FONDAZIONE PER LO SVILUPPO SOSTENIBILE
Sustainable Development Foundation

il Riciclo in Italia

Summary 2025

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Curated by Edo Ronchi

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Introduction

The 2025 Report on the Italian Waste Recycling Industry starts from a relevant Eurostat figure: in 2024, the circular material use rate — materials supplied by recycling activities replacing virgin raw materials — reached 21.6%, namely a 0.5% improvement over the previous year. This value is nearly double the EU average (12.2%) and significantly higher than that of Europe's largest manufacturing country, Germany, which stands at 14.8%. This result reflects 85.6% of all waste managed in Italy being recycled — which is the highest rate in Europe.

The recycling industry therefore plays a highly strategic role — not only environmentally, due to the savings in resources, emissions, landfills, and incinerators — but also economically, given the competitiveness of Italian manufacturing, which imports almost all of its virgin raw materials.

The 2025 Report delivers an updated overview of the 19 main industrial recycling supply chains. Difficulties are not absent and reflect the challenges facing the Italian manufacturing system as a whole during this period. Nevertheless, the recycling sector, overall, maintains good performance levels both in terms of volumes processed and revenues.

Several new EU measures are expected, particularly concerning the implementation of the new Packaging Regulation, and more specifically new rules for food and textile waste. They are expected to provide further thrust for the recycling industry. However, the Report raises two main issues: a current crisis in plastic recycling and the challenges hindering the growth of WEEE (waste electrical and electronic equipment) recycling.

The Report provides an overview of the secondary raw materials market and it highlights the significant challenges in terms of prices, profit margins, market demand, and unsold recycled plastic stocks. This crisis requires urgent action, as it is already causing difficulties in separate plastic waste collection and the closure of a few recycling plants in some regions and it risks affecting the industrial recycling capacity — especially in a sector that is strategically important and already struggling to meet EU targets.

Given the increasing importance of securing access to strategic raw materials procurement and managing their costs, it is no longer acceptable that the main potential resource — waste electrical and electronic equipment (WEEE) — is so underutilized in Italy. Given extremely low collection rates — around 30% — the available quantities are insufficient to support adequate investments in advanced recycling facilities.

As with previous editions, the 2025 Report has been drafted in consultation with the most relevant industrial supply chain stakeholders, to whom we would like to extend our gratitude for their precious cooperation.

President of Fondazione per lo sviluppo sostenibile

Edo Ronchi

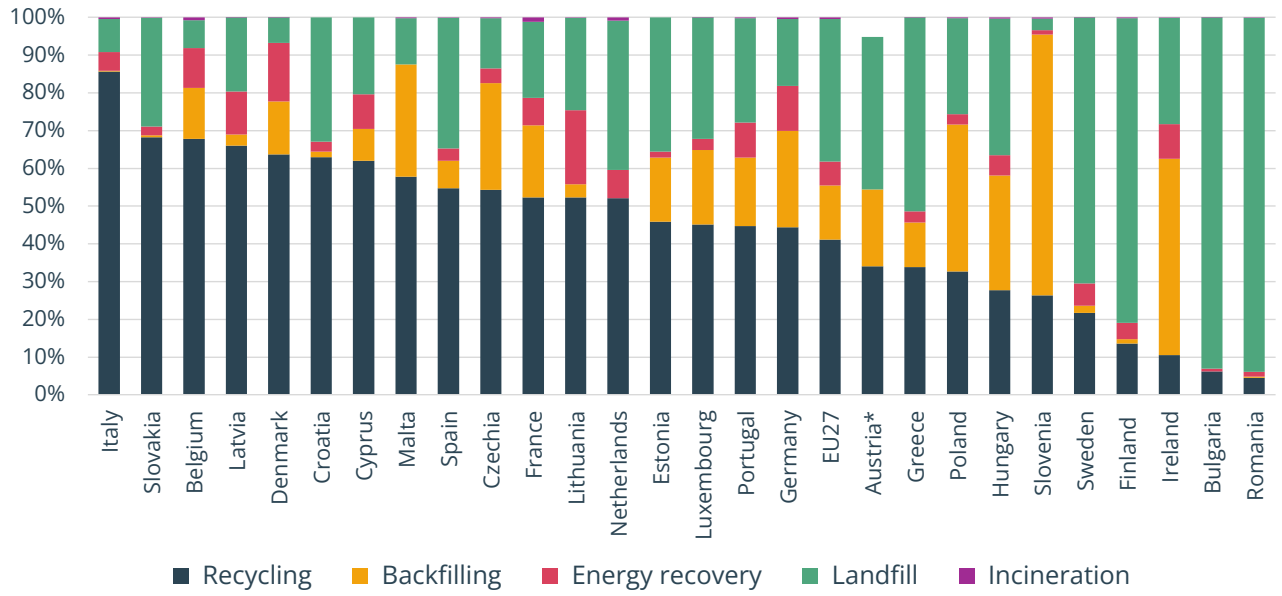
Italy in the European context

According to the most recent Eurostat data, industrial waste recycling activities continue to play a major role for Italian manufacturing and the national economy overall.

In Italy, out of a total of 160 million tonnes of (municipal and special) waste treated, as much as 137 million tonnes are directed to recycling. Italy therefore recycles 85.6% of the total waste managed, compared to 41.2% European average. In comparison with other major EU countries, Italy performs substantially better, outperforming other countries by more than 30 percentage points.

Source: Eurostat

Waste treatment by type of recovery and disposal, 2022 (%)

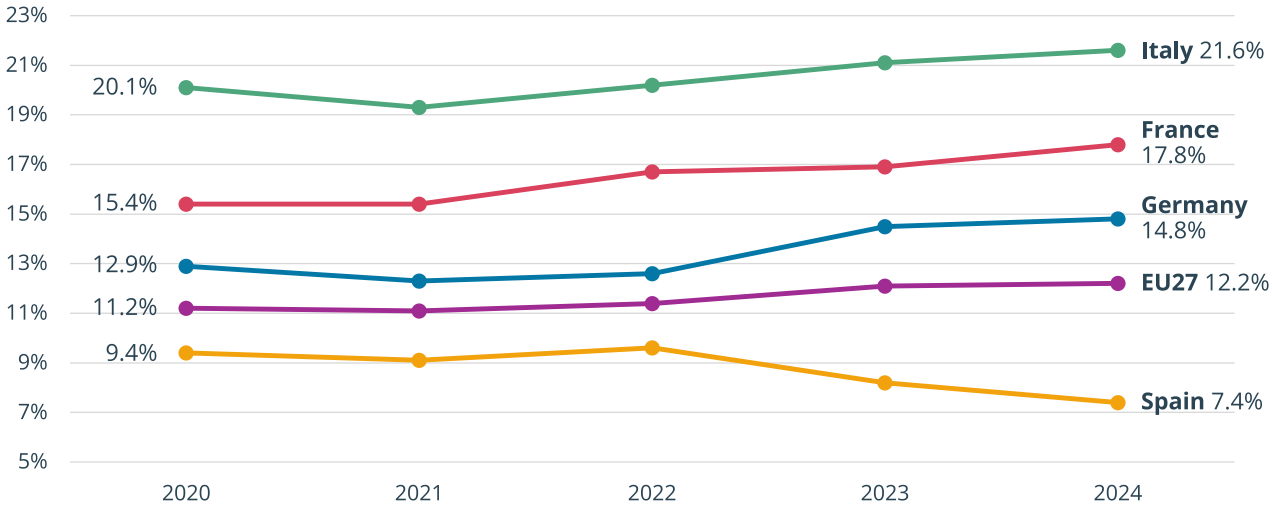


* For Austria, data on energy recovery and incineration are not available.

New Eurostat data confirm Italy's excellent performance in terms of circular material use rate: in 2024 it stood at 21.6%, a 0.5% increase over 2023 and 1.5% over 2020. In the EU27, over the same period (2020–2024), the indicator increased only slightly, by one percentage point only (from 11.2% in 2020 to 12.2% in 2024).

Source: Eurostat

Circular material use rate in the main European countries, 2020-2024 (%)

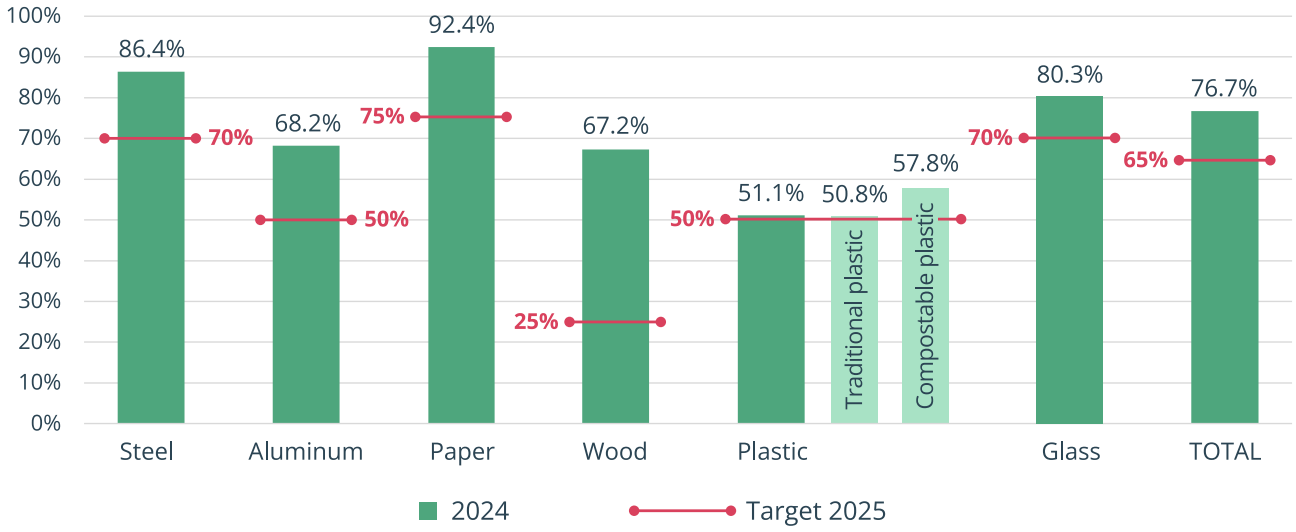


Among other major European countries, Italy ranks first, followed by France (17.8%), Germany (14.8%) and Spain (7.4%). Spain is the only country among those examined that recorded a significant decrease over the past five years (–2%).
According to the latest ISPRA data, the total quantity of special waste sent for recovery in Italy in 2023, reached significant levels up to 74.1% of all the total managed special waste. This trend has been increasing in recent years, with a 1.8% rise over the last three-year period.

There was also an improvement in the municipal waste recycling rate (calculated on the total waste produced) which reached 50.8% in 2023 (+1.6% compared to 2022). However, this figure is still far from the EU targets set at 55% by 2025, 60% by 2030, and 65% by 2035.
In 2024, the total amount of packaging placed on the market exceeded 13.9 million tonnes (+0.7%), remaining substantially stable compared to 2023. The actual recycling rate continued to grow, rising from 75.6% in 2023 to 76.7% in 2024. This increase was primarily due to higher volumes of recycled packaging in the wood and plastic supply chains. In absolute terms, 10.7 million tonnes of packaging waste were actually recycled, confirming continued improvement in recycling quantities.
Italy thus continues to far exceed the EU targets set at 65% for 2025 and at 70% for 2030.
More specifically, legal targets were met and significantly exceeded targets set for all types of packaging, including plastic, which — for the first time since 2020 —exceeded the 2025 target.

Source: CONAI

Recycling rate of packaging waste in 2024 and 2025 targets (%)

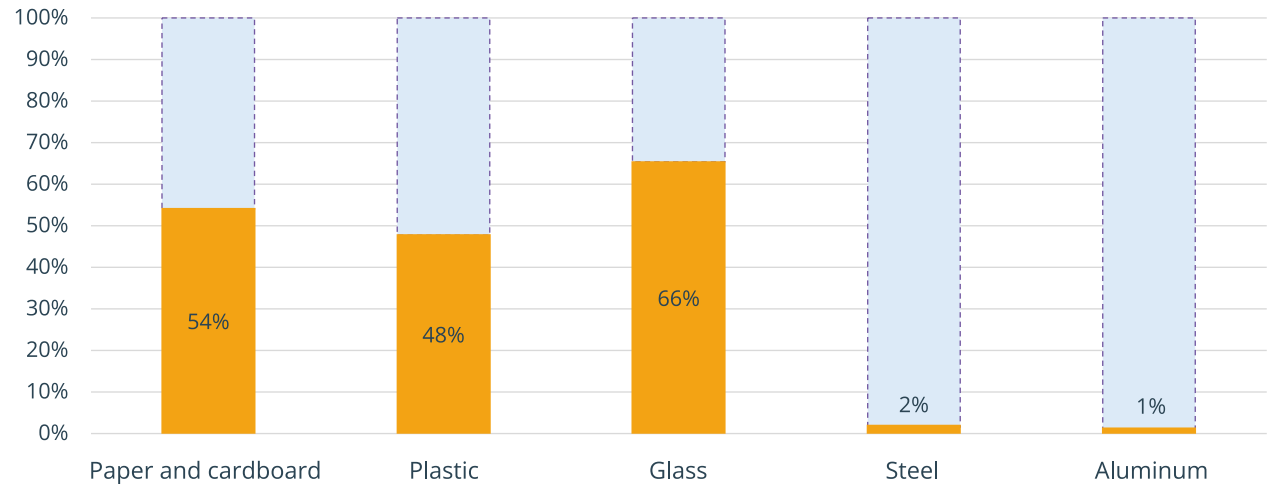


Secondary raw materials markets in Italy

In the 2025 edition of the *Recycling in Italy* Report, for the first time, an in-depth analysis of the national production of secondary raw materials (SRMs) resulting from the recycling of municipal and special waste was carried out in collaboration with CONAI and with the support of ISPRA.
The data was processed by MUD (Single Environmental Declaration Model), which since 2014 also requires the reporting of qualitative and quantitative information on End-of-Waste by recovery facilities.
According to ISPRA, in 2023, the total declared production of SRMs in Italy deriving from the treatment of paper and cardboard, plastics, ferrous and non- ferrous metals (steel, aluminum, and copper), glass, wood, and organic fraction amounted to 23.4 Mt, i.e. a 3% decrease compared to 2021, when the production of materials reached 24.2 Mt.
With regard to certain types of materials, specifically paper and cardboard, plastics, and glass, the share of packaging in total SRM production is very significant.

Source: Fondazione per lo sviluppo sostenibile elaboration on ISPRA data

Share of SRMs produced from packaging waste in Italy in 2023 (%)

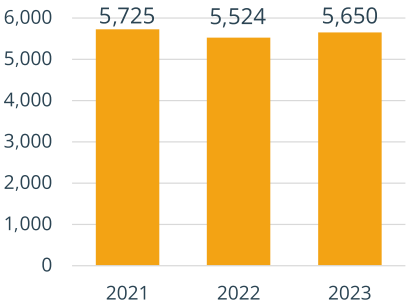


Waste paper

In 2023, the total quantity reported by recycling companies reached 5.6 million tons. The production of SRMs from paper and cardboard (recycled waste paper) is heavily concentrated in Northern Italy, accounting for 58% of the total. At the same time, 647 facilities reported SRM production in Italy, with over half of these recycling plants located in Northern Italy.

Source: Fondazione per lo sviluppo sostenibile elaboration on ISPRA data

Quantity produced and number of plants producing SRMs from paper and cardboard in Italy, 2021-2023 (kt and n.)



	2021	2022	2023
North	362	347	337
Central	137	112	124
South	205	189	186
Total	**704**	**648**	**647**

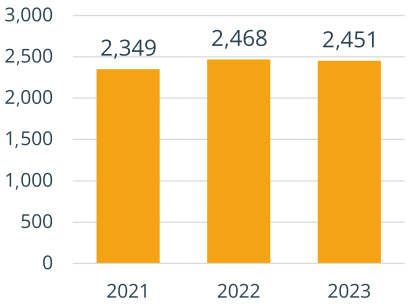
The Italian waste paper market is mature and well structured, giving rise to a relevant complex industrial supply chain. In 2024, domestic waste paper consumption by national paper mills increased by 3.8%, reaching 5.2 Mt. At the same time, exports of waste paper declined significantly - dropping by 10.6%, but still remaining very high at 1.9 Mt. The large volume of exports is mainly due to an imbalance between the growth of domestic collection and the absorption capacity of the domestic paper industry, the latter being affected by competitive factors (particularly energy costs). Exporting this raw material represents a loss of economic and environmental value for Italy.
The paradox of exporting domestically collected waste paper lies in the fact that these exported materials are precisely the ones that are then reintroduced into Italy in the form of purchased finished products or packaging for imported consumer goods (from both Asia and Europe). Absorbing the export of recycled paper domestically is technically feasible by fully utilizing the existing paper and cardboard production capacity.
Analyzing data provided by Unirima on waste paper prices shows a recent period of instability between 2024 and 2025. These exceptional fluctuations reflect deep structural tensions between supply and demand in the sector. The above findings derive from a survey conducted by the Fondazione per lo sviluppo sostenibile, which involved a group of industry operators who described the waste paper market as not positive, particularly noting a decline in the first half of 2025. The main critical issues reported are the lack of stable and adequate domestic demand for SRMs and the presence of excessively cumbersome bureaucratic barriers and lengthy authorization procedures. Despite all this, operators aim to strengthen their position in the SRM market through new investments. These include upgrading existing SRM processing plants, introducing new technologies to improve recycling or the quality of SRMs produced, and initiatives aimed at reducing costs and waste resulting from the recycling process.

Glass cullet

In 2023, the quantity of glass cullet produced exceeded 2.4 million tons, slightly down from 2022 (-0.7%) but up from 2021 (+4.3%). Over 80% of glass cullet production is concentrated in Northern Italy. The number of plants has remained substantially stable over time.

Source: Fondazione per lo sviluppo sostenibile elaboration on ISPRA data

Quantity produced and number of plants producing SRMs from glass in Italy, 2021-2023 (kt and n.)



	2021	2022	2023
North	41	40	36
Central	10	8	7
South	20	28	26
Total	**71**	**76**	**69**

In recent years, the Italian glass cullet market has been dominated by exceptional volatility. In 2023, markets experienced a surge in cullet prices, prompting the sector operators, attracted by high margins on the free market, to terminate agreements with COREVE and source independently for their own supplies. However, this "international bubble" soon burst, causing a sharp and sudden drop in prices in 2024 and early 2025.
The price of virgin glass has remained misaligned with the drop in recycled glass prices, as it is strongly linked to the cost of natural gas, essential for melting furnaces. For this reason, between 2023 and early 2025, virgin glass

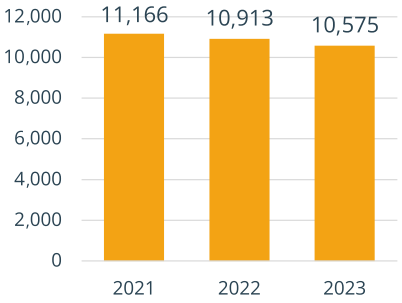
prices remained high or indeed increased. Consequently, the drop in glass cullet prices significantly increased the economic advantage for glassworks opting for the use of SRM glass.
Industry operators describe the SRM glass market as, on one hand, a market without major issues, but on the other, affected by reduced demand from packaging manufacturers. In spite of that, over the past 12 months, operators have found SRM glass prices to be in line and competitive with virgin raw materials.
The main challenges limiting the growth of the SRM glass market in Italy are the lack of adequate and stable domestic demand and, at times, unfair competition or excessively low prices of virgin raw materials. To become more competitive, operators aim to invest in the short-to-medium term in initiatives that are likely to reduce costs and recycling process waste for disposal, as well as making investments to modernize their facilities.

Steel scrap

Italy is a country with significant quantities of steel SRMs production, ranking among the largest European manufacturers of secondary steel derived from electric arc furnaces. A contraction in production is observed compared to 2021, amounting to – 5.3%, which, in quantitative terms, corresponds to more than half a million tonnes less. As in the case of glass, most steel SRM production is concentrated in Northern Italy.

Source: Fondazione per lo sviluppo sostenibile elaboration on ISPRA data

Production of SRMs from steel in Italy, 2021-2023 (kt)



In 2023, over 80% of the total amount was concentrated in Northern Italy, with an overall volume of 8.5 Mt, thanks to the high concentration of steel mills processing large quantities of steel in this area.
Italy remains a net importer of steel scrap, with a trade deficit rising to 5.1 million metric tons in 2024. Almost all (88%) imports come from EU countries, with Germany remaining the main supplier. Unlike Italy, the EU as a whole has a trade surplus with non-EU countries. This situation reflects the differing relevance of electric arc furnace steel production (which relies primarily on scrap): in Italy, it accounts for 90% of steel production, compared to 44% of the EU average.
A key factor in international trade concerns Turkey: on one hand, it is the main buyer of EU scrap steel; on the other, it has become the leading country of origin for finished steel products imported into the EU, with a remarkable increase of 72% compared to 2023.
2024 and early 2025 were marked by high uncertainty in ferrous scrap prices in Italy. According to the industry operators interviewed, the steel SRM market has recently been affected by global conditions and high volatility in materials markets. They believe that over the past twelve months steel SRM prices have been too low, discouraging investments and production. They also highlighted the poor quality of materials entering processing plants. In the short to medium term, companies aim to invest in upgrading existing plants and developing new strategic partnerships along the supply chain to secure larger or higher-quality supplies of recyclable waste.

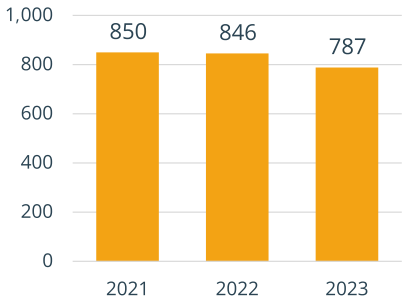
Aluminum scrap

Average production of aluminum SRMs over the three years under analysis stands at about 830 kt, heavily concentrated in Northern Italy, where foundries produce over 85% of the national total. The 2023 figure is likely influenced by missing MUD (Single Environmental Declaration Model) declarations from certain plants.
In Italy, only secondary aluminum is produced. Regarding the origin of the aluminum scrap processed, data show that the percentage from domestic sources (56%) is slightly

down from the previous year, in favour of imported scrap (44%).

Source: Fondazione per lo sviluppo sostenibile elaboration on ISPRA data

Production of SRMs from aluminum in Italy, 2021-2023 (kt)



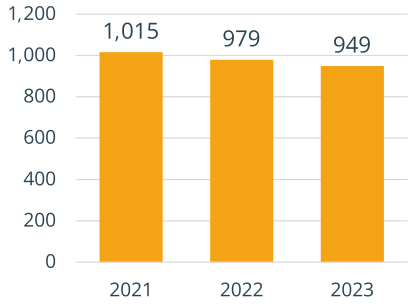
Industrial operators handling aluminum scrap — often also processing steel and other ferrous and non-ferrous metals — are facing market difficulties, mainly due to general volatility and weak demand from end users. In particular, they noted that the average annual selling price of secondary aluminum has often been inadequate compared with the price of virgin material. Technological barriers, however, are hindering the development of secondary aluminum production. The most frequently reported causes include the quality of incoming materials and the need for more complex and costly sorting, separation, or purification processes to meet the required standards. Despite these challenges, in the short to medium term, operators are ready to strengthen their position in the SRM market by building new plants, upgrading existing ones, and developing new supply-chain collaborations to ensure better market opportunities for the secondary aluminum produced.

Wood

Quantities reported through MUD (Single Environmental Declaration Model), as wood SRMs, require careful interpretation, as wood waste entering recycling plants is often used directly to produce wood products (typically panels). 92% of SRM wood production is concentrated in Northern Italy. Out of the 124 wood manufacturing plants using SRMs, a significant number — 79 units — is located in the Northern regions.

Source: Fondazione per lo sviluppo sostenibile elaboration on ISPRA data

Quantity produced and number of plants producing SRMs from wood in Italy, 2021-2023 (kt and n.)



	2021	2022	2023
North	69	65	79
Central	15	20	20
South	15	20	25
Total	**99**	**105**	**124**

The Italian wood supply chain features a unique management and procurement model, differing in several ways from other sectors. The most notable feature is that the recycling and processing industry sources and processes post-consumer waste wood directly to manufacture new wood products. Today, panel manufacturers mainly use wood sourced from post-consumer recovery streams.

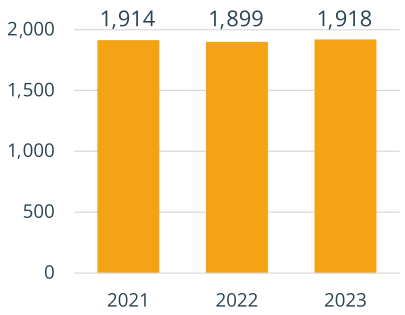
The main players in this supply chain are panel manufacturers, primarily chipboard panel manufacturers. The sector is highly concentrated, with just a few plants covering approximately 98–99% of wood recycling in Italy. Some Italian companies manufacture panels or other wood products (e.g., pallet blocks) entirely from recycled wood. This supply chain is considered one of the finest worldwide examples of Made in Italy.

Compost from the organic fraction

The analysis of the production of composted soil improvers focused on quantities produced in integrated plants and composting facilities. The types of soil improvers considered include: green composted soil improver, mixed composted soil improver, other soil improvers, and soil improvers from integrated plants.

Source: Fondazione per lo sviluppo sostenibile elaboration on ISPRA data

Compost from the organic fraction in Italy, 2021-2023 (kt)



According to the latest official data, management of organic waste — which accounts for just under 40% of municipal waste — produces about 2 Mt of compost annually in Italy, including 500 kt of Green Composted Soil Improver, 850 kt of Mixed Composted Soil Improver, 600 kt of Composted Soil Improver from Sludge, and 50 kt of Agri-food Chain Composted Soil Improver.

In an increasingly technologically advanced plant landscape, CIC (Consorzio Italiano Compostatori) periodically assesses the characteristics and market dimensions of the various outputs generated from organic waste processing, with a particular focus on the compost market.

Quantitatively, the market for composted soil improvers is exclusively or predominantly local, even though 25% of Mixed Composted Soil Improver and Green Composted Soil Improver, and all Agri-food Chain Composted Soil Improvers, are marketed on a national scale.

According to industry professionals, the composted soil improver market did not perform particularly well in the first half of 2025. The main challenges hindering the development of the Italian market for these materials are weak and unstable domestic demand for SRMs, the lack of implementation of Minimal Environmental Criteria for public urban green areas, bureaucratic barriers, and lengthy authorization procedures.

Over the past twelve months, professionals reported that SRM prices have often been far too low, discouraging investments and production of composted soil improvers. The processes required to obtain high-quality SRMs are costly, and market prices do not reflect the real benefits these products provide in terms of soil organic matter and crop nutrients.

Challenges include improving the quality of organic waste collection and managing non-compliant materials. CIC highlights that the presence of non-compostable materials in organic waste collection severely impacts the final product quality and increases production costs.

Applying Minimal Environmental Criteria to urban greenery and separate collection could help consolidate and relaunch the compost market.

Most compost is spread in open-field crops, while higher-value applications — such as producing potting soils and growing substrates — remain marginal. These high-value markets would be more profitable for composters, who today often sell their products to farmers at very low prices, or sometimes even for free.

Currently, the market is not functioning properly in terms of its economic valorization.

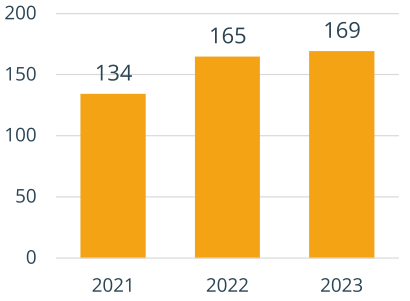
Critical raw materials from WEEE

In Italy, the potential from recycling technological products is high, but several critical issues prevent full exploitation: a collection rate below the European average for both WEEE (30% vs. 37% in 2023) and batteries and accumulators (31% vs. 46% in 2022), and poor development of a technologically advanced treatment-plant network for recovering critical raw materials.

Although critical raw materials are of primary importance for the national economy, there is still no real monitoring system for their use. Accurate information on recycled and recovered quantities is still missing. A preliminary assessment, based on ISPRA data, provides information on SRM quantities for certain materials, such as aluminum and copper.
Copper is considered a strategic and critical raw material for the EU due to its high economic importance, even though it does not exceed the critical supply-risk threshold. According to ISPRA data from MUD declarations, copper production from SRMs has grown significantly in recent years — from 134 kt in 2021 to 169 kt in 2023, with a 26% increase. Over 90% of the total is produced in plants located in Northern Italy.

Source: Fondazione per lo sviluppo sostenibile elaboration on ISPRA data

Production of SRMs from copper in Italy, 2021-2023 (kt)

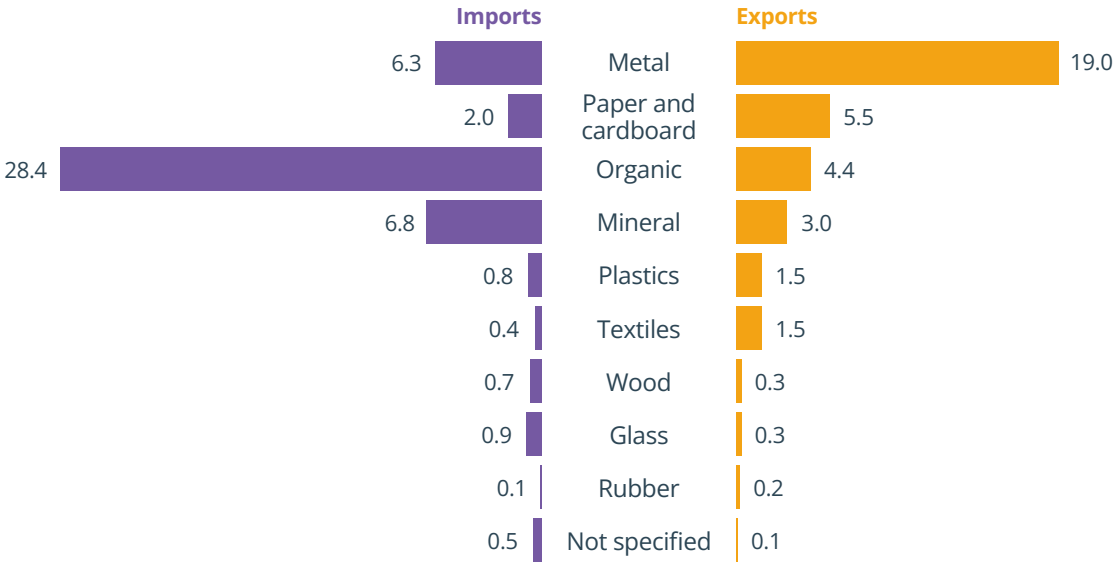


Trade in recyclable materials within Europe and with non-EU countries

In 2024, intra-EU trade in recyclable raw materials (Eurostat includes recyclable waste and scrap as well as other secondary raw materials) reached 84 Mt, worth around €50 billion.
The data use a broad definition of SRMs that includes recyclable waste and scrap. This inclusion is due to customs-recording methods, which do not allow distinguishing between different product types (such as waste, SRMs, and by-products). Therefore, no standardised monitoring or classification method currently exists at EU level to precisely identify materials qualifying as SRMs or certified as "end-of-waste".
Despite these methodological limitations, this database provides a useful tool for a rough estimate of the size and relevance of SRM markets at the European level and in relations with non-EU countries.
In 2024, exports of recyclable raw materials from the European Union to non-EU countries (35.7 Mt) fell by 8.2% compared to the previous year. 2023 had marked a record for exports, reaching 38.9 Mt — the highest level in the last two decades.
Meanwhile, imports of recyclable raw materials into the EU from non-EU countries reached 46.7 Mt in 2024 (+17.5%), mainly driven by organic materials (+16.5%).

Source: Eurostat

Extra-EU trade in recyclable materials, 2024 (Mt)



In 2024, EU metal exports reached 19 Mt, accounting for over half (53.3%) of all exported recyclable raw materials. The second most significant category included paper and cardboard, with 5.5 Mt (15.3%), followed by organic materials at 4.4 Mt (12.2%).

Regarding imports into the EU, the dominant category was organic materials, with 28.4 Mt (60.7%), followed by mineral materials at 6.8 Mt (14.5%) and metals at 6.3 Mt (13.5%).

According to Eurostat, Italy exported 2.8 Mt of recyclable materials to non-EU countries in 2024, down 11% from the previous year. Conversely, in the same year, 4.6 million metric tons of recyclable materials were imported from non-EU countries (with a significant 31.5% increase).

Trade volumes with other EU Member States were far more significant, with Italy importing 8.1 million metric tons from EU partners in 2024.

In terms of materials traded with non-EU countries, almost half of exports included paper and cardboard (1.3 Mt), although this value sharply declined from the previous year (–28%). Significant quantities of ferrous metals were also exported (571 kt).

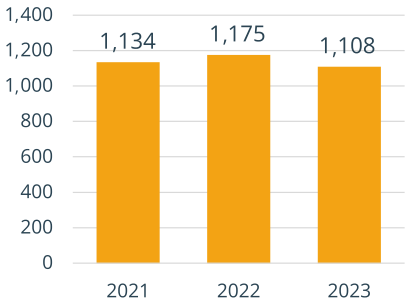
Imports from non-EU countries, on the other hand, account for over half of organic materials. Within the EU, Italy mainly trades ferrous metals, accounting for 64% of total intra-EU trade (5.2 Mt), largely imported from Germany.

The plastic packaging recycling crisis

The latest ISPRA data highlight a slowdown in the production of secondary raw materials (SRM) generated from plastic waste treatment. In 2023, declared production reached 1,108 kt, down by 2.2% compared to 2021 and by nearly six percentage points over the last two years. Northern Italy continues to play a dominant role, accounting for 70% of national production. Between 2021 and 2023, the number of companies producing plastic SRM fell by 25%, with 16 plant closures occurring in the northern regions alone.

Source: Fondazione per lo sviluppo sostenibile elaboration on ISPRA data

Quantity produced and number of plants producing SRMs from plastic in Italy, 2021-2023 (kt and n.)



	2021	2022	2023
North	310	308	294
Central	70	72	63
South	146	137	144
Total	**526**	**517**	**501**

An unprecedented crisis

According to an analysis by Plastic Consult on behalf of Assorimap, Italy's 77 companies operating in post-consumer plastics mechanical recycling (86 plants) generated approximately 833 kt of recycled plastics in 2024.

Including other recycling operators, the total production of post-consumer recycled plastic materials produced in Italy in 2024 will remain steadily above one million tonnes (1.1 Mt according to the most updated ISPRA data).

The Italian plastics recycling sector is now facing a severe crisis. Revenues, already declining in 2024, worsened further in 2025, while demand and prices for SRM (secondary raw materials) have fallen to their lowest levels since 2020.

Between 2024 and 2025, several recycling companies have already ceased operations.

Between September and October 2025, Assorimap – Italy's national association of plastic recyclers and regenerators – wrote a letter to the Italian Ministry of the Environment (MASE) and to the Ministry of Enterprises and Made in Italy (MIMIT), calling for immediate action and, at the same time, for the establishment of an institutional task force dedicated to plastic recycling.

Italy's plastic recycling supply chain is complex and multifaceted. While companies process pre-consumer plastic materials (industrial scrap), the bulk of recycling concerns post-consumer especially end-of-life plastic products. Post-consumer plastic waste is significantly more relevant in terms of volume and challenging to manage. According to data collected by Plastic Consult on behalf of Assorimap, 72% of the post-consumer feedstock comes from packaging waste collected through separate waste collection systems managed by CONAI/COREPLA, CORIPET, and partly CONIP. Most of the input is domestically sourced (83%), although imports are on the rise.

The operating profit of these recycling companies has collapsed: operating income fell by 95% between 2022 and 2023, dropping from €149 million to just 6.9 million euros.

Meanwhile, prices at COREPLA auctions have plunged. PET bottle auctions, for example, recorded price drops of more than 50% between January and October 2025. At the same time, COREPLA increased its recycling fees for subsidised materials — some by as much as 100% — and secured additional warehouse capacity to manage unsold stocks. These measures require substantial financial resources and are not sustainable in the long term.

Source: Plastic Consult for Assorimap

Turnover of the main recycled polymers in Italy, 2022-2024 (millions of euros)

	2022	2023	2024	Var% 24/23
R-PET	307.9	210.9	249.6	18.4%
R-HDPE	209.1	151.7	139.7	-7.9%
R-PE film	235.8	150.6	133.5	-11.4%
R-PP	90.3	94.3	97.1	3.0%
R-MPO	68.0	54.7	55.7	1.9%
R-Others	63.3	36.5	17.3	-52.7%
Total	**974.4**	**698.6**	**692.9**	**-0.8%**

Interviews with plastic recycling industry operators confirm and reinforce the concerns highlighted by the data, outlining a severe crisis in the market for recycled plastics. Demand is far below the growing volumes supplied by recyclers, due to a series of factors contributing to the current market contraction. First, regulations designed to promote the use of recycled plastics are not being effectively enforced, and as a result demand is not increasing. The 25% mandatory recycled PET content in bottles, for example, is not subject to penalties; likewise, the Minimal Environmental Criteria for public procurement — including street furniture, construction works, and road paving, which should also increase the use of recycled plastic, — have not led to any significant increase in recycled plastic demand.

The situation is further complicated by the slowdown in key sectors, such as automotive and construction, which are traditional consumers of recycled plastics and have consequently reduced their purchases.

At the same time, virgin polymer prices are low and falling, while industrial recycling costs in Italy remain high due to both energy costs and the disposal in landfills or incinerators of large quantities of non-recyclable residues resulting from the sorting and recycling processes.

Since these costs fall entirely on recycling companies, they significantly increase operational expenses. Finally, the growing competition from imported "recycled" plastics from non-EU countries — often marketed without credible certification of origin or quality —should not be overlooked. This phenomenon distorts the market, creates unfair competition and further weakens the competitiveness of European recyclers.

European challenges and opportunities for plastic recycling

According to Plastics Recyclers Europe, the European recycling sector is facing a serious crisis. For the first time, in 2024, both the total plastics input volumes and output of recycled plastics declined compared to the previous year, causing a decline in production capacity utilization and a significant reduction in the sector's operating margins, with a 5.5% decline in turnover. This crisis has led to a loss of industrial capacity: in 2024 alone, Europe saw plant closures totalling about 300 kt of capacity. Over the last three years, more than 40 facilities have shut down in Europe — mainly in the UK and the Netherlands — resulting in 1,700 job losses. The growth of recycling in Europe is also being held back by rising imports of recycled plastics.

To meet mandatory minimum recycled-content targets, the EU will require roughly 5.4 million tons per year of three key polymers (R-PE, R-PET, R-PP) by 2030. That demand is expected to more than double by 2040, reaching 11.5 million tons annually. Current European production capacity is significantly undersized to meet this demand.

The new EU Packaging Regulation offers an opportunity for the Euro-

pean recycling industry to expand its operations and strengthen its position against international competition. However, urgent measures are needed to overcome the current crisis, to avoid compromising the sector's industrial capacity and to enable it to revitalize itself and rise to future challenges.

Initiatives and proposals to address the plastic recycling crisis in Italy and Europe

Faced with the severity of the crisis, plastic recycling associations have launched a series of national and European initiatives and submitted proposals both in Italy, calling for urgent government action, and at the European level, advocating a comprehensive approach to combat unfair competition and support the circular economy.

In Italy, a crisis task force was established at the Ministry of the Environment on October 8, 2025, bringing together institutions and key supply-chain stakeholders (Assorimap, COREPLA, CONAI, PolieCo, Utilitalia, ANCI, ENEA, ISPRA).

At European level, 28 associations representing the entire plastics value chain— from production to processing, recycling, and waste management — sent an open letter to the President of the EU Commission, Ursula von der Leyen, on September 4, 2025. They called for urgent action and long-term measures to address the serious crisis in the sector. The European Commission is expected to reply by the end of 2025 and to submit a coordinated action plan.

Overview of the European and National Legislation on Recycling

In the field of waste recycling, the most significant development of the year was the entry into force of Directive 2025/1892/EU of 10 September 2025, which amends Directive 2008/98/EC (the Waste Framework Directive). This measure introduces provisions specifically addressing two product streams: textiles and food products.

Food waste

The recitals of the Directive set out that food waste is not decreasing to the extent necessary to make significant progress towards the target of halving per capita food waste by 2030, nor to reduce food losses along the production and distribution chain.

To fully unlock the potential for food waste reduction and ensure sustained progress over time, the Directive calls for a behavioural change tailored to the specific circumstances and needs of Member States to be fully integrated into national food waste prevention programs.

Member States are encouraged to promote technological solutions that help prevent food waste, such as active packaging designed to extend shelf life or maintain or improve the quality of packaged food, particularly during transport and storage.

The Directive sets the following food waste prevention targets by 2030:

- Reduce food waste in processing and manufacturing by 10% of the amount of food waste generated compared to current levels.
- Reduce per capita food waste in retail, and in other forms of distribution, restaurants, catering services, and households by 30% compared to current food waste levels.

To achieve these targets, the Directive envisages a set of measures, including coordination and sharing of best practices, notably through the EU Platform on Food Losses and Food Waste. The costs of these measures are to be borne and shared by stakeholders across the food supply chain.

The players that place almost all food products on the market are the food industry and large-scale retailers. This high concentration of market players allows for considering the introduction of an extended producer responsibility (EPR) scheme for this sector, which would also alleviate the burden on municipalities arising from the management of this waste disposal stream — i.e. being the most significant municipal waste stream.

The Directive mandates that Member States develop and implement food waste prevention programs capable of achieving the established reduction targets. These programs must be submitted to the European Commission by October 17, 2027, including an indication of the competent authorities responsible for coordinating the implementation of these measures.

Textile waste

The Directive introduces even more stringent measures for textile products, given the sector's considerable environmental impact. According to the European Environment Agency, less than 1% of clothing waste is currently used to produce new garments in a circular way. Most textiles are not designed to comply with circularity principles, and 78% require disassembly before fiber-to-fiber recycling is possible.

The Directive requires Member States to adopt EPR schemes for clothing, household textiles, hats, footwear, and potentially mattresses as well.

Producers must cover the costs of collection of used textiles and textile waste, transport and sorting, preparation for reuse, recycling, recovery, and disposal, analysis of residual waste composition, awareness-raising campaigns, data collection and reporting, research and development in eco-design.

Collection systems must involve all key stakeholders and cover the entire territory of each Member State. Provisions are also envisaged to protect social economy players, ensuring they can maintain and manage their collection points, receive equal or preferential treatment in separate waste collection site allocation, and retain the right not to deliver collected products to the collective system.

EPR schemes must also inform

consumers about how to prevent waste, available reuse and repair options for textiles and footwear, location of collection points and how to effectively contribute to proper sorting and donation.
The Italian Ministry of Environment (MASE) is currently finalizing a draft decree introducing the EPR (Extended Producer Responsibility scheme) for the textile sector. The draft was subject to a public consultation held in May 2025, to gather industry stakeholders' feedback. The text was then updated and submitted to the Ministry of Enterprises and Made in Italy (MIMIT) for approval prior to notification to the European Commission.
The draft decree requires manufacturers to promote the extension of product life both by supporting national and local repair networks and by establishing reuse centres, providing an economically viable alternative to fast-fashion and leveraging Italy's strong culture of reuse and repair in the textile sector.
The draft decree requires manufacturers to fulfill their EPR obligations through management systems organized as consortia, recognized by the Ministry and open to participation by relevant economic stakeholders, coordinated through a National Coordination Centre.
At the national level, textile EPR consortia began to flourish starting from 2021–2022, pending the finalization of the national EPR decree in the textile sector. The main consortia established to date include:
Cobat Tessile, part of the Cobat group
Corertex, promoted by the Prato textile district (eight companies, six active in reuse, two in recycling)
Ecotessili and **Ecoremat** for end-of-life mattresses, promoted by Federdistribuzione, part of the Ecolight network (a consortium of the WEEE supply chain)
Erion Textiles, part of the Erion WEEE network
Retex.Green, sponsored by Sistema Moda Italia and Fondazione del Tessile Italiano
RE.CREA, coordinated by the Italian National Fashion Chamber
ERP Italia Tessile, managed by the European Recycling Platform, already active in over 18 countries

The Circular Economy Act: Proposals from the Circular Economy Network

The European Commission launched a consultation for the development of a Circular Economy Act (CEA), which was concluded on November 6, 2025. The legislative proposal is expected to enter into force in the fourth quarter of 2026.
The CEA aims to address critical issues for the waste recycling sector, as the Commission intends to develop new circular economy legislation to stimulate the demand for secondary raw materials and to create a single market for waste, particularly for critical raw materials.
The CEA provisions may be structured around two main pillars:
- Waste electrical and electronic equipment (WEEE): This is the fastest-growing waste stream (increasing by 2% annually), currently with a collection rate below 40%. The objective is to ensure effective collection and recycling, generating market demand for the secondary raw materials.
- Promotion of a single market for waste and secondary raw materials and their use in products: such as reforming end-of-waste criteria, simplifying, digitizing, and extending EPR schemes, and establishing mandatory targeted, effective, and enforceable criteria for public procurement of circular goods, products, services, and works to stimulate EU demand.

The Circular Economy Network (CEN), a project by Fondazione per lo Sviluppo Sostenibile, submitted a position paper to the EU Commission detailing priority measures to be considered when drafting the CEA to ensure market outlets for secondary raw materials, especially plastics, which are difficult to reuse.
This position paper summarizes observations and proposals put forward by companies and organizations belonging to the Network. More specifically, it emphasizes that increasing circularity requires ensuring a stable market for recycled materials. Currently, demand is weak, partly due to the competitive pricing of virgin raw materials. Priority actions should target recycling sectors facing the greatest challenges, with particular concern for the plastic recycling industry.
For detailed measures, see the CEN (Circular Economy Network) Position Paper.

Recent regulatory developments in Italy

The most significant development is Decree-Law No. 116/2025, which amends Legislative Decree No. 152/2006, tightening penalties for waste management violations. The decree also introduces new WEEE provisions, aimed at curbing illegal waste disposal and increasing collection volumes.

Distributors may now collect WEEE from households free of charge, without requiring the purchase of equivalent new household appliances.

New sanctions have also been introduced, for distributors failing to report preliminary collection sites on the digital portal managed by the Coordination Center.

Additionally, the RENTRI digital registry became mandatory in 2025, enabling more efficient and transparent waste tracking, including the constant monitoring of waste and material flows, by verifying EWC (European Waste Catalogue) codes and waste generation points.

Recycling supply chains in Italy

Paper and cardboard packaging

In 2024, while paper and cardboard packaging consumption slightly declined, the amount of recycled packaging also slightly decreased, from 4.67 to 4.60 million tons. The recycling rate remained unchanged from last year, standing at 92.4%, well above the EU target of 85% set for 2030. Italy has an advanced recycling network that includes 346 waste management facilities that collect, sort, and press materials for 56 paper mills.

Plastic packaging

In 2024 a 5% increase in recycled plastic packaging was recorded, reaching a total of 51.1% of packaging placed on the market (2.3 Mt), with 1.18 Mt recycled plastic packaging, achieving the 2025 50% target one year earlier. Mechanical recycling volumes increased by 8.5% compared to 2023.

Glass packaging

Consumption decreased slightly (-0.9%) in 2024 compared to the previous year, while recycled volumes of glass packaging waste totalled just over 2.1 Mt in 2024. The actual recycling rate was 80.3%, up 2.9% from 2023 and above the EU 75% target set for 2030. Despite progress across the entire supply chain, a significant portion of glass packaging residual losses are still recorded, estimated at approximately 250 kt. With reference to this matter, COREVE recognizes the need to take action, promoting targeted actions in collaboration with Italian municipal authorities and waste collection management facilities with the aim of strengthening efforts to support separate waste collection.

Steel packaging

In 2024, in Italy, consumption was 504 kt (+4.1%), with 436 kt recycled (+1.1%), accounting for 86.4% recycling, compared to 2023, exceeding the 2030 target of 80%, despite a reduction of approximately 3 percentage points compared to 2023. This reduction is due to an increase in the quantities of steel packaging consumption (+4.1%) compared to the previous year.

Aluminium packaging

2024 aluminium packaging consumption was 91.5 kt, recording a significant increase (+8.5%) compared to 2023, with 62.4 kt recycled (68.2%). Despite the increase in recycled quantities, the recycling rate decreased slightly (-2.1%) due to the introduction of the new corrective measures for composite packaging, which requires including the aluminum component of composite packaging in both the consumption and recycled volumes. Despite this, the targets set for 2025 and 2030 are still met and exceeded.

Wood packaging

Wood packaging consumption exceeded 3.4 Mt (+3.4%) compared to the previous year, with a recycling rate of 67.2% (+2.3% compared to 2023), corresponding to approximately 2.3 million tons, and exceding EU recycling targets (set at 25% by 2025, and at 30% by 2030).
Pallet regeneration exceeded 945 kt, exceeding 70 million units reintroduced for consumption.

Compostable bioplastics waste

Compostable bioplastics waste is disposed of in organic recycling plants. Approximately 57.8% of recycled bioplastic packaging was placed on the market (47.5 kt) in 2024, up 2 points from 2023. To further improve recycling results, it is necessary to reduce the quantities of bioplastic packaging waste. Although properly collected with OFMSW (Organic Fraction of Municipal Solid Waste) and directed to organic recycling facilities, the overall national collection rate for such a kind of packaging is 72%, thus significantly positive), effective recycling still remains limited.

Organic waste

In 2023, a total of 7.5 million tonnes of organic waste were collected in Italy (5.5 Mt of source-separated food waste and 2 Mt of green waste), amounting to an increase of 38,000 tonnes compared to the previous year. The share of the population actively participating in the selective collection of organic waste continues to rise (92% of the national population), although several major urban centers and metropolitan areas still lack a fully implemented and structurally optimized organic waste collection system. Despite this expansion, the quality of the organic waste stream has deteriorated over the last five years.
Guided by technological trends in the sector and market-driven incentives, the number of integrated treatment facilities continues to grow. These plants adopt anaerobic digestion as the upstream process — aimed at biogas and

biomethane production — followed by the composting stage; in 2023 they processed 76% of the total food-waste stream. As national treatment capacity increases, many recycling facilities are progressively broadening the spectrum of acceptable organic feedstocks, including sewage sludge and by-products/residuals from the agri-food industry.

Sewage sludge

In 2023, the management of sewage sludge from municipal wastewater treatment involved a total volume slightly exceeding 3 million tonnes. Out of this amount, 51.3% was directed to recovery operations, 47.6% to disposal, while the remaining 1.1% remained in storage at year's end. Recovery should be regarded as the preferred management route. These materials possess physico-chemical properties that make them highly valuable for agricultural applications, particularly due to their high organic matter content and nutrient load.

End-of-life tyres (ELTs)

In 2023, 503 kt of end-of-life tyres (ELTs) were generated, marking a 5% decrease compared to the more than 530 kt recorded in 2022. Rubber recovered from ELTs has multiple applications, including sports flooring, insulation materials, urban furniture, modified asphalts, anti-vibration components, and more. The main challenge for the sector is to increase recycling rates by supporting market uptake through the introduction of minimum recycled-content requirements in various applications (as envisaged in the revision of the End-of-Life Vehicles Directive), and by promoting innovative processes such as pyrolysis and devulcanization.

WEEE

The collection rate of WEEE in Italy remained stable at 30% in 2024. This figure is still 35 percentage points below the target set by the European Union, which has required a minimum collection rate of 65% since 2019. Further increases in the volume of WEEE sent for recycling are essential to enable Italy to comply with EU targets. Last year, the European Commission placed several Member States, including Italy, under infringement procedures for failing to meet the targets. Under the Critical Raw Materials Act, the EU has also set the objective of increasing the recycling capacity for critical raw materials by 2030, to cover at least 25% of the EU's consumption of strategic raw materials.

Waste batteries, cells, and portable accumulators

During 2024, a total of 10,384 tonnes of end-of-life waste batteries, cells, and portable accumulators were collected, with a 10.5% increase compared to 2023. The collection rate reached 36.5%, up by approximately six percentage points from 2023, yet still below the European target of 45% set in 2016. Achieving the collection targets therefore remains a significant challenge, especially in light of future requirements under Regulation 1542/2023, which necessitates a decisive acceleration across the entire sector.

Used oil

In 2024, 188 kt of used oil were sent for regeneration. Italy maintains its leadership position in Europe, with 98% of collected used oil undergoing regeneration, compared to the European average of 61%.

Vegetable and animal oils and fats

In 2024, a total of approximately 110 kt of vegetable and animal oils and fats were collected nationwide and sent for recycling, accounting for a 8.9% increase compared to 2023. Strengthening the collection of household-generated waste remains a key target for the sector in order to increase the volumes of collected and regenerated material.

End-of-life vehicles (ELV)

In 2023, end-of-life vehicle (ELV) management maintained recycling and recovery in line with those recorded in 2022.
The sector achieved an 86% re-use and recycling rate of the average vehicle weight, exceeding the 85% target. Considering the lack of energy recovery treatments, the total recovery rate remains at 86%, still below the 95% target set by legislation since 2015.
Analysis of data from previous years indicates a stable material recovery rate, highlighting a structural challenge in the sector in finding value chains for lower-value materials. Addressing this issue requires the approval and implementation of the ELV management reform regulation, ensuring an EPR governance model that obliges producers to cover ELV treatment costs.

Construction and demolition (C&D) waste

Construction and demolition (C&D) waste has been steadily increasing in recent years. In 2023, it totalled over 61.6 Mt, up 1.8% compared to 2022. Material recovery reached approximately 49.9 Mt, marking a 3.3% increase from the previous year. The recovery rate therefore stands at 81%, exceeding the 70% target set for 2020. ISPRA data indicate high recovery percentages but also highlight persistent accounting issues due to incomplete traceability of C&D waste flows.

Street sweeping waste

In 2023, the quantity of street sweeping waste sent for recovery (498 kt) remained largely in line with the previous year. In March 2024, the Ministry of Environment (MASE) published a draft End-of-Waste (EoW) decree for street sweeping waste. The final text has not yet been approved or published, it is still pending, but it is clear that the decree will finally regulate the recovery process on a clear and uniform basis for all sector operators, according to well-defined technical and performance standards at the national level.

Textile waste

In 2023, textile waste collection totalled 171.6 kt, accounting for an increase of approximately 7% compared to around 160.3 kt in 2022. The introduction of mandatory separate collection of textile waste on 1 January 2022 has supported a gradual increase in national collection volumes in recent years. However, the obligation has not yet been fully implemented by all Italian municipalities (currently only 81%). Data indicate that a substantial share of municipal textile waste — over 1 Mt — still ends up in unsorted municipal waste. The sector is currently the focus of regulatory measures and funding aimed at modernizing and strengthening treatment infrastructure. Overall, the textile waste management chain is experiencing a period of significant challenges at both national and European levels.

Solvent recycling

The solvent recycling sector manages over 70% of solvent-based wastewater generated nationwide. With a total authorized capacity exceeding 300 kt/year, concentrated in 10 industrial plants across the country, this sector ensures the management of more than 70% of solvent-based effluents produced in Italy. The volumes of recovered products are nearly double the European Union average. Operators manage over 70% of solvent-based effluents nationally, with over 300 kt/year capacity in 10 plants, and recovery volumes almost double the EU average.

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