

Circular economy country profile – Italy



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Contents

Introduction.....	1
Italy – facts and figures.....	2
Existing policy framework	6
Dedicated strategy, roadmap or action plan for a circular economy	6
Circular economy policy elements included in other policies	6
Monitoring and targets	8
Assessment of circular economy performance	8
Circular economy monitoring frameworks and their indicators beyond the ones from Eurostat.....	8
Circular economy targets	8
Innovative approaches and good practice	10
Examples of public policy initiatives (national, regional or local)	10
Examples of private policy initiatives (sectoral)	14
The way forward.....	16
Addressing barriers and challenges.....	16
Ranking types of barrier	16
Future policy plans	16

Introduction

The European Commission requested the EEA to produce EU country profiles that offer an updated view of the following elements:

- circular economy policies being implemented at a national level with a particular focus on elements that go beyond EU mandatory elements; and
- best practice with a focus on policy innovation.

While implementing the EU Circular Economy Action Plan (CEAP 2020), Member States are encouraged to advance circularity at a national level by adopting policies and initiatives that go beyond EU regulations, while preserving the Single Market.

This circular economy country profile is based on information reported by the Eionet network and, in particular, the Eionet Group on Circular Economy and Resource Use in the second quarter of 2022. The information was reviewed and edited by the European Topic Centre on Circular economy and resource use (ETC CE). A selection of Eurostat data was made to further complement this country profile.

The information is current as of 15 September 2022 (final review), when members of Eionet verified the content of this profile.

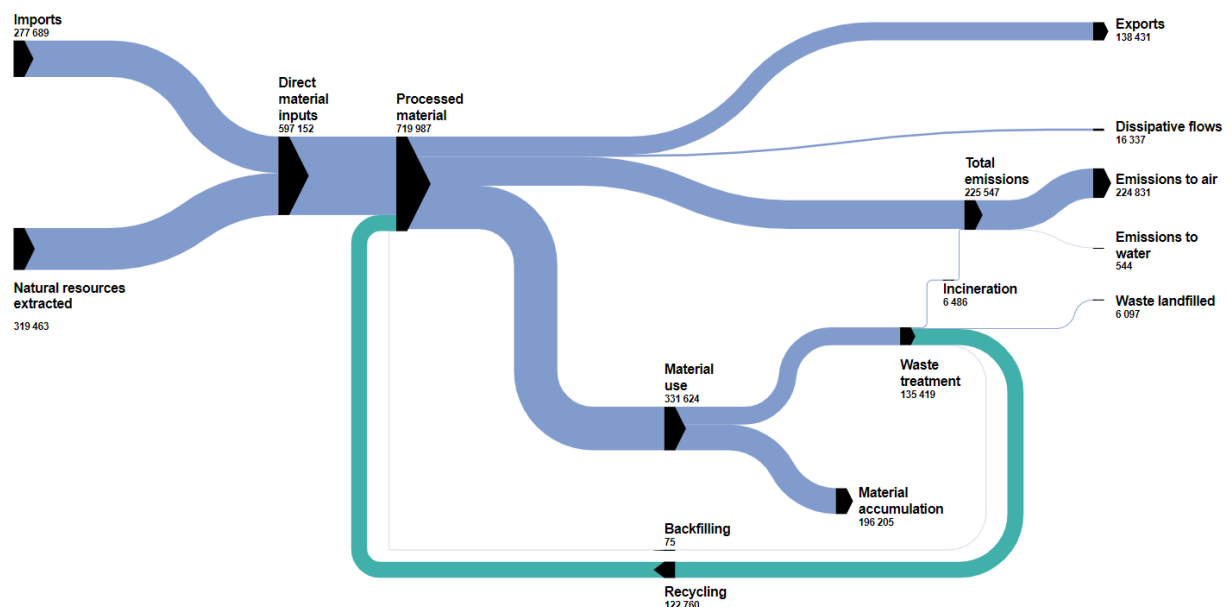
Italy – facts and figures

 	GDP: EUR 1 656.9 billion (12.4 % of EU27 total in 2020)
	GDP per person: EUR 27 880 (purchasing power standard) (93.7 % of EU27 average per person figure in 2020)
	Use of materials (domestic material consumption (DMC)) 458.7 million tonnes DMC (7.6 % of EU27 total in 2020) 7.7 tonnes DMC per person (57.3 % of EU27 average per person in 2020)
	Structure of the economy: Agriculture: 2.2 % Industry: 23.9 % Services: 73.9 %
	Employment in circular sectors: 518 859 people are employed in circular economy (CE) sectors (14.6 % of EU total in 2018) People employed expressed as a percentage of total employment: 2.1 % (EU average 1.7 %)
	Surface area: 302 073 square kilometres (6.8 % of EU27 total)
	Population: 59 641 488 (13.3 % of EU27 total in 2020)

Note: all definitions and metadata used in this profile are taken, as shown, from Eurostat

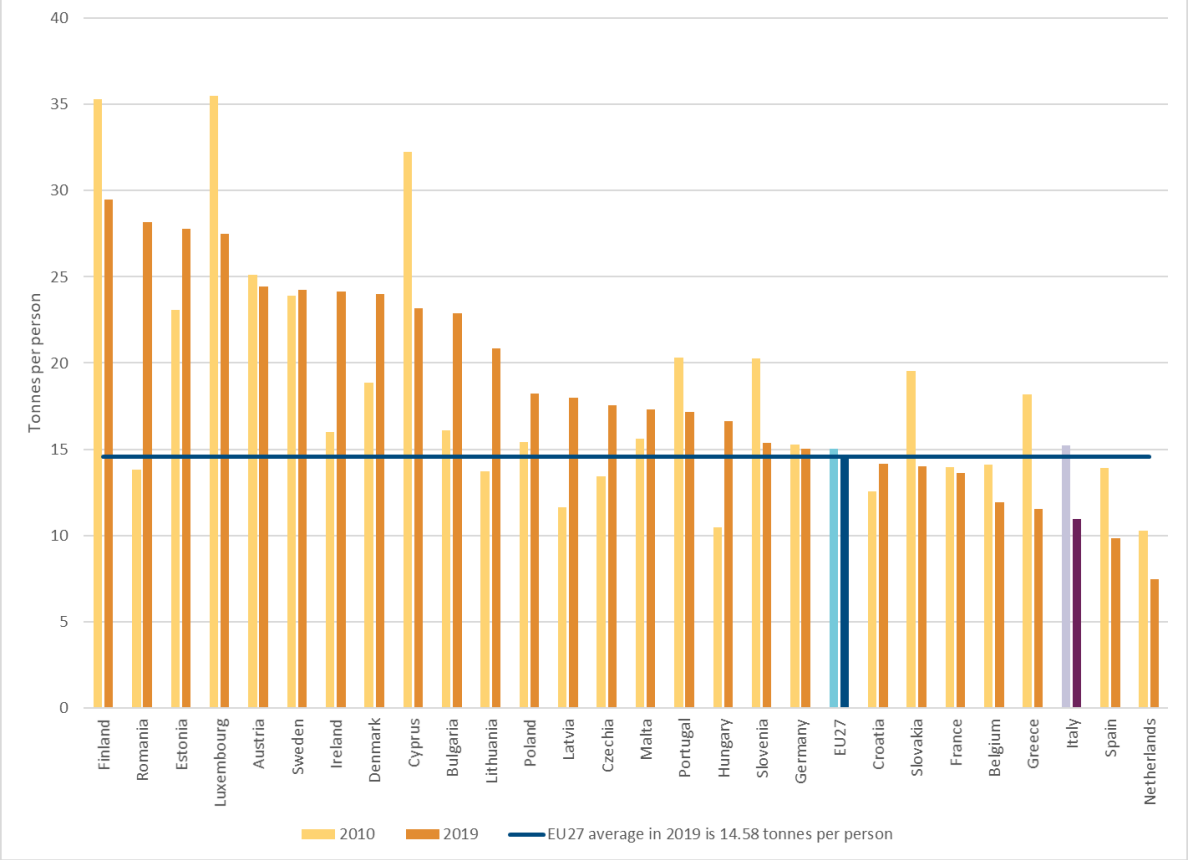
Source: Eurostat datasets, EU27 2020 (accessed 20 June 2022)

Figure 1 Material flow diagram for Italy in 2020, '000 tonnes



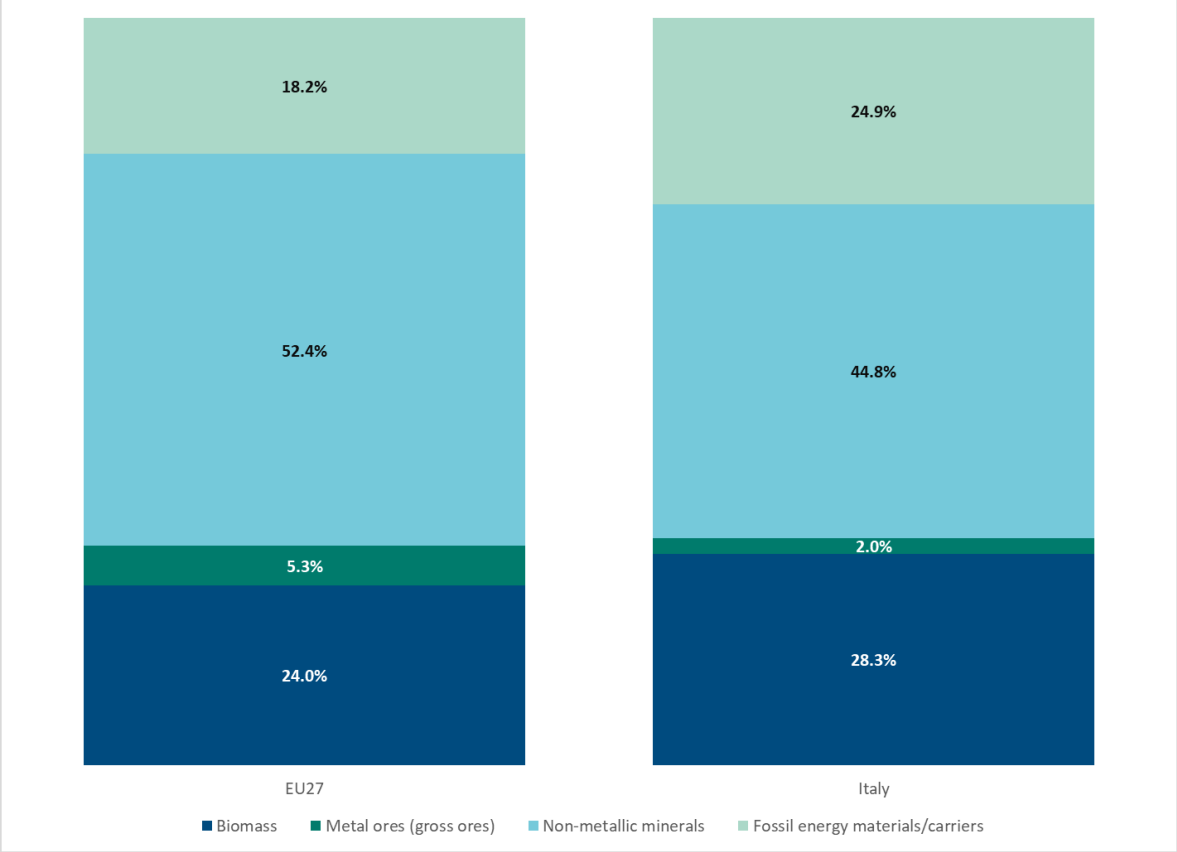
Source: Eurostat (2022) [env_ac_mfa], [en_ac_sd], [env_wassd] (accessed 20 June 2022)

Figure 2 Material footprint (raw material consumption), EU27, 2010 and 2019, tonnes per person



Source: Eurostat (2020) [env_ac_rme] (accessed 4 July 2020)

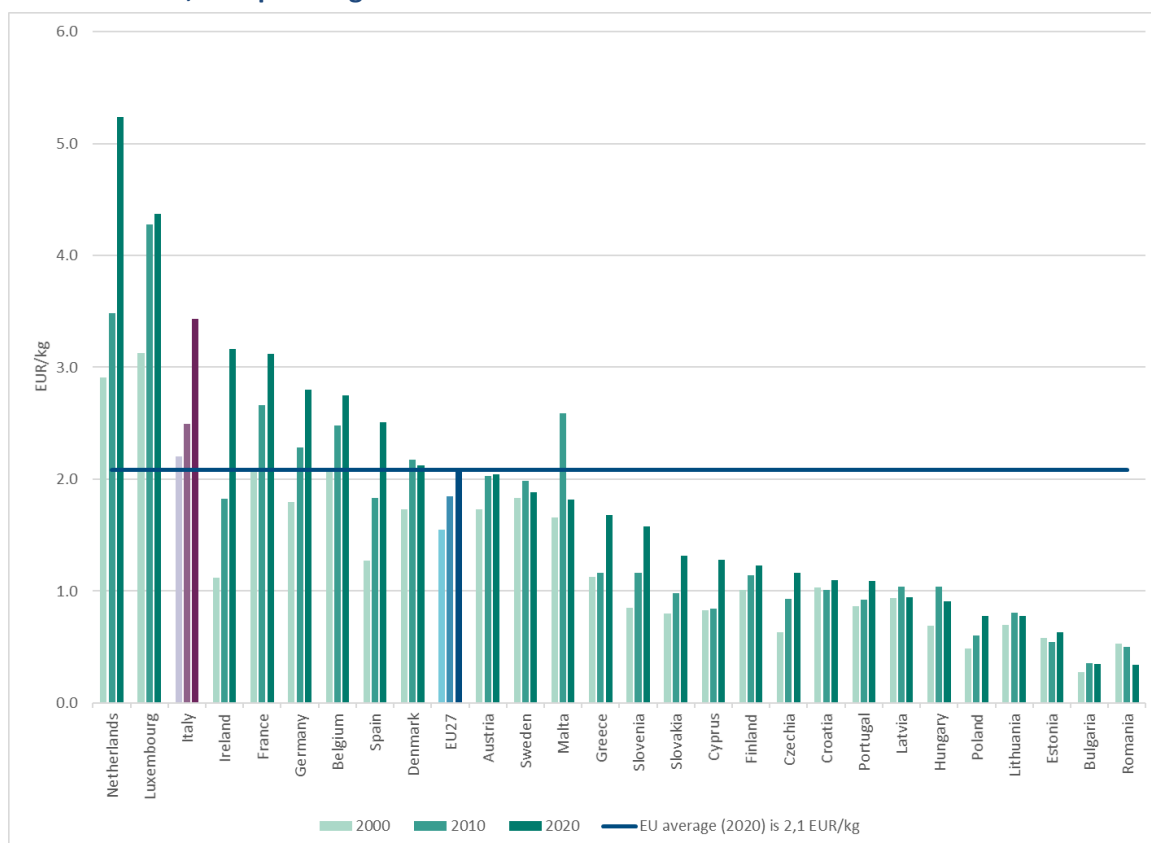
Figure 3 Domestic material consumption by selected material category, EU27 and Italy, 2020, per cent



Note: totals may not sum to 100 % due to rounding

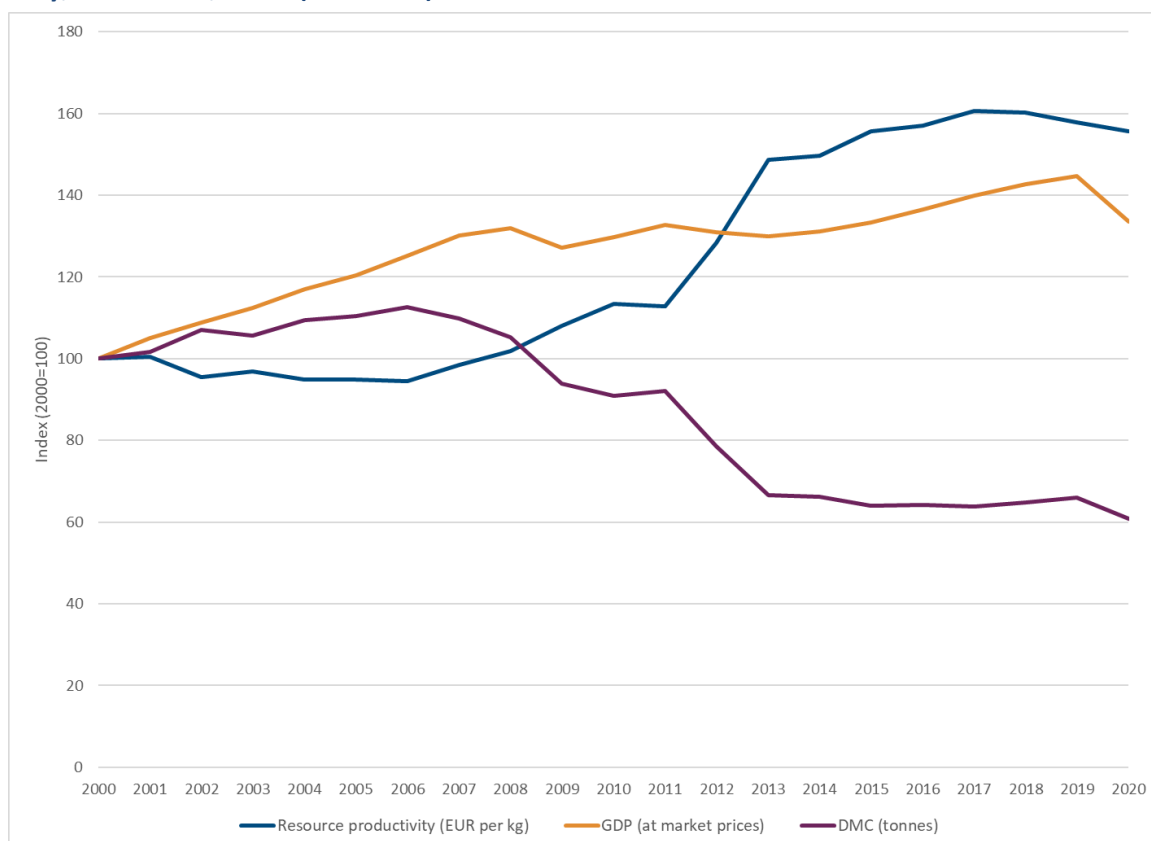
Source: Eurostat (2022) [env_ac_mfa] (accessed 20 June 2022)

Figure 4 Resource productivity (gross domestic product/domestic material consumption), EU27, 2000, 2010 and 2020, EUR per kilogram



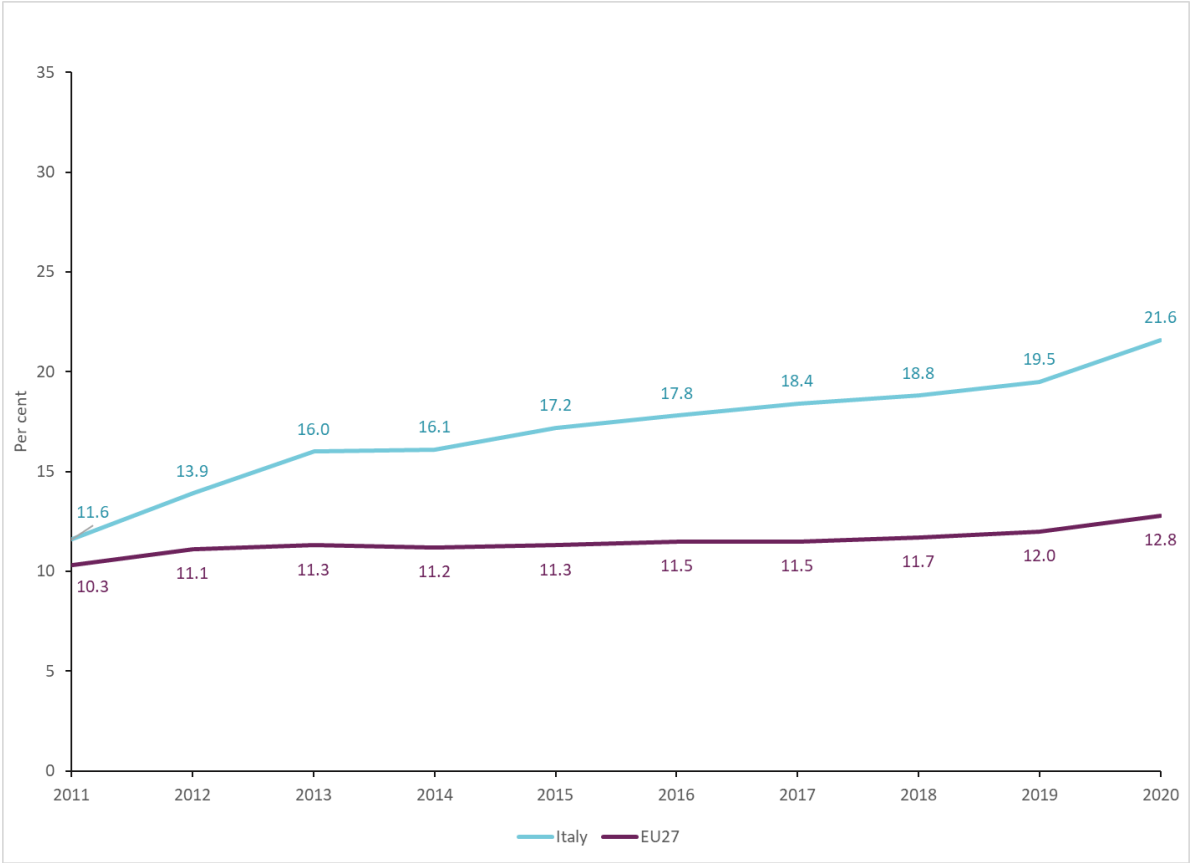
Source: Eurostat (2022) [env_ac_rp] (accessed 20 June 2022)

Figure 5 Gross domestic product, domestic material consumption and resource productivity trends, Italy, 2000–2020, index (2000=100)



Source: Eurostat [env_ac_mfa], [env_ac_rp] & [nama_10_gdp] (accessed 4 July 2022)

Figure 6 Circular material use rate in Italy, 2011–2020, per cent



Source: Eurostat (2022) [env_ac_cur] (accessed 20 June 2022)

Existing policy framework

Dedicated strategy, roadmap or action plan for a circular economy

The **National Strategy for the Circular Economy** was adopted by the Ministry of Ecological Transition in **June 2022** within the Recovery and Resilience Plan for Italy (Mission 2, Component 1) ⁽¹⁾.

The Strategy covers relevant milestones related to the payment of the loan by the Recovery and Resilience Facility: a new digital waste traceability system; tax incentives to support recycling activities and the use of secondary raw materials; a revision of environmental taxation on waste; the right to reuse and repair; the reform of the extended producer responsibility (EPR) and Consortia systems ⁽²⁾; support for existing regulatory tools such as end-of-waste legislation and minimum environmental criteria for green public procurement (GPP), specifically addressing construction, textiles, plastics and waste electrical and electronic equipment (WEEE); and support to industrial symbiosis projects.

The Strategy includes the following overall targets for 2035:

- the development of secondary markets for raw materials supported by a clear framework for the supply of secondary raw materials and by an improved waste traceability system;
- the reform of the EPR and Consortia systems to support the achievement of EU targets through the creation of a specific supervisory body, under the presidency of the Ministry of Ecological Transition, to monitor the functioning and the effectiveness of Consortia;
- the development of a favourable fiscal system for a circular economy;
- the strengthening of upstream circularity strategies such as eco-design and extending the lifespan of products and parts;
- the development and uptake of methodologies that quantify all environmental impacts over the lifecycle of a product and throughout the waste management system;
- skills development for integrating circular economy issues in school curricula and professional training.

Circular economy policy elements included in other policies

Circular economy policy element	Included in policy
- The highest levels of the preparation for reuse, recycling and recovery of waste; - Adapting the network of installations necessary for integrated waste management; - Minimising final disposal as the ultimate and residual option; - Establishing monitoring systems; - Tackling the low collection of waste; - Discouraging landfilling and ensuring complementarity with regional waste programmes; - Enabling the achievement of European and national waste legislation objectives;	National Programme for Waste Management 2022-2028 (in Italian)

¹ <https://www.mite.gov.it/pagina/riforma-1-1-strategia-nazionale-l-economia-circolare> (in Italian)

² The Consortia system ensures the achievement of recycling and recovery targets for specific waste flows throughout the country and, at the same time, guarantees the implementation of targeted management policies, including those concerning waste prevention.

Circular economy policy element	Included in policy
- Tackling illegal waste dumping and open-air burning.	Mandatory green public procurement (in Italian): - 2008 National Action Plan on GPP establishing that minimum environmental criteria defined by the Ministry for the environment must be included in tenders whenever possible. - 2016 Public Procurement Code (Decree no. 50/2016) which made GPP mandatory (i.e. all tenders for any amount must include technical specifications and contract conditions and these must be taken into account in the award criteria).
Circular economy criteria for product groups for the period 2013–2022: adult incontinence products, building construction and maintenance, building heating and lightening services, cleaning services, fabrics and textiles, food services, furniture, printers and printing services, printer cartridges, printing paper, public green management, public lighting service and works, road transport vehicles, street furniture, textiles renting and cleaning, urban waste management and work footwear and leather products. The Catalogue, which has been published each year since 2017 (fourth version issued in December 2021), aims to identify, analyse and evaluate fiscal erosion, tax expenditures as well as existing tax breaks and incentives. Knowledge of environmentally relevant subsidies is advantageous in designing ambitious and efficient environmental and economic policies, including policies for the CE. In line with the national experience, at the local level, the Lombardy and Piedmont regions, and the autonomous province of Trento, produced a catalogue of regional-provincial subsidies in 2020.	Fiscal policy: catalogue of environmentally harmful subsidies and environmentally favourable subsidies (in Italian)
Through the issue of the sovereign green bonds (the first was launched in 2021), Italy finances public expenditure intended to contribute to the achievement of environmental objectives of the EU's Sustainable Finance Taxonomy within which the transition to a circular economy.	Financial policy: Italian Sovereign Green Bonds
In the context of policies for natural capital and biodiversity, since 2017 the Ministry of Ecological Transition has published the <i>Report on the State of Natural Capital in Italy</i>. The 5th Report is in the process of being published. The document represents a tool for monitoring and qualitative-quantitative evaluation of the state of natural capital in Italy. The information it contains are fundamental to defining environmental policies, aimed to improve and conserve natural capital, biodiversity and ecosystem services, and a necessary attempt to design ambitious and efficient environmental and economic policies, including policies for the circular economy.	Biodiversity policy: Report on the State of Natural Capital in Italy

Monitoring and targets

Assessment of circular economy performance

Italy shows **major improvements in a number of prominent CE indicators**:

- *resource productivity* has increased by around 45 % in the period 2000–2021 (the EU average increased by some 35 % over the same period);
- Italy's *material footprint* has fallen from 17.3 to 9.8 tonnes per person over the period 2008–2020 (the EU average fell from 17.9 to 14.6 tonnes per person between 2008 and 2019);
- Italy's *circularity rate* was 21.0 % in 2020, 15.2 percentage points up from 2004 (the EU average rose to 12.7 %, an increase of 4.4 percentage points over the same period).

The differences between Italy and the EU average in these three indicators are explained by the deep fall, much deeper than across the EU, in the apparent consumption of non-metallic minerals, driven by the decline, on the supply side, in construction activities, and, on the demand side, in gross investment in dwellings, other buildings and structures in the aftermath of the global financial and economic crisis.

Conversely, *total waste generation* (strongly influenced by construction and demolition waste) has increased by some 25 % in Italy between 2004 and 2020, while the EU average for the same period decreased by 4,4 %, being more sensitive to the 2020 pandemic.

Italian waste generation shows a persistent link to economic activity, as **waste generation per unit of GDP has risen steadily** throughout the period 2004–2020, but, on the other hand, **waste generation per capita is about half of EU average** in the same period ⁽³⁾.

Circular economy monitoring frameworks and their indicators beyond the ones from Eurostat

Italian CE indicators are currently not within a dedicated monitoring framework. The Italian National Institute of Statistics produces official statistics on environmental accounting at the national and local levels while the Italian National Institute for Environmental Protection and Research (ISPRA) produces them for waste, the circularity rate, materials, energy and the carbon footprint. Moreover, Italy contributes to the ongoing work at an international level on measuring the CE by the EU, the Organisation for Economic Co-operation and Development (OECD) and the United Nations Economic Commission for Europe (UNECE), and on developing policies to improve resource productivity and reduce the environmental impact of waste generation and management with the EU, OECD, the G7 ⁽⁴⁾ and the G20 ⁽⁵⁾.

The **National Strategy for the Circular Economy** proposes the following 25 indicators to monitor and assess circularity:

- production and consumption (five indicators);
- waste generation (nine indicators);
- secondary raw materials (one indicator);
- soil (two indicators);
- water (one indicator);
- air quality (two indicators);
- innovation and competitiveness (four indicators);

³ More data are available at https://www.isprambiente.gov.it/en/activities/waste?set_language=en

⁴ The G7: Canada, France, Germany, Italy, Japan, the United Kingdom and the United States of America.

⁵ The G20: Argentina, Australia, Brazil, Canada, China, France, Germany, India, Indonesia, Italy, Japan, Republic of Korea, Mexico, Russia, Saudi Arabia, South Africa, Turkey, the United Kingdom, the United States of America and the EU.

- environmental education (one indicator).

Circular economy targets

The National Strategy for Circular Economy identifies overall and specific targets, as well as measures and policy tools related to them to be implemented within 2035 (see Section, Dedicated strategy, roadmap or action plan for a circular economy for key objectives of the Strategy).

Innovative approaches and good practice

Examples of public policy initiatives (national, regional or local)

➔ *Good practice examples: initiatives by the National Agency for New Technologies, Energy and Sustainable Economic Development*

The National Agency for New Technologies, Energy and Sustainable Economic Development (ENEA) ⁽⁶⁾ has recently launched a number of initiatives to promote the CE, among which are the Italian Circular Economy Platform (ICESP), the Symbiosis Users Network and the Italian Phosphorus Platform (for further information on the last initiative see Section Examples of private policy initiatives).

The **ICESP** was launched in 2018 and currently consists of 275 organisations. The platform brings together all sectors of society – government institutions, academia, civil society organisations, and business and industry– using the *quintuple helix approach*, through which all systems perform a pivotal function, influencing each other, and investment in knowledge and promotion of knowledge-production bring into play new and crucial impulses for innovation, know-how and the advancement of society.

The ICESP aims to promote the ‘Italian way to a Circular Economy’ in Europe, to collect examples of good practice as well as to produce and disseminate position papers, reports and guidelines for encouraging the transition towards a circular economy. Activities are carried out within six working groups: 1) research and innovation; 2) regulatory and economic tools; 3) measuring the CE; 4) circular and sustainable value chains; 5) the CE at a local level; 6) good practice.

The **Symbiosis Users Network** (SUN) ⁽⁷⁾, launched in 2017, is the first Italian network for industrial symbiosis (IS). It currently comprises 39 partners from academia, research institutes, businesses, industrial associations and consortia, as well as public bodies. The network aims to foster industrial symbiosis at company and at research level. Its activities are developed within the following working groups: 1) IS state of play; 2) IS local policies; 3) economic and social assessments of IS; 4) IS certification and standards; 5) regulations; 6) communication.

The SUN Working Group 2 on IS local policies mapped IS action in Italian regional policies in 2019, with a specific focus on the Smart Specialisation Strategy (S3). The methodology was based on the use of a specific template and the analysis was carried out on group of eight Italian regions. The objective of the exercise was to collect and analyse S3 and other policy tools in these regions, and evaluate how and to what extent they include specific action or reference to IS.

Results highlighted that while there is significant awareness of sustainability issues, further efforts are necessary if IS concepts are to be fully included in the main regional planning documents and regulations. Furthermore, supporting action is also needed to ensure IS policy coordination at a national level.

⁶ <https://www.enea.it/en>

⁷ <https://www.sunetwork.it/> (in Italian)

➔ *Good practice example: local initiatives*

The Antonio Brancati secondary school in Pesaro (8)

The municipality (Pesaro) has decided to invest in quality construction and the circular economy. The Antonio Brancati secondary school in Pesaro, inaugurated in 2021, is the first LEED Platinum (9) certified school building in Europe. The building is compliant with the Italian mandatory Green Public Procurement Minimum Environmental Criteria. The project is based on high-energy performance (nearly-Zero-Emission-Building levels), and the indoor wellbeing and health of students, teachers and all visitors to the building, with a special focus on natural ventilation, passive heating and daylight control. The entire project is also focused on the circularity of materials and water, as well as on the use of renewable and passive energy.

Main results: during the whole process some 98 % of the 556.7 tonnes of waste generated were recycled. The school is also equipped with separate collection bins for paper, metal, plastic and glass.

Prato municipality's Circular City Governance

The city of Prato is famous worldwide for its textile district. Despite the economic difficulties and major market changes, the district is still active and vibrant. Prato has always been a model of innovation in the textile sector having historically based its industrial fortune on the reuse of second-hand clothing from all over the world. The recycling techniques and valorisation of these fractions started at mid of XIX century and led to Prato being considered one of the most advanced and innovative industrial cities in Italy. Prato Circular City ⁽¹⁰⁾ is a project promoted by the Municipality of Prato to enhance the city's transition to a circular economy. Prato is strongly characterised by a homogeneous production district which is fertile ground for this transition.

The project is inspired by work carried out within the European partnership of the Urban Agenda on the Circular Economy and has two main objectives:

- to strengthen the image of Prato as a circular city and promote shared, integrated and participatory action;
- to establish a permanent round table of regional stakeholders to promote shared circular economy action and build a governance model for a circular city.

Prato Circular City is based on one horizontal theme and four vertical ones that reflect the most important aspects of a circular economy for the city:

- governance;
- the textile district;
- urban resources;
- circular consumption;
- sustainable urban agriculture.

⁸ http://www.comune.pesaro.pu.it/novita-in-comune/dettaglio/news/la-targa-platinum-da-oggi-scintilla-alla-scuola-brancati/?tx_news_pi1%5Bcontroller%5D=News&tx_news_pi1%5Baction%5D=detail&cHash=14590928daf88f3f724c63c92c01d628 (in Italian) and <https://site.unibo.it/scuola-superiore-citta-territorio/it/agenda/la-certificazione-ambientale-e-energetica-di-edifici-scolastici-l-esempio-della-scuola-media-brancati-di-pesaro> (in Italian)

⁹ <https://www.usgbc.org/leed>

¹⁰ <https://www.pratocircularcity.it/en/pagina1486.html>

The project website ⁽¹¹⁾ accompanies the evolution of Prato into a circular city and reports on the results.

There are currently four European circular economy projects underway in Prato. The city is the lead partner in two of them (InnomedUP, 2019-2022 ⁽¹²⁾; URGE, 2019-2022), while other lead partners are the Confindustria Toscana Nord (TEX MED Alliances, 2019-2022 ⁽¹³⁾) and Fondazione Museo del Tessuto di Prato (StandUP, 2020-2022 ⁽¹⁴⁾).

Saint Francis of Assisi: rendering a religious community sustainable and circular

Fra' Sole ⁽¹⁵⁾ is a sustainability project that started in 2017 and is still ongoing. It involves the monument complex of Saint Francis of Assisi and its nearby forestry, olive groves and vegetable gardens. The project has gained the support and endorsement of relevant firms in the Italian circular economy and ethical finance sectors in order to:

- significantly reduce the environmental impact of the religious community and of pilgrims visiting the site, with the total decarbonisation of the complex as the end goal;
- make the project replicable by drafting policies that can be applied to similar closed systems – schools, hospitals, prisons and residential structures;
- raise ecological awareness among visitors and pilgrims, while spreading good examples of sustainability.

Stages of the project:

- shared strategic planning among the promoting organisations;
- technical analysis and report on material flows, energy flows and procurement;
- planning and implementing the best available solutions for the areas of intervention;
- drafting a project report and regulations to replicate good practice in similar closed systems;
- disseminating good sustainable practice among pilgrims and visitors.

Main results:

- elimination of single-use products at the events of the religious community, replacing them with biodegradable and compostable products;
- no more sales of water in plastic bottles, thus saving around 13 000 plastic bottles every year.
- use of biodegradable and compostable disposable products, including coffee pods at the coffee stalls;
- introduction of 1 200 bins for the separate collection of waste; reorganisation of the internal collection system with a consequent reduction in undifferentiated waste from 50 % to 30 % in 2017–2018.
- introduction of a composting point for the recovery of organic waste (7 300 kilograms per year).
- restoration of the historic rainwater collection tanks so that the water could be reused for cultivation.
- electricity is supplied using renewable sources.

¹¹ See previous footnote. For further information on the results achieved by the City of Prato, please refer to the following paper, submitted at the 2018 Conference of the International Sustainable Development Research Society: *Circular economy and industrial symbiosis: The role of the municipality of Prato within the EU Urban Agenda partnership* (<http://programme.exordo.com/isdrs2018/delegates/presentation/625/>).

¹² <https://www.enicbcmed.eu/projects/innomed-up>

¹³ <https://www.enicbcmed.eu/projects/tex-med-alliances>

¹⁴ <https://www.enicbcmed.eu/projects/stand-up>

¹⁵ <https://www.frasole.org/en/>

An e-commerce portal for restored goods to increase the visibility of circular handicrafts in Turin

Founded in 1983, the Balon Merchants' Association ⁽¹⁶⁾ manages two street markets: the *Gran Balon*, a small antiques market in the city of Turin, and the *Saturday Balon*, the city's historic flea market which has operated since 1857. The Association provides assistance to exhibitors, deals with permits, authorisations, pitch assignments, advice to members on commercial issues, and organises events and collateral events in the area.

The Association is attentive to the dynamics of redevelopment and integration, investing a lot of effort in this.

In 2019 the City of Turin launched a number of circular and collaborative economy projects ⁽¹⁷⁾, among them the Balon Marketplace ⁽¹⁸⁾, an e-commerce portal for stakeholders who are active in the antiques, second-hand and vintage sectors, and particularly interested in the recovery, recycling, reuse and upcycling of goods, for the sustainable use of objects of high cultural and heritage value.

Main results:

Among the tasks/results of the Balon Merchants' Association are:

- promotion of training and integration of disadvantaged people coming from the Turin urban area who wishing to develop their professional skills. In so doing, the association contributes to redeveloping one of the most problematic areas of Turin;
- reduction of criminal activity in the neighbouring area and the creation of new jobs that enhance the market participants' backgrounds with a glocal ⁽¹⁹⁾ perspective.

Among the expected results of the e-portal are:

- sharing of ancient and historic know-how and skills by promoting circular handicraft activities and practices;
- increased visibility of small handicraft shops.

Genoa's municipal pharmacies: collecting unused pharmaceuticals for those who need them

The municipal pharmacies of the city of Genoa, in partnership with the Associazione Gigi Ghirotti, organise the collection of unused pharmaceuticals to provide for the needs of those who would otherwise struggle to afford them.

Through *Il Farmaco allunga la vita* project, started in 2015 and still ongoing, Genoa's eight *Farmacie Comunalì* distribute these unused pharmaceutical products, which must still be unopened, unexpired and not thermolabile, to the city's humanitarian and health non-governmental organisations (NGOs). Before they are distributed, all pharmaceuticals are further checked by the pharmacists.

Pharmacies become collection points where local citizens can drop off pharmaceuticals that have not used.

The main benefits of the activity:

- a reduction in the consumption and wastage of pharmaceuticals, thus reducing both the economic and environmental costs of their production and their disposal;
- humanitarian and health NGOs and the people they help do not have to buy expensive medication that they would otherwise have had to partly or fully pay for;
- the project also reduces expenses of the Italian *Servizio Sanitario Nazionale* (National Health Service) that covers part of the costs of many of the pharmaceuticals concerned.

¹⁶ <https://www.balon.it/> (in Italian)

¹⁷ <http://www.torinosocialinnovation.it/axto-azione-3-02-otto-sperimentazioni-di-economia-circolare-e-collaborativa/> (in Italian)

¹⁸ <https://www.torinocitylab.it/it/il-marketplace-del-balon> (in Italian)

¹⁹ glocal: reflecting or characterised by both local and global considerations

Main results:

The *Associazione Gigi Ghirotti*, which undertook a similar project in 2015 without the assistance of the municipal pharmacies, collected and "reused" pharmaceuticals valued at EUR 497 292. The value of pharmaceuticals "reused" through *Il Farmaco allunga la vita* is expected to be much higher, thanks to the contribution of the *Farmacie Comunali*.

Reggio Emilia municipality – La Polveriera: regeneration of old military warehouses into a vibrant space for civic and social initiatives

The *Polveriera* ⁽²⁰⁾ is an urban regeneration project, started in 2016 and still ongoing, conceived by the *Consorzio Oscar Romero* and social cooperatives *Coress - Il Piccolo Principe* ⁽²¹⁾, *L'Ovile* ⁽²²⁾, *Elfo* ⁽²³⁾, *Dimora d'Abramo* ⁽²⁴⁾, *Anemos* ⁽²⁵⁾ and New Harvest, together with other companies, associations and local bodies.

The initiative aims to redevelop an existing neighborhood (*Mirabello*), which is at risk of degradation, through the regeneration of a part of a structure used as a weapons warehouse during the Second World War, acquired on free loan.

The regeneration allowed for a series of initiatives in the area:

- disability and for asylum seeker services;
- coworking;
- an employment agency;
- cultural space and occupational opportunities;
- a civic hall;
- a multipurpose hall;
- expand the cooperative network;
- trade activities for organic products and short supply chains.

Main results:

The regeneration of the derelict warehouses made the development of an appropriate space for civic, economic and social community initiatives, which are sustainable and inclusive, possible.

Examples of private policy initiatives (sectoral)

The **Italian Circular Economy Platform** (ICESP; see Section Examples of public policy initiatives) incorporates information on stakeholders' innovative approaches and good practice into a database of good practice. Among these, the ICESP Working Group No. 4 is dedicated to industrial sectors, more specifically:

- WEEE;
- electric mobility;
- plastics;
- textiles, clothing and fashion;
- construction and demolition;
- agrifood.

²⁰ <https://lapolveriera.net/progetto/di-comunita/> (in Italian)

²¹ <https://www.coress.org/> (in Italian)

²² <https://www.ovile.coop/> (in Italian)

²³ <http://www.cooperativaelfo.it/> (in Italian)

²⁴ https://www.consorzioromero.org/dimora_abramo.html (in Italian)

²⁵ <https://www.consorzioromero.org/anemos.html> (in Italian)

Reports on the state of play of these value chains are available on the ICESP website ⁽²⁶⁾. These sectors are also cited in the National Strategy for the Circular Economy and most of them contribute to the Critical Raw Material (CRM) Strategy within the Italian CRM platform.

The **Italian Phosphorus Platform** (IPP), launched in 2019, involves more than 60 organisations and is organised in four working groups:

- market;
- technologies and good practice;
- legislation;
- promotion and sustainability.

As ICESP, IPP uses the *quintuple helix approach*. Stakeholders' innovative approaches, technologies and good practice are available on the IPP website ⁽²⁷⁾. In 2019, the IPP collected details of technologies and good practice related to phosphorous, as well as delivering a market analysis and a survey on phosphorous policies across Europe.

²⁶ <https://www.icesp.it/GdL/4> (in Italian)

²⁷ <https://www.piattaformaitalianafosforo.it/tecnologie.html> (in Italian)

The way forward

Addressing barriers and challenges

National policy so far mainly uses voluntary instruments. **Some of the current regulations and standards, as well as consumer behaviour, are not in line with more circular production and consumption patterns**, creating barriers for circular initiatives. Primary raw materials, for example, are often cheaper than secondary raw ones, market demand for recovered products is often still limited and customers are reluctant to use circular products because there are no guarantee schemes for them or they are more expensive than other products.

The National Strategy for the Circular Economy deploys a wide range of policy instruments and measures up to 2035 to overcome these barriers (see Section, Dedicated strategy, roadmap or action plan for a circular economy).

Ranking types of barrier

High barrier  Low barrier	Institutional challenge to develop policy for a complex cross-sectoral issue	Good indicators and targets
	Market barriers for recycled resources	
	Companies' ability to grasp opportunities	
	Consumer behaviour and awareness	

Future policy plans

Mission 2, component 1 (Circular economy, agri-food and green transition) of the **Italian Recovery and Resilience Plan** (²⁸) includes the following **two reforms and two areas of investment in waste management and a circular economy**.

- National Strategy for the Circular Economy, adopted in June 2022 (see Section, Dedicated strategy, roadmap or action plan for a circular economy for key objectives of the Strategy);
- National Programme for Waste Management (see Section, Circular economy policy elements included in other policies for key objectives of the Programme);
- Implementation of new waste management plants and modernisation of existing plants; this investment covers improving and mechanising municipalities' separated waste collection network, building new treatment/recycling plants for organic waste, multi-material waste, glass and paper packaging and innovative treatment/recycling plants addressing disposal of personal adsorbent items, wastewater sludge, leather waste and textile waste.
- Circular economy flagship projects: this investment supports the improvement of separate collection networks, including through the digitalisation of the processes and/or logistics, and treatment/recycle plants for the following sectors:
 - WEEE, including wind turbine blades and photovoltaic panels;
 - paper/paperboard industry;
 - plastic waste recycling, mechanical and chemical recycling, and Plastic Hubs (²⁹), including marine plastic litter. In this, industrial symbiosis projects will be encouraged in the form of circular districts

²⁸ https://ec.europa.eu/info/business-economy-euro/recovery-coronavirus/recovery-and-resilience-facility/italys-recovery-and-resilience-plan_en

²⁹ Plastic Hubs are networks aimed at improving the collection and reuse of plastic by-products and waste using a systemic perspective.

to assure the complete reuse of by-products from plastic recycling and produce high added-value goods;

- textiles (Textile Hubs) ⁽³⁰⁾.

Furthermore, a global monitoring system to address illegal dumping will be developed using satellites, drones and artificial intelligence technologies – a wider description of this is provided within *Investment 1.1 Implementation of an advanced and integrated monitoring and forecasting system in Mission 2 Component 4* of the Italian Recovery and Resilience Plan. The global monitoring system, together with proposed measures on waste traceability, will support local control authorities and law enforcement in preventing, controlling and tackling illegal dumping and organised crime's waste management activities.

³⁰ Textile Hubs are networks aimed at improving the collection and reuse of textiles by-products and waste using a systemic perspective.

European Topic Centre on
Circular economy and resource use
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