

Circular economy country profile 2024 – Sweden



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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 Sweden, all input was provided by the Swedish Environmental Protection Agency (Naturvårdsverket). 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 \(europa.eu\)](https://www.euro.pecd.eu/en/more-from-less-material-resource-efficiency-in-europe)

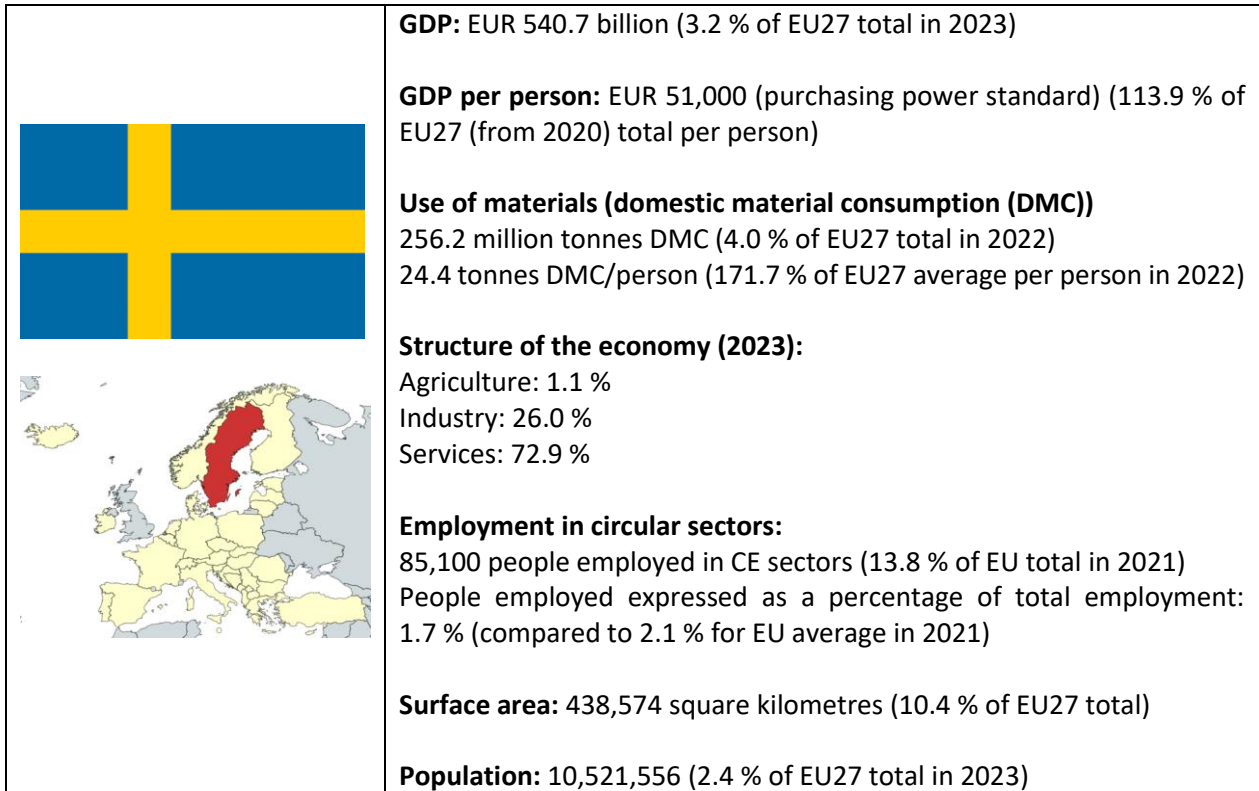
² [Resource efficiency and the circular economy in Europe 2019 — European Environment Agency \(europa.eu\)](https://www.euro.pecd.eu/en/resource-efficiency-and-the-circular-economy-in-europe-2019)

³ [Country profiles on Circular Economy in Europe — Eionet Portal \(europa.eu\)](https://www.eionet.europa.eu/portal/en/country-profiles-on-circular-economy-in-europe)

⁴ [draft-report-for-dg-env_final.pdf \(europa.eu\)](https://www.euro.pecd.eu/en/draft-report-for-dg-env_final.pdf)

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

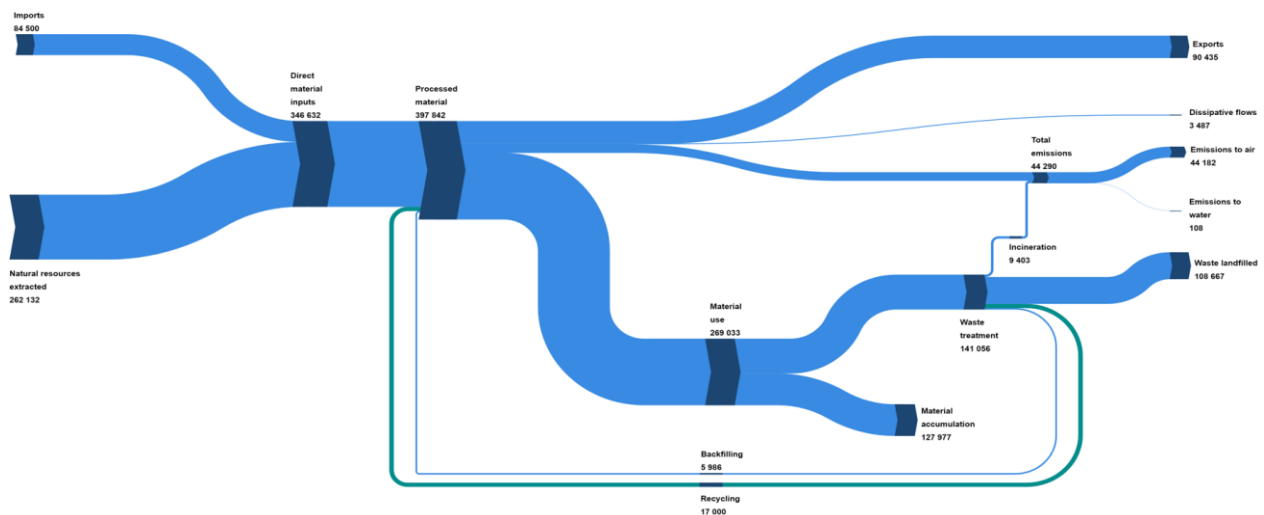
Sweden – facts and figures



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

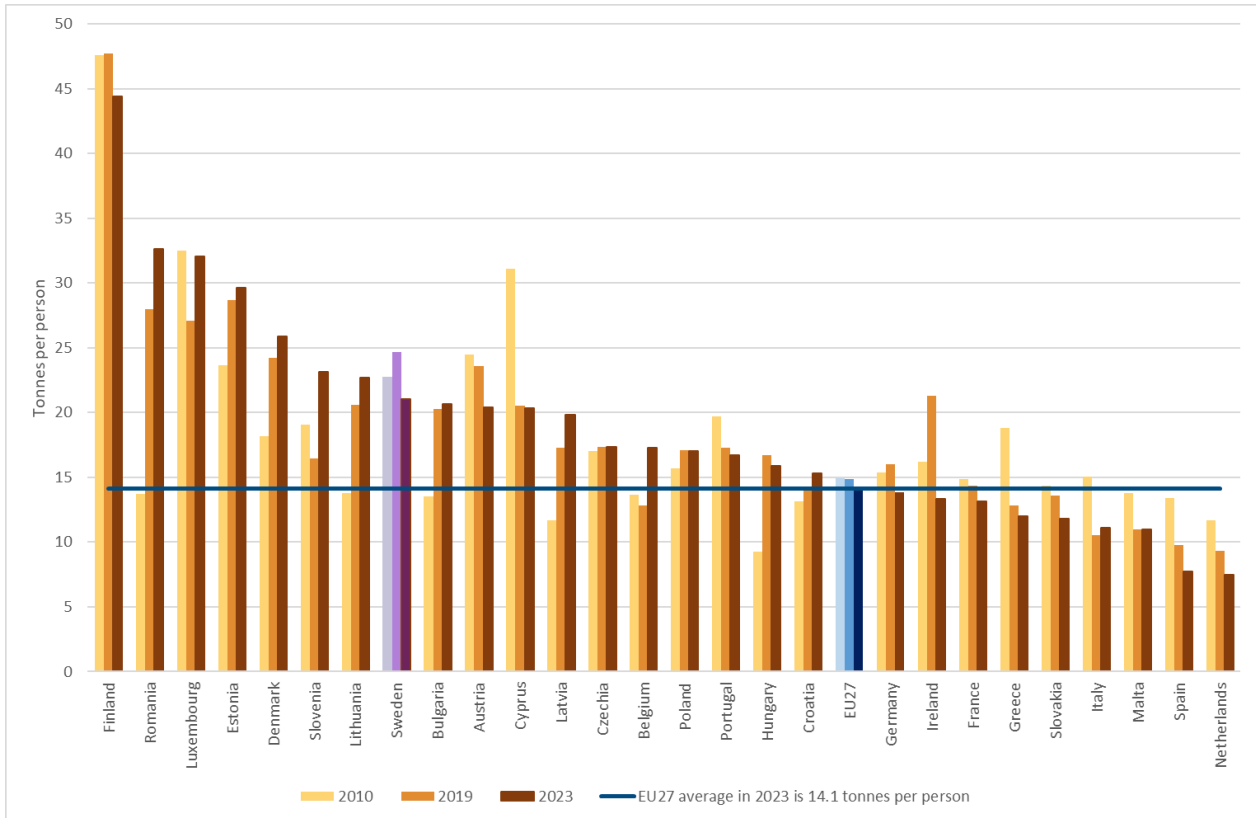
Source: Eurostat datasets, EU27 2021 EU27 2022 and EU27 2023 (accessed 21 August 2024)

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



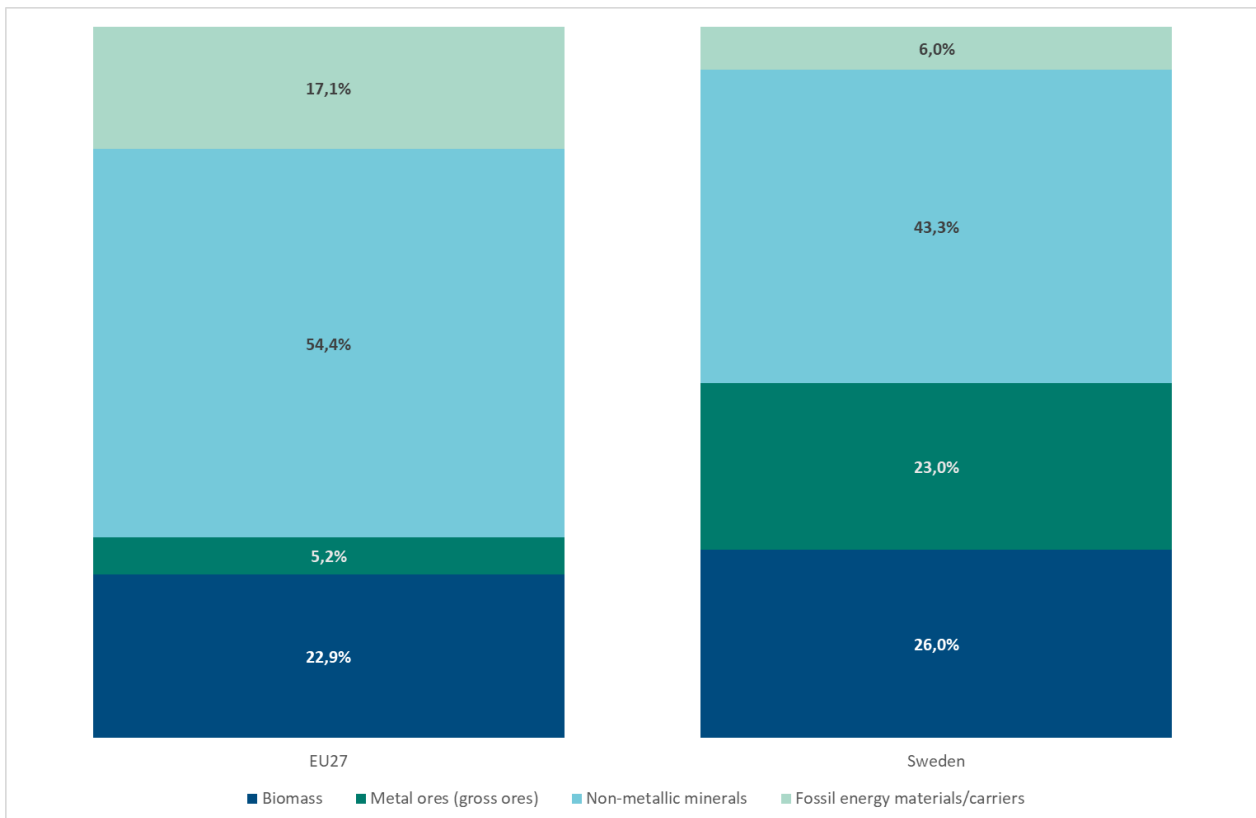
Source: Eurostat (2024) [env_ac_mfa], [en_ac_sd], [env_wassd] (accessed 27 August 2024)

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



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

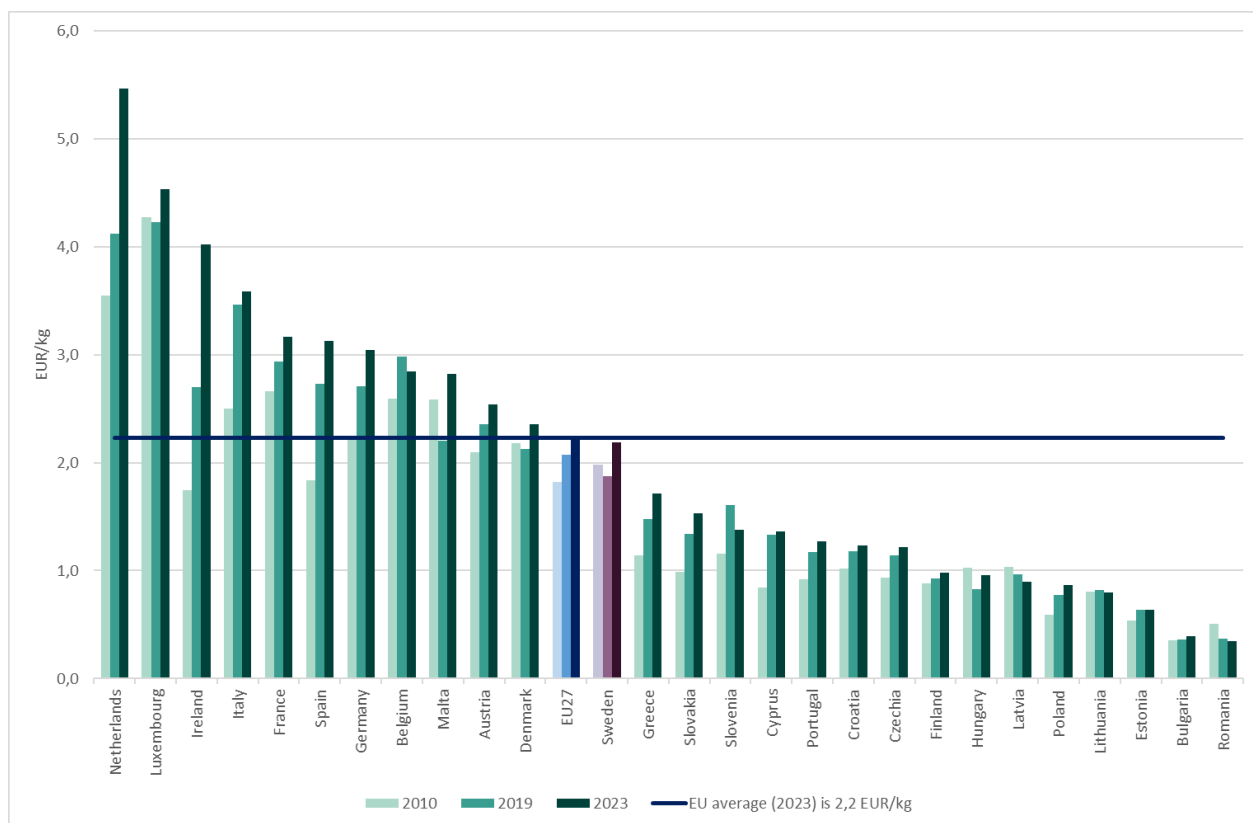
Figure 3 Domestic material consumption by selected material category, EU and Sweden, 2023, per cent



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

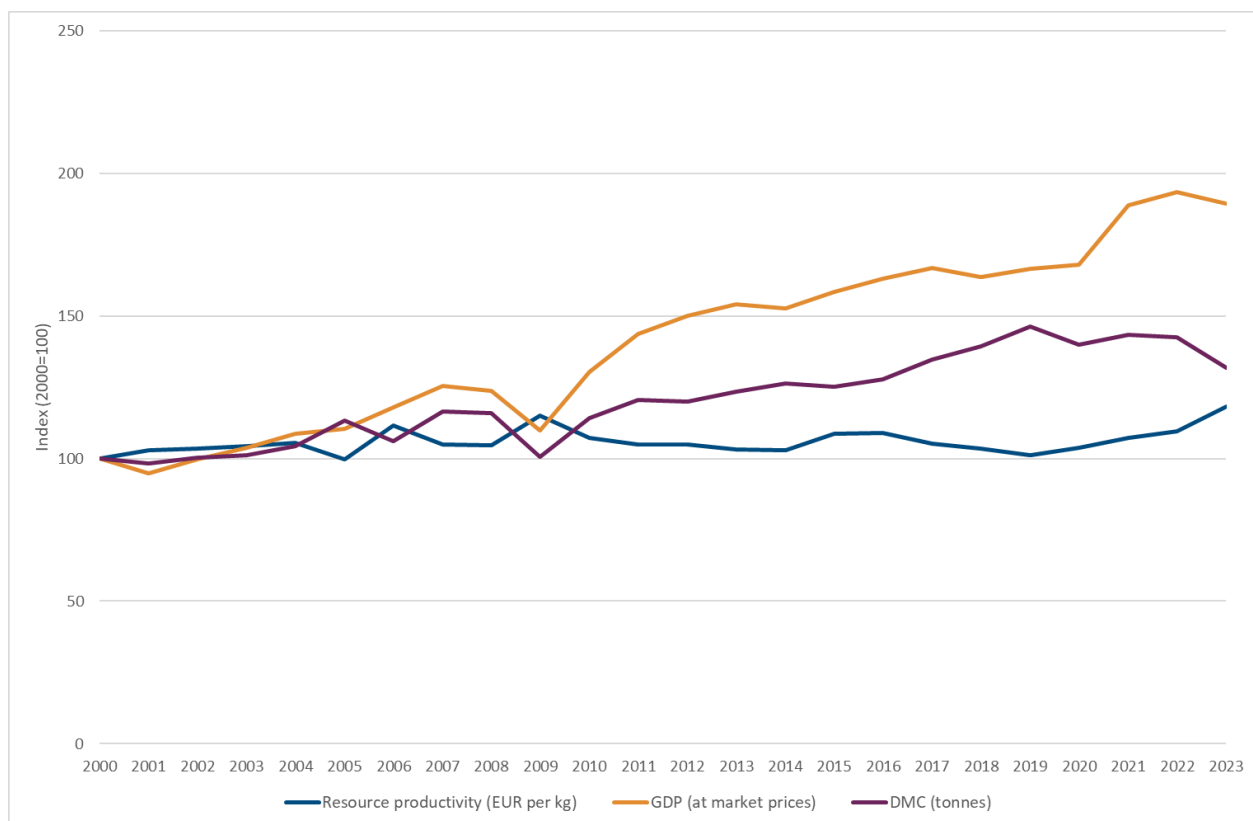
Source: Eurostat (2024) [env_ac_mfa] (accessed 21 August 2024)

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



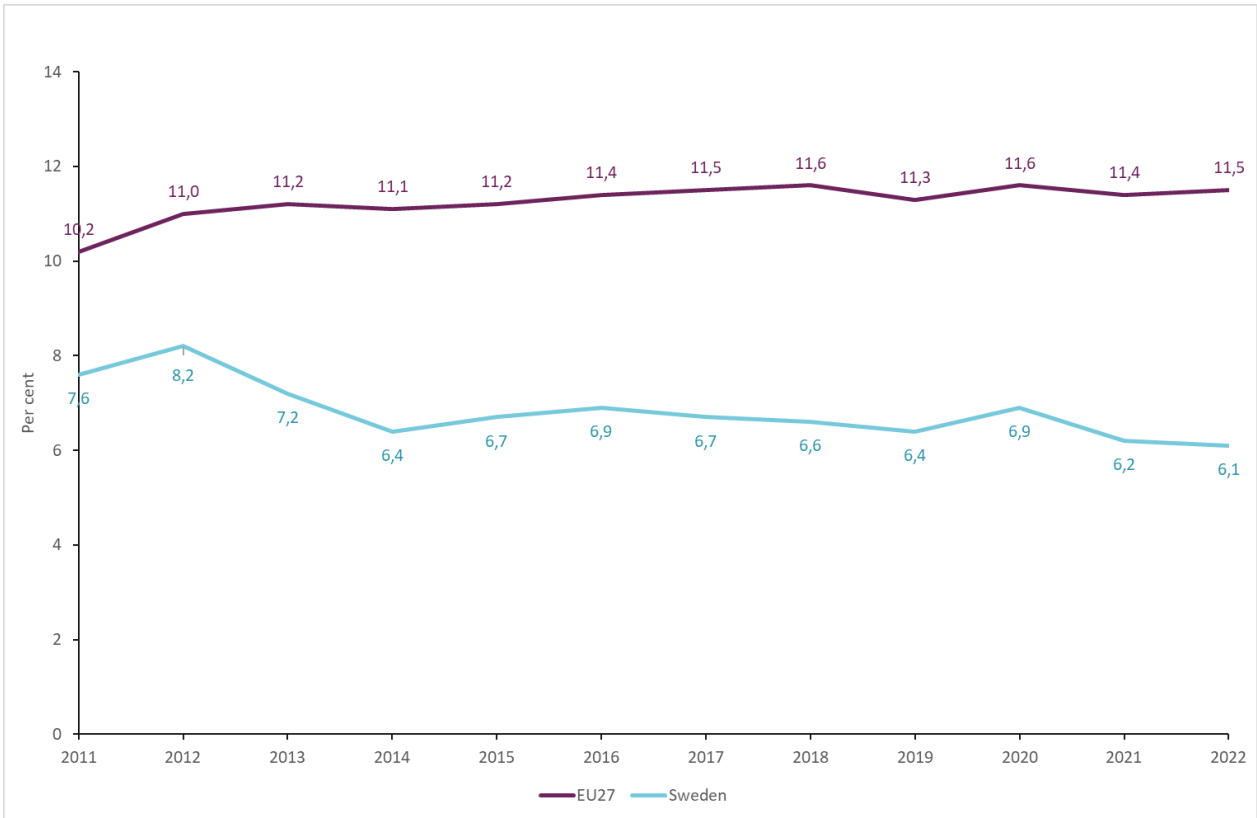
Source: Eurostat (2024) [env_ac_rp] (accessed 21 August 2024)

Figure 5 Gross domestic product, domestic material consumption and resource productivity trends, Sweden, 2000–2023, index (2000=100)



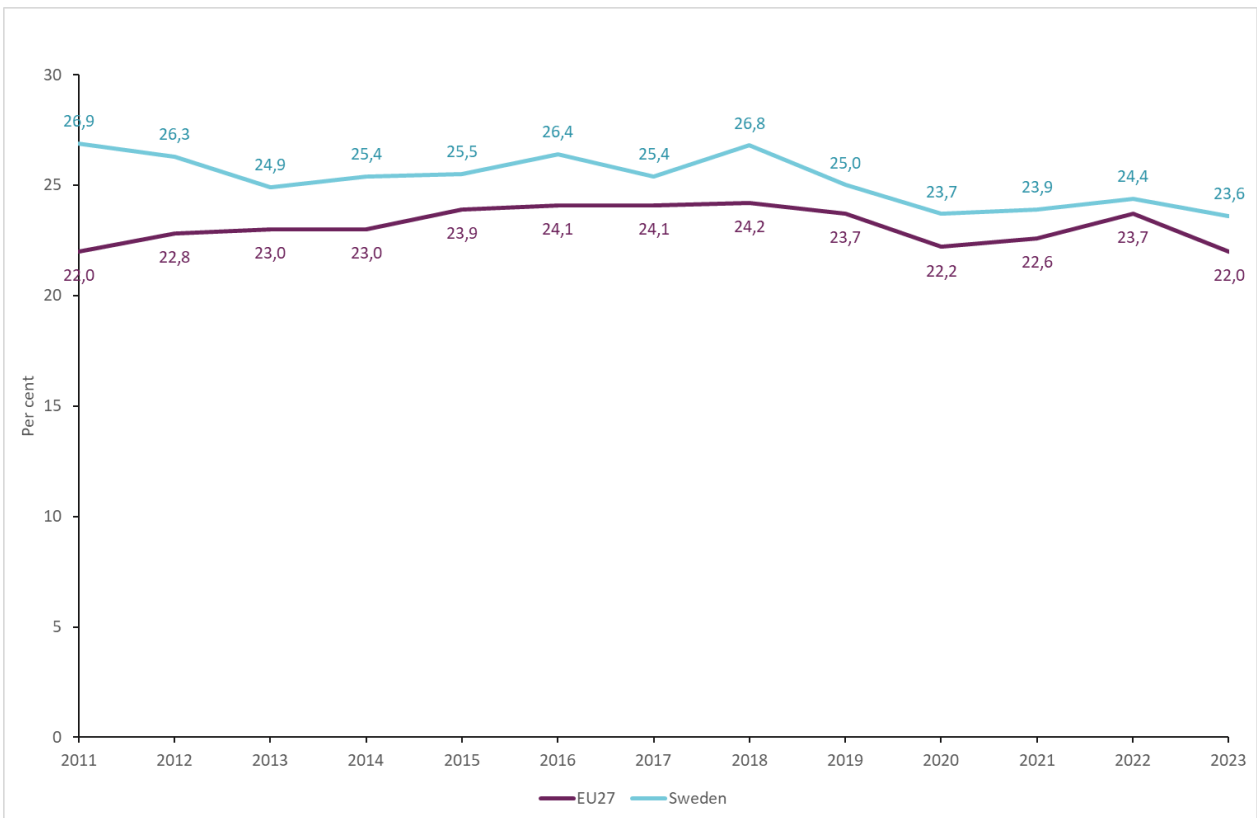
Source: Eurostat (2024) [env_ac_mfa], [env_ac_rp] & [nama_10_gdp] (accessed 21 August 2024)

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



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

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



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

Existing policy framework

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

Sweden has adopted a **National Strategy for the transition to a CE** in July 2020 ⁽⁵⁾. This has been followed by a CE action plan ⁽⁶⁾ as well as an Action Plan for Plastics ⁽⁷⁾. The strategy and the two action plans remain the same since 2022.

The **National Waste Management Plan and Waste Prevention Programme** ⁽⁸⁾ is currently under revision, due to be published by the end of 2024. The aim is to identify and make visible the root causes of the identified environmental problems, obstacles and opportunities to achieve the goals, key players as well as possible but unused solutions/potentials to speed up the work with a better potential to reach national and global goals.

In addition to the government's **Action Plan for Plastics**, the Swedish Environmental Protection Agency has developed a **roadmap** ⁽⁹⁾ together with the actors within the sector. The roadmap provides an overall picture and a guide for where we are going and what we mean by sustainable use of plastics. The intention is to create a unified understanding of which shifts need to take place and which development areas are particularly important to work on. The roadmap will also inspire action. It was published in 2021.

The Swedish EPA has since 2022 until 2024 been required to report back to the government regarding the work on increased **circular plastic use without leakage**. The Swedish EPA must report on the agency's work to promote circular and fossil-free plastic use and to reduce plastic, micro and nano plastic in the sea and nature. The EPA must also report what efforts have been carried out to push the issue in the negotiations for a new global agreement against plastic pollution. The EPA must report what result the EPA's work in the plastic area has been with focus on expected effects.

Plastic related policy instruments implemented since 2022 (mostly due to the Single used plastic directive).

- Ban on straws and disposable cutlery, cups and food boxes made of styrofoam from 1 January 2024.
- Ban to put disposable cups that contains more than fifteen percent plastic on the Swedish market from 1 January 2024.
- Requirement that drinking bottles made from PET must contain at least 25 percent recycled plastic from 2025 and 30 percent recycled plastic by 2030.
- Corks and lids made from plastic must be attached to the container throughout use. The requirement will come into force on July 3, 2024.
- As of 2030, the goal is that new plastic packaging that contains more than 50 percent plastic must contain at least 30 percent recycled plastic.
- Requirement to offer reusable take away cups and food boxes from 1 January 2024.
- The producers of certain disposable plastic products for example chewing gum and portioned snus must from 2022 inform the consumers of how to handle the product when it becomes waste and about the negative impact littering has on the environment.
- As of April 30, 2024 it is forbidden to use confetti that contains plastic outdoors.

⁵ <https://faolex.fao.org/docs/pdf/swe208661.pdf>

⁶ <https://www.regeringen.se/informationsmaterial/2021/01/cirkular-ekonomi---handlingsplan-for-omstallning-av-sverige/> (in Swedish)

⁷ <https://www.regeringen.se/rapporter/2022/02/sveriges-handlingsplan-for-plast/> (in Swedish)

⁸ <https://www.naturvardsverket.se/amnesomraden/avfall/pagaende-arbeten/planen-for-minska-och-forebygga-avfall/> (in Swedish)

⁹ <https://www.naturvardsverket.se/4ac159/globalassets/media/publikationer-pdf/6900/978-91-620-6998-8.pdf>

- To reduce littering the government has extended laws about what is considered punishable with littering. Meaning that all littering including candy wrappers, cigarette butts and snus is subject to criminal liability, i.e. fines since 2022.

The Swedish EPA has produced a report “**Global standards for plastic products**”⁽¹⁰⁾ to promote the development of global standards for circular and non-toxic plastic products. The assignment was reported on 30 October 2023. On behalf of the government, the Swedish Environmental Protection Agency has produced a report to promote the development of global standards for circular and non-toxic plastic products, for the international negotiation meetings on a global agreement for plastics. The report contributes with knowledge about sustainable and circular design for plastic products. The report contributes with knowledge about sustainable and circular design for plastic products, and describes how ecodesign criteria and product standards can be used as tools for sustainable and circular design. The report contains proposals for general criteria for plastic products, as well as proposals for product-specific criteria for packaging, fishing equipment and textile products. The Swedish Institute for Standards has contributed to this work, including texts describing the process of developing standards.

Sweden has established a **national plastic coordination** with the aim of increasing and disseminating knowledge about plastic and microplastics, and, together with other actors, be a driver of sustainable plastic use. The work is coordinated by the Swedish EPA⁽¹¹⁾.

Within the framework of National plastic coordination, seminars and webinars are arranged to spread knowledge to actors on the market within the entire plastics value chain. Since 2022 National plastic coordination have arranged “Plastic bubble, a day about sustainable plastic use”, when the actors throughout the plastics whole value chain meet to spread knowledge, have dialog and collaboration. The Swedish Environmental Protection Agency has financed a number of different projects, for example four different “smart take away”-projects that were presented at a webinar.

National plastic coordination has, based on demand, participated in 140-160 different events organized by other actors per year with the aim of spreading knowledge. National plastic coordination offers actors to participate in various work groups based on their field. Within the work groups knowledge is disseminated and common challenges and problems are discussed, creating opportunities for dialog and collaboration. Ten work groups are active within the national plastic coordination; Reuse of packaging, Take away-packaging, international processes, Plastic in health care, Municipal plastic, The authority network, Research network, Plastic in electronics, Material recycling capacity and the Tire wear group. This type of dialogue and interaction between actors has generated in several collaborations and projects.

Dialogue and collaboration in the joint international work on sustainable plastic use has been carried out with Plastikviden, Denmark, SYKE and Finland’s department of the Environment, Handelens Miljøfond in Norway, European Plastic Pact, Circular Plastic Alliance, Sea Circular, IG plastics, OECD among other international standardization projects, that is hold together by the Swedish Institute for Standards, were for instance a common EU nomenclature standard for plastics has been completed.

Every month National plastic coordination send out a progress report with current information in the area, today it has over 1,800 subscribers. In the framework for The Swedish Environmental Protection Agency’s roadmap for sustainable plastic use a **research agenda about microplastics**⁽¹²⁾ was put together which contributes to a need-based prioritization of research and innovation efforts. A study was commissioned which indicates that paint is a significant source of microplastics in Sweden.

¹⁰ <https://www.naturvardsverket.se/om-oss/regeringsuppdrag/slutredovisade-regeringsuppdrag/globala-standarder-for-plastprodukter/> (in Swedish)

¹¹ <https://www.naturvardsverket.se/amnesomraden/plast/hallbar-plastanvandning/> (in Swedish)

¹² <https://www.naturvardsverket.se/publikationer/7100/978-91-620-7107-3/> (in Swedish)

The Swedish government has given the University of Borås the task to establish and lead Textile & Fashion 2030 – **The National Platform for Sustainable Fashion and Textiles** ⁽¹³⁾. The assignment is led by Smart Textiles, part of Science Park Borås at the University of Borås, in collaboration with the Swedish School of Textiles, the Swedish Fashion Council, the RISE Research Institutes of Sweden, the Swedish Trade Federation, and TEKO, the Swedish trade and employers' association for companies working in the textile and fashion industry. In 2018-2022, they received SEK 8 million/year of government support to build a national platform for textiles. In 2023 and 2024, they received SEK 1 million to run the platform further.

New sorting requirement for textile waste

From 1 January 2025, there are requirements for sorting and separate collection of textile waste from households and businesses, following the requirements in the Waste framework directive. Municipalities will be responsible for collecting textile waste that is municipal waste. They are also responsible for information initiatives linked to the new requirements ⁽¹⁴⁾.

As of 1 January 2024, requirements for sorting and separate collection of biowaste from households and businesses apply, which is regulated by the Waste Ordinance Chapter 3. The requirements are linked to the introduction of Article 22 of the Waste Directive (2008/98/EC) on bio-waste and require EU Member States to ensure that bio-waste is either separated and recycled at source, or collected separately and not mixed with other types of waste. From 1 January 2024, there will also be a requirement that packaging must be emptied of its contents and then recycled.

Sweden has a **National Action plan for Reduced Food Waste**, "Fler gör mer" ⁽¹⁵⁾, which affects the entire food chain – primary production, producers, trade, meals in healthcare, schools and social care, restaurants, consumers, authorities and research and innovation. The action plan has been developed by the Swedish National Food Agency, the Swedish EPA and the Swedish Board of Agriculture in close collaboration with stakeholders and was submitted to the Government in June 2018. It contains 42 measures to reduce food waste in Sweden. The implementation of the action plan's measures will contribute to the achievement of the global sustainability goal in Agenda 2030 number 12.3. It will also contribute to the transition to sustainable consumption and production, as well as a circular economy.

The **Swedish Environmental Protection Agency** has published **comprehensive guidance** ⁽¹⁶⁾ on what applies when waste is generated, collected and sorted, mapping of the content of hazardous substances in waste, classification of waste, recycling and the assessment of when waste ceases to be waste.

The **Swedish Chemical Agency** has developed a **guide** ⁽¹⁷⁾ for those who recycle or manufacture recycled materials. The guide is also aimed at those who manufacture or import products that contain recycled materials. The guide contains information about rules and exemptions that apply as well as how to create better conditions for safe recycling without recirculating particularly hazardous substances.

The **Swedish National Board of Housing, Building and Planning** has been commissioned, in February 2022, by the government to develop the work on the transition to a circular economy in the construction sector ⁽¹⁸⁾. The purpose of the assignment is to contribute to achieving Sweden's environmental and climate goals. According to the assignment, the National Board of Housing, Building and Planning will map how

¹³ <https://textileandfashion2030.se/en/>

¹⁴ <https://www.naturvardsverket.se/vagledning-och-stod/avfall/krav-pa-separat-insamling-av-textilavfall/> (in Swedish)

¹⁵ https://www.livsmedelsverket.se/globalassets/matvanor-halsa-miljo/matsvinn/fler-gor-mer-handlingsplan-for-minskat-matsvinn_20180618.pdf (in Swedish)

¹⁶ <https://www.naturvardsverket.se/vagledning-och-stod/avfall/farliga-amnen-vid-avfallshantering-och-atervinning/#E-74116936> (in Swedish)

¹⁷ <https://www.kemi.se/stod-till-foretag/din-roll-och-ditt-ansvar/atervinnare-eller-anvandare-av-atervunna-material> (in Swedish)

¹⁸ <https://www.boverket.se/sv/byggande/cirkular-ekonomi/> (in Swedish)

reuse and recycling work today and propose measures to promote circular construction in the future. The National Board of Housing, Building and Planning will also develop indicators, disseminate information and guide authorities and stakeholders on the transition to a circular economy in the construction sector. In carrying out the assignment, the National Board of Housing, Building and Planning will collaborate with the Swedish EPA and the Swedish Agency for Innovation Systems (Vinnova). The National Board of Housing, Building and Planning shall also consult with the Swedish Energy Agency and other relevant authorities, as well as with the construction and real estate industry. The assignment must be reported to the Government Offices no later than 20 December 2024.

There are very few decisions at national level that affect the areas critical raw materials and batteries. Unlike many other countries, Sweden do not have a national strategy for either batteries or critical raw materials.

Institutional measures

The Swedish EPA got at **new instruction** in May 2022 which includes to **“support the socioeconomic efficient transition to a circular economy”**.⁽¹⁹⁾ In addition, the Swedish EPA is asked, during 2024⁽²⁰⁾, to specifically focus on the following two activities:

- Promote the circular economy as an enabler of the climate transition and contribute to other authorities and actors increasing the pace of this transition and what effects this has had, and
- Promote a circular and fossil-free plastic use as well as to reduce plastic, micro and nanoplastics in sea and nature as well as pursue the issue in the negotiations on a new global agreement against plastic pollution.

In addition, since January 2023, the Ministry of Environmental and Climate merged with Ministry of Enterprise, under the name Ministry of Climate and Enterprise. The Ministry of Climate and Enterprise is responsible for matters relating to the climate, the environment, energy, enterprise, innovation as well as radiation safety, the 2030 Agenda for Sustainable Development and outdoor life. The Ministry is also working to ensure the transition to a circular economy.⁽²¹⁾

The Swedish EPA, with financial support to the **Swedish Institute for Standards (SIS)**, has ensured that a European vocabulary **standard for the area of plastics and its environmental aspects** has been published⁽²²⁾, following Swedish-led work. This means that The Swedish EPA has contributed to create a solid ground for increased understanding and consensus for terms within sustainable plastic use and a circular society. The financial support from The Swedish EPA has since 2019 enabled the Swedish secretariat for ISO/TC 38/WG 35 Environmental aspects. The goal is to press ahead the work with environmental aspects in the textile area on a global level. Through financial support to SIS, The Swedish EPA has contributed to ensure continued Swedish management of the ISO secretariat for mechanical and chemical recycling of plastics. The work in the secretariat continues to develop with several new standard proposals and a continued strong Swedish commitment.

The **Delegation for Circular Economy** is an **advisory body**⁽²³⁾⁽²⁴⁾ to the Government with the aim of facilitating and driving the transition of the business sector to a circular economy that strengthens Swedish competitiveness. It shall:

- contribute to the business sector's transition to a circular economy
- identify barriers to the transition of the business sector to a circular economy

¹⁹ [Förordning \(2012:989\) med instruktion för Naturvårdsverket | Sveriges riksdag \(riksdagen.se\)](#) (in Swedish)

²⁰ [Regleringsbrev 2024 Myndighet Naturvårdsverket \(esv.se\)](#) (in Swedish)

²¹ [Ministry of Climate and Enterprise - Government.se](#) (in Swedish)

²² <https://www.sis.se/standardutveckling/tksidor/tk100199/sistk156/> (in Swedish)

²³ Annual Report 2022: [Delegation for Circular Economy](#) (in Swedish)

²⁴ Annual Report 2023: [Delegation for Circular Economy](#) (in Swedish)

- highlight and communicate the business opportunities of a transition to a circular economy.

Three main activities carried out in 2023:

- Resource management: During Almedalen (large democratic meeting place for social issues) a seminar was held on the connection between the international perspective and circular economy, access to resources and Sweden's future prosperity. A seminar was arranged on the role of critical raw materials in electrification.
- Waste crime is a threat to effective recycling: The role of supervision and positive examples of the application of existing legislation were the themes of the seminar in December.
- Raising awareness of EU legislation: Dissemination of knowledge about upcoming as well as current EU legislation was included in most of the events organised during the year, including the Construction Conference and the seminar A more circular Swedish industry.

Dedicated local strategy, roadmap or action plan for circular economy

Circular or Zero Waste Cities

Gothenburg ⁽²⁵⁾

By 2030, Gothenburg will be one of the EU's 100 climate-neutral cities, with a climate footprint close to zero. This is a major societal challenge that requires efforts by companies, the public sector and private individuals. Not least, it is important to transition from a linear “wear-and-tear” economy to a resource-efficient circular economy. Instead of consuming material resources, we should use and reuse them in an efficient, smart and equal way.

Uppsala ⁽²⁶⁾

Circular economy (CE) is integrated in many municipal departments, and it is hard to define how many people work with CE. The municipal company Uppsala Water & Waste is responsible for waste management, including recycling and reuse. The sustainability department is responsible for the overall strategy on sustainable resource management and the procurement department for including CE in procurements. The business department cooperates with innovation hubs to develop circular business models. The urban planning administration includes circular solutions and shared mobility in planning. The municipal housing company promotes reuse and recycling among residents.

Other municipal or regional activities

According to a survey about municipalities climate initiatives ⁽²⁷⁾ over half of them have measures in circular and climate-smart consumption, such as collecting for reuse, facilitating loans and rentals to residents in construction, leisure and second hand.

Within the mission to coordinate activities in order to reduce the negative impact of plastics, the EPA is coordinating two different cooperation activities: (1) with the municipalities in terms of handling of municipal plastic waste and (2) with the regions regarding the plastic use within healthcare, both shortly described below.

- 1) National plastic coordination together with The National Agency for Public Procurement, Avfall Sverige – Swedish Waste management and County Administrative boards have initiated four

²⁵ [Circular Gothenburg](https://circular-cities-and-regions.ec.europa.eu/pilots/gothenburg) (in Swedish); <https://circular-cities-and-regions.ec.europa.eu/pilots/gothenburg>

²⁶ <https://circular-cities-and-regions.ec.europa.eu/pilots/upsala>

²⁷ <https://skr.se/skr/tjanster/rapporterochskrifter/publikationer/kommunernasklimatarbeteenkundersokning2023.74767.html> (in Swedish)

collaboration meetings during 2022 and 2023. Municipalities and actors that may contribute to finding resource smart and circular solutions together are invited. Besides inspire to more action and collaboration the purpose is to share knowledge and good examples.

- 2) Collaboration for resource smart and circular healthcare plastics was initiated in 2020 by Swedish EPA, Swedish regions' national secretariat for sustainable procurement and The National Agency for Public Procurement.

Six meetings have been held so far ⁽²⁸⁾.

Circular economy policy elements included in other policies

Circular economy policy element	Included in policy
Sustainable value chains (link between circularity and fossil-free society), plastic waste, construction waste	Climate Action Plan https://www.regeringen.se/rattsliga-dokument/skrivelse/2023/12/skr.-20232459 (in Swedish) (further details below)
Diverse CE elements	Fossil Free Sweden https://fossilfritt Sverige.se/en/start-english/ (further details below)
Transition to a competitive, circular, as well as sustainable economy	National strategy for sustainable regional development https://www.regeringen.se/rattsliga-dokument/skrivelse/2021/03/skr.-202021133 (in Swedish) (further details below)

In the communication **Climate action plan** ⁽²⁹⁾ published in December 2023, the Government describes how climate policy work should be conducted during its term of office, including the decided and planned measures that the Government intends to take to improve the conditions for households and companies to make the decisions required to achieve the national and global climate goals and Sweden's climate commitments to the EU. There are a number of CE policy elements in the action plan, for example

- section 7.6 on sustainable value chains, focusing on the linkage between circularity and a fossil free society as well as
- section 10 regarding waste stating that the share of fossil-based plastic that ends up in incineration must be lowered and that the waste from the building sector must be more effectively handled and recycled.

Fossil Free Sweden ⁽³⁰⁾ is an initiative by the Swedish Government to increase the pace of the climate transition. The goal is to build a strong industrial sector and to create more jobs and export opportunities by going fossil free. By working together with companies, industries, municipalities and regions, Fossil Free Sweden is identifying obstacles and opportunities in order to accelerate developments. 21 different sectors have developed **roadmaps** ⁽³¹⁾ with the aim to become fossil free, in a number of these there are CE elements. Some examples are reported under question 4. The work is not specifically aiming at circular economy but rather a fossil free society. However, some of the actions listed in the roadmaps link to circular economy.

National strategy for sustainable regional development ⁽³²⁾

²⁸ <https://www.naturvardsverket.se/om-oss/aktuellt/dokumentation/nationell-samordning-for-hallbar-plastanvandning/> (in Swedish)

²⁹ <https://www.regeringen.se/rattsliga-dokument/skrivelse/2023/12/skr.-20232459> (in Swedish)

³⁰ <https://fossilfritt Sverige.se/en/start-english/>

³¹ <https://fossilfritt Sverige.se/en/roadmaps/>

³² <https://www.regeringen.se/rattsliga-dokument/skrivelse/2021/03/skr.-202021133> (in Swedish)

The importance of a transition to a competitive, circular, as well as sustainable economy is emphasised in the National strategy for sustainable regional development throughout the country 2021–2030.

Several Swedish regions has (and the region of Skåne still does) offered small and medium sized companies (SME) business development checks with the aim of developing the businesses and strengthen its competitiveness through for example digitalisation and green transition/circular economy. The financing model is as follows: 40% from the EU's Regional Development Fund, 10% from the regions themselves, and 50% co-financing from the applying company. The business development checks within sustainability were first offered in 2021 (funded through React-EU).

The annual reporting of the Swedish regions shows many initiatives within circular economy. Uppsala region, along with the universities, businesses, and civil society, participates in the advanced project Circular Uppsala, aimed at developing and accelerating innovative opportunities within the circular economy. In Örebro, the initiative Circular Collaboration in Östergötland and Örebro is underway, with the aim of strengthening businesses' innovation of circular solutions.

The **Swedish Agency for Economic and Regional Growth** (Tillväxtverket) has developed a **guide on circular business models** ⁽³³⁾ The guide is based on the Circular Business Model Canvas, a strategic tool for business development. The model enables description, challenge, innovation, and adjustment of a business model in a clear and straightforward manner. The Swedish Agency for Economic and Regional Growth (Tillväxtverket) has for several years offered a web-based introduction course in circular economy. The target group for the initiative has been representatives for regions, municipalities and state agencies.

Monitoring and targets

Assessment of circular economy performance

The European Commission has set up a [monitoring framework](#) 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 Sweden its 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.

Statistics Sweden has produced data for 21 indicators and published them on Statistics Sweden's website. The assessment of the progress and production of the data by using the Eurostat's circular economy indicators was as a result of a time-limited grant from Swedish Innovation Agency (Vinnova). Currently, no future publishing is planned. Eurostat has added the indicator group Global sustainability and resilience in 2023, which the project has not had the opportunity to include in Statistics Sweden's indicator set. The project published some new data and final reports in 2023. One conclusion from the project is that extensive knowledge was required to both generate and understand the data and indicators. The data shows signs of increased circularity in Sweden with regards that investments are increasing in the circular sector, including as a share of GDP. Value added (contribution to GDP) from the circular sector is increasing, but GDP is growing even more, the circular sector's share of GDP is decreasing. Several other

³³ [Om guiden Cirkulär affärsmodell - Tillväxtverket \(tillvaxtverket.se\)](#) (in Swedish)

indicators show signs of declining circularity. For example, indicators, such as waste per capita, waste per GDP and level of recycling of waste. In conclusion, the facts are that there are many aspects of circular economy which make it difficult to overview the total national trend; as circularity both increases and decreases at the same time, depending on what is studied or not. For more information on the project and its assessments regarding trends on a national level refer to the project's final report ⁽³⁴⁾.

No analysis of the Swedish data in comparison with the EU average has been carried out within the Statistics Sweden publication.

In Spring 2022, RE:Source, working together with Circle Economy, RISE and Statistics Sweden, who provided data, published **Circularity Gap Report Sweden** ⁽³⁵⁾. The indicator the report used is quite similar to the CMU rate, which is one of Eurostat's indicators. An analysis and recommendations regarding Sweden's status and how its economy can become more circular is in the report. The report concludes both country characteristics and policy actions set out to explain differences between Sweden's performance and the EU average regarding the circular gap.

Statistic Sweden have calculated the indicators regarding **Competitiveness and innovation** with data reported to Eurostat or other official statistics. All data are calculated in accordance with metadata sheets from Eurostat. For more information see the quality report from the publishing of the Circular economy indicators ⁽³⁶⁾.

The **Swedish Environmental Protection Agency** has recently published new information on its **website** focusing on **circular economy**. ⁽³⁷⁾ The websites contain comprehensive information regarding the national strategy, the EU action plan, guidance and support to actors, the role of the Swedish EPA and other actors, links to different economic contribution actors can apply for as well as recent relevant research.

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

In the **Swedish strategy for a transition to a circular economy** ⁽³⁸⁾ from 2020, it is stated that the transition to a circular economy is a tool for achieving the national and international environmental and climate goals, as well as the global goals in Agenda 2030. Therefore, the development was stated to be followed up through a selection of the indicators that already existed within existing follow-up systems for these objectives. For each of the four focus areas within the Swedish strategy specific Global Goals and Targets have been identified as contributing to the focus areas.

Within the Vinnova (Sweden's Innovation agency) funded project "**What is measured gets done – Stage 2**", four working packages were developed. The four working packages were divided into nationally, operations and industries (property management, schools, mining). All working packages developed methods for data collection, monitoring and indicators.

For example, in the work package regarding the mining sector, measurements of resource efficiency have been developed. The Geological Survey of Sweden (SGU) is the government authority responsible for subjects relating to bedrock, soil and groundwater in Sweden. SGU is also responsible for one of Sweden's 16 Environmental Quality Objectives, the Good-Quality Groundwater objective, which also involves reducing the use of natural gravel. This includes work with increased circularity and resource efficiency. Measurements in the mining industry have been developed from the perspective from resource efficiency (efficient use of water, energy, additives) as then used to minimise the amount of waste/unused

³⁴ <https://www.milav.se/wp-content/uploads/2023/12/Det-som-mats-blir-gjort-Nationellt.pdf> (in Swedish)

³⁵ <https://resource-sip.se/circularity-gap-report-sweden-en/>

³⁶ https://www.scb.se/contentassets/9ebac5eb75e54956b216dba54b9a4ee7/mi1306_kd_2023.pdf (in Swedish)

³⁷ <https://www.naturvardsverket.se/amnesomraden/cirkular-ekonomi/> (in Swedish)

³⁸ <https://faolex.fao.org/docs/pdf/swe208661.pdf>

energy/resource from the extraction processes. Data and measurements regarding resource efficiency from the subproject have been published in SGU's journal Mining statistics in 2021, 2022 and 2023, under the heading "environmental statistics". Annual publication of the results in the SGU's journal Mining statistics is planned ⁽³⁹⁾ ⁽⁴⁰⁾.

Regarding batteries, the Swedish Energy Agency is now working and until mid-2025 to further develop the work that was done in the latest battery assignment with indicators. However, only a small proportion of these will focus on circularity ⁽⁴¹⁾.

In the **Swedish national circular economy strategy** ⁽⁴²⁾, specific SDGs have been identified as contributing to each of the focus areas. Statistics Sweden has been commissioned by the Swedish government to publish a national list of all the SDG indicators annually, which can be updated after consultation with the authorities responsible for indicators and ministries between publications.

Circular economy targets

Please note that in the country profile of 2022, page 11, the following section:

"Besides Eurostat's indicator set, Sweden has indicators from the Delegation for Circular Economy (17, 18). These targets, which are in line with EU targets, are about reduction of greenhouse gases, packaging, food waste and municipal waste. One target, for example, is that the share of packaging which is reusable should increase by 20 % from 2022 to 2026 and by 30 % from 2022 to 2030."

These targets are not from the Delegation for Circular Economy but rather a decision by the Parliament. Likewise, on page 12 in the profile of 2022 is says: *"The Delegation for Circular economy has adopted these targets in their action plan for the transition in Sweden"*.

The same targets are valid as reported in Country Profile of 2022. No new targets have been adopted.

The following target is no longer valid as the target year has been reached and we now have a regulation mandating separate collection of food waste:

Increased separation and biological treatment of food waste

By 2023 at least 75 percent of food waste from households, catering services, shops and restaurants will be separated and treated biologically so that nutrients and biogas are utilised.

All other waste related targets are a direct implementation of EU directives and not mentioned here.

Regarding status of reaching targets, below are the targets and an assessment of whether the target will be met:

Reusable packaging ⁽⁴³⁾

The proportion of packaging placed on the Swedish market for the first time that is reusable must increase by at least 20 % between 2022 and 2026 and by at least 30 % from 2022 to 2030.

- *The target has not yet been achieved – uncertain assessment of whether the target can be achieved by the target year.*

Construction and demolition waste ⁽⁴⁴⁾

³⁹ <https://www.milav.se/wp-content/uploads/2023/12/Det-som-mats-blir-gjort-Huvudrapport.pdf> (in Swedish)

⁴⁰ <https://www.milav.se/wp-content/uploads/2023/12/Det-som-mats-blir-gjort-Gruvbranschen.pdf> (in Swedish)

⁴¹ <https://www.energimyndigheten.se/klimat--miljo/batterier/> (in Swedish)

⁴² <https://www.scb.se/om-scb/scbs-verksamhet/agenda-2030/> (in Swedish)

⁴³ <https://www.sverigesmiljomal.se/etappmalen/ateranvandning-av-forpackningar/> (in Swedish)

⁴⁴ <https://www.sverigesmiljomal.se/etappmalen/mer-bygg--och-rivningsavfall-materialatervinns-och-forbereds-for-ateranvandning/> (in Swedish)

Preparation for reuse, material recycling and other recycling of non-hazardous construction and demolition waste, except for soil and stone, must amount to at least 70 percent by weight annually until 2025.

- *The target has not yet been achieved – uncertain assessment of whether the target can be achieved by the target year.*

Increase the proportion of municipal waste that is recycled and prepared for reuse ⁽⁴⁵⁾

The amount of municipal waste that is prepared for reuse and/or recycled will increase to a minimum of 55 % by weight by 2025, to a minimum of 60 % by weight by 2030 and to a minimum of 65 percent by weight by 2035.

- *The goal has not yet been achieved and is not to be achievable by the target year.*

Reduced food waste

An increased share of food production will reach stores and consumers by 2025 ⁽⁴⁶⁾.

- *The target has not yet been achieved – uncertain assessment of whether the target can be achieved by the target year.*

Food waste must be reduced so that total food waste is reduced by at least 20 % by weight per capita from 2020 to 2025 ⁽⁴⁷⁾

- *The target has not yet been achieved – uncertain assessment of whether the target can be achieved by the target year.*

Sweden has implemented a number of new regulations that will contribute to achieve the targets, for example separate sorting requirements. However, some of these are a direct implementation of EU requirements and not unique for Sweden.

Sweden has not yet started the process of analysing or adopting an objective or target of CMU rate.

Innovative approaches and good practices

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

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

The Swedish EPA published **new guidelines on waste prevention** ⁽⁴⁸⁾⁽⁴⁹⁾ during 2023 to municipalities on how to guide household to reduce the amount of waste as well as a report:

The Government has decided that Sweden's **food waste** must be reduced in accordance with the goals of Agenda 2030 ⁽⁵⁰⁾. The ambition is to keep up an even higher pace. The Swedish National Food Agency, together with the Swedish Environmental Protection Agency and the Swedish Board of Agriculture have an ongoing government assignment to work with this. There are a number of guidelines on the Swedish Food Agency's website.

⁴⁵ <https://www.sverigesmiljomal.se/etappmalen/oka-andelen-kommunalt-avfall-som-materialatervinns-och-forbereds-for-ateranvandning/> (in Swedish)

⁴⁶ <https://www.sverigesmiljomal.se/etappmalen/livsmedelsforlusterna-ska-minska/> (in Swedish)

⁴⁷ <https://www.sverigesmiljomal.se/etappmalen/minskat-matsvinn/> (in Swedish)

⁴⁸ <https://www.naturvardsverket.se/vagledning-och-stod/avfall/informera-hushall-om-avfallsforebyggande-atgarder/> (in Swedish)

⁴⁹ Report [Waste Prevention Measures](#) (in Swedish)

⁵⁰ <https://www.livsmedelsverket.se/matsvinn> (in Swedish)

The **National Food Agency** and the Swedish Financial Supervisory Authority have developed a **teaching material** ⁽⁵¹⁾ that can give students more knowledge about food waste and how it affects the economy, the environment and the climate.

The **Swedish Consumer Agency** provide information and tips on how individuals and households can consume more sustainably and on how different products affect the environment ⁽⁵²⁾.

Avfall Sverige or **Swedish Waste Management** is a stakeholder and trade association in the field of waste management and recycling. With 400 members from both the public – all municipalities as well as municipal companies – and the private waste management sectors, we represent all Swedish inhabitants. Avfall Sverige has a number of good documents in its digital toolbox.

- Circular economy ⁽⁵³⁾
- Guidance on single plastics free events ⁽⁵⁴⁾
- European Week for Waste Reduction ⁽⁵⁵⁾
- Campaign – Repair, borrow, loop ⁽⁵⁶⁾
- Campaign – 10 Ways to Reduce Your Waste ⁽⁵⁷⁾

➔ *Good practice example: Producer /supplier responsibility*

There are ten different producer responsibility regulations in place in Sweden ⁽⁵⁸⁾. Not all of them are specifically targeted towards circular economy, some are a direct result of the EU Single Used Plastic Directive with the main purpose to reduce littering of plastic. The formulation of targets differs in the different regulations, some regulations have collection targets, others have recycling targets. Some include information requirements regarding waste prevention, but none has specific waste prevention targets.

➔ *Good practice example: Financial support programmes targeting circular economy*

The current program period (2021-2027) of the **Regional Development Fund** (EU-fund) includes 863 million euro. It offers funding opportunities within different areas including circular economy.

Klimatklivet (Climate leap initiative) is administered by the Swedish EPA and has recently funded a number of circular economy related investments ⁽⁵⁹⁾. The funding adds up to 1,382 million Swedish crowns to 76 different initiatives with an expected reduction in CO₂ emissions of 851,000 ton CO₂e/year, among others:

- Recycling of materials and reuse of resources
- Residues and by-products can refer to plastics from agriculture and industry
- Textile residues from the manufacturing industry
- By-products of the steel industry
- Soil masses from the construction industry
- Recycling of batteries and electronics
- Extraction of valuable raw materials from residues

⁵¹ <https://www.livsmedelsverket.se/matvanor-halsa--miljo/matsvinn/svinnrik-material-for-hkk-larare> (in Swedish)

⁵² <https://www.hallakonsument.se/omrade/miljo-och-hallbarhet/> (in Swedish)

⁵³ <https://www.avfallsverige.se/fragor-vi-driver/aktuella-sakfragor/cirkular-ekonomi/> (in Swedish)

⁵⁴ <https://www.avfallsverige.se/rappporter-utveckling/rappporter/2021-03-vagledning-for-engangsfria-evenemang-pantsystem-for-glas-och-tallrikar/?tab=summary> (in Swedish)

⁵⁵ [Europa minskar avfallet - Avfall Sverige](#) (in Swedish)

⁵⁶ <https://www.osynligtavfall.se/> (in Swedish)

⁵⁷ <https://www.sopor.nu/minska-ditt-avfall/10-saett-att-minska-ditt-avfall/> (in Swedish)

⁵⁸ <https://www.naturvardsverket.se/vagledning-och-stod/producentansvar/> (in Swedish)

⁵⁹ <https://www.naturvardsverket.se/amnesomraden/klimatomstallningen/klimatklivet/resultat-fran-olika-omraden/materialanvandning-och-avfallshantering/> (in Swedish)

Results ⁽⁶⁰⁾ up to and including 2 January 2024 show that the largest emission reductions are expected to occur in waste, biogas production and transport. In 2022, the expected climate benefits increased sharply in the waste category. This was due to the fact that in 2022, the Swedish Environmental Protection Agency granted support for several measures that mean that plastic waste in particular is recycled instead of incinerated. For the waste action category, approximately 75-80 per cent of the emission reduction is estimated to take place in Sweden ⁽⁶¹⁾.

→ *Good practice example: Research & innovation*

Mistra REES (Resource-Efficient and Effective Solutions) ⁽⁶²⁾ research programme has been run 2015-2023, budget of 89 million SEK provided by Mistra (The Swedish foundation for strategic environmental research) and 39 million SEK provided by participating organisations.

RE:Source ⁽⁶³⁾, strategic innovation financing projects focusing on sustainable material use. The program started in 2016 and has financed and supported more than 250 projects. The programme is run by Swedish government agencies Vinnova (Sweden's innovation agency), Formas (government research council for sustainable development) and the Swedish Energy Agency.

RISE (Research Institutes of Sweden) ⁽⁶⁴⁾ circular business lab – a collaborative innovation space for companies transitioning to circular business.

The **Swedish Environmental Protection Agency** is funding two new synthesis projects that summarise and analyse the existing state of knowledge and knowledge needs in parts of **sustainable consumption** ⁽⁶⁵⁾. One synthesis deals with the topic of sustainable business models, while another deals with environmental and climate impact in and outside Sweden's borders from Swedish production and consumption of food. The overall aim of the syntheses is to contribute to policy development to reduce the environmental and climate impact of Swedish consumption. Together, almost SEK 10 million will be funded during the years 2021–2024. Final reports are currently under revision.

→ *Good practice example: Green/Circular/Sustainable public procurement*

The **National Agency for Public Procurements** ⁽⁶⁶⁾ provides criteria and guidance that promote circular economy and share examples to learn from.

- Tool for the transition to a circular economy ⁽⁶⁷⁾
- Sustainability criteria to support a circular economy ⁽⁶⁸⁾
- Criteria for textiles ⁽⁶⁹⁾

Among the examples of we find a municipality that procured **light as a service** ⁽⁷⁰⁾. When the school properties in Bollnäs municipality needed to phase out old fluorescent tubes, they chose to take a holistic

⁶⁰ <https://www.naturvardsverket.se/amnesomraden/klimatomstallningen/klimatklivet/resultat-for-klimatklivet/> (in Swedish)

⁶¹ [Progress Report on climate measures](#) (in Swedish)

⁶² <https://mistra.org/program/mistra-rees/#eng>

⁶³ <https://resource-sip.se/en/?en>

⁶⁴ <https://www.ri.se/en/circularbusinesslab>

⁶⁵ <https://www.naturvardsverket.se/om-miljoarbetet/forskning/miljoforskning/forskningssatsningar-samhalle/syntesanalyser-om-hallbar-konsumtion/> (in Swedish)

⁶⁶ <https://www.upphandlingsmyndigheten.se/en/sustainable-public-procurement/> (in Swedish)

⁶⁷ <https://www.upphandlingsmyndigheten.se/om-hallbar-upphandling/miljomassigt-hallbar-upphandling/upphandling-for-att-framja-cirkular-ekonomi/verktyg-for-omstallning-till-en-cirkular-ekonomi/> (in Swedish)

⁶⁸ <https://www.upphandlingsmyndigheten.se/om-hallbar-upphandling/miljomassigt-hallbar-upphandling/upphandling-for-att-framja-cirkular-ekonomi/hallbarhetskriterier-som-framjar-en-cirkular-ekonomi/> (in Swedish)

⁶⁹ <https://www.upphandlingsmyndigheten.se/kriterier/kontor-och-textil/textil/> (in Swedish)

⁷⁰ [Light as a service in Bollnäs](#) (in Swedish)

approach to lighting in the school and preschool environment. An innovative and sustainable lighting solution provided a better learning environment, higher accessibility and also lower cost than a traditional solution.

Increased circularity within the **construction sector** and examples about shared economy and reuse ⁽⁷¹⁾ ⁽⁷²⁾.

→ *Good practice example: Circular economy criteria in ecolabels*

The **Nordic Swan Ecolabel** tries to include circular economy in its criteria (requirements for quality, spare parts, bio-based/recycled materials, design with recycling in mind, etc.). They have criteria documents for both products and services. The challenge, however, lies in the fact that criteria documents are usually drawn up for newly produced products. This is because it is easier to set e.g. chemical requirements, energy requirements, etc. linked to production. For textile, there is a criteria document for newly produced products, but there are no criteria for used products ⁽⁷³⁾. There is a criteria document for furniture ⁽⁷⁴⁾.

Important to note is that the criteria can most likely not be applied to second-hand furniture because it is not possible to test the quality of each individual product, to check that the wood is FSC-labelled, that it does not contain unwanted chemicals, etc.

→ *Good practice example: Industrial symbiosis*

Industrial symbiosis has existed in Sweden for a long time but has typically been developed with a focus linked to a single company. With the ongoing green transition and the growing interest in resource efficiency among companies and society, the interest in new types of symbioses is also increasing ⁽⁷⁵⁾.

One example is the industrial project Regenergy Frövi in Lindesberg in Örebro region. The project is based on the business idea of the company WA3RM to grow, among other things, tomatoes using waste heat from the paper mill Billerud Korsnäs. The initiative will create many job opportunities in the region and contribute to sustainability on several levels through its circular business model. The project is coordinated by Business Region Örebro, which has the task of facilitating business establishment in the region.

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

In recent years, annual **consumption** has been around 13-14 kilograms of **textiles** per person. After the Corona pandemic, consumption increased to over 15 kilos per person. But in 2023, consumption decreased down to 11.4 kilograms per person ⁽⁷⁶⁾. The reasons for the decline in 2008 were due to the global financial crisis after the bank Lehman Brothers went bankrupt. The decline in 2011 was due to the sovereign debt crisis in the euro area, and in 2020 there was a coronavirus pandemic. The reason for the decline in 2023 should be the high inflation and high interest rates.

Examples of private policy initiatives (sectoral)

→ *Good practice example: New business models*

The **Confederation of Swedish Enterprises** recently published a new report “How can Sweden become more circular?” ⁽⁷⁷⁾ (February 2024) The report provides the Confederations view on how the government

⁷¹ <https://www.upphandlingsmyndigheten.se/om-hallbar-upphandling/miljomassigt-hallbar-upphandling/upphandling-for-att-framja-cirkular-ekonomi/materialatervinning-inom-bygg-och-fastighet-gynnar-cirkular-ekonomi/> (in Swedish)

⁷² <https://www.upphandlingsmyndigheten.se/branscher/bygg-och-anlaggning/fossilfritt-byggande-genom-konkurrenspraglad-dialog> (in Swedish)

⁷³ <https://www.svanen.se/svanen-forklarar/vad-ar-cirkular-ekonomi/> (in Swedish)

⁷⁴ https://www.svanen.se/4ac24c/contentassets/446952e937b44ba3b0ecb636d4875267/criteria-document_031_furniture-and-fitments-031_norwegian2.pdf (in Swedish)

⁷⁵ [Centrum IUS \(ri.se\)](https://www.centrumius.se/) (in Swedish)

⁷⁶ [Textile consumption](https://www.centrumius.se/textile-consumption/) (in Swedish)

⁷⁷ [Confederation of Swedish Enterprises](https://www.confederationofswedishenterprises.se/) (in Swedish)

can contribute to a level playing field for Swedish industry and to contribute to making circular business models more profitable. The report includes a number of suggestions on what needs to be done in order to transform the industry and become more circular. The report consists of three main parts with a number of sections in each. In the first the basic conditions for the circular transition of the business sector are described and highlights, among other things, the importance of clear political leadership, the importance of the need for good market conditions. The second part focuses on national opportunities to continue to strengthen the circular economy and what the government needs to do. The third section lists a number of concrete action proposals together with the body responsible and the nature of the action.

Circular Sweden ⁽⁷⁸⁾ is a business forum that drives circular product and material flows forward. The companies that are members of Circular Sweden are: Axfood, Coca-Cola European Partners, H&M, Houdini, IKEA, NCC, Spendrups Bryggeri, Tarkett and the Swedish Recycling Industries. The starting point is that resource-efficient social responsibility is an important part of the solution in the climate transition and that a shift from linear to circular material flows is necessary to maintain welfare in the future. Circular Sweden highlights that Sweden is still a long way from the ambition that materials of various kinds should be able to circulate in society – from raw material to product to raw material of good quality. Circular Sweden therefore drives development and policy forward in four areas:

- Design for circular economy
- Sustainable consumption
- Increased availability and use of recycled materials
- Circular value chains

Within the framework of **Fossil Free Sweden** ⁽⁷⁹⁾, 22 different industries have developed roadmaps to show how they can strengthen their competitiveness by becoming fossil-free or climate-neutral. The roadmaps show the opportunities, identify obstacles and propose solutions, both through own commitments and policy proposals. Together, they provide a picture of what a fossil-free business sector will look like. Within these roadmaps, there are elements of circular economy practices.

For example, within the building and construction sector ⁽⁸⁰⁾:

- The reuse of steel is increasing rapidly and in some projects it can be up to 10 percent. It is a good complement to material recycling (remelting), which is currently the dominant way of circulating steel. Between 95 and 99% of all steel used in frames is recycled. A new technical specification, CEN/TS 1090-201, for quality assurance will further contribute to increased reuse. Recycled steel has been used in several projects, including by Skanska in the construction of an apartment building. Several pilot projects for the reuse of installations, concrete elements and façade materials have been carried out in the industry.

Another example are the objectives of the roadmap for the grocery industry ⁽⁸¹⁾:

- 2025: All plastic consumer packaging is recyclable
- 2030: All plastic consumer packaging is produced from renewable or recycled raw materials

→ *Good practice example for the construction sector*

The **Swedish Construction Federation** ⁽⁸²⁾ is an industry and employer organisation for construction, civil engineering and specialised companies that want to build Sweden on a foundation of fair principles. They have developed Resource and waste guidelines for construction and demolition, the first version developed in 2007, revised continuously. The guidelines aim to improve resource efficiency and waste management in the construction and demolition industry. The guidelines are a tool for meeting the

⁷⁸ <https://www.circularsweden.se/in-english>

⁷⁹ <https://fossilfritt Sverige.se/en/roadmaps/>

⁸⁰ <https://fossilfritt Sverige.se/en/roadmap/the-construction-and-civil-engineering-sector/>

⁸¹ <https://fossilfritt Sverige.se/en/roadmap/the-food-retail-sector/>

⁸² [Main report with guidelines](#) (in Swedish)

requirements of the Environmental Code, general rules of consideration, the waste hierarchy and other waste legislation, contribute to the Sweden's environmental objectives and to meet other expectations from society for increased circularity when it comes to the industry's material and waste management. The guidelines sometimes go beyond the legal requirements.

→ *Good practice example for the textile sector*

The Swedish EPA together with the Swedish Chemical Agency runs the textile dialogue (started in 2017). The purpose of the **Textile Dialogue** ⁽⁸³⁾ is to reduce the environmental and health impact throughout the textile value chain, from production and consumption to waste management, and to contribute to resource-efficient and non-toxic cycles. Tools, methods and good examples for sustainable textile production and consumption – with a focus on the environment and chemicals. Through dialogue and co-creation as a method, the Swedish Environmental Protection Agency and the Swedish Chemicals Agency want to involve relevant actors in order to create action on relevant issues in the textile value chain. The dialogue takes place in collaboration with a broad support of actors in the textile sector such as industry organisations, companies, innovation and education actors, researchers, voluntary organisations and second-hand actors, municipal representatives, ministries and authorities.

In 2023, the **Eleventh Meeting of the Textile Dialogue** was held, the theme for the meeting was Textiles – an area in transition. The content focused on the fact that there is a lot going on within the textile area nationally as well as international. At the meeting more than 350 participants attended. The year before (2022) the theme of the meeting was The EU Strategy for Sustainable and Circular Textiles. More than 250 attendees signed up and in the subsequent survey more than 95% said that they felt that they had received up-to-date and valuable information about the EU Textiles Strategy and related initiatives. At the first meeting in 2017 there were about 70 people in the audience, in 2021 the participant had increased to 110–130 participants. The ever-increasing number of participants at the Textile Dialogue meetings shows that in times of great changes, there is a need for dialogue and collaboration.

→ *Good practice example for the food sector*

Cooperation for reduced food waste, SAMS ⁽⁸⁴⁾

A voluntary industry agreement where actors from all parts of the food chain cooperate to stop food waste in Sweden. SAMS is also part of the government's mission to reduce food waste.

→ *Good practice example for other sectors/value chains*

A new industry report from the recycling industries ⁽⁸⁵⁾ highlights trends in the circular economy and the recycling industry. The members of the **Swedish Recycling Industries Association** are at the forefront of technological development. Today, they build machines and plants that do things that were technically impossible to do ten years ago. Member companies have expertise that is in demand in all parts of the economy. Many industries are now transitioning their production towards increased circularity, and then they need recycling companies, not only to take care of the product at the end of its life, but also to understand how to design products for longer life cycles and increased recyclability already in the design phase.

⁸³ <https://www.naturvardsverket.se/amnesomraden/textil/> (in Swedish)

⁸⁴ <https://www.ivl.se/projekt/samarbete-for-minskat-matsvinn.html> (in Swedish)

⁸⁵ [Report of Recycling Industry in Sweden](#) (in Swedish)

The way forward

Identifying and addressing barriers and challenges

According to survey results published in 2023 in the report “**Companies' green transition – Drivers, obstacles and support needs**”⁽⁸⁶⁾, conducted by the Swedish Agency for regional and economic development, the uncertainty in the long-term political decisions is the biggest obstacle on green transition for small and medium sized companies.

The survey also shows that every fourth company considers the development of **circular products and services** important for the company's future development. Circular flows are necessary for us to meet the challenges in the environmental and climate areas. At the same time, companies can lower their costs or find new business opportunities through revenues from example industrial symbiosis via residual energy or residual products that previously became waste. Although the survey does not provide clear indications, we know that there are several challenges for circularity. These range from laws and regulations, procurement competence in public administration, to market difficulties.

Circular business models can entail a complex process of change for companies, where the business models are evolving, revenue streams will look different, relationships between suppliers and customers change, and new logistics flows develop. The needs for efforts to strengthen circular resource flows are many, but increased knowledge about using recycled materials and working to develop the market for this is of great importance. Among small and medium-sized enterprises, the need for support is likely even greater than for large companies. In addition to this, procurement competence in public administration needs to be improved, and laws and regulations need to be reviewed to better meet society's needs for circular resource flows.

Critical raw materials are present in large quantities of waste streams, but there is little awareness of where different raw materials are located, in what quantities they are and where in the life cycle they are and when they can (if possible) be available for reuse or recycling. Developing a mapping system is an opportunity that can help to address this and to ensure that efforts are put in place where they have the best effect. One request Sweden wishes to send to the EEA is that such a mapping system be developed at European level in order to make the data as comparable as possible.

The **National Waste Management Plan and Waste Prevention Programme** is currently under revision, due to be published by the end of 2024. They will contain an overview of barriers, challenges and future developments to both use waste more effectively as well as how to prevent waste, two key elements to become more circular.

The following reports all have some analysis of challenges and problems as well as suggested solutions to several issues relevant to the circular economy:

- Increase recycling of municipal waste⁽⁸⁷⁾
- Textile⁽⁸⁸⁾
- Plastics⁽⁸⁹⁾

⁸⁶ <https://tillvaxtverket.se/tillvaxtverket/publikationer/publikationer2023/foretagensgronaomstallning.6046.html> (in Swedish)

⁸⁷ <https://www.naturvardsverket.se/om-oss/regeringsuppdrag/slutredovisade-regeringsuppdrag/atgarder-for-att-oka-materialatervinningen-av-avfall/> (in Swedish)

⁸⁸ <https://www.regeringen.se/rattsliga-dokument/statens-offentliga-utredningar/2020/12/sou-202072/> (in Swedish)

⁸⁹ <https://www.naturvardsverket.se/om-oss/regeringsuppdrag/slutredovisade-regeringsuppdrag/ratt-plast-pa-ratt-plats/> (in Swedish)

- Batteries ⁽⁹⁰⁾

In addition, the **Confederation of Swedish Enterprise**, recently published a report ⁽⁹¹⁾ relevant to circular economy in which they explain their view on barriers and what is needed in order for the industry and market to transfer to a circular economy.

In the beginning of 2023, the Swedish EPA presented the report “**In-depth evaluation of the Swedish environmental objectives**” ⁽⁹²⁾, carried out every fourth year. One of the key messages in the report is that we need a transition to a resource-efficient and non-toxic society where we use resources efficiently in circular flows and where we conserve energy, primary materials, land and water. The transition to a circular economy has great potential to reduce resource use, limit climate and environmental impact, and reduce the amount of waste.

Important parts of a circular economy are to create more sustainable production and consumption patterns of goods and services.

Measures to prevent waste generation needs to take place at all stages from raw material extraction and production to consumption and use, where reuse is one measure among many others to extend a product's lifespan and prevent waste. Transitioning to a circular economy requires a societal transformation, including:

- Design for a longevity,
- New technologies,
- New innovative products and services,
- Resource-efficient business models and,
- Changing consumer behaviour.

It is about decoupling economic growth from material consumption, switching from linear to circular and resource-efficient material and product flows, but also about promoting a fairer distribution of environmental space globally. In its latest report from 2024, the International Resource Panel states that high-income countries consume six times more materials and cause 10 times greater climate impact than those living in low-income countries.

The Swedish Environmental Protection Agency believes that there is a need for a broad review and development of waste legislation and possibly other instruments in the waste area, both at national and EU level, in order to achieve a circular economy. The implementation of the EU waste package, the development of the collaborative economy, digitalisation, new and ongoing infrastructure projects, an increase in illegal waste management, requirements for increased traceability and extended producer responsibility are some of the factors that highlight the need for a clear, enforceable and effective regulation in the area of waste.

Future policy plans

No specific circular economy elements are defined. The Climate leap (see information under good practice examples) listed activities under the focus area green transition. However, that is primarily a climate action, while some activities funded contribute to circular economy, such partial funding of plastics recycling plants.

⁹⁰ <https://energimyndigheten.a-w2m.se/Home.mvc?ResourceId=211561> and <https://energimyndigheten.a-w2m.se/Home.mvc?ResourceId=218374> (in Swedish)

⁹¹ [Confederation of Swedish Enterprises](#) (in Swedish)

⁹² <https://www.naturvardsverket.se/publikationer/7000/978-91-620-7088-5/> (in Swedish)

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.

