours in Italy, though the above colours are commonly used.

The allowed and disallowed items in Italian bins are as follows:

Materials in paper and cardboard collection	
Allowed	**Not allowed**
Paper and cardboard packaging	Hygenic papers, including sanitary materials
Boxes and other cardboard boxes	Used tissues
Paper bags	Chemical paper, e.g. receipts
Beverage and food cartons	Labels with adhesives
Drawing paper or photocopying paper	Pizza cartons
Notebooks and flyers	

Allowed and disallowed items in Italian bins continue below:

Materials allowed in metals and plastics collection		Materials not allowed in metals and plastics collection
Metals	**Plastics**	Kitchen utensils
Beverage cans and bottles	Bottles from mineral water, milk, soft drinks, and oil	Irrigation hoses
Tins	Disposable plates and glasses	Plastic toys
Metal trays	Food trays	Balls
Aerosols and spray cans	Blisters and shaped wrappers	Plastic folders
Thin foils such as kitchen rolls	Containers for cream and yoghurt sauces	Plastic jars
Metalized cream tubes	Materials for the protection and transport of goods	CDs
Screw caps for bottles of water, oil, wine and spirits	(polystyrene, pluriball, films, and chips)	Diapers
Various lids and closure	Bags for pasta, crisps, sweets, vegetables and frozen foods	Cutlery
	Bottles and dispensers for detergents, soaps and cosmetics	Syringes

Materials in glass collection	
Allowed	**Not allowed**
Bottles and jars of all colours	Crystal objects, metal lids
	Mirrors, plastics
	Ceramics and porcelain as plates and cups
	Lamps and bulbs
	Pyrex-type fire resistant ceramic glass containers
	Tubes and screens (TV monitor / computer)

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Italy

3.2 Labelling requirements

continued

Legislative Decree 116/2020 introduced new labelling obligations for packaging producers as a result of an implementation of wider EU laws in the form of new guidelines on the labelling of packaging.

The guidelines introduced by **Legislative Decree 116/2020** require each packaging component that can be separated by hand to include at least:

1. The packaging material Resin Identification Code (RIC) under EU Decision 129/97/EC.
2. Information regarding separate waste collection when this is not already given by outer presentation packaging. In particular, packaging should:
   a. specify the specific collection, determined by the primary material found in the packaging, or
   b. indicate the main type material by weight, accompanied by the wording "Separate collection", and inform the consumer that specific provisions for local municipalities should be reviewed.
   c. Suggestions for the efficient collection of waste, e.g. by emptying the article of packaging, or removing any labels.

Additionally, CONAI recommends that a full description of the type of packaging and the various components which can be separated by hand is included on the outer packaging, with clear specifications for material families via RIC codes.

3.3 Deposit Return Scheme

Italy does **not** have a Deposit Return Scheme in place.

The National Association of Virtuous Municipalities (*Italian: Associazione Comuni Virtuosi*) has called for the introduction of a national DRS scheme, and the concept is widely supported by Italian citizens.

4 Sorting

Sorting activities are **developing**

4.1 Sorting activities

The management of waste material flows in Italy is accomplished by private consortium companies which specialise in specific materials. These Italian organisations are responsible for their respective material waste flows and sort with technically advanced and automated mechanical operations.

The Italian waste management system places a strong emphasis on pre-collection waste sorting, which is achieved through the implementation of separate collection programs in cities and towns across the country. The separate collection of waste results in a high degree of material purity and reduces the need for further sorting and processing. Sorted materials are eventually sent to reprocessing centres, which are also represented by sector groups in Italy. The Italian waste sorting stream is advanced, and relies almost entirely on mechanical processing.

4.2 Glass

The Glass Recovery Consortium, (Italian: *Consorzio Recupero Vetro*), **CoReVe**, has direct contracts with sorting facilities and auction systems to sort and sell glass waste packaging materials to markets. The consortium works with 24 producers, 40 importers, 38 fillers, and 7 recovery organisations to ensure that glass waste is effectively collected, sorted, and recycled.

Because glass is rarely collected in specific separate collection containers, CoReVe must rely more heavily on partnerships with other consortiums under the CONAI umbrella. Due the commingled collection of varying glass colours in Italy, effective sorting is essential to the efficient transfer of the material to reprocessing systems. This is accomplished via the use of modern mechanical processes, including air separators and sieve drums.

4.3 Metals

The management of metals is divided into two categories: ferrous and non-ferrous. Ferrous metals, such as steel, have magnetic properties and can be separated using powerful magnets. Non-ferrous metals, the most common of which in household packaging is aluminium, are not magnetic and must be sorted using other methods, such as eddy-current separators. More than 500 affiliated entities are associated with this process in Italy.

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Sample report

Italy

4.3 Metals

The National Aluminum Packaging Consortium, **CIAL**, (*Italian: Consorzio Nazionale Imballaggi Alluminio*), is responsible for the majority of metal sorting, and is composed of 250 companies and 441 affiliated entities which manage the collection, treatment, and reprocessing of aluminium. Waste is sorted between ferrous and non-ferrous materials by these organisations and sent to local reprocessors.

RICREA, the National Consortium for the Recycling and Recovery of Steel Packaging, (*Italian: Consorzio Nazionale per il Riciclo e il Recupero degli Imballaggi in Acciaio*), is responsible for the collection, treatment, and reprocessing of steel. 317 companies subscribe to the consortium.

4.4 Paper & Cardboard

The separate collection of paper and cardboard allows the material to often be taken directly to a paper recycler for further processing, where any remaining metals and plastics are separated. Waste management companies and municipalities aim to reduce contamination in household paper to meet quality requirements set by the reprocessor. The sorting process is based on the EN643 standard for different grades of paper and cardboard.

Cardboard and paper is managed by the National Consortium for the Recovery and Recycling of Cellulose-based Packaging, **COMIECO** (*Italian: Consorzio Nazionale Recupero e Riciclo degli Imballaggi a base Cellulosica*). The organisation brings together 3,330 companies including mills, producers, converters and importers of paper and cardboard for packaging.

COMIECO is responsible for ensuring that paper flows move from collection to sorting facilities, and later to reprocessing facilities. These sorting and reprocessing facilities are either internally recognised or members of associated unions, such as the **UNIRIMA**, who represent 600 plants who have a production capacity of 7 million tonnes of waste paper annually (*Italian: Unione Nazionale Imprese Raccolta, Recupero, Riciclo e Commercio dei Maceri e altri materiali*).

4.5 Plastics

COREPLA, or the National Consortium for the collection, recycling and recovery of plastic packaging, (*Italian: Consorzio Nazionale per la raccolta, il riciclo e il recupero degli imballaggi in plastica*), is responsible for the management of the plastic waste stream. Roughly 2,500 companies participate in the organisation, which connects upstream and downstream stakeholders in order to ensure an efficient marketplace.

In Italy, the Consortium is responsible for sorting and selling plastic packaging waste by polymer, adhering to strict European standards. The targeted materials for sorting and recycling include clear PET bottles, blue PET bottles, PET bottles of other colors, HDPE bottles, LDPE films, crates for fruit and vegetables (not managed by Corepla), and mixed packaging consisting mainly of rigid and flexible PE and PP.

5 Reprocessing

Reprocessing activities are **developing**

5.1 Reprocessing activities

Italy has developed an extensive reprocessing capacity, with such a number of facilities that the average Italian is always within 17km of a reprocessing plant. These are registered to CONAI and the respective consortia to which the material they reprocess applies. Italian waste reprocessing systems are one of the most effective in Europe and are focused on reducing landfill usage and maximising the potential for recycling and energy recovery.

After waste is sorted at waste management facilities, it is transported to either recycling facilities or energy recovery facilities for further processing. Recycling facilities use advanced technologies to convert waste into new products, while energy recovery facilities utilise the high caloric value of residual municipal solid waste to generate energy. The participation of facilities across different materials is diverse and can involve partnerships between public and private entities. This integrated approach to waste management helps to reduce the environmental impact of waste and promote sustainable use of resources.

5.2 Glass

Glass reprocessing is a **mature** process in Italy.

As with collection and sorting, the Glass Recovery Consortium, (Italian: Consorzio Recupero Vetro), CoReVe, is responsible for and has direct contracts with reprocessing facilities and auction systems to sell recycled glass cullet to markets. The consortium works with 7 recovery organisations to ensure that glass waste is effectively recycled.

Sorted glass is cleaned and crushed into small pieces, called cullet, by these organisations. This cullet is melted down and formed into new glass products. By separating the glass into clear, green, and other streams before sending it to reprocessors, a higher-quality recycled product is produced. The recycling of glass conserves raw materials and energy, and reduces greenhouse gas emissions compared to producing new glass from raw materials.

CoReVe reported that a total of 2,417,000 tonnes of glass were collected for recycling in 2021. Of this total, 234,000 tonnes were landfilled due to contamination, leaving a total recycling rate of 90.3% for collected material.

CIRCPACK by VEOLIA

The information on these pages is provided as an example of the full report on the local situation of recycling of household packaging.

It is indicative for the information the report provides on the national situation in 69 countries.

Sample report Italy

5.3 Metals

CiAL recycled 52,900 tonnes of aluminium packaging in 2021, representing 78,400 tonnes sold on the market, alongside 3,700 tonnes of thin packaging destined for waste-to-energy treatment. Ferrous metal packaging is processed into scrap materials suitable for melting and recycling; Aluminium packaging is crushed and further cleaned to produce scrap ready for melting.

Steel recycling is managed by **RICREA**, who reported recycling 72% of the steel packaging that was released for consumption in the Italian market. The consortium reported that 542,263 packaging items were placed on the market in 2022, of which 463,865 were collected and 389,828 were recycled.

5.4 Paper & Cardboard

COMIECO, responsible for the management and reprocessing of cellulose-based packaging, reported that paper and cardboard packaging had a recovery rate of 91% and recycled 85% of paper and cardboard packaging that was put on the market. A small amount was rejected due to contamination, which was sent to WtE.

After sorting, paper and cardboard are recycled into new products at recycling facilities using pulping and de-inking processes. They are separated into different grades based on quality to ensure similar quality in the recycled products. The discrepancy between recovered and recycled materials is related to contamination and limited separation of collection in specific regions of the country.

5.5 Plastics

COREPLA recycled 722,218 tonnes of plastic waste in 2021, an increase of 10% from 2020. 95% of this material was collected from urban areas, and 5% was the result of commerce and industry collection.

Once sorted, plastic is taken to specialised recycling centres where it is transformed into new plastic items, usually made from Post Consumer Recycled (PCR) pellets. The worth of these pellets is closely tied to the quality of the feedstock and the success of the plastic recycling process is closely tied to the efficient sorting of different types of polymers.

The approximate breakdown by polymer was as follows:

Source	Year	Polymer					
		PET	HDPE	LDPE	PP	Biodegradable	Other
ISPRA	2021	29.2%	17.5%	16.1%	5.3%	4.2%	27.7%

6 Recycling results

6.1 National results

For European countries, **CIRCPACK** provides two standardised reprocessing results in order to give an overview on potential data discrepancies caused by varying data sources and calculation methodologies:

1. **Eurostat data**, which covers all packaging placed on the market and is calculated with a 22 month delay
2. **National data**, which is assembled by the Italian Higher Institute for Environmental Protection and Research, or **ISPRA** (*Italian: Istituto Superiore per la Protezione e la Ricerca Ambientale*). This dataset is more specialised, and is released with a 12 month delay.

Source	Year	Material					
		Steel	Aluminium	Glass	Paper & cardboard	Plastic	Total
Eurostat	2019	80.6%	0.7	77.3%	80.8%	44.7%	69.6%
	2020	-	-	-	-	-	
Eurostat uses data covering all packaging placed on the market and all packaging waste generated in a country, regardless of waste source							
National	2020	77.6%	67.3%	78.6%	86.2%	51.2%	**72.8%**
	2021	71.9%	67.4%	76.6%	85.1%	55.6%	**73.3%**
ISPRA uses data from CONAI and other national consortia, which focus on "Household" and "Commerce & Industry" data fractions							

6.2 Deposit Return Scheme (DRS) results

As described in section 3.3, Italy does **not** currently operate a national Deposit Return Scheme.

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