Circular economy country profile 2024 - Austria



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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:

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

With the EU Circular Economy Action Plan (CEAP 2020) "the Commission [..] encourages Member States to adopt or update their national circular economy strategies, plans and measures in the light of its ambition".

These country profiles originate in the work leading to the EEA More from less report (2016)¹, that presented an overview of approaches to material resource efficiency and to circular economy in thirty-two European countries. The More from Less report was followed by the 2019 EEA Report 'Resource efficiency and the circular economy in Europe 2019 – even more from less: An overview of the policies, approaches and targets of 32 European countries'².

It presented an updated and extended assessment of approaches and identified trends, similarities and new directions taken by countries in the connected policy areas of resource efficiency and the circular economy.

These reports, comprising a compilation of extensive survey responses from countries, were accompanied by 32 country profiles.

In the second quarter of 2022 a new survey with questions and guidelines was launched. Based on information reported by the Eionet network, in particular, the Eionet Group on Circular Economy and Resource Use, and after review and editing by the European Topic Centre on Circular economy and resource use (ETC CE), the 30 2022 CE country profiles³ were published alongside the EEA report 'Circular Economy policy innovation and good practice in Member States'⁴ (2022).

These 2024 CE country profiles are an update of the 2022 ones and based on the responses of 29 countries to the survey questions and guidelines that were launched in March 2024. The information in the countries' responses was again reviewed and edited by the European Topic Centre on Circular economy and resource use. A selection of Eurostat data was made to further complement these country profiles.

The main objectives of these assessments and its updates are to: • stimulate exchange of information and share good practice examples among country experts; • support policymakers in Eionet countries, the European institutions and international organisations by providing an updated catalogue of circular economy actions being undertaken in European countries.

This circular economy country profile is based on information reported by the Eionet network and, in particular, the Eionet Group members on Resource Efficiency and Circular Economy in the second quarter of 2024. Proposals for the further development or amendment of policies represent the view of the reporting country. For Austria, all input was provided by experts from Environment Agency Austria and from Federal Ministry for Climate Action, Environment, Energy, Mobility, Innovation and Technology. The information was reviewed and edited by the European Topic Centre on Circular economy and resource use. A selection of Eurostat data was made to further complement this country profile.

¹ More from less — material resource efficiency in Europe — European Environment Agency (europa.eu)

² Resource efficiency and the circular economy in Europe 2019 — European Environment Agency (europa.eu)

³ Country profiles on Circular Economy in Europe — Eionet Portal (europa.eu)

⁴ draft-report-for-dg-env final.pdf (europa.eu)

The information profile.	is current as	of September	2024, when	members of	Eionet verified	the content of this

Austria – facts and figures

GDP: EUR 478.2 billion (2.8 % of EU27 total in 2023)

GDP per person: EUR 52 370 in 2023 (purchasing power standard) (122.4 % of EU27 (from2020) total per person)

Use of materials (domestic material consumption (DMC))

154.4 million tonnes DMC (2.4 % of EU27 total in 2022)

17.1 tonnes DMC/person (120.0 % of EU27 average per person in 2022)

Structure of the economy (2023):

Agriculture: 1.5 % Industry: 29.4 % Services: 69.2 %

Employment in circular sectors:

49,173 people employed in CE sectors (1.1 % of EU total in 2021) People employed expressed as a percentage of total employment: 1.1 %

(compared to 2.1 % for EU average in 2021)

Surface area: 83,879 square kilometres (2.0 % of EU27 total)

Population: 9,104,772 (2.0 % of EU27 total in 2023)

Note: all definitions and metadata used in this profile are taken, as shown, from Eurostat Source: Eurostat datasets, EU27 2021, EU27 2022 and EU27 2023 (accessed 21 August 2024)

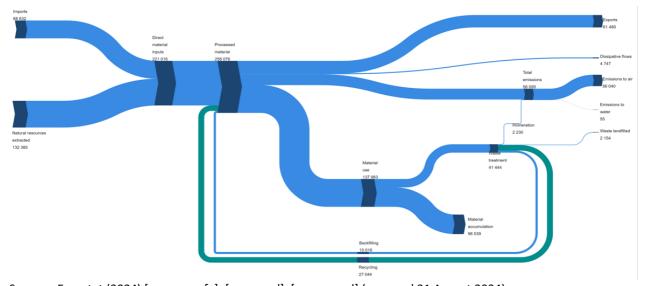


Figure 1 Material flow diagram for Austria in 2022, thousand tonnes

Source: Eurostat (2024) [env_ac_mfa], [en_ac_sd], [env_wassd] (accessed 21 August 2024)

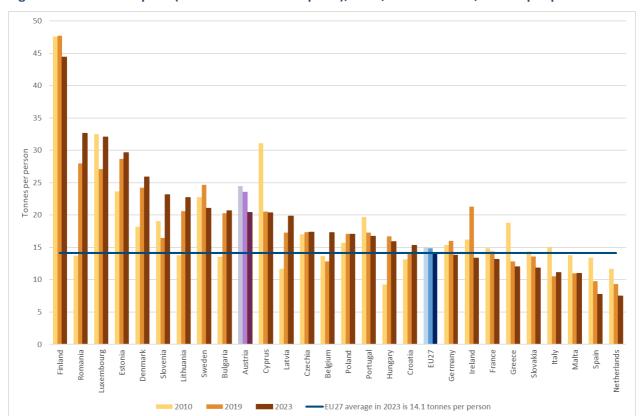
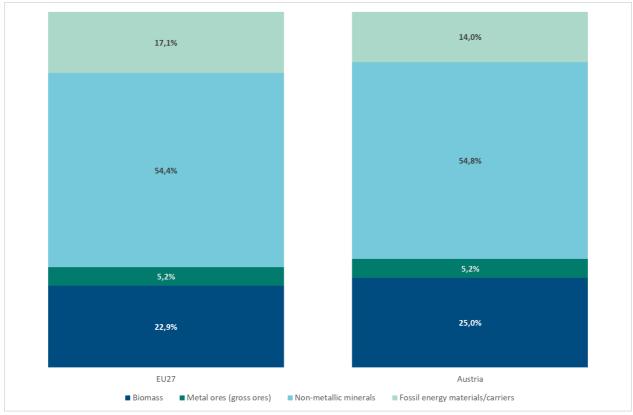


Figure 2 Material footprint (raw material consumption), 2010,2019 and 2023, tonnes per person

Source: Eurostat (2024) [env_ac_rme] (accessed 21 August 2024)

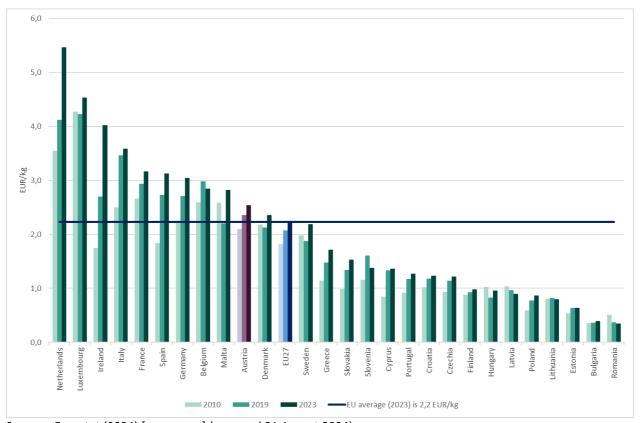




Note: totals may not sum to 100 % due to rounding

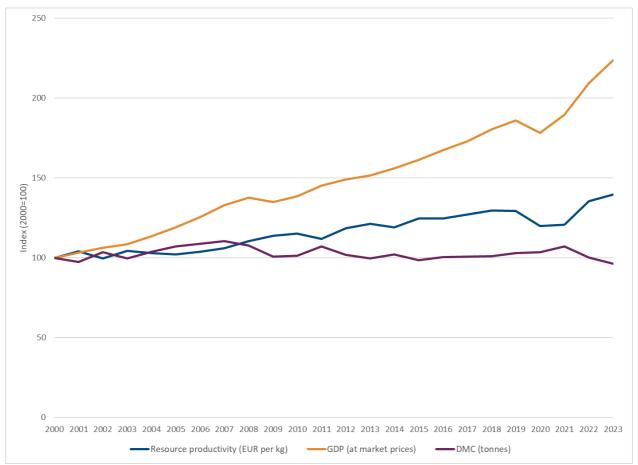
Source: Eurostat (2024) [env_ac_mfa] (accessed 21 August 2024)

Figure 4 Resource productivity (gross domestic product/domestic material consumption), EU27, 2010, 2019 and 2023, EUR per kilogramme



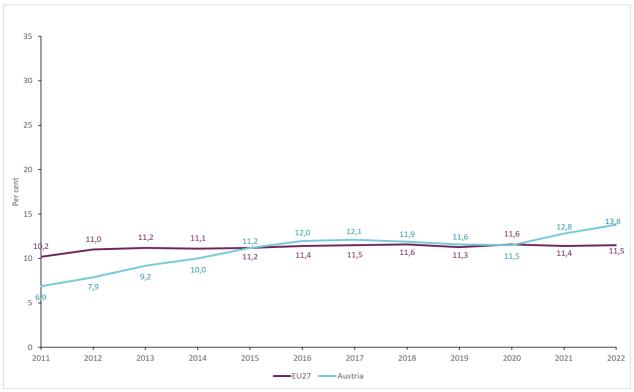
Source: Eurostat (2024) [env_ac_rp] (accessed 21 August 2024)





Source: Eurostat (2024) [env_ac_mfa], [env_ac_rp] & [nama_10_gdp] (accessed 21 August 2024)

Figure 6 Circular material use rate in Austria, 2011–2022, per cent



Source: Eurostat (2024) [env_ac_cur] (accessed 21 August 2024)

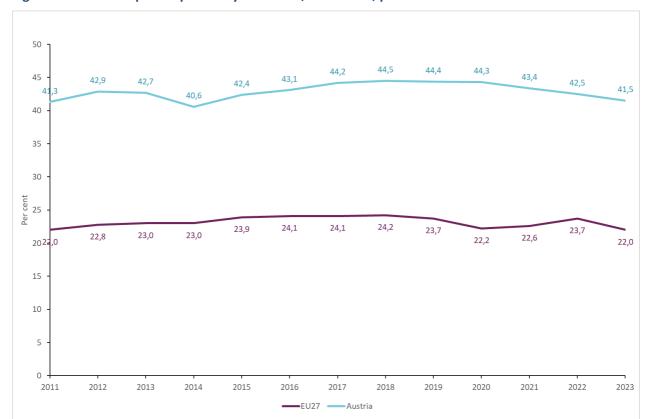


Figure 7 Material import dependency in Austria, 2011-2023, per cent

Source: Eurostat (2024) [cei_gsr030] (accessed 21 August 2024)

Existing policy framework

Dedicated national and/or regional and/or local strategy, roadmap or action plan for circular economy

The Austrian Circular Economy Strategy

- a) <u>Background:</u> To accelerate the realization of a functioning circular economy, the Circular Economy Action Plan was published by the European Commission in 2020. In the same year, the Austrian Federal Government agreed on the development of a national circular economy strategy. This was drawn up in the period from 2021 to 2022 along a multi-stage development path and was adopted and published by the Council of Ministers on 7 December 2022.
- b) <u>Visions:</u> The Federal Government's vision is to transform the Austrian economy and society into a climate-neutral, sustainable circular economy by 2050. This enables sustainable and socially just development that secures the ecosystem, our quality of life and our prosperity for us and future generations.
- c) <u>Goals and targets:</u> The CE Strategy sets targets based on indicators. See the Circular economy targets chapter on page 11.
- d) <u>Shaping the transformation:</u> The central areas of intervention of the Austrian Circular Economy Strategy are: Legal and regulatory framework conditions; Smart market incentives; Financing and Funding, Research, technology development and innovation (FTI); Digitalisation; Information, knowledge and cooperation;
- e) <u>Starting points for the transformation:</u> More than 150 specific CE measures have been defined following the seven transformation focal points in analogy to the EU Circular Economy Action Plan: Construction industry and infrastructure; Mobility; Plastics and packaging; Textile industry; Electrical and electronic devices, information & communications technologies; Biomass; Waste and secondary resources.
- f) Further readings:

 - ii. Infographics (6)
 - iii. Process and milestones for the development of the strategy (7)
 - iv. 1st Progress report on the implementation of the Circular Economy Strategy (8)
- g) <u>Upcoming reports in 2024:</u> Report "Resource use in Austria 2024". This report focuses on the circular economy and is an empirical basis for two Austrian political strategies. First, the Austrian National Circular Economy Strategy, which aims to transform the Austrian economy and society into a climate-neutral, sustainable circular economy by 2050. Second, the Raw Materials Master Plan 2030, which aims to ensure Austria's ecologically and socially secure supply of mineral raw materials from national and international sources. The "Resource use in Austria 2024" report is also an important basis for monitoring the circular economy in Austria.
- Roadmap VIE.CYCLE circular building, City of Vienna;
- a) The roadmap has been developed in the context of the "DoTank Circular City Vienna 2020-2030" (DTCC30) programme, which aims to boost circular economy in the construction sector. It is a 10-year cross-municipal program of the City of Vienna, one of the flagship projects of the Vienna 2030 Economic and Innovation Strategy and a driving force for the transition from a linear system to a circularly built city. The program integrates the levels of socio-economics, urban planning, infrastructure and building construction.

⁵ https://www.bmk.gv.at/Dam/Jcr:427f6f36-1d5a-4ef2-Bc84-52a1792ad3db/Austrian CES.pdf

⁶ https://www.bmk.gv.at/dam/jcr:d9147793-3869-435c-b106-fddc66191436/Austrian CES Infographics.pdf

⁷ https://www.kreislaufwirtschaft-helpdesk.at/entwicklung-kreislaufwirtschaftsstrategie (in German)

⁸ https://www.bmk.gv.at/themen/klima_umwelt/abfall/Kreislaufwirtschaft/strategie.html (in German)

- b) Further reading: (9)
- Actions in alignment with the EU Plastics Strategy,
- a) Key elements of the EU Plastic Strategy have been considered in the revision of the Austrian Waste Management Law (10) and corresponding product-specific ordinances (11), as for instance:
 - i. <u>Beverage packaging:</u> Waste legislation sets the target that by 2025 at least 80 percent by weight of waste from single-use plastic beverage bottles (with a capacity of up to three liters) should be collected separately. By 2027, this target will increase to at least 90 percent by weight. In addition, the retail sector retail sector has to offer a certain percentage of their beverages in refillable containers. These targets should be achieved by mandatory implementation of a deposit refunding scheme.
 - ii. Extended Producer Responsibility (EPR): According to §18a of the Packaging Ordinance 2014 (BGBl. II Nr. 184/2014), manufacturers of wet wipes, balloons, tobacco products and fishing gear are obliged to bear certain costs for the products they place on the market from 1 January 2023 and to participate in a collection and recycling system for this purpose.
 - iii. <u>Take-away consumption:</u> The report (¹²), pursuant to Article 4 of the EU Directive on the reduction of the impact of certain plastic products on the environment, provides an overview of initiatives that have already been implemented and new measures to mitigate the negative effects of take-away consumption.
- b) <u>Plastic waste prevention:</u> The Waste Prevention Plan 2023 (¹³) contains actions on plastics and packaging (p. 31 ff) (also microplastics) affecting public administration, businesses, consumers, civil societies and research institutions as well as actions to prevent littering, affecting the same groups (p. 56).
- c) <u>Microplastics</u>: The Microplastics Action Plan 2022–2025 (¹⁴) contributes to the implementation of the EU Green Deal, in particular the EU Circular Economy Action Plan, the EU Plastics Strategy and the EU Zero Pollution Action Plan. Measures in the field of microplastics also contribute to the implementation of the 2030 Agenda for Sustainable Development.

Circular economy policy elements included in other policies

Circular economy policy element	Included in policy
1) Defining circular economy criteria (e.g. building products low in harmful substances, a minimum recycling rate for asphalt of 10 %, availability of spare parts for electrical and electronic (EEE) products) in public procurement processes.	Public Procurement Action Plan
2) A set of CE policy elements to strengthen sustainable	Raw Material Masterplan 2030 (English summary)
resource management	Raw Material Masterplan 2030 (in German)
3) Research funds for Circular Economy, Production & Materials, and Al for Green	Research, Technology and Innovation (RTI) Policy
4) Waste prevention measures	Federal Waste Prevention Program 2023 (in German) Waste prevention measures
4) waste prevention measures	Regional Waste Prevention Concepts (in German)

⁹ https://viecycle.wien.gv.at/roadmap (in German)

¹⁰ https://www.ris.bka.gv.at/GeltendeFassung.wxe?Abfrage=Bundesnormen&Gesetzesnummer=20002086 (in German)

¹¹ Packaging Ordinance 2014, Deposit scheme for Single-Use Beverage Packaging Ordinance 2023

¹² https://www.bmk.gv.at/themen/klima umwelt/kunststoffe/publikationen/verringerung-auswirkungenkunststoff.html (in German)

¹³ https://www.bmk.gv.at/themen/klima_umwelt/abfall/abfallvermeidung/publikationen/avprog.html (in German)

¹⁴ https://www.bmk.gv.at/themen/klima_umwelt/kunststoffe/mikroplastik.html (in German)

5) Reduction of food loss	Strategy to prevent food waste (in German) "Food is precious!" action programme (in German)
6) Reduction of microplastics	Microplastics Action Plan 2022-2025 (in German)
7) Management of secondary resources resulting from waste	<u>Austrian Federal Waste Management Plan</u> (in German)
8) 10 CE policy elements, e.g. separate collection of organic waste and fertilizer production	Bioeconomy Action Plan (in German)

Addition to point 1:

With the Sustainable Procurement Action Plan, the public administration in Austria is contributing to the achievement of the goals of the Circular Economy Strategy. In 2023, the revision process of the already existing construction criteria started including a recommendation for state administrations, cities and municipalities, to implement sustainable public procurement.

Addition to point 2:

The implementation of the measures has been reviewed in 2023 and the results are documented in the Monitoring Report 2024 (15).

Addition to point 3:

The Federal Ministry for Climate Action, Environment, Energy, Mobility, Innovation and Technology (BMK) has made a total of EUR 66 million available for applied research in the circular economy for the years 2022 and 2023.

For the period from 2024 to 2026, EUR 92 million were approved for corresponding projects in circular economy and circular production.

This included and includes various measures, from technology- and system-centred research to training and the corresponding knowledge management. The underlying objectives, in addition to those of the circular economy strategy, are

- Increasing the research, technology and innovation intensity (RTI intensity) of the Austrian corporate sector
- Developing modern, efficient, powerful and safe technologies and innovations to tackle the major challenges facing society in the future, such as climate change and resource scarcity
- Increasing employment in the field of research, technology and innovation with a particular focus on increasing the proportion of women

Results are generally published on open4innovation.at (¹⁶) and its thematic subpages (¹⁷). The tenders are handled operationally by the Austrian Research Promotion Agency (FFG) (¹⁸).

In addition to the circular economy, there have been and still are calls for tenders on the topic of artificial intelligence, which often promote measures at the interface with the circular economy. Examples for projects in this field are:

KIRAMET uses AI-based methods to increase the recycling efficiency of old scrap. (¹⁹)

¹⁵ <u>https://www.bmf.gv.at/dam/jcr:17984664-822e-4a49-86d6-7a770b20723c/Monitoring_Bericht_2024.pdf</u> (in German)

¹⁶ https://www.open4innovation.at/en/

¹⁷ https://www.fti-ressourcenwende.at/en/

¹⁸ www.ffg.at/en

¹⁹ https://projekte.ffg.at/projekt/4664131 (in German)

- KI4Holz uses machine learning techniques and mathematical optimizations in the wood processing industry to improve (a) the conveyor flow in sawmills and (b) the order and shift planning in sawmills. (20)
- DeB-AT aims to detect and reject waste batteries in mixed waste material streams to be treated using sensor and AI-based technologies. (21)
- recAlcle is using AI for recycling-oriented waste sorting. (²²)
- AISEMO ToolAnalytics uses AI for process optimization and resource conservation for injection moulded plastics. (²³)
- KI-ALZ uses AI methods for predicting the service life of noise protection walls alongside railways.
- RE:STOCK INDUSTRY uses AI-algorithms in a FEM (finite element method) model, which is used for
 evaluating the re-use capability of industrial and commercial buildings. (25)
- MetTwin uses AI to develop a digital twin of steel production. (26)
- ErdProfi Smart 360 uses AI technologies to optimize business processes in civil engineering sector.
- INTEGRAL uses AI to improve the robustness and efficiency of the glycerine waste recycling process. (28)

Addition to point 4:

The program was evaluated and updated in 2023. It includes 93 different measures in the following areas: construction sector; plastic and packaging; food; textiles; reuse and repair; private households; companies and other institutions.

In addition to the Federal Waste Prevention Programme, a new initiative is focusing on Regional Waste Prevention. Guidance and templates have been developed for creating Regional Waste Prevention Concepts (RWPC). Complementary, the development and implementation of RWPC are piloted in close cooperation with regional stakeholders. The waste prevention concepts of specific municipalities (e.g. Hadres, Mank, Hallein, Sulmtal-Koralm and Wattens) are published online. (29)

Addition to point 5:

The "Food is precious!" action programme containing measures for food waste reduction for the different players in the food value chain was published in 2023 (also as part of the waste prevention programme). In 2024 an evaluation of the strategy and the measures specified in the action programme were started. Results are expected in Q4 of 2024.

Two out of several initiatives:

• A social media campaign for young people to raise awareness against food waste, led by civil societies, associations, interest groups, business and the Federal Ministry for Climate Action, Environment, Energy, Mobility, Innovation and Technology (BMK) (30).

²⁰ https://projekte.ffg.at/projekt/4415590 (in German)

²¹ https://projekte.ffg.at/projekt/4578455 (in German)

²² https://projekte.ffg.at/projekt/4352943 (in German)

²³ https://projekte.ffg.at/projekt/4677484 (in German)

²⁴ https://projekte.ffg.at/projekt/3970233 (in German)

²⁵ https://projekte.ffg.at/projekt/4936188 (in German)

²⁶ https://projekte.ffg.at/projekt/4265911 (in German)

²⁷ https://projekte.ffg.at/projekt/5122258 (in German)

²⁸ https://projekte.ffg.at/projekt/4641729 (in German)

²⁹ https://www.umweltbundesamt.at/umweltthemen/abfall/abfallvermeidung/regionales-abfallvermeidungskonzept (in German)

³⁰ https://www.bmk.gv.at/kostbare-lebensmittel (in German)

• Digital food hub installed by public funds and planned to be launched in 2024 to support social and non-profit organizations (presentation of the Council of Ministers 2023; Nr. 58/15) (31)

Addition to point 6:

The Microplastics Action Plan 2022-2025 is currently under evaluation. The challenges and success stories as well as an outlook on the next steps until 2025 were presented in June 2024 (32).

Addition to point 7:

By 2023, the Austrian Waste Management Plan was published by the Federal Ministry for or Climate Action, Environment, Energy, Mobility, Innovation and Technology. It includes detailed information and guidance to manage waste streams in order to re-circulate wastes to industry and to apply waste management operations at the very high end of the waste hierarchy.

Monitoring and targets

Assessment of circular economy performance

The European Commission has set up a <u>monitoring framework</u> to keep track of progress towards a circular economy. This framework provides a holistic view as it:

- measures direct and indirect benefits of 'becoming circular' and
- values the contribution of a circular economy in living well within the limits of the planet
- addresses energy and material supply risks.

It consists of **5 thematic sections** with a total of **11 statistical indicators**, some of which have additional sub-indicators. In some cases policy targets exist which should be achieved in the future, and the indicators monitor progress towards these targets. The current monitoring framework is a revision of the original framework which was set up in 2018.

This section elaborates on the assessment of Austria's progress in terms of observed trends over the last 5 years and what country characteristics or policy actions may explain differences between the country its performance and the average EU performance.

The Austrian CE Strategy (see the section on Existing policy framework on page 7) includes the development of a monitoring and evaluation scheme to track the progress towards a CE. The development of such a concept is currently ongoing.

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

The Austrian CE Strategy (see the section on Existing policy framework on page 7) includes the development of a monitoring and evaluation scheme to track the progress towards a CE. The development of such a concept is currently ongoing.

Circular economy targets

- a) Targets of the Austrian Circular Economy Strategy (non-legally binding):
 - Goal 1: Reduction of resource consumption
 - o Material footprint (MF) reduced to 7 tonnes per capita and year by 2050.

³¹ https://www.bundeskanzleramt.gv.at/medien/ministerraete/ministerraete-seit-dezember-2021/58-mr-10-mai.html (in German)

³² https://www.umweltbundesamt.at/news240606-aktionsplan-mikroplastik (in German)

Note: In 2020, the MF was 22 t/cap/year (33);

Domestic Material Consumption (DMC) reduced to 14 tonnes per capita and year by 2030.
 Note: In 2022, the DMC was 17 t/cap/year (³⁴);

- Goal 2: Increasing domestic resource productivity by 50 % by 2030

The resource productivity, the economic performance in Euro (BIP) per tonne of material consumed domestically (DMC) has continually risen in the last 15 years by decoupling of economic growth from resource consumption. Assuming that the economy will continue to grow on an average of 1.4% per year to 2030 and the resource consumption is reduced (pursuant to Goal 1 - DMC), the resource productivity should increase by 50% by 2030 compared to 2015, without the resource-intensive production processes abroad being reduced.

Note: In 2015, the resource productivity was 2266 Euro / ton (35).

- Goal 3: Increasing the circularity (CMU) rate to 18 % by 2030;

By 2030, the CMU rate of 18% should be achieved by reducing domestic material consumption and increasing production and use of recycled material.

Note: According to Eurostat, the circularity rate for Austria was 13.8% in 2022 (36).

- **Goal 4: Reduction of material consumption in private households by 10 % by 2030** (compared to reference year 2020).

Currently the volume of municipal waste from households and similar establishments is used as the indicator for material use in private consumption. In the past years, this waste stream shows an increase by + 8% from 2015 to 2019, more strongly than the population growth in the same period (+ 3%). The goal is that consumers satisfy their needs with lower material consumption and the per capita volume of the waste will fall to an equivalent degree.

Note: In 2020, the generation of municipal waste from households and similar establishments was 4 630 711 kg/year and 519 kg/cap/year (³⁷), respectively. In 2022, a minor decrease to a total amount of 4.456.984 kg/year already has taken place.

b) New targets compared to the information specified in the 2022 CE Country profile

- National legal targets (introduced after 2022)
Landfill bans for specific construction mineral wastes and gypsum products (38)

- SDG Target on reduction of food waste

This goal aims to halve per capita food waste at retail and consumer levels (including Out of Home) and reduce food waste, generated along production and supply chains. In order to achieve the goal, a Strategy to avoid food waste (³⁹) was developed in Austria.

The measures to achieve the CE targets are defined in the Austrian CE Strategy

A target for the CMU Rate is defined in the Austrian CE Strategy (cfr goal 3 in the paragraph above)

Innovative approaches and good practices

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

→ Good practice example: Financial support programmes targeting CE

³³ Page 55, https://www.statistik.at/fileadmin/user_upload/Projektbericht-MFA-2000-2022.pdf (in German)

³⁴ Table 11, https://www.statistik.at/fileadmin/user_upload/Projektbericht-MFA-2000-2022.pdf (in German)

³⁵ Table 22, https://www.statistik.at/fileadmin/user_upload/Projektbericht-MFA-2000-2022.pdf (in German)

³⁶ https://ec.europa.eu/eurostat/databrowser/view/cei_srm030/default/table?lang=en

³⁷ https://www.bmk.gv.at/themen/klima_umwelt/abfall/aws/bundes_awp/bawp2023.html (in German)

³⁸ https://www.wko.at/oe/gewerbe-handwerk/bau/deponierungsverbote-laut-deponieverordnung (in German)

³⁹ https://www.bmk.gv.at/themen/klima umwelt/abfall/abfallvermeidung/publikationen/strategievermeidung.html (in German)

Green Finance Agenda

The Green Finance Agenda of the Republic of Austria aims to channel private capital into climate and environmentally friendly investments. In addition to achieving climate targets, this is intended to support the transition to a sustainable, circular economy. The agenda contains proposals for measures and recommendations for action to redirect financial flows to achieve climate targets. On 6 September 2023, the "Green Finance Agenda" was adopted by the Council of Ministers ⁽⁴⁰⁾, retrieved at 15.12.2023. It is noted that the implementation of the Green Finance Agenda includes the issuance of a Green Bond in 2022 for EUR 4 billion, having adopted a Green Bond Framework in alignment with Green Bond Principles, as published by the International Capital Market Association. The Austrian Green Investor Report 2023 highlights circular economy in the "pollution prevention and control" category, with a total eligible amount of EUR 310,7 mio allocated to this purpose. Capital expenditures are subsidised under the Investment Bonus Act, including "measures to reduce raw material consumption, to improve recyclate quality by at least 10% by removal of contaminants, plants for the recovery of critical raw materials and recycling plants etc." (41).

CE activities are eligible for public funding

The new funding program "Circular Economy" was set up as part of the amendment to the Environmental Promotion Act (UFG) to promote the protection of the environment and human health. The important goals include:

- the reduction of resource consumption, the efficient use of resources and the avoidance and recycling of waste,
- the production and use of high-quality, low-pollutant secondary raw materials,
- sustainable design and design of products, production processes and services in the spirit of the circular economy (circular design),
- extending the lifespan and increasing the intensity of use of products (e.g. through re-use, repair or remanufacturing) and intensifying the use of products through shared use.

For this purpose, the Ministry for Climate Protection is providing a separate funding area for companies for the period 2024-2027(42).

The 1st funding call supports four project categories:

- 1. <u>Circular design</u>: Funding is provided for investments related to the development and implementation of sustainable design and the design of production processes, products and product use in the sense of the circular economy.
- 2. <u>Textiles and bed mattresses</u>: Investments related to sustainable design, production, re-use and recycling of textiles including bed mattresses will be encouraged.
- 3. <u>Facilities for the material recovery or recycling of gypsum waste, mineral wool waste, wood ash, carbon fibres and glass-fibre reinforced plastics are funded.</u>
- 4. <u>Socio-economic enterprises (SÖB):</u> Reuse and repair projects are funded.

Further information (43)

Database for funding of CE projects and measures

The database is accessible online (44).

https://ris.bka.gv.at/geltendefassung.wxe?abfrage=bundesnormen&gesetzesnummer=10010755&fassungvom=20 99-03-16&ShowPrintPreview=True (in German)

⁴⁰ https://www.bundeskanzleramt.gv.at/medien/ministerraete/ministerraete-seit-dezember-2021/68-mr-6-sept.html (in German)

⁴¹ https://www.oebfa.at/en/presse/presseuebersicht/2024/green-investor-report-2023.html

⁴³ https://www.publicconsulting.at/newsletter/kreislaufwirtschaft-start-der-aktuellen-ausschreibung (in German)

⁴⁴ https://kreislaufwirtschaft.at/financial-instruments/ (in German)

→ Good practice example: Research & innovation, Digitalization

Digitalization to boost CE

The combination of circular economy and digitalisation also brings additional potential to the "research and innovation" sector. In the Comet competence center "Recycling and Recovery of Waste 4.0 (ReWaste 4.0)" and "Recycling and Recovery of Waste for Future (ReWasteF)", new Industry 4.0 solutions with a special focus on networked recycling and recovery processes of the highest quality are investigated and implemented.

→ Good practice example: Legal framework

CE elements in legislation

In the run-up to the publication of the Circular Economy Strategy and in the first year thereafter, the Ministry of Climate Protection issued or adapted a number of laws and regulations in order to advance the implementation of the strategy.

Examples:

- From 2025, Austria will have a deposit refunding scheme for single used bottles and cans. This
 ensures that beverage packaging does not end up in nature but can be used as a secondary raw
 material in the best possible way. In particular, the collection will be strengthened by this measure.
- The Landfill Ordinance was amended on 1. April 2021 (⁴⁵). From 1.1.2024 onwards, there is a landfill ban for specific mineral C&D wastes and from 1.1.2026 onwards, there is a landfill ban for specific gypsum products. The landfill bans are intended to strengthen reuse and recycling.
- The increased use of end-of-waste ordinances is intended to facilitate access to secondary raw materials. The End-of-Waste Ordinance for excavated soil, which is currently being drafted, is intended to facilitate the recovery of excavated soil.
- With the revision of the national waste legislation, several measures have been implemented. For example, mandatory quotas for reusable beverage packaging and the separate collection of textile waste from 2025 onwards have been introduced.
- The drafted amendment of the Waste Incineration Ordinance contains a fundamental obligation
 to incinerate municipal sewage sludge from wastewater treatment plants and an obligation to
 recover phosphorus. This could replace a considerable share of the phosphorus fertiliser
 consumption in Austria.
- By the amendment of the Recycling Wood Ordinance sorting of recycling wood at source was strengthened to provide the manufacturing industry with high quality input materials from secondary wood waste.
- Harmonized collection scheme for plastic packaging throughout the hole territory of Austria by beginning of 2023. This shall foster the plastic packaging recycling engagement.
- → Good practice example: Education and awareness-raising, collaboration

Circular Economy Helpdesk (46)

The HelpDesk is a National Contact Point for CE was launched in February 2024. It provides up-to-date information on the circular economy strategy and its implementation. The HelpDesk answers general enquiries on CE from all stakeholders (e.g. citizens, companies). The HelpDesk is financed by the Ministry of Climate Protection and complements the implementation of the CE Strategy.

⁴⁵ https://www.ris.bka.gv.at/eli/bgbl/II/2021/144/20210401

⁴⁶ https://www.kreislaufwirtschaft-helpdesk.at/ (in German)

Circularity at the Climate Lab (47)

The platform provides physical rooms for stakeholder engagement and participation. Its focus is on circular economy. It complements the implementation of the CE Strategy.

→ Good practice example: Product-related policies, including on the R-strategies (repair, reuse, remanufacturing, etc)

Data on re-use

- Re-use statistic (legal reporting requirement)
- Re-use data, provided by socio-economic organizations in Austria (48)

Examples of private policy initiatives (sectoral)

→ Good practice example: New business models

Circular mattresses (49)

The "Circular Mattresses" report gives insights into the possibilities of recycling mattresses in Austria as well as the challenges and opportunities for the establishment of closed material cycles. It reflects the opinions of the people involved and makes recommendations for next steps. Among other measures, the establishment of an extended producer responsibility (EPR system) system stands out in particular. An EPR system can be a powerful incentive and funding tool to increase mattress recycling and reuse rates, reduce environmental impacts, and promote ecological design principles in mattress production. Insights into good practices from other countries provide guidance and inspiration on how the establishment of a fair and financially viable system in Austria can work, and mattress manufacturers from Austria and abroad already have circular mattresses in their range, showing that it is possible.

→ Good practice example for electro, electronics, textiles and furniture

Re-Use in Austria

Re-Use Austria (50) is a voluntary representation of the interests of socio-economically oriented re-use companies in Austria as well as existing repair networks and repair initiatives and consists of more than 40 member organisations. An online repair guide (51) allows consumers to search for re-use companies.

→ Good practice example for vehicles and mobility

Carsharing (52)

Shared mobility is a way to reduce the number of vehicles and therefore reduce resource consumption and emission. In 2023, the Austrian Ministry for Climate Protection published the "Sharing Strategy in the Passenger Mobility Sector" (53), an implementation strategy of the Mobility Master Plan for the sharing of

⁴⁷ https://climatelab.at/circularity/ (in German)

⁴⁸ https://www.repanet.at/re-use-toolbox/re-use-repathek/repanet-taetigkeitsbericht-2022/ (in German)

⁴⁹ https://climatelab.at/ergebnisbericht-zirkulaere-matratzen/ (in German)

⁵⁰ https://reuseaustria.at/ (in German)

^{51 &}lt;a href="https://www.reparaturfuehrer.at/">https://www.reparaturfuehrer.at/ (in German)

⁵² https://www.umweltbundesamt.de/themen/verkehr/nachhaltige-mobilitaet/car-sharing (in German)

⁵³ https://www.bmk.gv.at/themen/mobilitaet/alternative_verkehrskonzepte/sharing_strategie.html (in German)

vehicles (sharing) and journeys (ride-sharing). Several car sharing companies exist as well as platforms for private car sharing and carpooling.

→ Good practice example for biomass

BioBASE compass for raw materials and residues, products and their targeted process chains (54)

As an innovation platform for the bioeconomy and circular economy, BioBASE GmbH acts as a central information hub and service agency for business, science, administration and politics. With the help of the BioBASE Compass, the material flows of the bioeconomy become visible. The Compass is a database that lists ongoing national (and subsequently international) actors and activities. It links fields of activity (from raw materials/residues to products) of companies with areas of activity of research institutions and educational institutions as well as public sector bodies. These processes are linked to each other in the compass and form dynamic process chains.

→ Good practice example for plastics

Plastics Cluster Upper Austria (55)

In December 2021, the Plastics Cluster Upper Austria published a roadmap. By 2030, Upper Austria aims to be a model region for the circular economy in plastics.

→ Good practice example for textiles

Pilot project Textile Recycling (56)

Lenzing, ARA, Salesianer Miettex, Caritas and Södra are joining forces to promote the circular economy. The joint project includes the collection, transport and sorting of used textiles as well as their further processing. Together, they have succeeded in collecting used household and clothing textiles, producing pulp from them and finally processing them into new lyocell and viscose fibres. After the sorting process, the textiles are delivered to Södra, where they are recycled and turned into OnceMore® brand pulp. It is the world's first process to be used for the large-scale recycling of textile waste from blended fabrics. With the innovative REFIBRATM technology, Lenzing uses this technology to produce new lyocell and viscose fibers.

→ Good practice example for construction sector

Specifications of tenders for Social Urban Mining

The income from reusable materials and components that are reused can be used to finance predemolition removal work by social enterprises. In request these services in a standardized manner in the corresponding tenders, sample texts for specifications of these activities were developed by the BauKarussell on behalf of the Ministry of Climate Protection. These sample texts can be downloaded (57,58).

→ Good practice example for waste and secondary raw materials

^{54 &}lt;a href="https://biobase.at/biobase-kompass/">https://biobase.at/biobase-kompass/ (in German)

⁵⁵ https://www.kunststoff-cluster.at/ (in German)

⁵⁶ https://www.lenzing.com/newsroom/press-releases

⁵⁷ https://www.bmk.gv.at/themen/klima_umwelt/abfall/Kreislaufwirtschaft/bauwesen/urban_mining.html (in German)

⁵⁸ https://www.baukarussell.at/services/ (in German)

Innovative recycling facilities

A couple of innovative recycling facilities are under development and construction, respectively. For example:

- Gypsum recovery (⁵⁹)
 - The construction company PORR, the drywall construction specialist Saint-Gobain and the waste management company Saubermacher are aiming for Austria's first gypsum-to-gypsum recycling plant. The plant should have an annual capacity of around 60,000 tonnes and will thus be able to meet the demand of Eastern Austria. Commissioning at the Saint-Gobain site in Stockerau is scheduled for mid-2025.
- Metal smelter for residues from mechanical sorting of shredder light fractions (60) A large-scale plant for thermal metal extraction is currently under construction. In this plant, around 100,000 tons of secondary waste from shredder residue processing are to be further treated annually in a pyrometallurgical process. To this end, 60 million euros are to be invested in recovering copper and precious metals as metal alloys, producing slag that might be used as construction material, air-pollution control residues with potential zinc recovery, as well as energy products (heat, electricity).
- → Good practice example for a stakeholder platform

Circular Economy Forum Austria (61)

The Circular Economy Forum Austria is Austria's largest independent multi-stakeholder platform for the promotion of the circular economy. The forum supports companies and their environment on their way to the circular economy and connects important players in the creation of innovative value creation cycles.

The forum initiates and promotes the exchange and further development of knowledge, ideas and implementation of circular economy measures across companies, politics, science, research and design.

It is a learning, development and dialogue platform for Austrian companies to create a circular innovation ecosystem in which all participants benefit from international collaboration and cooperation.

The way forward

Identifying and addressing barriers and challenges

Austria refers to a study on barriers "Future circular economy: Relevance & challenges on the way to a circular business model".

• <u>Summary</u>: The study conducted in 2022 by EFS Consulting, Fraunhofer Austria and the Vienna University of Technology identifies key challenges for the Austrian manufacturing industry in the transformation to a circular economy. Almost 90% of the 229 participating companies, predominantly board members and top management, consider the circular economy to be highly relevant for long-term success. Main barriers are in the area of product material/design, followed by technology and supply chain challenges, particularly in recycling and reverse logistics. Despite the strategic importance and initial circular initiatives, it is clear that a transition to higher-value circular strategies such as refurbishing or remanufacturing is necessary in order to exploit the full potential of circular business models and establish the circular economy as the dominant model by 2050 (⁶²).

⁵⁹ https://www.saint-gobain.at/presseaussendung/kreislaufwirtschaft-im-vormarsch-startschuss-fuer-das-erstegips-zu-gips-recyclingwerk-oesterreich (in German)

⁶⁰ https://tbs.bernegger.at/rohstoffpark-enns/ (in German)

⁶¹ https://www.circulareconomyforum.at/ (in German)

⁶² https://www.circulareconomyforum.at/ (in German)

- Further reading (63)

Future policy plans

No update on future policy plans available.

⁶³ Whitepaper | Zukunft Kreislaufwirtschaft - EFS Consulting (in German)

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 Agency.

