

## Circular economy country profile – Hungary



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## 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 3 October 2022 (final review), when members of Eionet verified the content of this profile.

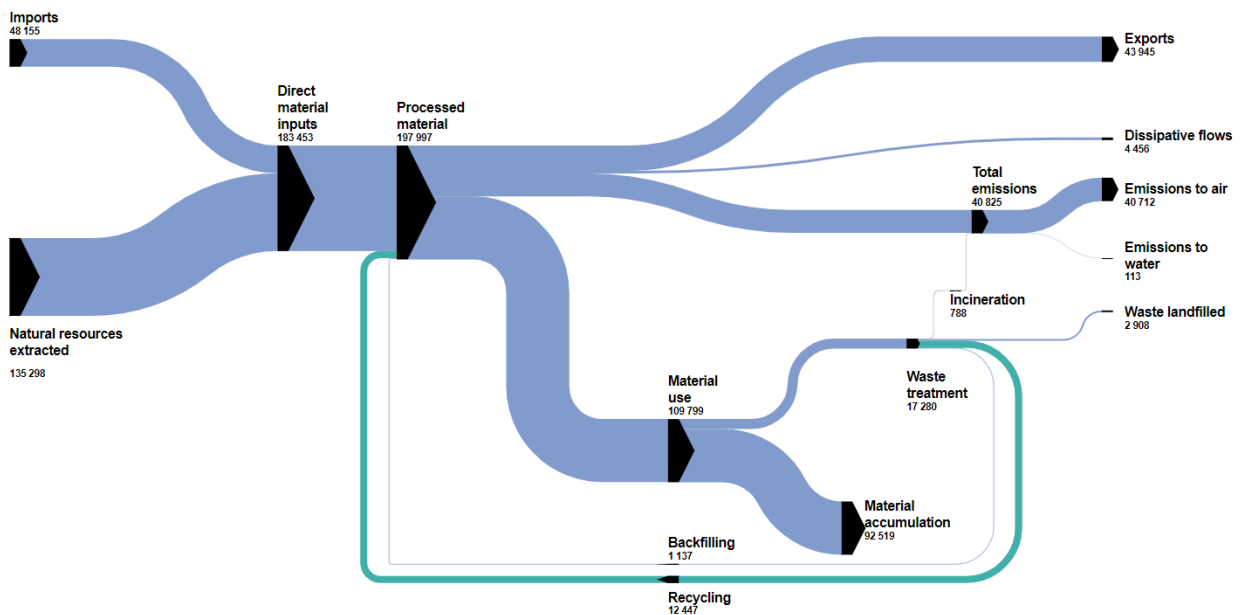
## Hungary – facts and figures

  	<p><b>GDP:</b> EUR 137.4 billion (1.0 % of EU27 total in 2020)</p>
	<p><b>GDP per person:</b> EUR 14 100 (purchasing power standard) (74.3 % of EU27 average per person figure in 2020)</p>
	<p><b>Use of materials (domestic material consumption (DMC))</b>            139.5 million tonnes DMC (2.3 % of EU27 total in 2020)            14.3 tonnes DMC per person (106.3 % of EU27 average per person in 2020)</p>
	<p><b>Structure of the economy:</b>            Agriculture: 4.0 %            Industry: 29.1 %            Services: 66.9 %</p>
	<p><b>Employment in circular sectors:</b>            91 568 people are employed in circular economy (CE) sectors (2.6 % of EU total in 2018)            People employed expressed as a percentage of total employment:            2.0 % (EU average 1.7 %)</p>
<p><b>Surface area:</b> 93 011 square kilometres (2.1 % of EU27 total)</p>	
<p><b>Population:</b> 9 769 526 (2.2 % of EU27 total in 2020)</p>	

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

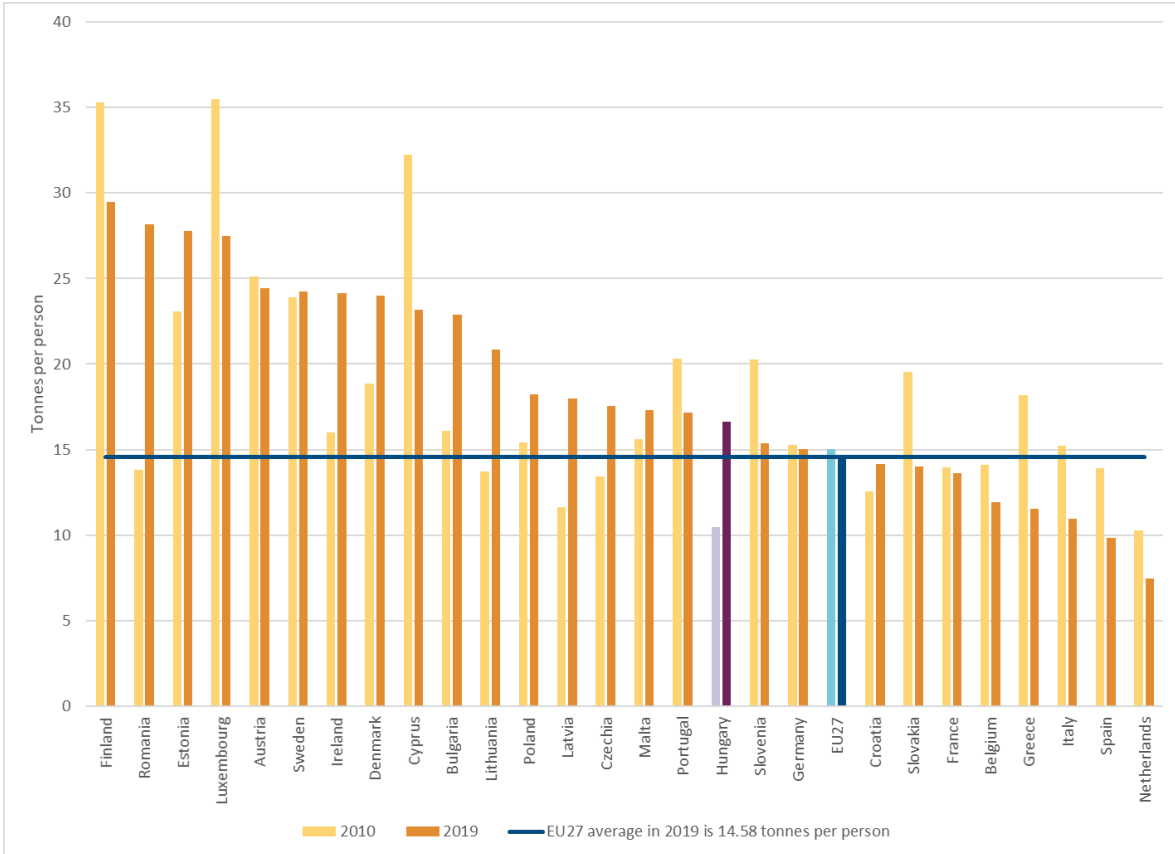
Source: Eurostat datasets, EU27 2020 (accessed 20 June 2022)

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



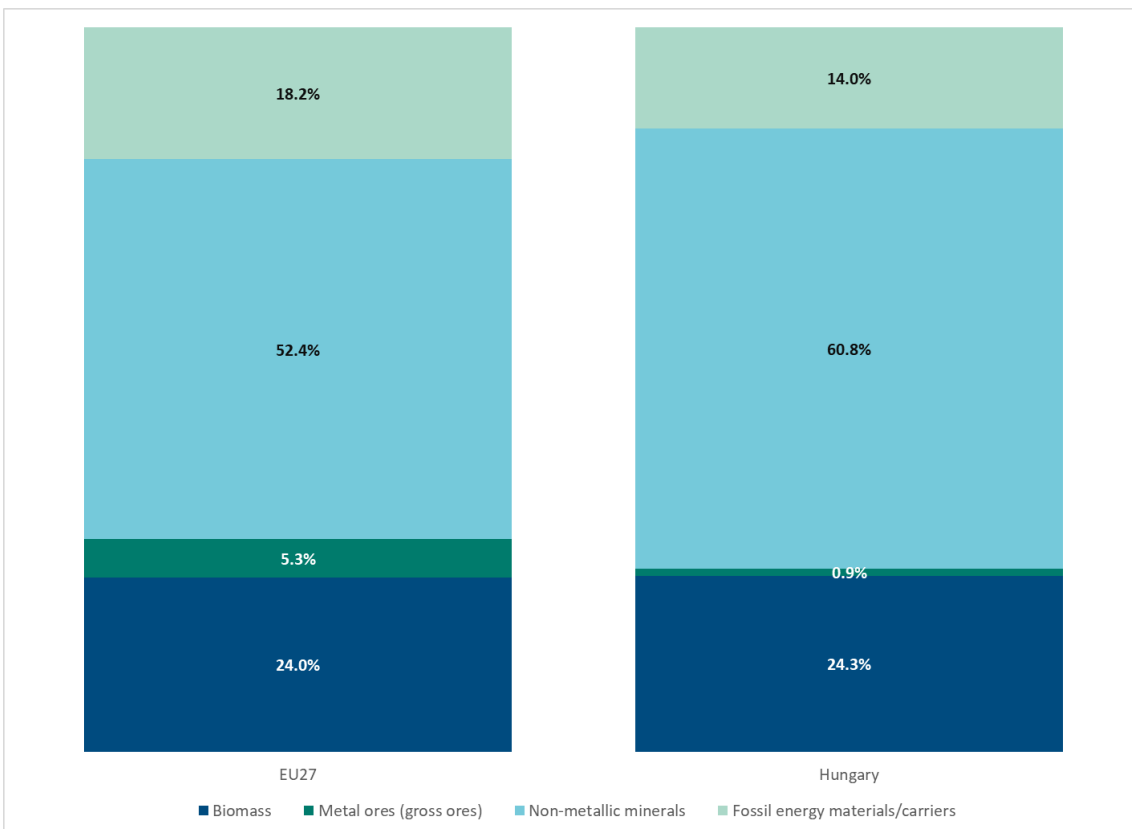
Source: Eurostat (2022) [env\_ac\_mfa], [en\_ac\_sd], [env\_wassd] (accessed 20 June 2022)

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



Source: Eurostat (2020) [env\_ac\_rme] (accessed 4 July 2020)

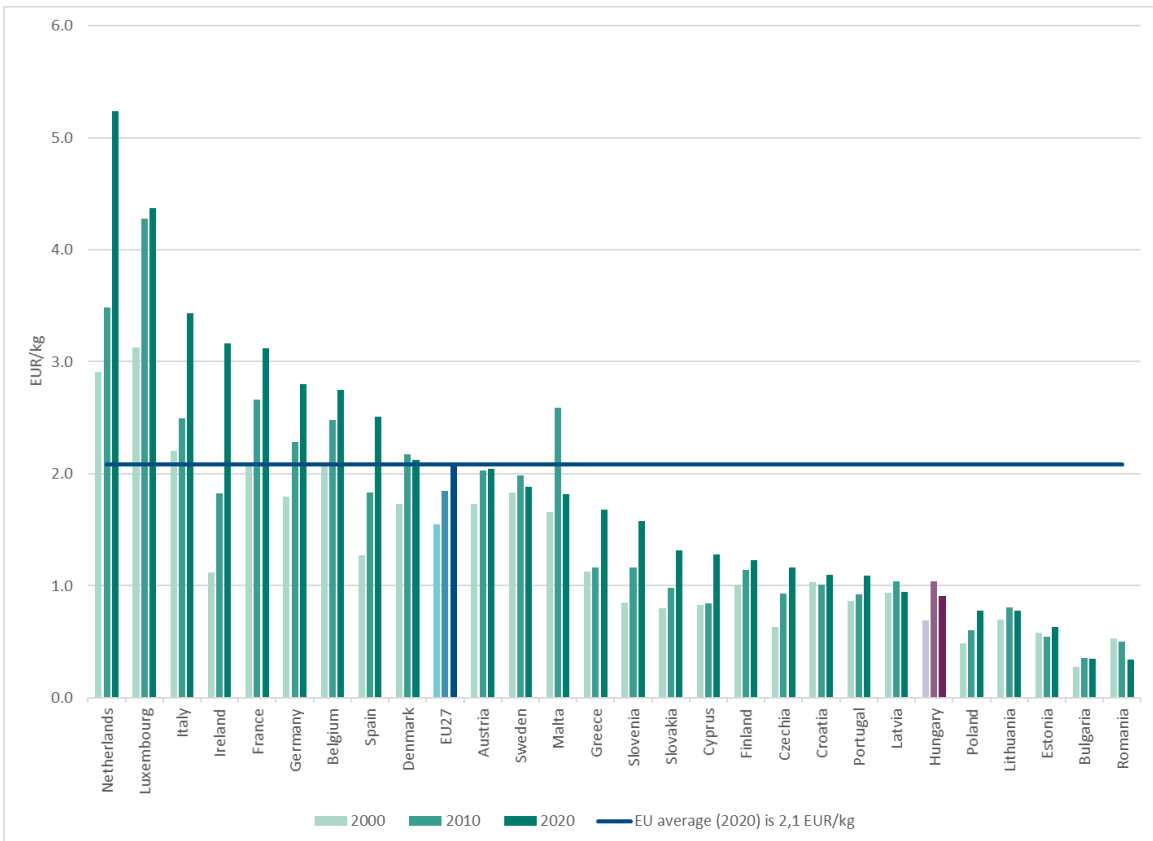
**Figure 3 Domestic material consumption by selected material category, EU27 and Hungary, 2020, per cent**



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

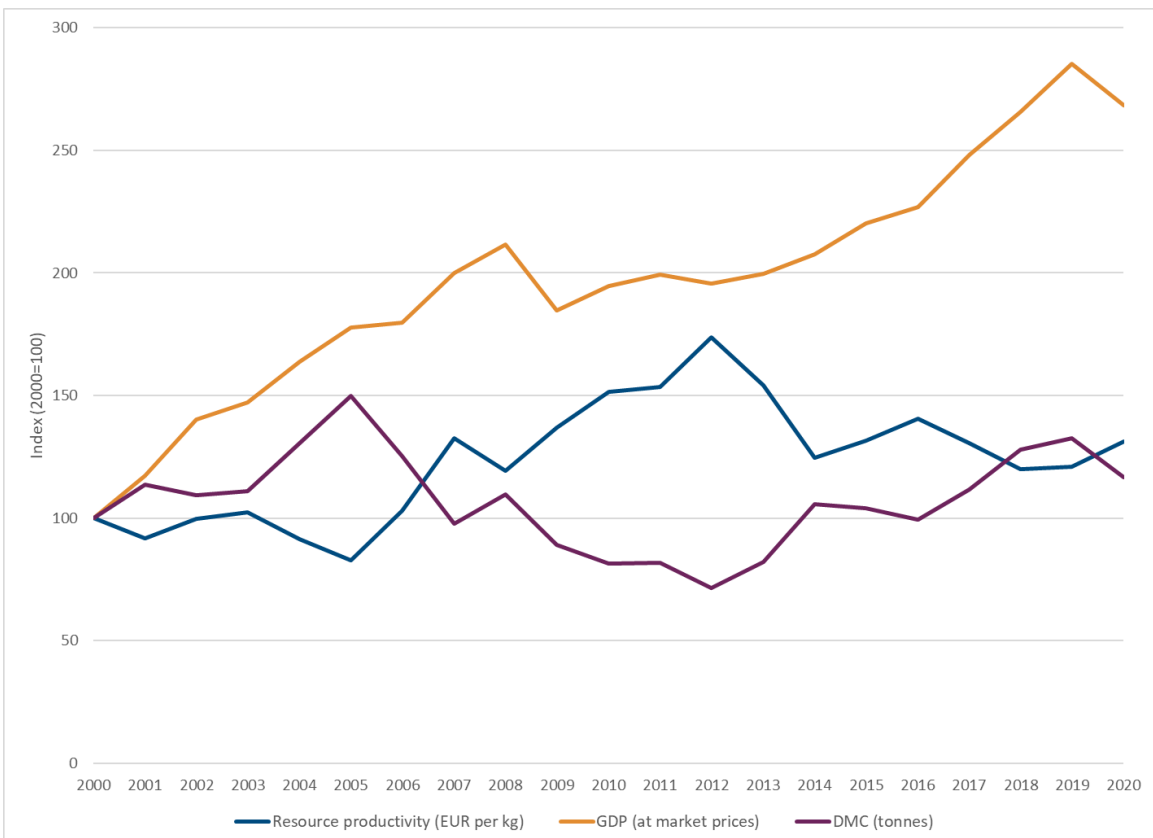
Source: Eurostat (2022) [env\_ac\_mfa] (accessed 20 June 2022)

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



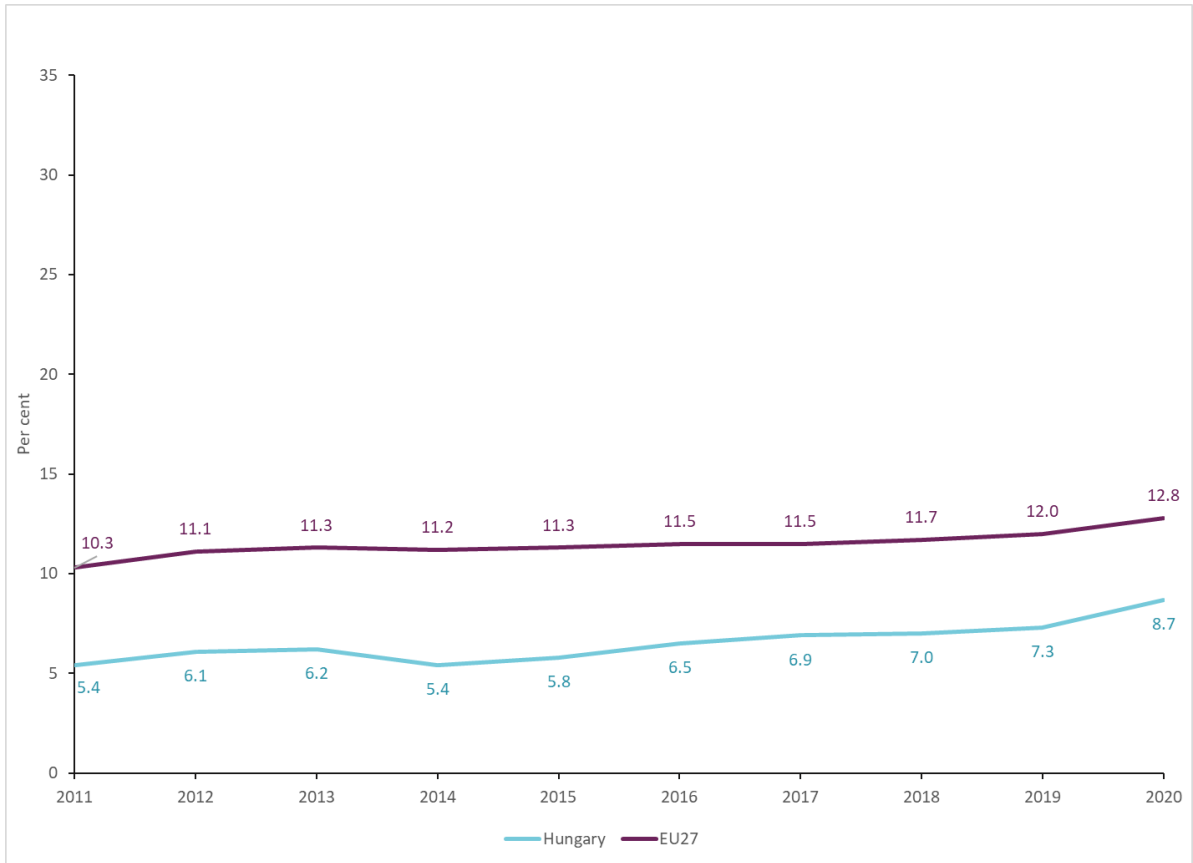
Source: Eurostat (2022) [env\_ac\_rp] (accessed 20 June 2022)

**Figure 5 Gross domestic product, domestic material consumption and resource productivity trends, Hungary, 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 Hungary, 2011–2020, per cent



Source: Eurostat (2022) [env\_ac\_cur] (accessed 20 June 2022)



## Existing policy framework

### Dedicated strategy, roadmap or action plan for circular economy

In October 2019, the Energy Efficiency Operational Programmes of the Ministry for Innovation and Technology, within the framework of Structural Reform Support Programme, successfully applied for EUR 500 000 funding from the European Commission for the **Introducing Circular Economy and Addressing Waste Management Challenges** project. In the context of this project, Hungary is currently working on a national CE strategy with a vision statement for 2040 in cooperation with the Organisation for Economic Co-operation and Development (OECD) as the lead contractor and with the participation of relevant policy and economic actors. The planned duration of the project is 24 months and it is expected to be completed by the end of 2022.

Three priority areas have been identified as having the highest circular potential for Hungary:

- food/biomass;
- construction;
- plastics.

The proposed vision statement and objectives are the following:

*By 2040, Hungary will become a more competitive and sustainable economy, having adopted a holistic approach to the CE transition, focussing not only on waste management, but also on the industrial, agricultural and service sectors.*

All stakeholders will collaborate to reach the following targets by 2040, compared to 2019 levels:

- reduce the amount of materials consumed;
- close the loop of materials used in the economy;
- generate economic value in material-related activities.

### Circular economy policy elements included in other policies

Circular economy policy element	Included in policy
The aim is to foster the Hungarian economy and exceed the average economic development, consumption level and quality of life of the European Union by 2030. One of the programmes to achieve this vision is the development of the green economy, with sub-programmes addressing CE principles, such as in the environmental and waste industries, or some related aspects, including green transport; agricultural energy and green pilot projects.	<a href="#">New Széchenyi Plan (ÚSZT)</a> (in Hungarian)
The document is a comprehensive framework for all environmental strategies, programmes and plans in Hungary. Although the programme itself is broader than the concept of the CE, it covers specific aspects of the CE, such as material production and uses and waste management, as well as industry, agriculture and forestry, transport and logistics, and environmental industry and infrastructure.	<a href="#">Fourth National Environmental Programme (NKP)</a>
Elimination and prevention of illegal dumping of waste: introduction of stricter administrative and criminal sanctions from 1 March 2021, complemented by support for the disposal and prevention aiming to keep waste in the legal treatment system.	<a href="#">Climate and Nature Protection Action Plan (2020)</a>
Introduction of a deposit-refund system; ensuring the replacement of glass and plastic bottles and metal cans from 1 July 2024.	<a href="#">Climate and Nature Protection Action Plan (2020)</a>

Circular economy policy element	Included in policy
Prohibition of single-use plastics: the placing of certain disposable plastic products on the market and prohibiting products made of oxo-degradable plastics in Hungary from 1 July 2021.	<a href="#">Climate and Nature Protection Action Plan (2020)</a>
This is the highest-level policy for the development of waste management in Hungary in the long term (for the period 2014–2027). The main directions identified by the Concept are waste prevention, waste collection and transport, material and energy recovery, and improvements in landfilling	<a href="#">Waste Management Development Concept (HFK)</a> (in Hungarian)
Reform of the waste management sector and the introduction of a concession system through which the public-waste management task was entrusted to a concessionaire by the state.	Act No. II of 2021 on amending certain laws on energy and waste management (link is not available)
For all waste streams, measures to promote collection and recycling have been designed to increase the recovery rate and reduce landfill.	<a href="#">National Waste Management Plan 2021–2027</a> (in Hungarian)
The analysis of mixed municipal waste and separately collected waste streams to quantify the efficiency of these methods and the foreign matter content of the collected waste, as well as to evaluate and effectively coordinate different collection methods in each region.	<a href="#">National Waste Management Plan 2021–2027</a> (in Hungarian)
The establishment of waste collection yards and collection points so that everyone can hand over their waste at a point close to their place of residence or the place where the waste is generated.	<a href="#">National Waste Management Plan 2021–2027</a> (in Hungarian)
Preparation of investment in energy recovery from non-recyclable municipal waste, <i>inter alia</i> , in order to reduce landfill.	<a href="#">National Waste Management Plan 2021–2027</a> (in Hungarian)
Address issues related to the classification of secondary waste from the pre-treatment of municipal waste.	<a href="#">National Waste Management Plan 2021–2027</a> (in Hungarian)
Examine the possibility of applying a certain waste code in the future for waste that is actually suitable for energy recovery.	<a href="#">National Waste Management Plan 2021–2027</a> (in Hungarian)
In addition to the above, the development of sorting and pre-treatment capacities for packaging waste covered by the municipalities and the encouragement of market investment for the development of processing capacities.	<a href="#">National Waste Management Plan 2021–2027</a> (in Hungarian)
Measures planned to collect additional waste streams such as biodegradable waste, textile waste and used household cooking oil.	<a href="#">National Waste Management Plan 2021–2027</a> (in Hungarian)
In the case of industrial waste, efforts should be made to produce without creating waste, to reuse the waste as much as possible, and, primarily, to develop the material recovery of waste. Strengthening industrial symbiosis to promote job creation, the green economy, eco-innovation and resource efficiency. It is particularly important to support research, development and innovation for exploitation opportunities.	<a href="#">National Waste Management Plan 2021–2027</a> (in Hungarian)
A review of the regulations is needed to increase the agricultural use of compost from biodegradable waste and establish an appropriate compost classification system. The primary purpose of the new legislation is to facilitate the separate collection and recovery of biodegradable waste.	<a href="#">National Waste Management Plan 2021–2027</a> (in Hungarian)
Increased support for on-site recovery to continuously increase the recycling rate of construction and demolition	<a href="#">National Waste Management Plan 2021–2027</a> (in Hungarian)

Circular economy policy element	Included in policy
waste. Provide a legal framework for the elimination of this waste.	
<p data-bbox="178 304 836 461">Evolving and implementing new recovery technologies for the development of the domestic processing industry for hazardous waste. Legislative and economic incentives, support for research and development (R&amp;D) of new utilisation technologies.</p> <p data-bbox="178 468 836 555">Establishment of a separate collection system for more hazardous-waste streams and the development of existing systems.</p>	<p data-bbox="863 304 1417 365"><a href="#">National Waste Management Plan 2021–2027</a> (in Hungarian)</p>

## Monitoring and targets

### Assessment of circular economy performance

Hungary has been making **progress in its circularity**, it has decoupled economic growth from total primary and municipal waste generation. Per person waste generation levels are also below the OECD and EU averages. In many aspects, however, Hungary is an **average performer**. For instance, the efficiency with which it uses materials, as well as the circularity of material use, are lagging. Its material consumption levels have also risen rapidly, threatening the economy's progress towards a CE.

Hungary's performance in terms of the circular material use (CMU) rate has been relatively low. The share of material resources used from recycled and recovered products only reached 6.8 % in 2019, compared to the EU average of 11.9 %.

The main goal of the Hungarian Government is to **increase the role of the domestic waste management sector in economic policy** and to support the fulfilment of sustainability goals while achieving the transition to a CE. To this end, in December 2019, the Government decided on a comprehensive review and transformation of the Hungarian waste management system.

For Hungary, the **rationalisation of resource management and the development of the waste management system** is important since the country is poor in raw materials, relies on energy and material imports, and is increasingly dependent on these for certain resources. The conscious, efficient and effective management of resources, the avoidance of over-exploitation and the mitigation of environmental impacts resulting from use are key issues from the social, environmental, security of supply and competitiveness points of view. Greater resource efficiency in production and clean, environmentally conscious production has competitive advantages in themselves.

The greatest need is to reduce municipal waste, as it has the highest rate and volume of landfill disposal. Therefore, it is the primary target area for developments in the coming years.

In the previous system, the motivation of individual actors could not be established. Due to a lack of interest among them, a lack of demand in the recycling market, and the obstacles to the sale of recycled material, the share of recycled materials is far below the level expected in the case of efficient use of the existing capacities.

Previous infrastructure developments do not provide for the diversion of a sufficient proportion of waste from landfill, so new directions are needed.

The waste management system was found to be inefficient.

The aim of the government is to ensure that municipal waste does not end up in landfill, but that the materials contained in it are recycled.

Interested market participants will be involved in increasing the efficiency of the overall system and achieving the goals.

In addition, Hungary is aiming to **introduce a financing system in which all actors have an interest** in selective collection and efficient sorting of waste and sending it for recovery.

In February 2020, the Hungarian government announced the **Climate and Nature Protection Action Plan**, which includes environmental protection objectives and measures to reduce waste, eliminate illegal waste dumping in the country, improve sustainability, the wider use of renewable energy and climate protection. The Action Plan also includes a provision to encourage domestic and multinational companies to use environmentally-friendly technologies, renewable energy and to increase wooded areas. The measures related to the Action Plan's objectives are based on innovative solutions, in the development of which the primary consideration is the enforcement of the principles of environmental protection and sustainability.

The Ministry for Innovation and Technology, the ministry responsible for waste management, provided the legal framework for the transition to a CE in the spring of 2021, and the provisions of the European Union directives were transposed into the domestic legal system.

In the transition to a CE, Hungary will focus on the **involvement of market participants and mutual cooperation**. With the planned measures in the field of waste management, Hungary has a dual purpose: on the one hand, to provide and preserve a clean environment for future generations, and on the other, to create a waste management infrastructure, to introduce innovative technological solutions that ensure the efficient use of resources and increase the competitiveness of the waste management sector. It is important for Hungary to create incentives for participants in the sector – waste producers, participants in waste management activities, users of secondary raw materials from waste and consumers.

An important objective in this regard is to **promote the production of secondary raw materials and make them more marketable**. For Hungary, laying the foundations of an economy based on secondary raw materials, investing in innovative solutions and promoting cooperation between industrial actors could be a significant breakthrough point.

Hungary has its own set of indicators to assess the Sustainable Development Goals (SDGs), including the ones related to the CE, developed by the Hungarian Central Statistical Office (KSH).

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

No dedicated CE monitoring framework has yet been established in Hungary.

### Circular economy targets

Concerning CE related targets in the waste management area, Hungary uses the indicators listed below. Based on these indicators, the performance of the waste management system can be measured annually to ensure the fulfilment of the CE objectives and the targets set in domestic commitments.

General indicators:

- the amount of municipal waste generated annually (tonnes);
- the increase in the share of separately collected municipal waste compared to the total (per cent);
- monitoring of changes in the number of illegal landfills (number).

Specific Indicators:

- reuse rate of materials recovered from construction and demolition waste (per cent);
- number of certified re-use centres (number) and population served (number of people);
- quantity of used products going to certified re-use centres (number of items);
- percentage of products sold to and from certified re-use centres;
- waste from textiles, electrical and electronic equipment, furniture, building materials and construction products, other products (tonnes);
- share of green elements in public procurement compared to the total (per cent);
- number of enterprises implementing and applying ISO 14001 (environmental management);
- number of enterprises implementing and applying the Eco-Management and Audit Scheme (EMAS);
- number of companies rated excellent in terms of corporate and social responsibility;
- number of companies with a sustainability rating;
- number of industrial innovation centres;
- number of students educated about waste prevention;
- number of waste prevention events.

## Innovative approaches and good practice

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

→ *Good practice example: data and transparency/traceability, producer/supplier responsibility*

#### **Electronic construction log.**

Since 1 October 2013, the electronic construction log, mandatory technical documentation, can be used in official and court proceedings. It includes the status of work performed and details of the environmental impacts of construction and any construction defects. It must be started on site on the day of the handover of the construction site or the start of construction.

According to the Government Decree No. 191/2009 (IX. 15.) on construction activities, it is the responsibility of the contractor to continuously record the amount and type of construction and demolition waste generated on the construction site in the log.

On completion of construction activity, a waste registration form, in accordance with Annex 5 of the Government Decree shall be completed, giving details of waste generated by type and European Waste Catalogue code, as part of the construction log. The amount of construction and demolition waste generated on the construction site must be kept up-to-date in the log, and the investor (builder) notified if the amount reaches the legal threshold to ensure that the waste is disposed of in a timely manner and properly treated.

#### **WasteRadar <sup>(1)</sup>**

This is a mobile app designed and developed to prevent the illegal dumping. The app provides the public with the ability to report illegal waste by simply using their mobile devices. They just take a geotagged photo of the affected area, provide some details about the illegally dumped waste – type of waste, volume, containers, etc. – and send a simple report to the competent authorities, who can then identify the area and begin clean-up operations.

The application has been developed in the wider context of the **Let's Clean Up the Country!** programme, part of which includes the elimination of the illegal dumping. During the programme – through a never previously seen level of state and local government cooperation – efforts are being made to collect waste found in forests, national parks, rivers, rail and road facilities and local government public areas as a result of the illegal dumping that has occurred in recent decades. The Hungarian state railway company, MÁV Zrt.; Hungarian Public Roads Zrt.; state forestry companies and national park directorates, the Hungarian General Directorate for Water Management and local governments are all part of this cooperation.

The app is readily available to members of the public and easy-to-use. People are highly motivated to participate in the process of waste management and the general tidying up of their local communities once practical tools have been provided to them. There have been a significant number of notifications from all over the country since the launch of the application. The wide range of cooperation between state actors in the context of the Let's Clean Up the Country! programme gives further weight and significance to the initiative. An added benefit is traceability – the back-end administrator who receives a notification from a user documents the full process of removal, and thus the user can get feedback on the fate of his notification.

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<sup>1</sup> <https://2015-2019.kormany.hu/en/ministry-for-innovation-and-technology/news/let-s-clean-up-the-country-project-to-be-launched>

→ *Good practice example: financial support programme, education (consultancy and training), innovative business models*

**The Central Bank of Hungary's Green Program** <sup>(2)</sup> The Central Bank of Hungary (MNB) launched its Green Program early 2019 to mitigate the risks associated with climate change and other environmental problems, expand green financial services in Hungary, widen the related knowledge base in Hungary and abroad, and reduce financial market participants' and its own ecological footprint. The Green Program consists of three pillars:

1. the financial sector;
2. the development of the MNB's social and international relations;
3. the further greening of its own day-to-day operations.

By implementing its Green Program, MNB wishes to contribute to reducing risks related to climate change and other environmental issues and to raising the volume of green market finance in Hungary. Therefore, following the measures already taken in the banking sector, the Bank will start introducing green finance to the capital market. This involves the publication of an analysis of the Bank's regulatory measures to promote green bond issuance with the intention of jump-starting the green bond market in Hungary.

In addition, MNB is among the first central banks and domestic financial institutions to publish a climate-related financial disclosure (TCFD) report. This aims to identify, measure and publicise climate risks related to MNB's operational activities and financial instruments as widely as possible and in a transparent manner, thereby providing guidance to the domestic financial sector.

**Green Bus Program** <sup>(3)</sup> One of today's major challenges is the global warming. To achieve the 2050 climate goal, set by the European Union and adopted by Hungary, a significant reduction in emissions from the transport sector is essential. This sector is responsible for almost one-fifth of Hungary's total emissions, of which road traffic is responsible for 98 %. One way to achieve the climate goal is to spread the use of electric vehicles, including electric buses, replacing old, polluting ones.

In addition, to create a sustainable environment, the Hungarian government's main goals are to take a leading role in the field of electro-mobility in the region, be at the forefront of its implementation and the introduction of successful models, with a special emphasis on research, development and innovation. In September 2019, the government adopted a national bus strategy, the Green Bus Program (Government Resolution 1537/2019 (IX. 20.) as amended by 1280/2021 (V. 17.)), and established the Green Bus Project Office under the supervision of the Ministry for Innovation and Technology.

Between 2020 and 2029, a HUF 35.9 billion budget is available for cities with a population of more than 25 000 and for public transport providers to support the procurement of electric buses and trolleybuses, and the establishment of related charging infrastructure.

**Government support to purchase electric cars** <sup>(4)</sup> Related to the Climate and Environmental Protection Action Plan, the Hungarian government has launched several grant programmes to subsidise the purchase of electric cars, trucks, motorcycles, bikes and cargo bikes between 2016 and 2021.

Goals:

- climate neutral mobility and transport;
- spread of electromobility;
- providing an alternative to the use of fossil fuel-based motor vehicles;
- reducing the use of fossil fuels; and, through this,
- reducing the air pollution in settlements.

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<sup>2</sup> <https://www.mnb.hu/greenfinance/english>

<sup>3</sup> <https://www.iea.org/policies/13933-climate-and-nature-protection-action-plan-green-bus-program>

<sup>4</sup> <https://hungarianinsider.com/government-continues-to-support-purchase-of-electric-cars-7400/>

Grant rate: a maximum of 12.5–50% (depending on the type of the e-vehicle)

These subsidies have contributed to an outstanding achievement: today there are more than 42 000 green licence plate vehicles, half of which are electric ones, on the road in Hungary.

→ *Good practice example: change in consumption patterns and consumer behaviour*

**TeSzedd! voluntary waste collection** <sup>(5)</sup> The “TeSzedd! – Volunteering for a clean Hungary” series of events is the largest voluntary waste collection campaign in Hungary for many years. Every year during the action thousands of volunteers are collecting illegal waste from public areas across the country. The Government also supports other citizen initiatives to eradicate illegal dumping, such as the PET Cup, which is an innovative boat contest for waste collection on the river Tisza.

→ *Good practice example: change in consumption patterns and consumer behaviour, education (awareness-raising and training), spatial planning and urban policy*

**MOL programme for used cooking oil collection** <sup>(6)</sup> In 2011, MOL, a petroleum refining company, launched a programme to simplify the process of collecting used cooking oil from households. As part of this programme, used oil can be dropped off at designated MOL service stations. Collecting used cooking oil across the service station network represents a unique solution to a widespread problem. The cooking oil collected at the stations is converted into bio motor fuel. After launching the used cooking oil collection programme in Hungary, similar ones were rolled out in Croatia, Romania, Serbia and Slovakia.

Since 2011, MOL has organised a communication campaign every year to improve the popularity of this programme and to encourage the population to act in a more environmentally conscious way. MOL’s collection initiative is, therefore, not only innovative and environmentally conscious, but also serves social and educational purposes and fits the long-term business strategy of the MOL Group. Benefits of the project to the community include:

- making available cooking oil collection points at 473 filling stations;
- collecting a total of 800 tonnes;
- transforming hazardous waste into an energy source and decreasing its environmental footprint.

The awareness-raising benefits of the project are clearly visible and measurable. The 2014 communication campaign resulted in a spectacular improvement and positive changes in attitudes. During the first month of the 2014 campaign, some 20.2 tonnes of oil was collected – nearly 7 tonnes more than the previous monthly record.

**Wasteless Programme** <sup>(7)</sup> About 865 thousand tonnes of food waste is produced in Hungary annually. A significant proportion, about a quarter, of this originates from households. According to empirical research data, the half of it could be avoided. Although this amount lags behind some extremely wasteful countries, it still accounts for a significant part of Hungarian customers’ purchases and generates more than 665 110 tonnes of biodegradable waste. This has a serious impact on the environment, considering that not only its destruction represents an unnecessary burden, but the process of production, processing and distribution, also have environmental consequences. Recognising this problem, the National Food Chain Safety Office (Nébih) started its Wasteless programme with the financial support of the European Union’s LIFE (*L’instrument financier pour l’environnement environmental*) subprogramme, with the aim of

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<sup>5</sup> <http://szelektalok.hu/teszedd/> (in Hungarian)

<sup>6</sup> [https://molgroup.info/storage/documents/esettanulmanyok/kornyezet/1\\_used\\_cooking\\_oil\\_campaign.pdf](https://molgroup.info/storage/documents/esettanulmanyok/kornyezet/1_used_cooking_oil_campaign.pdf)

<sup>7</sup> <https://maradeknelkul.hu/en/>



decreasing Hungarian food waste. The project has become the official national programme for the prevention of food waste.

To measure the efficiency of the project, a baseline study was carried out in 2016 to determine the amount of food waste generated at the household level, involving 100 households, based on the EU's Food Use for Social Innovation by Optimising Waste Prevention Strategies (FUSIONS) recommendations. This was the first empirical study carried out using this methodology in the Central and Eastern European region. The study was replicated with the involvement of 165 households at the end of 2019, using the same methodology, to collect comparable data. The studies suggest that Hungarian households each generated 65.5 kilograms of food waste annually. Between the two periods (2016–2019), a 4 % decrease was observed, despite the significant economic expansion in the observed period.

Household food waste reduction through awareness-raising:

- proactive communication: awareness raising activities scheduled into important events, such as Earth Day, International Day of Awareness of Food Loss and Waste, World Food Day, Christmas and Covid-19 lockdowns: a total of 13 press releases issued, 166 interviews and presentations given, 1 279 media appearances made, and a reach of 96 million people estimated;
- thematic sub-campaign promoting ugly but edible fruit and vegetables;
- guide for storing leftovers – fridge challenge;
- guide to freezing food, guide to food stockpiling – Stockpiling Tetris Challenge;
- composting guide;
- food donation action with the Hungarian Food Bank Association;
- proactive media activity;
- main communication platforms: website, Facebook, Instagram;
- more than 1 800 students and 110 teachers have been reached in 58 primary schools in person;
- two online quiz competitions with 1 907 participating children;
- two thematical summer camps attended by 68 children in total;
- drawing contest – 280 applicants;
- 270 000 sets of the Wasteless educational materials have been delivered to the Hungarian primary schools.

### Examples of private policy initiatives (sectoral)

**The Circular Economy Platform** was established in Hungary in 2018 as an initiative of the Business Council for Sustainable Development in Hungary (BCSDH), the Embassy of the Kingdom of the Netherlands, and the Ministry of Innovation and Technology. The Platform aims to accelerate the transition towards a CE through knowledge sharing, joint projects and collaborations.

The Circular Economy Technology Platform, led by the National Research, Development and Innovation Office, was established in 2022 to accelerate the transition and to develop cooperation between circular economy actors.

## The way forward

### Addressing barriers and challenges

As a small open economy with few domestic material sources, Hungary can secure and improve its competitiveness by fostering circularity throughout its production and consumption patterns. Education and digital technologies will be critical to fostering green jobs and resource efficient value chains.

The sectoral analysis suggests that the **construction and manufacturing sectors** are key points of interest. The construction sector makes a relatively small contribution to the economy but generates large quantities of waste while consuming large quantities of materials. The manufacturing of basic metals and fabricated metal products has an important waste generation component with a small, and a significant value-added component. Decreasing waste generation is of high importance in moving towards circularity. Hungary's material productivity is low, and its material consumption high. As the economy has grown, its material productivity has deteriorated, which is in contrast with other comparable economies, notably V4 countries (Czech Republic, Poland and Slovakia). It should be Hungary's aim to reverse this negative relationship. From a tonnage perspective, construction minerals, as well as biomass for food and feed require the most attention. These materials are consumed in large quantities and demand for them is positively correlated with economic growth.

**Incentivising research and development in circular technologies** is also of high importance. It could ensure that the value added of Hungarian products increases while their production costs fall. Enhanced digitalisation and digital infrastructure could also broaden circular business opportunities and ensure a better use of underutilised resources. Hungary is a two-speed economy with productive, large multinational firms and laggard small and medium-sized enterprises (SMEs). Circular solutions could increase the productivity of SMEs and provide improved links between sectors.

**Households** are responsible for a significant share of waste generation. It remains an important area to investigate further, especially given the high levels of landfilled municipal waste and low recycling rates of (packaging) materials. High landfill rates and low recycling rates have been identified in the past as an issue of high priority for Hungary.

In general:


- selection of criteria and identification of indicators for the CE, raw material supply and resource efficiency, in which primary and secondary resources are considered;
- introduction of lifecycle analyses into the analysis of supply and demand;
- stakeholder consultations should be improved between stakeholders – industry, ministries, authorities, research institutes and non-governmental organisations (NGOs).

Challenges to waste management:

- A lack of financial resource and experience. Sharing good practice is essential, and several information campaigns are already under way to promote knowledge sharing and raise awareness among various target groups.
- The relative cost of secondary raw materials. Low market prices of secondary raw materials are key elements to the transition to a CE, but the gap between the market price of primary and secondary raw materials often means that it is not economically feasible to choose secondary raw materials – an example is the low price of oil for plastic production. This hinders policymakers from introducing efficient economic regulations to encourage their use.
- There is no real solution for the use of stabilised biodegradable municipal waste, making it difficult to divert it from landfill.
- Unknown chemical additives in certain products make recycling difficult or unsafe.
- The lack of end-of-waste EU regulation – only three regulations exist – causes uncertainty regarding how materials can cease to be waste. This generates legal uncertainty for operators and

authorities and creates difficulties in the application and enforcement of chemical and product legislation.

### Ranking types of barrier

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

### Future policy plans

#### The New Széchenyi Plan (ÚSZT) sets quantitative targets

Meeting the EU targets for waste management: creation of separate waste collection for specific waste streams by 2015; increasing the preparation for reuse and recycling of paper, metal, plastic and glass to a minimum of 50 % by 2020; increasing the preparation for reuse, recycling and other recovery of non-hazardous construction and demolition waste to a minimum of 70 %; decreasing the amount of biodegradable organic waste entering landfills as part of municipal solid waste to 35 % by 2016, and promoting material and energy recovery from certain products.

The Fourth National Environmental Programme (NKP) defines circular economy related quantitative targets for specific waste streams

- Municipal solid waste: develop separate waste collection systems for glass, metal, plastic and paper by 2015; preparation for reuse and recycling of paper, metal, plastic and glass waste from households and similar to be increased to an average of at least 50 % by weight by 2020; reduce landfilling rate to below 40 % of collected municipal solid waste.
- Construction and demolition waste: Increase preparation for reuse, recycling and other recovery of non-hazardous construction and demolition waste to at least 70 % by weight by 2020.
- Biodegradable waste: reduce amount of landfilled biodegradable municipal waste to 35 % by 1 July 2016, compared to 1995 levels.
- Battery and accumulator waste: increase collection rates to 35 % discarded batteries and accumulators by 2014. Batteries or accumulators deposited must be recycled in their entirety. Depending on the type, they must be recycled with an material efficiency rate of 50-75 %.
- Waste from electrical and electronic equipment: increase collection rate to 4 kilograms per person per year. By 2018 at the latest, increase collection rate to 65 % of all discarded EEE products in circulation.
- End-of-life vehicles: increase the combined reuse and recovery rate, measured as the weight of the vehicle, of all end-of-life vehicles to 95 % by 2014. The 95 % must be broken down to 85 % for material recovery and 10 % for energy recovery.

#### The national CE strategy in preparation suggests the following quantitative targets:

- All stakeholders will collaborate to reach the following targets by 2040 (compared to 2019 levels):
- to restrain the amount of materials consumed, the government will invest in research and implement incentives to foster resource efficiency through eco-design, product sharing and reuse. Hungary aims to double resource productivity (GDP/DMC) to EUR 2/kg of material;
- to close material loops and make feedstock materials for production more sustainable, measures will be taken to double the Hungarian circular material use rate, to 15 %;
- to capture a broader array of benefits related to transitioning to a CE, support mechanisms for innovation and new business models will be implemented. Hungary aims to increase the number of circular jobs by 30 % across industry, agriculture and service sectors to achieve them making up 2.5 % of total employment.

The transposition of the directives included in the EU's CE proposal package and the ensuring of compliance with the requirements of directives are the basis for Hungary's steps towards the implementation of a CE. Amendments to the directives based on the Circular Economy Directive package require Member States to take measures on waste prevention, reuse, preparation for reuse, recycling and recovery, as well as **precise targets**.

In addition to the above, the government has set the goal of achieving a clean, waste-free environment as a domestic commitment in the Climate and Nature Protection Action Plan, published in February 2020. To this end, in February 2021, the Hungarian parliament adopted the law on the renewal of the waste management sector, the Act II of 2021 on the amendment of certain laws on energy and waste management. With the adoption of the law and the creation of related regulation-level rules, the CE objectives set by the EU have been transposed.

European Topic Centre on  
Circular economy and resource use  
<https://www.eionet.europa.eu/etcs/etc-ce>

The European Topic Centre on Circular economy and resource use (ETC CE) is a consortium of European institutes under contract of the European Environment

