Waste prevention country profile

Italy February 2025





Country profile: Italy

General information

Name of the country/ region	Italy		
Geographical coverage of the waste prevention programme (national/ regional)	National		
Type of programme (stand alone or integrated into waste management plan or into the circular economy strategy)	Separate programme		
Title of programme and link to programme	Programma nazionale di prevenzione dei rifiuti (National Waste Prevention Programme)		
	https://www.mite.gov.it/sites/default/files/archivio/normativa/dm 07 10 2013 programma.pdf		
Duration of programme	2013–2020 - The new Waste Prevention Programme is under revision.		
Language	Italian		
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Development process of the programme/ revision	The new waste prevention program is being developed, with the first draft in internal consultation.		
Foreseen budget for implementation of the programme	An integrated programming approach will be adopted to fund the programme, ensuring coherence and synergy across various funds related to waste management, waste prevention, circular economy, and green economy, including regional funds.		

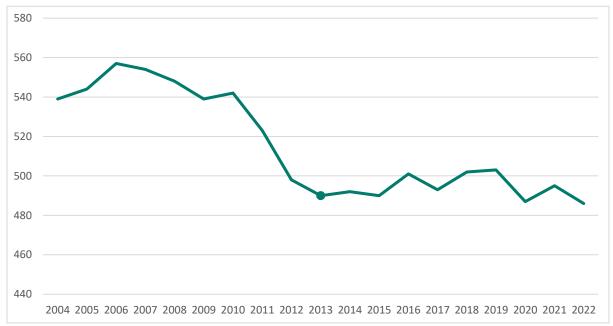
WASTE GENERATION

The following figures illustrate the progress towards waste prevention and decoupling of waste generation from economic growth in Italy.

Municipal solid waste (MSW):

Italy's municipal waste generation shows a slight decrease over the past 10 years, generating 486 kg/cap of municipal waste in 2022, which is slightly below the estimated EU27 average of 513 kg/cap (Figure 1).

Figure 1 Municipal waste generation in Italy (kg per capita), 2004-2022



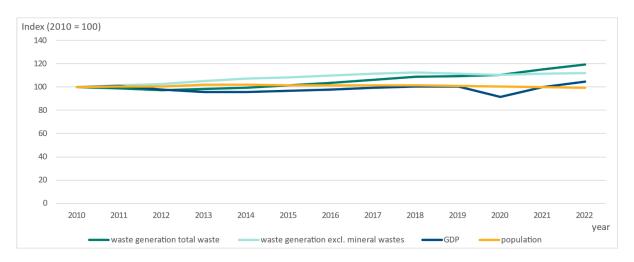
Source: Eurostat [ENV WASMUN].

Note: As of reference year 2020, new reporting rules apply for calculating recycled municipal waste pursuant to the targets laid down in Article 11.2(c-e) of Directive 2008/98/EC. However, the data in Figure 2 do not correspond to these new reporting rules.

Total waste

The total amount of waste generated in Italy has significantly increased over the past 12 years (Figure 2). The increasing trend for the total amount of waste generated is mainly driven by mineral waste from construction and demolition. However, excluding major mineral wastes, does not strongly affect the overall trend. This trend is mostly driven by recyclable wastes. Italy's GDP stagnated throughout the considered timeframe, with the exception of a decrease in 2020, most likely due to the Covid-19 outbreak. In general, waste generation increased while GDP and population remained rather stable, hence there are no clear signs of decoupling waste generation from economic growth.

Figure 2 Generation of waste (total and excluding major mineral wastes), population and economic development, 2010-2022



Source: Eurostat [ENV_WASGEN, NAMA_10_PC, DEMO_GIND].

Note: Waste generation data for odd years are interpolated.

WASTE PREVENTION PROGRAMME

Objectives and priorities

1.	Waste prevention objectives of the Programme - quantitative objectives (waste reduction) - qualitative objectives (reduction of hazardous	The programme sets objectives aimed at decoupling economic growth from the environmental impacts generated by waste (p. 7).	
	substances/ environmental impacts)		
2.	Sectors covered	 Agriculture; construction and infrastructure manufacturing; sale, retail, transport; households; private service activities/hospitality; public services 	
3.	Priority waste types	 Food/organic; construction and demolition waste; hazardous waste; paper; packaging; waste electrical and electronic equipment /batteries. 	
4.	Target groups	The target group for each measure is specified (pp. 19–28). Target groups include industry, the public sector, consumers, non-governmental organisations, the catering sector, commerce, private sector, and the construction and demolition sector.	

Targets, indicators and monitoring

1. Indicators used to monitor progress

One or more indicators are specified for each measure, which are considered for different waste types.

BIODEGRADABLE WASTE

- Number of decrees or guidelines related to food industry by-products (pp. 19–20).
- Number of signed agreements among Communities, government bodies in charge of waste management, large-scale distribution companies, volunteer organisations and charities for the redistribution of excess food products generated in the distribution phase of the supply chain; guidelines created (yes/no) and quantity of redistributed excess food products (pp. 20–21).
- Number of 'ethical procurement groups' created; these are groups of consumers who cooperate in order to buy food and other frequently used goods directly from producers at a price that is fair to both parties (pp. 21–22).
- Guidelines created (yes/no) for environmental quality certification in the food service sector; number of operators who have applied for this certification as a proportion of the total number of operators (pp. 22).
- Number of information campaigns related to household food waste; handbook for household food waste reduction created (yes/no) (pp. 22–23).

PAPER WASTE

- Number of 'no junk mail' stickers for mailboxes distributed and number of agreements made with the marketing industry to dematerialise publicity (pp. 23–24).
- Number of agreements made with utilities companies to promote online communication with their clients and number of utilities companies that provide online services (p. 24).
- Guidelines for public and private sector offices created (yes/no), amount of paper ordered by offices, and number of public and private sector offices
- that have adopted the computer protocol (p. 24).

PACKAGING WASTE

- Number of signed agreements to promote points of sale of loose/bulk products and number of businesses that sell loose/bulk products (p. 26).
- Number of information campaigns created to encourage the consumption of tap water instead of bottled water, number of programme agreements to

encourage the use of tap water and number of public water fountains installed (p. 26).

WASTE ELECTRICAL AND ELECTRONIC EQUIPMENT

- Number of awareness campaigns to encourage consumers to choose less environmentally harmful electrical and electronic equipment and inform them about the correct ways to use and dispose of electrical and electronic equipment (p. 27).
- Number of products that enter and leave a reuse centre, and number of visits made to reuse centres (pp. 27–28).
- 2. Quantitative targets

The programme sets the following targets to be achieved by 2020, based on 2010 levels (p. 7):

- 5 % reduction in the ratio of generated municipal solid waste (MSW) to gross domestic product unit (GDP); as a monitoring measure, the trend in the amount of MSW produced per household will also be considered.
- 10 % reduction in the ratio of generated special hazardous waste to GDP unit.
- 5 % reduction in the ratio of generated special nonhazardous waste to GDP unit.

Special waste includes, according to Article 184, paragraph 3, of Italian legislative decree 152/2006:

- waste from agriculture and agro-industry;
- waste resulting from demolition or construction, and from excavation activities;
- waste from industrial processes;
- manufacturing waste;
- waste resulting from commercial activities;
- waste resulting from the activities of recovery and disposal of waste, as well as sludge from water treatment;
- waste arising from sanitary activities.

The programme suggests that these targets could be changed into targets for individual waste streams

3. Monitoring mechanism of the programme

There is no information specifically indicating how the overall programme is to be monitored, nor the frequency with which evaluations will be carried out or other requirements. However, it is stipulated that the technical round table that will be created within the Ministry of the Environment will be responsible for monitoring the performance of the national and regional programmes, identifying and proposing priority actions and measures to update these programmes. This group will have to collect the information required to benchmark the outcomes (p. 8).

		Yes. These indicators will be monitored by the Ministry of the Environment, through a 'technical round table', which will be constituted by public officers and the stakeholders involved in accomplishing the measures set out in the programme (pp. 7–8).
4. Evaluati program	ion of the nme	There is no information specifically indicating how the overall programme is to be evaluated, nor the frequency with which evaluations will be carried out or other requirements. However, it is stipulated that the technical round table that will be created within the Ministry of the Environment will be responsible for monitoring the performance of the national and regional programmes, identifying and proposing priority actions and measures to update these programmes. This group will have to collect the information required to benchmark the outcomes (p. 8).

Prevention measures

Implemented prevention measures according to Article 9

The waste prevention programme includes the following measures that are proposed to avoid waste generation (Chapter 1.5):

Table 1: Specific waste prevention measures structured according to Art 9 WFD

Table 1: Specific waste prevention measures s	-
Promote and support sustainable consumption models	 Technological changes are oriented towards the production process and the modification of plants and, therefore, technologies in order to reduce waste and emissions as a preliminary step. (p.10). Action plan for sustainable consumption and production and sustainable industrial policy (SCP/SIP). The Commission proposes a series of measures to support the implementation, in the European Union and internationally, of a policy to promote ecological consumption and production. (p.13).
Encourage the design, manufacturing and use of products that are resource-efficient, durable (including in terms of life span and absence of planned obsolence), reparable, re-usable and upgradable.	 promotion of eco-design (p.3) Measures relating to the design of electrical and electronic equipment that is more durable or easier to repair and/or reuse (p.27) Optimising product life through easy upgradability, maintenance and low functional obsolescence (p.12) Product reuse and recycling facilities (p.12) Application of Ecodesign regulations contained in Legislative Decree 16 February 2011(15), implementing Directive 2009/125/EC on the establishment of a framework for the setting of eco-design requirements for related products to energy (p.27)
Target products containing critical raw materials to prevent that those materials become waste.	 Changes in raw materials (including substitution practices) correspond to the reduction or elimination from the production process of raw materials that are harmful to humans and/or the environment Such changes may lead to changes in design or composition and the new product will have to result in less environmental impacts throughout the life cycle, from the extraction of the raw materials until final disposal. (p.10)

Encourage the re-use of products and the setting up of systems promoting repair and re-use activities, including in particular for electrical and electronic equipment, textiles and furniture, as well as packaging and construction materials and products.

- promotion of re-use and/or repair of certain discarded products. (p.3)
- Decrees defining the operational modalities for the costing and support of accredited for the establishment and support of repair/reuse centres and networks, including the establishment of simplified authorisation procedures and a sample catalogue of products and product waste that can be subject to reuse. (p.16)
- the portal will provide information on consumer choices that favour waste reduction as well as practical guidance on the possibility of using reuse and repair centres, and providing contacts with local networks (p.17)
- Another possibility is to eliminate the use of packaging by promoting the sale of unpackaged products, so-called "on tap". This practice involves the use of packaging that can be reused several times and therefore extends its life cycle and therefore reduces waste. (p.26)
- Measures to encourage the creation of centres for the repair and reuse of electrical and electronic equipment
- Interventions to encourage the creation of re-use and repair centres. (p.27)
- Measures relating to the design of electrical and electronic equipment that is more durable or easier to repair and/or reuse (p.27)

Encourage, as appropriate and without prejudice to intellectual property rights, the availability of spare parts, instruction manuals, technical information, or other instruments, equipment or software enabling the repair and re-use of products without compromising their quality and safety

Reduce waste generation in processes related to industrial production, extraction of minerals, manufacturing, construction and demolition, taking into account best available techniques.

- From a production point of view, waste prevention requires changes in production models and product design through interventions in the organisational and production models of industrial sectors and product design. In particular, waste prevention for industry can be linked to changes in raw materials, technological changes and good operational practices. (p.10)
- Integrated Pollution Prevention and Control covers new and existing industrial and agricultural activities with a high pollution potential, as defined in Annex I of the

production and transformation, mineral products industry, chemical industry, waste management, animal husbandry). The obligations that an industrial or agricultural installation must fulfil in order to obtain a permit include the prevention, recycling or disposal of waste by the least polluting techniques. (p.11) Valorisation of by-products of the food industry (p.20) Another reference for waste prevention in the construction and demolition sector is the Green Public Procurement. 'Road construction and maintenance' and 'construction and maintenance of buildings' are among the categories for which the minimum environmental criteria of the Action Plan for Environmental Sustainability of Public Administration must be adopted. necessary to identify a calculation methodology and tools for to account for this category of waste (p.28) Reduce the generation of food waste in Resolution of 19 January 2012 on how to primary production, in processing and avoid food waste: strategies for improving manufacturing, in retail and other the efficiency of the food chain in the EU. distribution of food, in restaurants and food (p.6)services as well as in households as a Measure IV: Promotion of environmental contribution to the United Nations quality certification in the context of the Sustainable Development Goal to reduce by food services (restaurants, hotels, catering, 50 % per capita global food waste at the bars (p.21) retail and consumer levels and to reduce Measure: Reducing household food waste food losses along production and supply At the household level, food waste chains by 2030. prevention can be done firstly by raising awareness of the amount of food still available. The economic loss it represents and the impact it has on the environment. The environmental issues related to the collection and treatment of this waste. Information campaigns can help consumers better plan their food purchases. Tools: informative campaigns; development of a manual for the reduction of household waste. (p.22) Encourage food donation and other redistribution for human consumption, prioritising human use over animal feed and the reprocessing into non-food products.

Directive (energy activities, metal

Directives 2002/95/EC, 2002/96/EC and Promote the reduction of the content of hazardous substances in materials and 2003/108/EC on the reduction of the use of products, without prejudice to harmonised of hazardous substances in electrical and legal requirements concerning those electronic equipment, and to the waste materials and products laid down at Union disposal (p.5) level, and ensure that any supplier of an 10% reduction target in the production of article as defined in point 33 of Article 3 of special hazardous waste per unit of GDP Regulation (EC) No. 1907/2006 of the (p.7)European Parliament and of the Council The substitution of materials to avoid at provides the information pursuant to article source or prevent the generation of 33(1) of that regulation to the European hazardous waste (p.10) Chemicals Agency as from 5 January 2021. prevent the generation of WEEE promote the reuse, recycling and other recovery methods for WEEE in a way which to reduce the quantity to be sent for disposal reduce the use of hazardous substances in electrical and electronic equipment (p.27) Reduce the generation of waste, in The food that has not deteriorated and has particular waste that is not suitable for not vet reached its expiry date may be preparing for re-use or recycling. intercepted before become waste and be usefully distributed to soup kitchens or "supermarkets" (p.20) Identify products that are the main sources In the distribution phase a considerable of littering, notably in natural and marine amount of waste is produced by two relevant environments, and take appropriate categories of waste: food waste and measures to prevent and reduce litter from packaging waste. (p.20) such products, where Member States decide to implement this obligation through market restrictions, they shall ensure that such restrictions are proportionate and nondiscriminatory. Aim to halt the generation of marine litter as a contribution towards the United Nations Sustainable Development Goal to prevent and significantly reduce marine pollution of all kinds. Develop and support information Measure: Promotion of short supply chain campaigns to raise awareness about waste Instruments: information campaigns to prevention and littering. disseminate knowledge of the benefits of which enjoy Solidarity Purchasing Groups and direct agricultural markets. Measure: Reducing household food waste Tools: informative campaigns; development of a manual for the reduction of household waste. (p.22) Measure: Spreading of points of sale for 'on tap' products by information campaigns and awareness initiatives Measure II: Promoting the consumption of public water (from the tap) by information campaigns (p.26)

FOOD WASTE PREVENTION

Food waste generation

In 2013, the Italian Ministry of Environment started the National Plan for Food Waste Prevention. Main players in food waste management like the Last Minute Market were involved in the policy process. The Plan intended to develop measures that tackle the problem of food waste all along the supply chain from primary production (only agricultural production) to final consumption. ¹

Around 55% of the waste is generated at the consumer level with surplus food being the main reason. In 2020, after years of fighting against food waste, the Italian average is 146 kg per person, which is below the European average. Yet, the costs for Italy with about €13 billion every year are very high.²

Measures to prevent food waste

Legislative measures:

In 2016, Italy passed a law against food waste throughout the whole food supply chain that simplifies the donation and distribution of food waste as well as pharmaceutical products. Instead of coercive measures, the law focuses on incentives (e.g. tax reduction) for entities to donate or distribute surplus food and pharmaceuticals. The law includes products in supermarkets but also agricultural products.

In 2017 an agreement was stipulated with ANCI (National Association of Italian Municipalities) for the duration 2018 - 2021 under which the following activities were carried out.

- 1) prevention of food waste in school catering through communication activities, among which a database of food waste prevention projects in Italian schools has been set up within the project website (http://sprecoalimentare.anci.it/ristorazione-scolastica/ricerca-progetti);
- 2) creation of a cycle of webinars aimed at teachers and school and municipal officials on the topic of food waste prevention within schools, together with webinars aimed at officials of the sole contracting stations of the school canteen service. The recordings of the 6 webinars conducted and presentation slides are available on the project website (http://sprecoalimentare.anci.it/al-2-attivita-di-formazione-educazione-rivolte-agli-insegnanti-e-ai-funzionari-comunali/).
- 3) Experimentation (measurement of effectiveness in terms of food waste reduction) of a set of measures to reduce uneaten food with particular attention to measures aimed at reducing "plate leftover" within a panel of schools: Due to the COVID-19 emergency, the activities were carried out "remotely" thanks to the activation of the PENSALAMENSA platform, a digital educational space:
- 4) Prevention of food waste in commercial catering: The National Communication Campaign was aimed at promoting the use of the doggy-bag/family-bag in the commercial catering sector for the removal of leftover food, aiming at the creation of a national network of catering businesses that adhere to the initiative and that promote the culture and practice of reducing food waste to their customers, including by taking away leftover food.

In 2018 the following projects aimed at reducing food waste through the management of surpluses with social solidarity actions were co-financed:

With the project called "Non ti rifiuto.Ti dono" the charity Fondazione Solidarietà Caritas Onlus cofinanced the purchase of a motor vehicle and other equipment to integrate the existing ones, for the conservation and reuse of food surpluses (blast chiller and freezer), as well as contributing to the extension of a reuse process, with the involvement, training and operation of a project team participating in the phases of: procurement - transport - storage - conservation - distribution.

With the project called "FRESCO-Fare: Rete, Solidarietà, Comunità, Opere" the Association Spazi di Prossimità Onlus set out to create a short chain of awareness, collection, transport, storage and reuse of packaged fresh products concerning the areas of Pescara , Montesilvano and Penne. The activities carried out concern the recovery of unsold food to be destined for markets aimed at the less well-off.

¹ http://www.reducefoodwaste.eu/situation-on-food-waste-in-italy.html

² https://zerowasteeurope.eu/wp-content/uploads/2020/11/zwe 11 2020 factsheet italy en.pdf

In 2013, Last Minute Market and the Municipality of Bologna launched the voluntary agreement "Zero Waste Charter". The aim of the charter is to set out various measures to reduce food waste along the food supply chain.

Measures on awareness raising:

- To raise awareness and promote the campaign "One year against waste"
- to establish nutrition education courses (e.g., in schools, companies etc.)
- to simplify the expiry date endorsements on food labels and to clarify between "best before" and "use by" date
- to establish an observatory or national agency for the reduction of food waste
- Development of a manual for the reduction of food waste production in households

Measures to promote and create incentives

- to support public and private initiatives that aims to food (re-)distribution, food waste reduction and food waste management
- to favour companies in governing public contracts that ensure free redistribution of recovered food waste for the benefit of less affluent citizens
- to promote concrete actions to reduce food waste upstream
- to promote discounted sales when a product is about to expire or has a defect. ³

Measures on donation:

• to donate food surpluses for solidarity purposes

• to provide a donation below €15,000 without official procedures and no communication obligations for easily perishable food

to reduce waste tax for entities doing food donation. ^{4 5}

³ http://www.reducefoodwaste.eu/situation-on-food-waste-in-italy.html

 $^{^4\} https://zerowasteeurope.eu/wp-content/uploads/2020/11/zwe_11_2020_factsheet_italy_en.pdf$

⁵ www.eu-fusions.org/phocadownload/country-report/FUSIONS%20IT%20Country%20Report%2030.06.pdf

REUSE OF PRODUCTS

Data

According to 2021 data reported to the EEA according to Commission Implementing Decision (EU) 2021/19 (EEA, 2024), Italy re-used:

- 13 933 tonnes of textiles;
- 63 464 tonnes of electrical and electronic devices:
- 119 067 tonnes of furniture.

It should be noted that this data has been reported for the first time. More information about the interpretation and limitations of the data set are available (EEA, 2024).

Measures to support reuse

In 2020, Italy brings into force the 2018 European Directives 849 to 852 of the European Circular Economy Package. The new Italian legislative framework shifts towards waste prevention, reuse and recycling.⁶

In 2022, the National Strategy for Circular Economy has been approved by the ministerial decree 259/2022.

A measure to support reuse is the Italian ReMade certification system, which evaluates the materials of products from the waste stream. It is an independent third-party certification and measures the percentage of recycled content in a product. The certification attests the traceability of production, (source of input raw materials) and final product.⁷

In 2018, a five-year agreement was signed by the Minister pro tempore and by AICA (International Association for Environmental Communication), in order to carry out activities aimed at promoting waste reduction in Italy through the coordination and dissemination of the European EWW campaigns (European Week for Waste Reduction) and ECUD (European Clean Up Day). On the basis of this agreement, the Ministry undertakes to promote, through its institutional channels, information to the public regarding the SERR and ECUD by providing logistical support to AICA which continues to perform its role of organizational secretariat.

To promote green public procurement, some decrees containing MEC (minimum environmental criteria) aimed at supporting reuse have been adopted, among which:

- the collective catering MEC (approved with Ministerial decree 10 March 2020) intend to promote the use of reusable tableware for the administration and consumption of meals in replacement of disposable ones and single-dose ones, where possible. The MEC also provide for the replacement of disposable and single-serving food containers with reusable containers where health and hygiene standards allow it.
- the interior furnishings MEC (approved with Ministerial decree 23 June 2022) intend to promote the supply and assignment of rental services and the extension of the useful life of interior furnishings by favoring eco-design. The use of recycled materials, modularity and non-destructive disassembly is promoted to allow the recovery of parts to be used as spare parts. There is also an obligation to collect the packaging for its reuse;
- the waste MEC (approved with Ministerial Decree 23 June 2022) for the assignment of the urban waste management service require that the contractor of the urban waste management service carry out some activities and provide some services to facilitate the exchange and repair of goods, for example through the creation of exchange and reuse centres and, more generally,

⁶ https://www.interregeurope.eu/smartwaste/news/news-article/9743/circular-economy-directives-into-force-in-italy/

⁷ ReMade in Italy | Urbanwins; Remade-in-Italy-EN.pdf (remadeinitaly.it)

- to promote the prevention of waste production, for example by carrying out information and user awareness campaigns and implementing prevention projects in agreement with large-scale retail trade
- the events MEC (approved with Ministerial Decree 19 October 2022) intend to promote waste prevention during events through the use of furniture, fittings and physical media for communication reused from previous events or deriving from reuse centers and preparation centers for reuse or leased; it is also prescribed that, where possible, the furniture, fittings and physical media used for the event are destined for reuse in subsequent editions of the event or in other events or alternatively donated to charity. Furthermore, where the distribution of gadgets is envisaged, these must be reusable (such as water bottles, bags and fabric t-shirts); in the refreshment points, for the administration of food and drinks, the use of reusable crokery cutlery as well as washable and reusable tablecloths and napkins; finally, where possible, the reuse of packaging is prescribed.

The Italian map of repairers shows 28 repair cafés, restarters as well as other independent companies. The map tries to distinguish between places to repair and places to reuse products. 8

Best practice examples

Avoiding food waste

In 2010, Last Minute Market and the Department of Agricultural and Food Sciences of the University of Bologna launched the campaign "one year against waste". It is a repeating communication campaign aiming at raising awareness among citizens, institutions and companies about the causes and consequences of food waste. The campaign targets different audiences (general public; children; local, national and European institutions, businesses). It includes a number of communications tools and initiatives such as publications, books, conferences, public meetings, theatrical performances and food waste prevention awards.

In the project "The pleasure not to waste" products that are close to the expiry date are set up at a space and sold at a discounted price. The project involves 275 large-scale retailers in the Piedmont and Aosta Valley Regions. ⁹

In large-scale retail trade, the food waste is often linked to warehouse management. It is mainly unsold products close to their expiry date and products that represent damaged packaging. These can be intercepted before they become waste and usefully distributed to social canteens or solidarity supermarkets. An example of good practice is the project "More donations, less waste", a protocol of understanding between the municipality of Parma, the local health unit of Parma, Enia, Fondazione Banco Alimentare Emilia Romagna Onlus and Federdistribuzione.

This protocol envisages that participating large-scale distributors can benefit from a discount on the variable portion of the waste tariff, in proportion to the amount of urban or assimilated waste produced which the producer, by presenting self-certification and transport documents filled in and signed, proves to have sent for recovery. ¹⁰

From 2012 the project Information System of Withdrawals (SIR), an IT application, realizes in real time the meeting between supply and demand (Producers' organizations and Charitable Entities) in

⁸ Mappa Restarters Italia – www.restarters.it Right to repair: why do I have to throw away everything that breaks? | Italy changing (italiachecambia.org)

⁹ http://www.eu-fusions.org/phocadownload/country-report/FUSIONS%20IT%20Country%20Report%2030.06.pdf

Ministry of Environment, Land and Sea, 2013, National program for waste prevention https://www.mite.gov.it/sites/default/files/archivio/normativa/dm_07_10_2013_programma.pdf

relation to the chapter "Prevention and Management of Market Crises" within the scope of 'CMO (common organization of the market)¹¹.

Reuse of products

ReMade in Italy®

The non-profit, non-governmental organisation promotes recycled products through independent third-party certification. The certification system is the first in Italy and Europe and verifies the recycled content of a product.¹²

The "Waste Prevention Portal" is the tool developed by the Region to collect and highlight the numerous initiatives and allow those who collaborate in the projects promoted by Emilia-Romagna to accredit themselves and interface with the Authority to provide information and data through the use of specific web applications. In this way, this tool intends to give transparency to the regional activity, share knowledge and simplify the interaction with the companies, associations and administrations participating in the various initiatives. In particular, as far as companies are concerned, the portal will provide information on possible waste prevention actions to be undertaken through the creation of a database with a list of best practices and direct support to those who request it. The portal will provide information on consumption choices that favour waste reduction as well as practical information on the possibility of turning to re-use or repair centres, providing contacts with local networks. Citizens will also be able to submit their own proposals. As far as schools are concerned, the portal will contain information for teachers to develop educational projects on the topic. For local public administrations, the portal will provide support in the preparation of prevention programmes.¹³ ¹⁴

By-products

From 2015, the project REMAKE makes use of leather and leather goods processing residues to replace tree cellulose to produce paper, with a view to industrial symbiosis.¹⁵

Form 2012, the project CRUSH males use of alternative materials to virgin cellulose to produce paper, such as by-products from agro-industrial supply chains with a view to industrial symbiosis.¹⁶

¹¹ https://www.icesp.it/buone-pratiche/recupero-delle-eccedenze-ortofrutticole

¹² ReMade in Italy | Urbanwins; Remade-in-Italy-EN.pdf (remadeinitaly.it)

¹³ Regione Emilia Romagna (Direzione generale cura del territorio e dell'ambiente), 2019, Portale della prevenzione, https://ambiente.regione.emilia-romagna.it/it/rifiuti/temi/rifiuti/portale-della-prevenzione ¹⁴ Ministry of Environment, Land and Sea, 2013, National program for waste prevention

https://www.mite.gov.it/sites/default/files/archivio/normativa/dm_07_10_2013_programma.pdf

¹⁵ https://www.icesp.it/buone-pratiche/remake

¹⁶ https://www.icesp.it/buone-pratiche/crush

Links to circular economy

Waste prevention is an integral part of the comprehensive transformation towards a circular economy. It reduces the input of natural resources into the economy as well as the necessary efforts to collect and recycle waste.

Approaches for improving circularity are often highly interlinked with successful waste prevention. The following table shows which circular strategies are explicitly integrated into Italy's waste prevention programme.

Topic	Addressed in the programme	Comments
Eco-design	Yes	e.g. Redesign of products through interventions in the organisational and production methods of industrial sectors
Repair, refurbishment and remanufacture	Yes	e.g. Measures relating to the design of electrical and electronic equipment that is more durable or easier to repair and/or reuse
Recycling	Yes	e.g. promoting the reuse, recycling and other recovery methods for WEEE in a way which to reduce the quantity to be sent for disposal
Economic incentives and finance	Yes	e.g. economic incentives are considered a tool/instrument to encourage waste prevention
Circular business models	Yes	e.g. They have to change in order to shift to more sustainable production patterns
Eco-innovation	Yes	e.g. Technological changes focus on reducing waste and emissions upfront through innovations in production processes
Governance, skills and knowledge	Yes	e.g. information campaigns to disseminate knowledge of the benefits of which enjoy Solidarity Purchasing Groups and direct agricultural markets

National Strategy for Circular Economy

In June 2022 the National Strategy for Circular Economy¹⁷ has been approved by the ministerial decree 259/2022.

Among other aspects, the strategy outline priorities on waste prevention, which is placed at the top of the hierarchy defined in art. 179 of Legislative Decree 152/2006.

From the point of view of prevention, eco-design takes on a priority role. Design implies the development of products that reflect the principles of the circular economy as much as possible. To this end, it is essential to be based on Life Cycle Thinking approaches, i.e. through analyses and evaluations, applying standardized methodologies, which take into account the impacts generated throughout the entire life cycle of the product and service.

¹⁷ https://www.mase.gov.it/pagina/riforma-1-1-strategia-nazionale-l-economia-circolare

The development of a new product or service must take place following the principles of eco-design and using tools that allow the various environmental impacts to be assessed:

- Substitution of non-renewable materials with materials that are renewable, recycled, biodegradable and compostable;
- Increase the efficiency of productive processes;
- Enhance the use of energy supplies from renewable sources;
- Improving the design of products following the principle of modularity to allow the replacement of components;
- Promoting the recovery and recycling of materials;
- Substitution of dangerous substances;
- Encouraging separate collection and recycling;
- Promoting the reuse and regeneration of products.