EUROPEAN
COMMISSION

Brussels, 7.7.2025
SWD(2025) 326 final

COMMISSION STAFF WORKING DOCUMENT

Environmental Implementation Review 2025
Country Report - SWEDEN

Accompanying the document

Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions

2025 Environmental Implementation Review for prosperity and security

{COM(2025) 420 final} - {SWD(2025) 300 final} - {SWD(2025) 301 final} - {SWD(2025) 302 final} - {SWD(2025) 303 final} - {SWD(2025) 304 final} - {SWD(2025) 305 final} - {SWD(2025) 306 final} - {SWD(2025) 307 final} - {SWD(2025) 308 final} - {SWD(2025) 309 final} - {SWD(2025) 310 final} - {SWD(2025) 311 final} - {SWD(2025) 312 final} - {SWD(2025) 313 final} - {SWD(2025) 314 final} - {SWD(2025) 315 final} - {SWD(2025) 316 final} - {SWD(2025) 317 final} - {SWD(2025) 318 final} - {SWD(2025) 319 final} - {SWD(2025) 320 final} - {SWD(2025) 321 final} - {SWD(2025) 322 final} - {SWD(2025) 323 final} - {SWD(2025) 324 final} - {SWD(2025) 325 final}

Contents

Executive summary

In May 2016, the European Commission launched the Environmental Implementation Review (EIR), a regular reporting tool based on analysis, dialogue and collaboration with EU Member States to improve the implementation of existing EU environmental policy and legislation ([1]). Following previous cycles in 2017, 2019 and 2022, this report assesses the progress made while describing the main outstanding challenges and opportunities regarding environmental legal implementation in Sweden. The purpose of this report is to provide information on the implementation performance and highlight the most effective ways to address the implementation gaps that impact human health and the environment and hamper the economic development and competitiveness of the country. The report relies on detailed sectoral implementation reports collected or issued by the Commission under specific environmental legislation.

The main challenges set out below have been selected from Part I of this report, 'Thematic areas', taking into consideration factors such as the gravity of the environmental implementation issue in light of the impact on the quality of life of citizens, the distance to target, and financial implications.

Regarding biodiversity, 77% of habitats and 51% of species in Sweden are in unfavourable conservation status. 6% of Swedish **forest habitats** protected under the Habitats Directive are in favourable conservation status, while all the others are in unfavourable status. For forest habitats, the main pressure is forestry, especially intensive logging, followed by energy production and natural processes.

Sweden needs to improve its performance regarding the **circular economy**. The circular use of materials (the share of materials used in the economy coming from recycling) and resource productivity (the amount of GDP extracted from a kilo of materials) in Sweden continue to be below EU average. Incineration is the main type of **waste treatment** in Sweden, accounting for 59 % of all waste treated. Sweden has relatively low reuse and recycling rates, mainly due to low capture rates of recyclables.

Despite improvements on **air quality**, the latest data show non-compliance with Sweden's nationwide ammonia reduction commitment and with PM_{10} standards in some areas of Sweden.

As regards **climate** policy, Sweden is a frontrunner when it comes to battery electric vehicles, rail transport, and low emissions from buildings. At the same time, Sweden will need to implement new measures and/or use available flexibilities to achieve its 2030 effort sharing target. The projected gap is 6.2 percentage points to the 2030 target. The latest projections show a gap to the Land Use, Land-Use Change and Forestry (LULUCF) Regulation target, meaning that current levels of CO_2 removals have been insufficient. Sweden is also behind its renewable energy and energy efficiency targets.

The overall **environmental investment** needed to enable Sweden to meet its main environmental objectives is estimated at EUR 13.9 billion per year, focused on the following areas: pollution prevention and control, the circular economy and waste, water protection and management, and biodiversity and ecosystems. The current **investment gap** stands at an estimated EUR 8.5 billion per year in Sweden, representing around 1.52 % of national gross domestic product.

On the positive side, organic farming practices are widespread in Sweden, with almost 20 % of the country's utilised agricultural land area used for organic farming. This is the third best result in the EU, and this figure is much higher than the EU average of 10.5 %. Sweden is therefore significantly contributing to achieving the target to have 25 % of the EU's agricultural land engage in organic farming by 2030. Sweden continues to implement the Infrastructure for Spatial Information in the European Community (INSPIRE) Directive, thus providing relevant environmental spatial information for good governance.

([1]) Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions – Delivering the benefits of EU environmental policies through a regular environmental implementation review, COM(2016) 316 final of 27 May 2016, http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=COM%3A2016%3A316%3AFIN.

Part I: Thematic areas

1. Circular economy and waste management

Transitioning to a circular economy

Advancing the transition to a circular economy in the EU will reduce the environmental and climate impact of our industrial systems by reducing input materials, keeping products and materials in the loop for longer and reducing waste generation, thus decoupling economic growth from resource consumption. A circular economy has considerable potential to increase competitiveness and job creation and will also promote innovation and provide access to new markets. With the 2020 circular economy action plan (CEAP) [2] measures either in place or legislatively advanced, EU Member States will now have to focus on a swift and effective implementation.

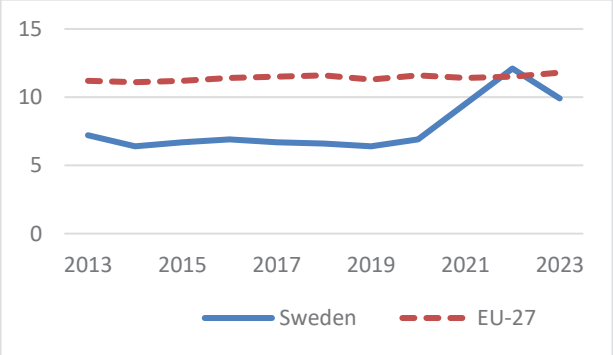
The 2020 CEAP launched the legislative process for a set of initiatives that will now have to be implemented by national governments across the EU. These initiatives were all introduced following a holistic life-cycle approach, with measures addressing the different stages of a product's life cycle, from design through use to end of life.

In the CEAP, the EU sets as its overarching objective the doubling of its circular material use rate (CMUR) by 2030.

The CMUR is a measure of one aspect of circularity: the share of the total amount of material used in the economy that is accounted for by recycled waste. A higher CMUR value means that more secondary materials were used as a substitute for raw materials, thus reducing the environmental impacts of extracting primary material.

The circular material use rate (CMUR) in Sweden was 9.9 % in 2023, against the EU average of 11.8 % (Figure 1). The rate had increased quickly since 2019, reaching 12.1 % in 2022, but decreased again in 2023.

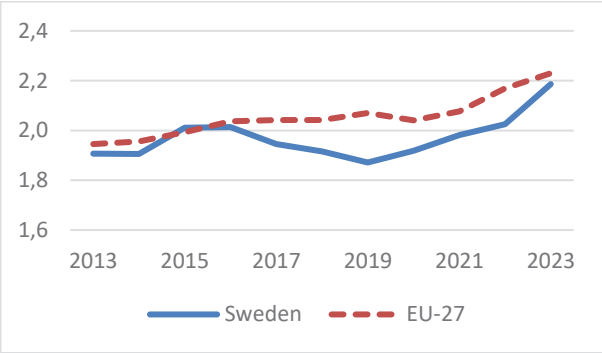
Figure 1: CMUR (%), 2013–2023



Source: Eurostat, 'Circular material use rate', env_ac_cur, last updated 13 November 2024, accessed 9 December 2024, https://ec.europa.eu/eurostat/databrowser/product/view/env_ac_cur.

Resource productivity measures the total amount of materials directly used by an economy in relation to gross domestic product (GDP). Improving resource productivity can help to minimise negative impacts on the environment and reduce dependency on volatile raw material markets. As shown in Figure 2, with EUR 2.18 generated per kg of material consumed in 2023, Sweden's resource productivity is only slightly below the EU average of EUR 2.23 per kg, after a steady increase since 2019.

Figure 2: Resource productivity (EU/kg), 2013–2023



NB: The unit of measurement used is EUR/kg chain-linked volume (2015). Chain-linked volumes focus on changes on quantities and prices of commodities in previous years, taking account of inflation, and are indexed to the nearest appropriate year, in this case 2015.
Source: Eurostat, 'Resource productivity', env_ac_rp, last updated 7 August 2024, accessed 9 December 2024, https://ec.europa.eu/eurostat/databrowser/product/view/env_ac_rp.

(2) Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions – A new circular economy action plan for a cleaner and more competitive Europe, COM(2020) 98 final of 11 March 2020, https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=COM%3A2020%3A98%3AFIN.

Policies and measures

In parallel with European initiatives under the 2020 circular economy action plan (CEAP), Member States are encouraged to adopt and implement circular strategies at the national, regional and city levels. These should be tailored to each national and local reality, to harness the proximity economy's ([3]) potential, while following the principles of a holistic whole-value-chain approach.

Since the launch of the online European Circular Economy Stakeholder Platform in 2017 ([4]), national, regional and local authorities have used the platform to share their strategies, roadmaps and good practices, for example alternative business models and innovative technologies.

In 2020, Sweden adopted its circular economy strategy ([5]), which acts as the country's main policy framework for the transition to a circular economy. The key actors to advance the transition to a circular economy were identified as part of the strategy.

As a follow-up to the strategy, in 2021 Sweden adopted a CEAP([6]). The action plan presents more than 100 different measures along the entire life cycle of products and identifies a set of priority sectors, including plastics, textiles, renewable and bio-based materials, food, the construction and property sector (including building and demolition waste), and innovation-critical materials and minerals. An action plan for plastics ([7]) was adopted in 2022, and some non-legislative measures have been introduced on food waste and textiles.

The importance of a transition to a competitive, circular and sustainable economy is emphasised in the national strategy for sustainable regional development throughout the country 2021–2030 ([8]). The strategy allows for regional funding including via the EU Regional Development Fund and the Just Transition Fund for business development through, among other things, the transition to a circular economy.

Green public procurement

Public procurement accounts for a large proportion of European consumption, with public authorities' purchasing power representing around 14 % of EU GDP. Public procurement using green or circular criteria (life-cycle analysis, platform as a service, and second hand) can help drive the demand for sustainable products that meet reparability and recyclability standards.

A national strategy for sustainable public procurement strategy has been in place in Sweden since 2016, which introduced responsible public procurement under objective six of the strategy. The National Agency for Public Procurement offers a 'criteria library' containing recommendations on environmental and social requirements to be used when purchasing goods, services and works. There are three levels of environmental criteria: basic, advanced and spearhead. The criteria are available within eight product groups.

There is no mechanism for monitoring the percentage of public procurement procedures incorporating green criteria out of the whole volume of procurement at the national level. However, the National Agency for Public Procurement has carried out a study that showed that 90 % of the tender documents analysed contained some form of environmental criterion, either criteria from the National Agency for Public Procurement or criteria developed by the contracting authority.

The EU Ecolabel and the eco-management and audit scheme

The number of EU Ecolabel product groups and the number of eco-management and audit scheme (EMAS)-licensed organisations in each country provide some indication of the extent to which the private sector and national stakeholders in that country are actively engaged in the transition to a circular economy. The EU Ecolabel is awarded to products with best-in-class environmental performance. EMAS is a voluntary environment management scheme aimed at reducing the environmental impacts of organisations.

As of September 2024, Sweden had 6 500 products out of 98 977, a significant share of them being in the tissue category, and 53 licences out of 2 983 registered in the EU Ecolabel scheme, demonstrating a good take-up of products and licences ([9]). In addition to the EU Ecolabel

([3]) European Commission, 'Proximity and social economy ecosystem', European Commission website, https://single-market-economy.ec.europa.eu/sectors/proximity-and-social-economy_en.

([4]) Circular Economy Stakeholder Platform (https://circulareconomy.europa.eu/platform/en/strategies).

([5]) Ministry of the Environment, *Circular Economy – Strategy for the transition in Sweden*, Elanders, 2020 https://faolex.fao.org/docs/pdf/swe208661.pdf.

([6]) Ministry of Climate and Enterprise, *Cirkulär ekonomi – Handlingsplan för omställning av Sverige*, Stockholm, 2021, https://www.regeringen.se/informationsmaterial/2021/01/cirkular-ekonomi---handlingsplan-for-omstallning-av-sverige/.

([7]) Ministry of Climate and Enterprise, *Sveriges handlingsplan för plast – En del av den cirkulära ekonomin*, Stockholm, 2022, https://www.regeringen.se/rapporter/2022/02/sveriges-handlingsplan-for-plast/.

([8]) Ministry of Climate and Enterprise, *Nationell strategi för hållbar regional utveckling i hela landet 2021–2030*, Stockholm, 2020, https://www.regeringen.se/rattsliga-dokument/skrivelse/2021/03/skr.-202021133.

([9]) European Commission, 'EU Ecolabel facts and figures', European Commission website, https://environment.ec.europa.eu/topics/circular-economy/eu-ecolabel/businesses/ecolabel-facts-and-figures_en.

registrations, as of October 2024, Sweden had 35 000 products and services awarded with the Nordic Swan Ecolabel, a widespread ecolabel used in certain Nordic countries. Moreover, eight organisations from Sweden are currently registered in EMAS, four fewer than in October 2021 ([10]).

Since the figures for the CMUR in the 2022 report refer to 2020, and the latest available data as of September 2024 is from 2022, it is not yet possible to assess progress in this regard.

2025 priority action

- Adopt measures to increase the CMUR.

Waste management

Turning waste into a resource is supported by:

(i) addressing the full life cycle of products, from conception to end of life, by setting requirements on the design of products to ensure that they are more sustainable;
(ii) fully implementing EU waste legislation, which includes the waste hierarchy, the obligation to ensure separate collection of waste, landfill diversion targets, etc.;
(iii) reducing waste generation per capita and in absolute terms;
(iv) increasing the recycling rates of waste containing critical raw materials, with a view to reducing dependencies and building resilient value chains, and stimulating demand for recycled content in all products;
(v) limiting energy recovery to non-recyclable materials; and
(vi) phasing out landfilling of recyclable or recoverable waste.

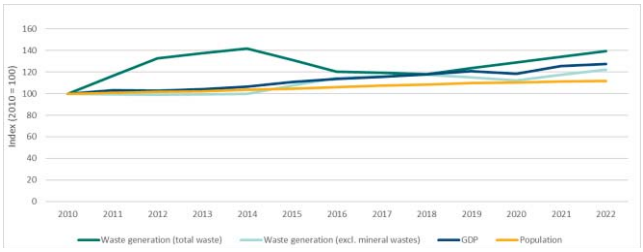
One of the main objectives of the EU Waste Law is to decouple economic growth from its environmental impacts.

The EU's approach to waste management is based on the waste treatment hierarchy: prevention, preparing for reuse, recycling, recovery and, as the least preferred option, disposal (which includes landfilling and incineration without energy recovery).

All legislative proposals in the field of waste management put forward by the Commission since 2021 are intended to encourage Member States to promote better product design, to require producers to cover the costs of managing the waste resulting from their products and to ensure that waste is managed at the higher levels of the waste hierarchy.

The total amount of waste generated in Sweden increased from 2010 to 2014, then declined between 2016 and 2018, with 2022 levels returning to those observed in 2014 (Figure 3). This trend is primarily driven by the largest waste category: other mineral wastes (mainly from mining and quarrying activities). When excluding major mineral wastes, the trend is somewhat different, showing an increase throughout the considered time period with the exception of a slight drop in 2020. This trend is driven by the major waste category mixed wastes, while recyclable wastes only increased in 2018. Sweden's GDP showed an overall increase, apart from a slight decline in 2020, most likely due to the COVID-19 outbreak. There is no clear indication that waste generation has been decoupled from economic growth.

Figure 3: Generation of waste (total and excluding major mineral wastes), population and GDP, 2010–2022



NB: Waste generation data for odd years are interpolated.

Sources: Eurostat, 'GDP and main components (output, expenditure and income)', nama_10_gdp, accessed 15 October 2024, https://ec.europa.eu/eurostat/databrowser/view/nama_10_gdp__custom_9301905/default/table; Eurostat, 'Generation of waste by waste category, hazardousness and NACE Rev. 2 activity', env_wasgen, accessed 15 October 2024, https://ec.europa.eu/eurostat/databrowser/view/env_wasgen/default/table?lang=en; and Eurostat, 'Population change – Demographic balance and crude rates at national level', demo_grind, accessed 15 October 2024, https://ec.europa.eu/eurostat/databrowser/view/demo_gind/default/table?lang=en&category=demo.demo_ind.

Critical raw materials

Critical raw material (CRM)-relevant aspects are covered by Sweden's waste management plan 2024–2030 ([11]). The Swedish CEAP ([12]) also mentions CRMs.

([10]) European Commission, 'Eco-management and audit scheme (EMAS)', European Commission website, October 2024, http://ec.europa.eu/environment/emas/emas_registrations/statistics_graphs_en.htm.

([11]) Swedish Environmental Protection Agency (SEPA), *Avfall i ett cirkulärt samhälle – Nationell avfallsplan 2024–2030*, Stockholm, 2024, https://www.naturvardsverket.se/4ad992/globalassets/media/publikationer-pdf/7100/978-91-620-7171-4.pdf.

([12]) Ministry of the Environment, *Circular Economy – Strategy for the transition in Sweden*, Elanders, 2020 https://faolex.fao.org/docs/pdf/swe208661.pdf.

Construction and demolition waste

Construction and demolition waste accounts for almost 40 % of all waste generated in the EU. A recent study ([13]) by the Joint Research Centre shows that preparing for reuse and recycling operations are preferred over incineration and landfilling from an environmental perspective for most of the different streams of construction and demolition waste. However, the economics are often unfavourable for preparing for reuse and recycling compared with incineration and landfilling. If available technology were to be applied, it is estimated that the increase in preparing for reuse and recycling would lead to 33 Mt of greenhouse gas (GHG) emission savings annually (more than the combined annual GHG emissions from Estonia, Latvia and Luxembourg).

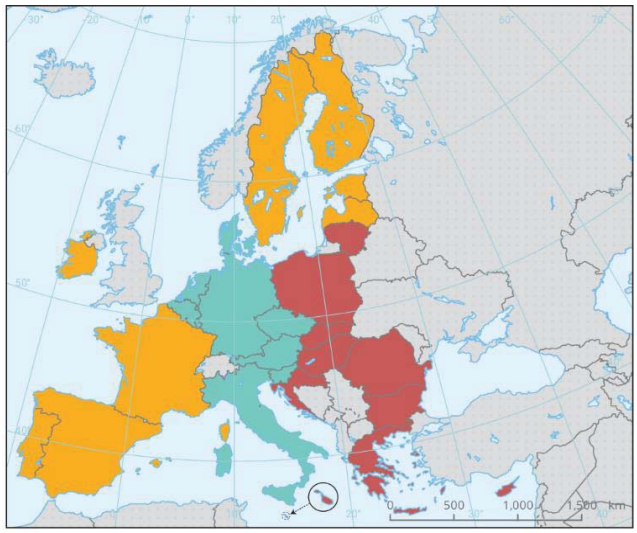
Measures to further increase the preparing for reuse and recycling rate of construction and demolition waste include separate collection at the source – for instance, through digitalised pre-demolition audits ([14]) ('resource assessments'); extended producer responsibility and other economic instruments; and upstream measures such as increasing the recycled content in construction products and the circular design ([15]) of construction works.

There are specific milestones and targets for construction and demolition waste in the Swedish environmental objectives system ([16]). Guidance on the handling of construction by-products and the use of by-products in construction work could be important for slags and ashes, and construction and demolition waste ([17]).

Boosting implementation – the 2023 *Waste Early Warning Report*

This section focuses on the management of municipal waste ([18]), for which EU law sets mandatory recycling targets. In June 2023, the Commission published the *Waste Early Warning Report* ([19]) identifying the general trends in waste management and the Member States at risk of missing 2025 waste targets (see Figure 4). Sweden is in the category of countries at risk of missing the municipal waste target.

Figure 4: Member States' prospects of meeting the preparing for reuse and recycling targets for municipal waste and packaging waste



- Member States not at risk of missing both the 55 % preparing for reuse and recycling target for municipal waste and the 65 % recycling target for packaging waste
- Member States at risk of missing the preparing for reuse and recycling target for municipal waste but not at risk of missing the recycling target for packaging waste
- Member States at risk of missing both targets
- Outside coverage

Source: European Environment Agency (EEA), 'Many EU Member States not on track to meet recycling targets for municipal waste and packaging waste', briefing No 28/2022, Copenhagen, 2023. Reference data © ESRI.

Under certain conditions, EU waste legislation enables some Member States to postpone the deadlines for

([13]) European Commission: Joint Research Centre, Cristobal Garcia, J., Caro, D. et al., *Techno-economic and environmental assessment of construction and demolition waste management in the European Union*, Publications Office of the European Union, Luxembourg, 2024, https://publications.jrc.ec.europa.eu/repository/handle/JRC135470.

([14]) European Commission: Directorate-General for Internal Market, Industry, Entrepreneurship and SMEs, *EU Construction and Demolition Waste Management Protocol including guidelines for pre-demolition and pre-renovation audits of construction works – Updated edition 2024*, Publications Office of the European Union, Luxembourg, 2024, https://op.europa.eu/en/publication-detail/-/publication/d63d5a8f-64e8-11ef-a8ba-01aa75ed71a1/language-en.

([15]) European Commission, *Circular Economy – Principles for buildings design*, Brussels, 2020, https://ec.europa.eu/docsroom/documents/39984.

([16]) SEPA, 'The environmental objectives system', SEPA website, 10 February 2020, https://www.sverigesmiljomal.se/environmental-objectives/.

([17]) SEPA, 'Masshantering och användning av massor i anläggningsarbete', SEPA website, 6 December 2024, https://www.naturvardsverket.se/vagledning-och-stod/avfall/atervinning-av-avfall-i-anlaggningsarbeten.

([18]) Municipal waste consists of (i) mixed waste and separately collected waste from households, including paper and cardboard, glass, metals, plastics, biowaste, wood, textiles, packaging, waste electrical and electronic equipment, waste batteries and accumulators, and bulky waste, including mattresses and furniture; and (ii) mixed waste and separately collected waste from other sources, where such waste is similar in nature and composition to waste from households (Directive 2008/98/EC, Article 3.2b).

([19]) https://environment.ec.europa.eu/publications/waste-early-warning-report_en.

reaching certain waste management targets for municipal and packaging waste. Member States that want to use this possibility have to notify the Commission 24 months in advance of the deadline and submit an implementation plan laying down the steps they envisage to reach the postponed targets within a new time frame. Regarding the 2025 targets, 11 Member States, including Sweden, have used this prerogative.

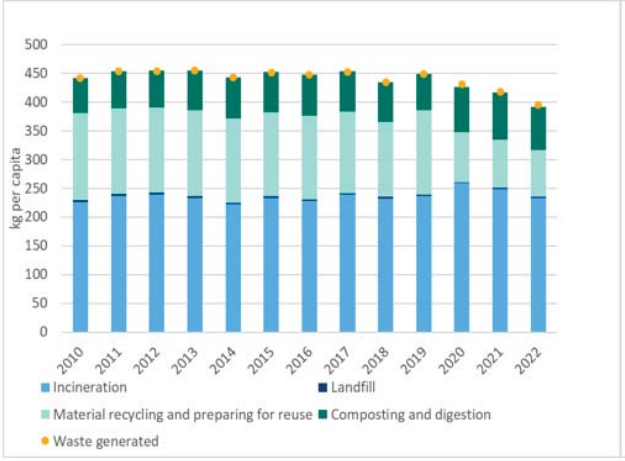
In December 2023, Sweden notified the Commission of its decision to postpone the deadline for meeting the 2025 targets for plastic packaging until 2028. The Commission found that the plan submitted did not comply with the requirements set out in the relevant waste legislation[20].

In the *Waste Early Warning Report*, the Commission recommended that Member States accelerate their efforts to improve their recycling performance. The Commission is, on one hand, working together with the national authorities and stakeholders to speed up the implementation of measures necessary to meet the targets, including through dedicated financing. On the other hand, the Commission is pursuing enforcement actions against those Member States that, based on data submitted to the Commission, do not achieve the targets of the Waste Framework Directive ([21]), the Packaging and Packaging Waste Directive[22] and the Directive on Waste Electrical and Electronic Equipment ([23]).

Municipal waste

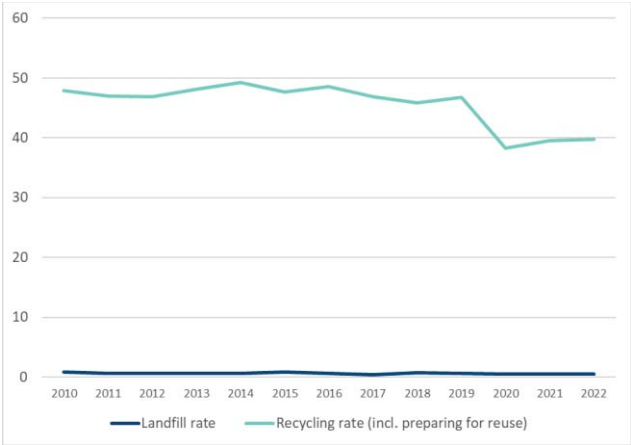
Sweden's municipal waste generation remained stable in 2010–2019 (Figure 5). The reported amounts in 2020 and 2021 were lower, but this is likely to be due to a comprehensive change in reporting methodology in response of the implementation of the new reporting rules introduced in the Waste Framework Directive in 2018, and further adjustments are expected, especially with respect to the generation of municipal waste from sources other than households. In 2022, the country generated 395 kg of municipal waste per capita, which is significantly below the estimated European average of 513 kg per capita.

Figure 5: Municipal waste management and recycling (including preparation for reuse), 2010–2022



Source: Eurostat, 'Municipal waste by waste management operations', env_wasmun, accessed 22 October 2024, https://ec.europa.eu/eurostat/databrowser/view/ENV_WASMUN/default/table.

Figure 6: Recycling (including preparation for reuse) and landfill rates (%), 2010–2022



NB: As of reference year 2020, new reporting rules apply for calculating recycled municipal waste pursuant to the targets laid down in Article 11.2(c–e) of Directive 2008/98/EC. Sweden has applied the new calculation rules since reference year 2020, which led to a break in series in 2020.

Source: Eurostat, 'Municipal waste by waste management operations', env_wasmun, accessed 22 October 2024, https://ec.europa.eu/eurostat/databrowser/view/ENV_WASMUN/default/table.

Sweden has a recycling rate of 40 %, which is below the estimated EU-27 average of 49 %. The recycling rate has been rather stable since 2010, with a large drop in 2020, which is mainly caused by the change in reporting regarding the new calculation rules, especially the new

([20]) Commission Decision (C(2024) 1954)

([21]) Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste and repealing certain Directives, Directive - 2008/98 - EN - Waste framework directive - EUR-Lex.

([22]) European Parliament and Council Directive 94/62/EC of 20 December 1994 on packaging and packaging waste (OJ L 365, 31/12/1994, p. 10–23), Directive - 94/62 - EN - EUR-Lex.

([23]) Directive 2012/19/EU of the European Parliament and of the Council of 4 July 2012 on waste electrical and electronic equipment (WEEE) (OJ L 197, 24.7.2012, p. 38), Directive - 2012/19 - EN - EUR-Lex.

calculation points that exclude rejects during sorting, in compliance with the 2025 recycling target (Figure 6) ([24]).

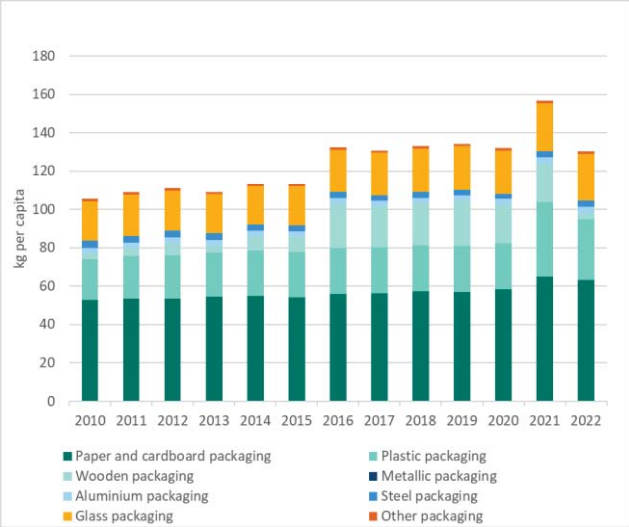
Incineration is the predominant method of waste treatment in Sweden, accounting for 59 % of all waste treated, while landfilling accounts for less than 1 %. The low preparing for reuse and recycling rates are mainly due to low capture rates of recyclables ([25]). In addition, the recycling efficiency of separately collected recyclables is influencing the recycling rate negatively when calculating according to the calculation points of actual recycling ([26]).

Sweden has reported data to show compliance with the preparing for reuse and recycling target of 55 % for 2025, as laid down in the Waste Framework Directive. The difference between these data and the data shown in Figure 6 (voluntary reporting) is below 1 percentage point for the preparing for reuse and recycling rate both in 2021 and 2022.

Packaging waste

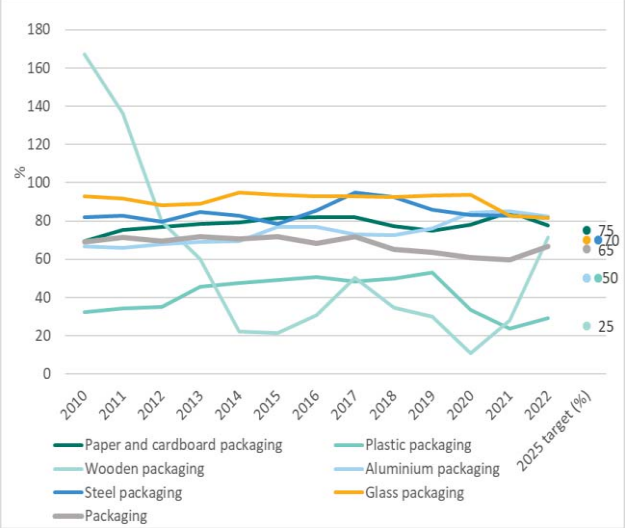
Sweden's packaging waste generation significantly increased between 2010 and 2022 (Figure 7). In 2022, the country generated 130 kg per capita, which is still significantly below the estimated EU-27 average of 186 kg per capita in the same year ([27]). One reason might be the lack of estimates for free riders, which could lead to an underestimation of the volume of packaging placed on the market ([28]).

Figure 7: Packaging waste generation, 2010–2022



Source: Eurostat, 'Packaging waste by waste management operations', env_waspac, last updated 23 October 2024, accessed 28 October 2024, https://ec.europa.eu/eurostat/databrowser/view/ENV_WASPAC__custom_842634/default/table?lang=en.

Figure 8: Packaging waste recycling rates (%), 2010–2022



NB: There are breaks in the data series for paper/cardboard and plastic in 2020 and 2021; for plastic again in 2022; for glass in 2021; for wooden packaging in 2016, 2017, 2018, 2020; and for metals in 2021. As of reference year 2020, the rules for calculating recycled packaging waste have changed, pursuant to Article 6a of Directive 94/62/EC. However, it is unclear based on the information available whether these new reporting rules have been fully implemented in Sweden.

([24]) While compliance with the 2020 recycling target of the Waste Frame Directive is not assessed here, it is noted that the drop in the recycling rate is even higher when compared with the reported recycling rate for the 2020 target. Sweden previously used method 2 set out in Commission decision 2011/753/EU in order to calculate the 2020 target and was only including some waste streams, so the change in methodology led to a drop from 61 % to 38 % in 2020.

([25]) Commission staff working document – The early warning report for Sweden, SWD(2023) 200 final of 8 June 2023, https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=SWD%3A2023%3A200%3AFIN.

([26]) SEPA, 'Kommunalt avfall', SEPA website, 16 August 2024, https://www.naturvardsverket.se/vagledning-och-stod/avfall/kommunalt-avfall/.

([27]) The EU average might have been influenced by not all Member States already fully applying the reporting rules for packaging waste set out in Commission Implementing Decision (EU) 2019/665.

([28]) Eurostat, 'Country-specific notes referring to data on packaging and packaging waste', 2022, https://ec.europa.eu/eurostat/documents/342366/13429143/Country+specific+notes+for+packaging+and+packaging+waste.pdf/59ea2d73-3416-b40b-1771-2eb33e0b8486?t=1648204996107.

Source: Eurostat, 'Packaging waste by waste management operations', env_waspac, last updated 23 October 2024, accessed 28 October 2024, https://ec.europa.eu/eurostat/databrowser/view/ENV_WASPAC__custom_842634/default/table?lang=en.

In 2022, the overall recycling rate for packaging waste was 67 %, very close to the estimated EU-27 average of 65 %. The recycling rate is mostly driven by the two fractions with the highest share in total packaging – paper and cardboard, and plastics – and it has stagnated compared with 2010 (Figure 8). The recycling rates for plastics and glass packaging recycling show a decreasing trend. All other packaging waste fractions show an increasing trend. However, these changes are affected by methodological changes in the reporting, as indicated by several flagged breaks in the data series for all materials. The reported recycling rates for 2022 are above the 2025 targets for total packaging waste and for all materials except plastics.

Policies to encourage waste prevention

Waste management plans and waste prevention programmes are instrumental to the full implementation of EU waste legislation. They set out key provisions and investments to ensure compliance with existing and new legal requirements (e.g. on waste prevention, on separate collection for certain waste streams, on recycling and on landfill targets).

For the years 2024-2030, Sweden has a waste management plan in place 'Waste in a circular society – National Waste Plan 2024–2030 ([29]) and a waste prevention programme 'A circular Sweden thinks - before! National Waste Prevention Programme for a Circular Economy 2024 – 2030 ([30]).

From January 2024, municipalities in Sweden have an expanded responsibility for waste prevention initiatives and are also in charge of providing information to households ([31]).

In order to achieve UN sustainable development goal 12.3, 'halve global per capital food waste', in 2018 Sweden launched its action plan to reduce food waste by 2030 ([32]). The action plan has identified four criteria for success: a national goal and development of monitoring methods; active collaboration between actors in the food supply chain; a change in consumer behaviour; and investigation, research and innovation.

To establish a baseline for food losses occurring in the initial stages of the farm to fork chain, Sweden has developed a national method and the Swedish Board of Agriculture has started monitoring food losses. It is anticipated that this monitoring approach will enhance the understanding of food loss and the waste generated during food production ([33]).

Policies to encourage separate collection and recycling

In Sweden, separate collection is mandatory for both households and non-households. Sweden has started to move from the dominant system of bring points to door-to-door collection. Newly implemented provisions for separate collection, covering the whole country, require that food waste from households and non-households are collected separately door-to-door (applying from 2024). Paper and cardboard, metal, glass (coloured and uncoloured) and plastic packaging waste from households and non-households – if their waste collection is located at the same site as households – will be collected separately through a door-to-door system (applying from 2027). Bulky packaging waste made of paper and plastic should be collected at accessible public collection points. Garden, wood, ceramics and textile wastes are mainly collected at the municipalities' recycling centres ([34]).

In Sweden, extended producer responsibility applies to packaging waste from both households and non-households for all packaging materials. Sweden applies some limited fee modulation based on recyclability criteria for paper and cardboard and plastics packaging. Sweden had a tax on plastic carrier bags ([35]), but it was removed in November 2024 ([36]).

In order to incentivise sorting at source, Sweden has fully rolled out pay-as-you-throw systems, mostly based on container volume and collection frequency. Some municipalities have introduced weight-based fees. In addition, the fee for biowaste is smaller than for residual waste or it is free of charge ([37]).

([29]) Avfall i ett cirkulärt samhälle
([30]) Ett cirkulärt Sverige tänker efter – före!
([31]) SEPA, 'Avfall i ett cirkulärt samhälle', SEPA website, 19 November 2024, https://www.naturvardsverket.se/amnesomraden/avfall/avfall-i-ett-cirkulart-samhalle/.
([32]) Swedish Food Agency, *More People Doing More – Action plan to reduce food waste by 2030*, Uppsala, 2018, https://www.livsmedelsverket.se/globalassets/publikationsdatabas/rapporter/2018/fler-gor-mer-handlingsplan-for-minskat-matsvinn-2030.pdf.
([33]) Jordbruksverket, *Slutrapport om livsmedelsförluster*, Jönköping, 2024, https://webbutiken.jordbruksverket.se/sv/artiklar/ra241.html.
([34]) SEPA, information provided during the Eionet review of the draft EEA country profile on waste management for Sweden, 2024.
([35]) EEA, *Early warning assessment related to the 2025 targets for municipal and packaging waste – Sweden*, Copenhagen, 2022, https://www.eea.europa.eu/publications/many-eu-member-states/sweden/view.
([36]) SEPA, information provided during the Eionet review of the draft EEA country profile on waste management for Sweden, 2024.
([37]) EEA, *Early warning assessment related to the 2025 targets for municipal and packaging waste – Sweden*, Copenhagen, 2022, https://www.eea.europa.eu/publications/many-eu-member-states/sweden/view.

Since it is now mandatory to collect biowaste separately, the Swedish government assesses that the need for these types of incentives for food waste will decrease. In 2027, when new collection rules for packaging will apply, many municipalities will change collection systems, as they need to collect a larger share of waste from each household. Depending on the chosen collection systems, the previous pay-as-you-throw systems will probably be replaced ([38]).

Sweden has mandatory deposit return systems for most aluminium drink cans and most plastic drink bottles. For glass drink bottles, plastic crates and wooden packaging, there is no deposit return system ([39]).

Policies and instruments to discourage landfilling or incineration

Sweden has a landfill tax in place of SEK 725/t (EUR 60/t equivalent) in 2024; this is adjusted yearly ([40]). The landfill tax is close to the average of landfill taxes of Member States applying such taxes. Sweden has a ban in place for landfilling residual or biodegradable waste, with an exemption for sorted combustible waste containing less than 18 % total organic carbon (TOC), and waste containing less than 10 % TOC ([41]). The previous tax on incineration has been removed ([42]).

Sweden is currently subject to an infringement case ([43]) for failing to meet waste collection and recycling targets laid down under the current EU waste legislation.

In the 2022 Environmental Implementation Review (EIR), it was recommended that Sweden (i) introduce policies to promote waste prevention and (ii) shift reusable and recyclable waste away from incineration. Some progress has been achieved on those priority actions, but further efforts are needed.

2025 priority actions

- Further shift reusable and recyclable waste away from incineration, including through economic instruments.
- Improve municipal waste preparation for reuse and recycling.
- Increase the collection and recycling rate of electronic and electric equipment waste.
- Invest in waste prevention measures to reduce the total amount of waste generated.
- Ensure the achievement of the 2025 waste targets, following the recommendations made by the Commission in the early warning reports where applicable.

([38]) SEPA, information provided during the Eionet review of the draft EEA country profile on waste management for Sweden, 2024.

([39]) EEA, *Early warning assessment related to the 2025 targets for municipal and packaging waste – Sweden*, Copenhagen, 2022, https://www.eea.europa.eu/publications/many-eu-member-states/sweden/view.

([40]) Skatteverket, 'Ändrad avfallsskatt från 1 januari 2024', Skatteverket website, 6 December 2023, https://www.skatteverket.se/foretag/skatterochavdrag/punktskatter/nyheterinompunktskatter/2023/nyheterinompunktskatter/andradavfallsskattfran1januari2024.5.7da1d2e118be03f8e4f2208.html.

([41]) EEA, *Early warning assessment related to the 2025 targets for municipal and packaging waste – Sweden*, Copenhagen, 2022, https://www.eea.europa.eu/publications/many-eu-member-states/sweden/view.

([42]) SEPA information provided during the Eionet review of the draft EEA country profile on waste management for Sweden, 2024.

([43]) INFR(2024)2146.

2. Biodiversity and natural capital

Global and EU biodiversity frameworks

Biological diversity and healthy ecosystems are critical for our societies, underpin our economies and well-being and are essential for climate change adaptation and mitigation. The Kunming–Montreal global biodiversity framework (GBF), adopted in December 2022, sets comprehensive and measurable targets to tackle biodiversity loss by 2030. To implement this global framework and integrate biodiversity considerations into national decision-making, the EU – as well as all Member States – had to submit national biodiversity strategies and action plans (NBSAPs), or to communicate national targets aligned with the global targets, by the end of 2024.

The EU biodiversity strategy for 2030 (BDS) aims to put EU biodiversity on a path to recovery by 2030. It sets quantified targets intended to protect and restore nature and manage ecosystems in a sustainable manner, as well as measures to enable implementation and commitments to support global biodiversity. A BDS actions tracker ([44]) and a dashboard of indicators ([45]) provide information on implementation progress.

The recently adopted EU Nature Restoration Regulation ([46]) is the first EU-wide, comprehensive law of its kind and a key instrument for the EU to deliver on the global biodiversity targets for 2030. It lays down an overarching objective at the EU level to put in place effective restoration measures on 20 % of EU land and sea by 2030 and for all ecosystems in need of restoration by 2050. To achieve this, it sets binding targets for Member States to restore and maintain ecosystems, as well as an effective implementation framework based on national restoration plans.

The BDS is the main instrument used by the EU to deliver on its obligation under the GBF. The Commission has submitted to the Convention on Biological Diversity its report on GBF-aligned EU targets that stem from the BDS and from other policy instruments under the European Green Deal.

Member States' NBSAPs need to provide coherent frameworks for national delivery on the global and EU 2030 biodiversity targets. In line with the global obligations, NBSAPs should also include a biodiversity financing plan and a capacity-building plan, based on needs assessments, as well as an overview of the national indicators used to measure progress.

Following the adoption of the GBF, the process of updating Sweden's NBSAP has started. The NBSAP finalisation and adoption is envisaged in 2025 ([47]). In July 2024, Sweden uploaded more than 60 national targets to the Convention on Biological Diversity's online reporting tool, with each target drawing on a range of national policies and instruments that contribute to the global biodiversity goals ([48]).

There is no Swedish strategy for reaching favourable conservation status of habitats and species per se. Instead, biodiversity is integrated into the broad system that specifies the overall goal guiding Sweden's environmental policy, which was adopted by the country's parliament at the turn of the century and has been updated since ([49]).

Swedish nature conservation follows three general themes: (i) protection and management of nature; (ii) species protection; and (iii) sustainable use. The 2014 Act on Biodiversity and Ecosystem Services constitutes Sweden's overall strategy for the period up to 2020.

The overarching goal of this environmental policy, the 'generational goal', is to hand over to the next generation a society in which the major environmental problems have been solved, without increasing environmental and health problems outside Sweden's borders.

([44]) EU Biodiversity Strategy Actions Tracker (https://dopa.jrc.ec.europa.eu/kcbd/actions-tracker/).

([45]) EU Biodiversity Strategy Dashboard (https://dopa.jrc.ec.europa.eu/kcbd/EUBDS2030-dashboard/?version=1).

([46]) Regulation (EU) 2024/1991 of the European Parliament and of the Council of 24 June 2024 on nature restoration and amending Regulation (EU) 2022/869, OJ L 2024/1991, 29.7.2024), http://data.europa.eu/eli/reg/2024/1991/oj; see also the Commission web page on the law (https://environment.ec.europa.eu/topics/nature-and-biodiversity/nature-restoration-law_en).

([47]) Government of Sweden, 'Sweden's national statement at the sixteenth meeting of the Conference of the Parties to the Convention on Biological Diversity (COP 16)', government of Sweden website, 31 October 2024, https://www.government.se/speeches/2024/10/swedens-national-statement-at-the-sixteenth-meeting-of-the-conference-of-the-parties-to-the-convention-on-biological-diversity-cop-16/.

([48]) https://ort.cbd.int/national-targets?countries=se.

([49]) SEPA, *Sweden's Environmental Objectives – An introduction*, Stockholm, 2018, https://www.naturvardsverket.se/publikationer/8800/swedens-environmental-objectives--an-introduction/#:~:text=The%20overall%20goal%20of%20Swedish,health%20problems%20outside%20Sweden's%20borders.

Sweden's environmental policy is broken down into 16 environmental quality objectives (EQOs) covering different areas, including an EQO focusing on 'a rich diversity of plant and animal life'. Six other EQOs are particularly relevant to biodiversity and the implementation of the EU Nature Directives.

The EU aims to allocate to biodiversity objectives at least 7.5 % of annual spending under the EU budget in 2024, rising to 10 % in 2026 and 2027. For details on biodiversity financing and investments in Sweden, see 'Biodiversity and ecosystems' in Chapter 5.

Nature protection and restoration – Natura 2000

Natura 2000 ([50]), the largest coordinated network of protected areas in the world, is key to the achievement of the objectives set out in the Birds and Habitats Directives. These objectives are to ensure the long-term protection, conservation and survival of Europe's most valuable and threatened species and habitats and the ecosystems they underpin. Key milestones towards meeting the objectives of the Birds and Habitats Directives are (i) the setting up of a complete and coherent Natura 2000 network; (ii) the designation of sites of community importance (SCIs) as special areas of conservation (SACs) ([51]); and (iii) effective management of all Natura 2000 sites through the setting of site-specific conservation objectives and measures.

Setting up a complete and coherent network of Natura 2000 sites

The setting up of a complete and coherent network of Natura 2000 sites is a cornerstone of the EU's international commitments, under the BDS and GBF, to legally protect a minimum of 30 % of its land area and 30 % of its sea area by 2030.

Meeting these commitments requires the full implementation of Article 3 of the Habitats Directive. The Natura 2000 network should represent a complete and coherent ecological network composed of sites hosting natural habitat types and species of community interest. Natura 2000 will enable the natural habitat types and the species' habitats concerned to be maintained or, where appropriate, restored to a favourable conservation status in their natural range.

Sweden hosts 89 habitat types ([52]) and 163 species ([53]) covered by the Habitats Directive. The country also hosts populations of 86 bird taxa listed in Annex I of the Birds Directive ([54]).

As shown in Figure 9, in 2023, 12.8 % of Sweden's national land area was covered by Natura 2000 (EU average: 18.6 %), with special protection areas (SPAs) classified under the Birds Directive covering 5.9 % (EU average: 12.8 %) and SCIs under the Habitats Directive covering 12.7 % of the Swedish territory (EU average: 14.3 %).

Considering both Natura 2000 and other nationally designated protected areas, Sweden legally protects 15 % of its terrestrial areas ([55]) (EU average: 26.1 %) and 16 % of its marine areas (EU average: 12.3 %) ([56]).

([50]) Natura 2000 comprises sites of community importance (SCIs), designated pursuant to the Habitats Directive, as well as special protection areas (SPAs), classified pursuant to the Birds Directive. Numbers of protected areas in Figure 9 do not add up to the total of SCIs plus SPAs, because some SCIs and SPAs overlap. A special area of conservation (SAC) is an SCI designated by a Member State.

([51]) SCIs are designated pursuant to the Habitats Directive, whereas SPAs are designated pursuant to the Birds Directive. Figures of coverage do not add up because some SCIs and SPAs overlap.

([52]) EEA, 'Number of habitats and species per Member State', Article 17 dashboard, Annex I total, 19 December 2019, https://www.eea.europa.eu/en/analysis/maps-and-charts/general-information-on-habitats-and-species-article-17-national-summary-dashboards-archived.

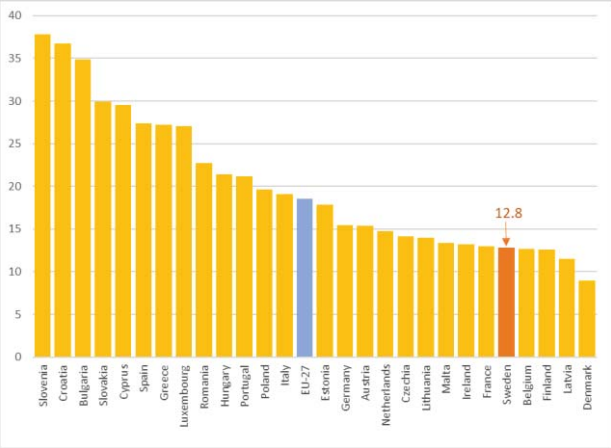
([53]) EEA, 'Number of habitats and species per Member State', Article 17 dashboard, 19 December 2019, https://www.eea.europa.eu/en/analysis/maps-and-charts/general-information-on-habitats-and-species-article-17-national-summary-dashboards-archived.

([54]) EEA, 'Number of bird species/populations per Member State', Article 12 dashboard, Annex I total, last updated 11 May 2023, https://www.eea.europa.eu/en/analysis/maps-and-charts/general-information-on-bird-species-populations-article-12-national-summary-dashboards-archived. This counting only takes into account birds taxa for which information was requested.

([55]) EEA, 'Share of country designated as terrestrial protected area and the overlap between Natura 2000 or Emerald sites and national designations', last updated 20 September 2024, https://www.eea.europa.eu/en/analysis/maps-and-charts/complementarity-between-european-designations-3?activeTab=265e2bee-7de3-46e8-b6ee-76005f3f434f.

([56]) Eurostat dataset env_bio4, protected area percentage for 2022, last updated 12 March 2025, https://ec.europa.eu/eurostat/databrowser/view/env_bio4/default/table?lang=en.

Figure 9: Natura 2000 terrestrial protected area coverage per Member State (%), 2022



Source: European Environment Agency (EEA), 'Natura 2000 Barometer', 2023 data, accessed March 2025, https://www.eea.europa.eu/data-and-maps/dashboards/natura-2000-barometer.

Designating special areas of conservation and setting site-specific conservation objectives and measures

In order to ensure that SCIs contribute to the objectives of the Habitats Directive, Member States must designate them as SACs, setting site-specific conservation objectives based on the ecological needs of the species and habitats present on the sites. The site-specific conservation objectives must be defined in terms of attributes and targets that cover the properties of the feature of interest that are necessary to describe its condition as either favourable or unfavourable. These objectives must address the key pressures and threats present on the site. Article 6 of the Habitats Directive requires Member States to establish and implement conservation measures for the realisation of the objectives of the site.

The assessment of the Natura 2000 network showed that there are insufficiencies in the designation of SCIs and SPAs. Sweden is subject to an infringement case ([57]) on the insufficiency of (i) the list of proposed SCIs according to Article 4(1) of the Habitats Directive, and of (ii) the SPAs under Article 4(1) and (2) of the Birds Directive, in particular completion of the designation of the SPAs at sea.

Recovery of species

One objective set by the BDS is that, by 2030, there should be no further deterioration in conservation trends or the status of any protected species. The BDS also states that Member States should ensure that at least 30 % of species not currently in favourable conservation status achieve that status or show progress towards doing so (e.g. by exhibiting positive population dynamics or stable or increasing range and habitat size), by 2030. According to the European Environment Agency (EEA), based on reporting required under Article 17 of the Habitats Directive, a quarter of species in the EU were of good conservation status as of 2018 ([58]).

One of the primary objectives of the Habitats Directive is the maintenance of or restoration to favourable conservation status of all species of community interest. Moreover, the Birds Directive also aims to ensure that all wild birds in the EU enjoy a secure status. In order to achieve these objectives, it will be necessary to address key pressures and threats. The Birds Directive and the Habitats Directive lay down a framework of species protection rules and rules on the conservation of habitats and species in order to combat these threats.

Under Article 17 of the Habitats Directive, Member States are required to report on the conservation status of habitats and species every six years. The current reporting cycle, covering the years 2019 to 2024, is due for submission in July 2025.

According to the last available report from Sweden on the conservation status of habitats and species covered by the Habitats Directive for 2013–2018, the share of assessments of favourable conservation statuses has been relatively stable since the last reporting period (i.e. 2007–2012). The share of habitats in good conservation status has decreased by 3.09 percentage points and accounted for 22.58 % in 2018 compared with the 25.67 % reported under the previous reporting period (see Figure 10). As for protected species, the share of assessments in good conservation status in 2018 has increased by 1.9 percentage points and accounted for 47.45 % compared with the 45.55 % reported under the previous reporting period (see Figure 11).

However, conservation statuses are uneven across groups: of the 33 biogeographical assessments of the 16 EU forest habitat types protected under the EU Nature Directives in Sweden, only 6.06 % (two habitat types in the Alpine region) have favourable conservation statuses, while all the others have unfavourable statuses ([59]).

At the same time, the share of habitats in bad or poor

([57]) INFR(2020)2207.

([58]) EEA, *State of Nature in the EU: Results from reporting under the Nature Directives 2013–2018*, Publications Office of the European Union, Luxembourg, 2020, https://www.eea.europa.eu/publications/state-of-nature-in-the-eu-2020.

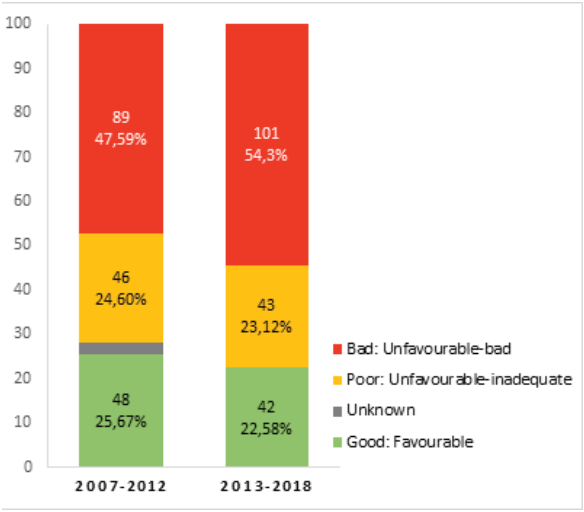
([59]) EEA, *State of Nature in the EU: Results from reporting under the Nature Directives 2013–2018*, Publications Office of the European Union, Luxembourg, 2020, https://www.eea.europa.eu/publications/state-of-nature-in-the-eu-2020.

conservation status has increased to 77.42 % (see Figure 10), while the share of assessments for species in bad or poor conservation status has (slightly) decreased to 51.46 % (see Figure 11).

For forest habitats, the main pressure is forestry (including conversion to less biodiverse forests), followed by energy production (biomass) and natural processes. For grasslands and agriculture-dependent habitats, the main pressures relate to agriculture (e.g. ceased grazing and grassland abandonment). For water-dependent habitats, pressure relates to conversion to forestry and modification of hydrological flows (including obstacles to river continuity). For coastal habitats, urbanisation and industrialisation, including pollution, are major pressures. Invasive alien species (IAS) are assessed as an increasing threat to biodiversity.

As regards to birds, close to 58 % of the breeding species showed population trends that were increasing in the short term or stable (for wintering species, this figure was close to 55 %), while one third have a bad status. According to national data regarding forest birds, six species increased in number and six species decreased in number between 2002 and 2023 ([60]).

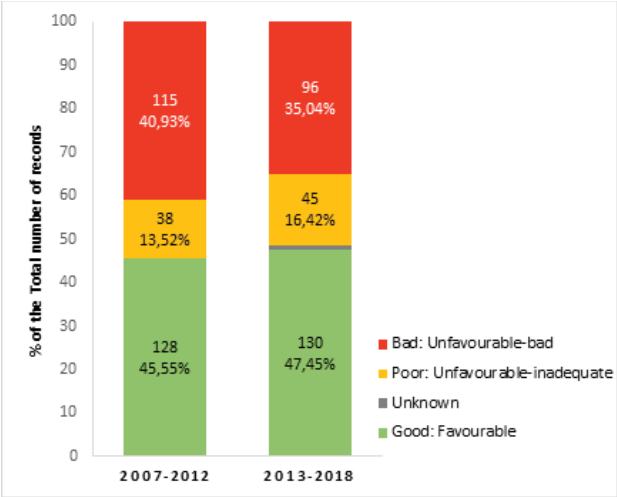
Figure 10: Assessments of conservation status of habitats for the 2007–2012 and 2013–2018 reporting periods



NB: Please note when comparing the figures shown for 2007–2012 and 2013–2018 that these data may also be affected by changes of methods or due to better data availability.

Source: EEA, 'Conservation status and trends of habitats and species', 19 December 2019, accessed December 2024, https://www.eea.europa.eu/themes/biodiversity/state-of-nature-in-the-eu/article-17-national-summary-dashboards/conservation-status-and-trends

Figure 11: Assessments of conservation status of species for the 2007–2012 and 2013–2018 reporting periods



NB: Please note when comparing the figures shown for 2007–2012 and 2013–2018 that these data may also be affected by changes of methods or due to better data availability.

Source: EEA, 'Conservation status and trends of habitats and species', 19 December 2019, accessed December 2024, https://www.eea.europa.eu/themes/biodiversity/state-of-nature-in-the-eu/article-17-national-summary-dashboards/conservation-status-and-trends.

As mentioned above, some marine Natura 2000 sites are not yet effectively managed and further efforts could be made to reduce significant disturbances to highly sensitive marine species. Sweden is subject to an infringement procedure addressing the protection of those marine areas in the framework of the designation of Natura 2000 sites ([61]).

Another infringement case is open regarding insufficient action by Sweden to monitor and prevent the bycatch of harbour porpoises ([62]). The same procedure covers Sweden's failure to transpose the prohibition – in the Habitats Directive – to significantly disturb species within Natura 2000 sites. There is also an ongoing infringement case concerning Sweden's licensed hunting of wolves ([63]).

The financial instrument for the environment (LIFE) programme has been widely used in Sweden for nature purposes. Three recent example projects are:

- Ecostreams for LIFE (Ecosystem based restoration and management of boreal rivers);

([60]) Green, M., Haas, F. and Lindström, Å., *Övervakning av fåglarnas populationsutveckling – Årsrapport för 2023*, Lund University, Lund, 2023, https://www.fageltaxering.lu.se/sites/fageltaxering.lu.se/files/2024-10/arsrapportfor2023.pdf.

([61]) INFR(2020)2207.
([62]) INFR(2020)4037.
([63]) INFR(2010)4200.

- LIFE Restored (Restoration of EU Redlisted Annex I habitats, dependent on grazing or hay cutting in Natura 2000 sites in Sweden);
- GRIP on LIFE (Restoration of waters in forest habitats).

2025 priority actions

- Complete the Natura 2000 site designation process.
- Strengthen the integration of biodiversity actions into other policies (e.g. on energy, agriculture, fisheries, forestry, urban and infrastructure planning, and sustainable tourism), and promote communication between stakeholders.
- Reinforce action for habitats and species in unfavourable conservation status, for example through restoration measures, increased connectivity, better policy coordination and integration, and increased funding.

Recovery of ecosystems

Agricultural ecosystems

The BDS works alongside the common agricultural policy (CAP) to support the transition to sustainable agriculture.

The strategy has set five common agriculture-related targets for 2030, namely to:

— reduce by 50 % the overall use of – and risk from – chemical pesticides;
— reduce by 50 % the use of more hazardous pesticides;
— reduce by 50 % losses of nutrients from fertilisers (which will result in a 20 % reduction in the use of fertilisers) while ensuring that there is no deterioration of soil fertility;
— restore at least 10 % of agricultural area to have high-diversity landscape features; and
— increase the area under organic farming to at least 25 %.

The "Vision for agriculture and food", adopted by the European Commission in February 2025, sets a roadmap to an agri-food system that is attractive, competitive, sustainable and fair for current and future generations. To ensure a sustainable future for EU agriculture, it is crucial that these four priority areas are pursued together, and that public and private support are adequately targeted toward this objective ([64]).

The CAP and national CAP strategic plans are key instruments to facilitate and strengthen the efforts of European farmers to protect biodiversity and the environment at large. The Commission approved Member States' CAP strategic plans in 2022 for the programming period 2023-2027. The CAP is the largest source of funding dedicated to supporting biodiversity and plays a significant role in implementing EU environmental policy. Strategic plans should continue to support the protection of soil, water, air quality and biodiversity.

While certain CAP result indicators focus on interventions favouring sustainable agriculture practices that regenerate ecosystems, the impact of these measures is difficult to assess. The uptake of the eco-schemes is voluntary for farmers.

The utilised agricultural area in Sweden increased from 3 031 500 ha in 2012 to 3 036 080 ha in 2013 and decreased to 2 995 180 ha in 2022 ([65]).

Landscape features are small fragments of non-productive and typically – but not exclusively – semi-natural vegetation present in or adjacent to agricultural land. They provide ecosystem services and support for biodiversity. The indicator 'share of agricultural land covered with landscape features' is the ratio between the area covered by landscape features and the area covered by agricultural land. Based on the Land Use/Cover Area Frame Survey landscape features estimates, the share of agricultural land covered with non-productive landscape features in Sweden is 8.1 %, above the EU average. At the EU level, landscape features cover 5.6 % of agricultural land.

In 2024, the CAP basic regulations were amended ([66]), regarding, inter alia, the standards for good agricultural and environmental condition of land. These changes removed the obligation for farmers benefiting from CAP area-related support to have a minimum share of 3–4 % of non-productive areas or landscape features in their farms. However, the amended regulation does not remove the obligation under the GAEC 8 to maintain existing landscape features, and sets out an obligation for Member States to establish and provide support for eco-schemes covering practices for the maintenance of non-productive areas, such as land lying fallow, and for

([64]) https://agriculture.ec.europa.eu/overview-vision-agriculture-food/vision-agriculture-and-food_en

([65]) Eurostat, 'Utilised agricultural area by categories', tag00025, accessed 5 December 2024, https://ec.europa.eu/eurostat/databrowser/view/tag00025/default/table?lang=en.

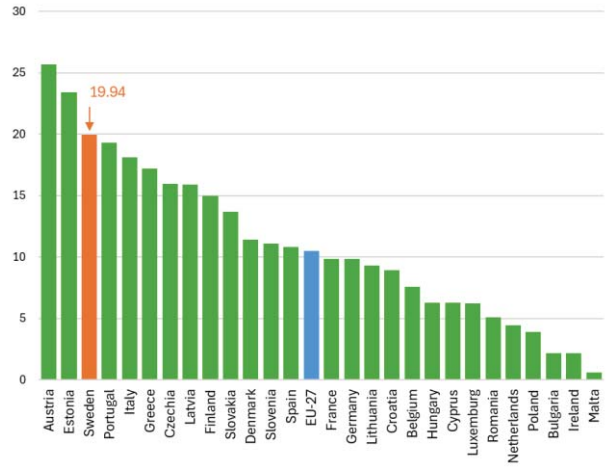
([66]) Regulation (EU) 2024/1468 of the European Parliament and of the Council of 14 May 2024 amending Regulations (EU) 2021/2115 and (EU) 2021/2116 as regards good agricultural and environmental condition standards, schemes for climate, environment and animal welfare, amendment of the CAP strategic plans, review of the CAP strategic plans and exemptions from controls and penalties (OJ L, 2024/1468, 24.5.2024), http://data.europa.eu/eli/reg/2024/1468/oj.

the establishment of new landscape features on arable land.

The recently adopted Nature Restoration Regulation ([67]) focuses on the restoration of agricultural ecosystems and requires Member States to put in place measures that aim to achieve an increasing trend at the national level in at least two out of three indicators for agricultural ecosystems ([68]). One of these indicators is the 'share of agricultural land with high-diversity landscape features'.

Organic farming practices are highly beneficial to biodiversity. As shown in Figure 12, it is estimated that 19.94 % of Sweden's utilised agricultural land area is used for organic farming. This is the third best result in the EU and much higher than the EU average of 10.5 % ([69]). Sweden is therefore significantly contributing to achieving the target to have 25 % of the EU's agricultural land being used for organic farming by 2030.

Figure 12: Share of total utilised agricultural area occupied by organic farming per Member State (%), 2022



Source: Eurostat, 'Area under organic farming', sdg_02_40, accessed 5 December 2024, https://ec.europa.eu/eurostat/databrowser/view/sdg_02_40/default/table?lang=en.

2025 priority action

- Implement eco-schemes and agri-environmental measures and practices to address the environmental needs of Sweden.

Soil ecosystems

Soil is an essential, finite and extremely fragile resource. Its increasing degradation poses a threat to EU food security and climate resilience, adaptation and mitigation.

The EU soil strategy, adopted in November 2021, aims to support soil protection, sustainable soil management and the restoration of degraded soils to achieve the Green Deal objectives as well as land degradation neutrality by 2030.

This entails:

— preventing further soil degradation;
— making sustainable soil management the new normal;
— taking action for ecosystem restoration.

The proposed directive on soil monitoring and resilience ([70]) aims to introduce the first comprehensive legislation on the protection of all soils in the EU. Should the directive be adopted, Member States will have to transpose it into national legislation and implement it, starting with putting in place the governance systems and a sound monitoring framework building on existing national soil monitoring frameworks. The objective of the proposed directive is to provide better and more comparable soil health data with the view of attaining healthy soils by 2050.

Degradation of soil ecosystems encompasses several aspects. The proposed directive requires Member States to assess soil health according to a set of common indicators and to define the necessary regeneration measures. The area of soil that is sealed is an important factor in monitoring land-use change and represents an important pressure on nature and biodiversity. Other soil issues related to land degradation are soil erosion, soil compaction, loss of soil organic carbon, soil contamination, soil salinisation and the presence in soil of nitrogen and phosphorus in excess. The impact assessment accompanying the proposal, which builds on the data available in the EU Soil Observatory, points to the following soil degradation issues in Sweden ([71]).

([67]) Regulation (EU) 2024/1991 of the European Parliament and of the Council of 24 June 2024 on nature restoration and amending Regulation (EU) 2022/869 (OJ L, 2024/1991, 29.7.2024), http://data.europa.eu/eli/reg/2024/1991/oj.

([68]) The three indicators are 'grassland butterfly index', 'stock of organic carbon in cropland mineral soils' and 'share of agricultural land with high-diversity landscape features'.

([69]) This is based on the latest available information from Eurostat, which is currently under review; European Commission, *Agriculture biologique au sein de l'union européenne*, factsheet, Brussels, 2024, https://agriculture.ec.europa.eu/document/download/c67458ed-ec50-4762-ae68-341763ab93c2_fr?filename=factsheet-organic-farning_fr.pdf&prefLang=en.

([70]) Proposal for a directive of the European Parliament and of the Council on soil monitoring and resilience (Soil Monitoring Law), COM(2023) 416 final of 5 July 2023, https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex:52023PC0416.

([71]) Commission staff working document – Impact assessment report: Annexes – Accompanying the proposal for a directive of the European Parliament and of the Council on soil monitoring

Only 5 % of Sweden's soils are considered unhealthy. The greatest contributor to this status is unsustainable soil erosion by water, wind, tillage and harvest, which affects 3 % of the land and 37 % of cropland areas. The other indicators of unhealthy soil are negligeable.

Grasslands

Grasslands are among the most diverse ecosystems in the EU; they can contain as many as 80 different plant species per square metre and are home to a large variety of animals, ranging from small insects, birds and rodents to large herbivores. Grasslands are essential for agriculture and livestock herding. Natural grasslands also play an important role in storing carbon. However, changes in agricultural practices and land uses have caused grasslands to disappear at an alarming rate, making them one of Europe's most threatened ecosystems.

Sweden hosts 14 grassland habitat types, of which five are priority habitats (habitats 6110, 6120, 6230, 6270 and 6280). The majority are in bad conservation status, with the exceptions of 6150, siliceous alpine and boreal grasslands; 6170, alpine and subalpine calcareous grasslands; 6110, rupicolous calcareous or basophilic grasslands (continental only); and 6430, hydrophilous tall herb fringe communities of plains and of the montane to alpine levels (alpine only).

The main pressures on grasslands in Sweden come from abandonment (lack of active management) with risk of conversion to forest, and pollution.

Wetlands/peatlands

Wetlands act as water sources and purifiers; they are the planet's greatest natural carbon stores and they are crucial to agriculture and fisheries. Peatlands are a special type of wetlands dominated by peat-forming plants such as *Sphagnum* mosses. Nearly all peatlands in the EU are habitat types listed in Annex I of the Habitats Directive. Drained peatlands under intensive agricultural use constitute only 3 % of the EU's utilised agricultural area. At the same time, they are responsible for 25 % of the GHG emissions from the EU's agricultural sector. Restoring peatlands brings multiple benefits, as peatlands improve water retention and quality, store carbon, reduce GHG emissions and increase biodiversity.

Sweden hosts 11 'bogs, mires and fens' habitat types across its three biogeographical regions, all are priority habitats with the exception of the habitat 7 130 alkaline fens. The main pressures come from agriculture and forestry as well as pollution.

The Swedish Environmental Protection Agency has funded eight research projects on the ecosystem services of wetlands, which will strengthen the opportunities for optimal planning and locating future wetlands ([72]). During the annual nature dialogue with the Commission, Swedish environmental authorities confirmed their focus on wetland restoration in view of climate change mitigation objectives and contributing to the targets of the Nature Restoration Regulation.

Forest ecosystems

Forests are important carbon sinks, and conserving them is vital if the EU is to achieve climate neutrality by 2050. The EU forest strategy for 2030, adopted in July 2021, is a plan of actions to promote the many services that forests provide. Its key objective is to ensure healthy, diverse and resilient EU forests that contribute significantly to the achievement of the EU's biodiversity and climate ambitions. About 27 % of the forest area in the EU is covered by habitat types listed in Annex I to the Habitats Directive. Moreover, forests host several species protected under the Birds and Habitats Directives, including those for which there is a requirement to designate Natura 2000 sites and to protect breeding sites and resting places.

Several Commission guidelines on forestry management were published in 2023. They covered biodiversity-friendly afforestation, reforestation and tree planting; closer-to-nature forest management; and defining, mapping, monitoring and strictly protecting primary and old-growth forests. Further guidance on payment schemes for ecosystems services has also been published.

In 2023, the Commission proposed a new forest monitoring law that aims to create a comprehensive forest knowledge base, address information gaps and enable a better response to growing pressures on forests.

Assessments show that of the 27 % of the forest area protected EU-wide under the Habitats Directive, less

and resilience (Soil Monitoring Law), SWD(2023) 417 final of 5 July 2023, https://environment.ec.europa.eu/system/files/2023-07/IMPACT ASSESSMENT REPORT ANNEXES SWD 2023 417 part4.pdf.

([72]) SEPA, 'Våtmarkers ekosystemtjänster', SEPA website, 20 June 2024, https://www.naturvardsverket.se/om-miljoarbetet/forskning/miljoforskning/natur/vatmarkers-ekosystemtjanster/.

than 15 % is of favourable conservation status ([73]). The share of forested areas in the EU with a bad conservation status increased from 27 % in 2015 to 31 % in 2018.

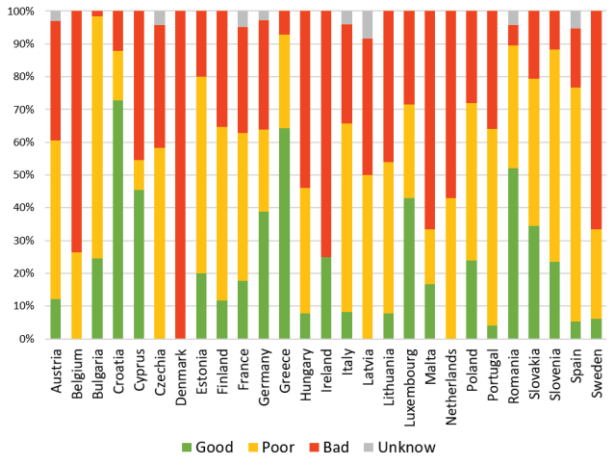
Sweden hosts 15 forest habitat types, among which seven are priority habitat types (habitats 9010, 9020, 9030, 9080, 9180, 91D0, 91E0 and 91F0).

In Sweden, forests covered 68.7 % of the territory in 2020 ([74]). As shown in Figure 13, only 6% of Swedish forest habitats protected under the Habitats Directive are in favourable conservation status, while all the others are in unfavourable (bad or poor) status ([75]). In total, 2 249 000 ha, i.e. around 8% of the total forest area in Sweden, are covered by primary forests ([76]). Most of this area consists of formally protected areas or is exempted from harvesting, either by law or on a voluntary basis. Yet scientists report that unprotected boreal old-growth forests have been cut at a rate that could lead to their disappearance within 50 years ([77]).

By far the main threat to forests is forestry, especially intensive logging, followed by energy production and natural processes. The Swedish Environmental Protection Agency has found that Sweden is not on track to meet its sustainable forest goals for 2030 as policy instruments steer forest management towards production rather than valuing biodiversity.([78])

According to the OECD, "[f]orestry practices need to be adapted to better support biodiversity, especially in areas of high conservation values. Production and environmental objectives are not well balanced in forestry policy, which favours voluntary biodiversity conservation. Ambiguities of the Forestry Act have hindered the supervision of the Swedish Forestry Agency and the proper application of the Environmental Code, resulting in the continued felling of forests with high conservation values."([79])

Figure 13: Conservation status of forests protected under the Habitats Directive per Member State 2013–2018 (% of assessments)



Source: *Source:* Commission staff working document – New EU forest strategy for 2030, SWD(2021) 652 final of 16 July 2021, p. 24, eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52021SC0652.f.

The EU Timber Regulation (EUTR) ([80]) prohibits the placing on the EU market of illegally harvested timber.

On 29 June 2023, the Regulation on Deforestation-free Products (EUDR) ([81]) entered into force ([82]). The regulation seeks to guarantee that products in the EU that are made using any of seven listed commodities have no links to deforestation. The EUDR repeals the EUTR.

Reversing the degradation processes at work in forest habitats and species and removing the drivers of forest biodiversity loss are key to meeting the objectives of the Nature Directives and the target under the EU BDS for

([73]) EEA, *State of Nature in the EU: Results from reporting under the Nature Directives 2013–2018*, Publications Office of the European Union, Luxembourg, 2020, https://www.eea.europa.eu/publications/state-of-nature-in-the-eu-2020.

([74]) EEA, forest information system for Europe, 'Countries – FISE country factsheets', forest information system for Europe website, https://forest.eea.europa.eu/countries.

([75]) Commission staff working document – Stakeholder consultation and evidence base: Accompanying the document Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions – New EU forest strategy for 2030, SWD(2021) 652 final of 16 July 2021, https://eur-lex.europa.eu/legal-content/NL/TXT/?uri=CELEX:52021SC0652.

([76]) European Commission: Joint Research Centre, *Mapping and assessment of primary and old-growth forests in Europe*, Publications Office of the European Union, Luxembourg, 2021, p. 13, https://publications.jrc.ec.europa.eu/repository/handle/JRC124671.

([77]) A. Ahlström, J. G. Canadell, D. B. Metcalfe, "Widespread Unquantified Conversion of Old Boreal Forests to Plantations", Earth's Future, 2022, https://doi.org/10.1029/2022EF003221.

([78]) Naturvårdsverket, "Fördjupad utvärdering av Sveriges miljömål 2023", January 2023, https://www.naturvardsverket.se/4acc3d/globalassets/media/publikationer-pdf/7000/978-91-620-7088-5.pdf.

([79]) OECD, Environmental Performance Review of Sweden, 2025.

([80]) Regulation (EU) No 995/2010 of the European Parliament and of the Council of 20 October 2010 laying down the obligations of operators who place timber and timber products on the market (OJ L 295, 12.11.2010, p. 23), https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32010R0995.

([81]) Regulation (EU) 2023/1115 of the European Parliament and of the Council of 31 May on the making available on the Union market and the export from the Union of certain commodities and products associated with deforestation and forest degradation and repealing Regulation (EU) No 995/2010 (OJ L 150, 9.6.2023, p. 206), https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32023R1115&qid=1687867231461.

([82]) The law will apply to large and medium-sized companies starting on December 30, 2025, and to micro and small enterprises starting on June 30, 2026.

2030. In the 2022 EIR, Sweden was called upon to involve the forestry sector in management practices compatible with species preservation, and to identify and preserve areas of high ecological value for the Natura 2000 network. As no substantial progress has been achieved, these recommendations are repeated in the current report.

2025 priority actions

- Improve the conservation status of forests by promoting sustainable forest management and ensuring compliance with the Habitats Directive before granting/renewing permits for forest logging.
- Implement peatland conservation and restoration measures and include such measures and objectives in the national restoration plans.

Marine ecosystems

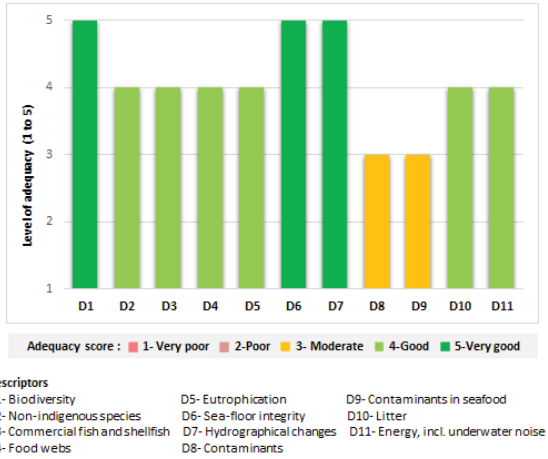
The Marine Strategy Framework Directive (MSFD) requires Member States to achieve good environmental status (GES) for their marine waters. To that end, Member States must draw up marine strategies for their marine waters and cooperate with other Member States sharing the same marine region or subregion. These marine strategies comprise different steps to be developed and implemented over six-year cycles.

Since the 2022 EIR report, no additional data regarding Member States' set of GES characteristics for each descriptor in the MSFD has become available. Nevertheless, Member States had to report updates by October 2024. In the context of this reporting, in accordance with the MSFD and the Commission GES decision ([83]), Member States must include as part of their set of GES characteristics any threshold values for the descriptors in the MSFD that may have been established in cooperation with other Member States at the EU or regional level ([84]). Sweden has reported the Articles 8, 9 and 10 data required by the Article 17 of the MSFD, which are now under the assessment of the Commission.

The Commission assessed the updated monitoring programme reported by Member States in 2020 ([85]). At that time, their updates on the elements, features and parameters identified monitoring gaps. The Commission recommended that Member States should prioritise work to address those gaps at all levels of implementation of the MSFD.

Member States also reported their updated programmes of measures, which are required under Article 13 of the MSFD and which must be updated every six years. The Commission has assessed Member States' programmes of measures.

Figure 14: Level of adequacy of Sweden's updated programme of measures under Article 13 of the MSFD (2022 reporting exercise)



Source: Technical assessment carried out by the European Commission, pursuant to Article 16 of the MSFD, based on the data reported by Sweden in March 2022.

Sweden's updated programme of measures was assessed overall with a good adequacy level, with most descriptors scoring 'good' or 'very good'. This is due to a comprehensive gap analysis and, in most cases, targeted measures that aimed at directly addressing the relevant environmental pressures.

For biodiversity (D1), new measures were introduced to reduce harmful fishing techniques such as trawling and to prevent oil spills. For sea-floor integrity (D6), while important gaps remain regarding bottom trawling in the North Sea, a new measure to reduce the trawling swept area stands out as particularly effective in contributing to GES.

For contaminants (D8) and contaminants in seafood (D9), the effectiveness of new measures remains unclear due to a lack of quantification of the anticipated impact. For

([83]) Commission Decision (EU) 2017/848 of 17 May 2017 laying down criteria and methodological standards on good environmental status of marine waters and specifications and standardised methods for monitoring and assessment, and repealing Decision 2010/477/EU (OJ L 125, 18.5.2017, p. 43–74), http://data.europa.eu/eli/dec/2017/848/oj.

([84]) Commission notice on the threshold values set under the Marine Strategy Framework Directive (Directive 2008/56/EC) and Commission Decision (EU) 2017/848 (C/2024/2078) (OJ C, C/2024/2078, 11.3.2024), http://data.europa.eu/eli/C/2024/2078/oj.

([85]) https://environment.ec.europa.eu/system/files/2023-04/C_2023_2203_F1_COMMUNICATION_FROM_COMMISSION_EN_V5_P1_2532109.PDF.

marine litter (D10), there is a need to more extensively cover micro-, seabed and surface litter alongside macro- and beach litter.

Prevention and management of invasive alien species

IAS are a major cause of biodiversity loss in the EU. Besides inflicting direct and indirect damage on nature and the economy, some IAS also carry and spread infectious diseases, posing a threat to humans and wildlife. Regulation (EU) No 1143/2014 (the IAS Regulation) aims to prevent, minimise and mitigate the adverse impacts of IAS on biodiversity. It focuses action on a list of IAS of EU concern (the 'Union list'), which is regularly updated ([86]).

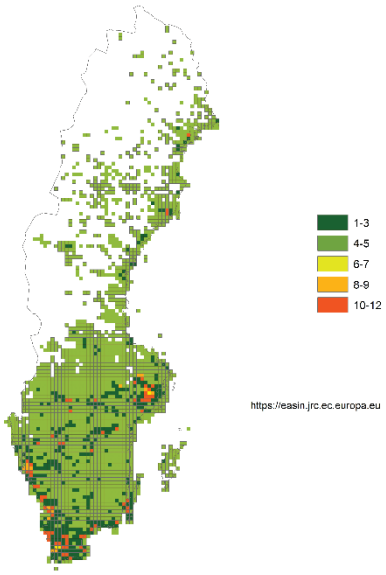
The third update of the Union list ([87]) entered into force on 2 August 2022. The fourth update is in preparation.

The IAS Regulation ([88]) currently lists 88 species subject to restrictions on keeping, importing, selling, breeding, growing and releasing into the environment. Member States are required to take measures to (i) prevent the introduction of IAS, (ii) ensure early detection and rapid eradication of IAS and (iii) manage species that are already widespread on their territory. This aligns with target 6 of the GBF to reduce the introduction of IAS by at least 50 % by 2030 and minimise their impact.

Preventing the introduction and spread of IAS, and managing them, including through eradication and control, can result in a substantial cost saving. Studies estimate that the total cost of IAS in Europe (damages and management) amounted to EUR 116.61 billion between 1960 and 2020 ([89]). More recent studies have put this cost at USD 28 billion per year in the EU, increasing to USD 148.2 billion by 2040 ([90]), and at USD 423 billion annually at the global level ([91]).

There are in total 54 IAS of Union concern in Sweden. This includes 16 species recorded in the previous EIR (2021) and 38 additions. Of these additions, 27 were already on the Union concern list in 2021, and 11 were added later under Commission Implementing Regulation (EU) 2022/1203.

Figure 15: Number of IAS of EU concern, based on available georeferenced information for Sweden, 2024



Sweden has made significant progress on the action on implementation of the IAS Regulation.

2025 priority action

- Step up implementation of the IAS Regulation, including with regard to enforcement and the capacity of inspection authorities.

Ecosystem assessment and accounting

The BDS calls on Member States to better integrate biodiversity considerations into public and business decision-making at all levels and to develop natural capital accounting.

Similarly, target 14 of the GBF ([92]) aims to ensure the full

([86]) Commission Implementing Regulation (EU) 2016/1141 of 13 July 2016 adopting a list of invasive alien species of Union concern pursuant to Regulation (EU) No 1143/2014 of the European Parliament and of the Council (OJ L 189, 14.7.2016, p. 4), as amended by Commission Implementing Regulations (EU) 2017/1263, (EU) 2019/1262 and (EU) 2022/1203, https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:02016R1141-20220802&from=EN.

([87]) Commission Implementing Regulation (EU) 2022/1203 of 12 July 2022 amending Implementing Regulation (EU) 2016/1141 to update the list of invasive alien species of Union concern (OJ L 186, 13.7.2022, p. 10), https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32022R1203.

([88]) Regulation (EU) No 1143/2014 of the European Parliament and of the Council of 22 October 2014 on the prevention and management of the introduction and spread of invasive alien species (OJ L 317, 4.11.2014, p. 35).

([89]) Haubrock, P. J., Turbelin, A. J., Cuthbert, R. N. et al., 'Economic costs of invasive alien species across Europe', *NeoBiota*, Vol. 63, 2021, pp. 153–190.

([90]) Henry, M., Leung, B., Cuthbert, R. N. et al., 'Unveiling the hidden economic toll of biological invasions in the European Union', Environmental Sciences Europe, Vol. 35, No 1, 2023, p. 43.

([91]) IPBES (Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services), *Summary for Policymakers – Invasive alien species assessment*, Bonn, 2023, https://www.ipbes.net/document-library-catalogue/summary-policymakers-invasive-alien-species-assessment.

([92]) Decision 15/4 adopted by the Conference of the Parties to the Convention on Biological Diversity: Kunming–Montreal global

integration of biodiversity and its multiple values into policy and planning and, as appropriate, national accounting. This requires effective and coherent biodiversity observation and reporting on ecosystem condition in the EU ([93]).

The amended Regulation (EU) No 691/2011 on European environmental economic accounts ([94]) introduces new requirements for Member States to report on the condition of ecosystems including urban ecosystems, croplands, grasslands, forest and woodlands, coastal beaches, dunes and wetlands. Data reported by the Member States will feed into the second European ecosystem assessment, due in 2027, and can also be used to support policy decisions.

An ecosystem assessment is an analysis of the condition of ecosystems and the pressures acting on them, as well as the benefits that they provide to people, either directly or indirectly through the economy.

Sweden has ongoing projects for communicating information about ecosystem services and a research programme on 'the value of ecosystem services'.

An increasing number of platforms, networks and communities of practice involve businesses in protecting biodiversity, including the EU Business & Biodiversity Platform ([95]). These platforms and communities are key tools for promoting and facilitating natural capital assessments among businesses and financial services providers.

Natural capital assessments help private businesses to better understand both the negative and positive impacts that they have on nature, and to appreciate how nature contributes to their success. Such understanding contributes to the implementation of the EU's BDS.

One Swedish business and biodiversity network is an active member of the EU Business & Biodiversity Platform.

biodiversity framework (https://www.cbd.int/doc/decisions/cop-15/cop-15-dec-04-en.pdf).

([93]) European Commission: Joint Research Centre and EEA, *EU Ecosystem Assessment – Summary for policymakers*, Publications Office of the European Union, Luxembourg, 2021, https://op.europa.eu/en/publication-detail/-/publication/81ff1498-b91d-11eb-8aca-01aa75ed71a1/language-en.

([94]) Proposal for a regulation of the European Parliament and of the Council amending Regulation (EU) No 691/2011 as regards introducing new environmental economic accounts modules, COM(2022) 329 final of 11 July 2022, https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=COM:2022:329:FIN.

([95]) The EU Business & Biodiversity Platform (https://green-business.ec.europa.eu/business-and-biodiversity_en) aims to promote the business case for biodiversity to businesses and financial institutions through workshops, seminars, reports and a cross-media communication strategy.

3. Zero pollution

Clean air

EU clean air policies and legislation have successfully reduced emissions of key air pollutants and significantly improved air quality, which is now moving towards the levels recommended by the World Health Organization (WHO). This has resulted in clear health benefits and reduced adverse impacts on ecosystems and biodiversity. However, to achieve the WHO-recommended levels, more efforts are needed, including full compliance with EU legislation. To guide these efforts, the EU zero pollution action plan sets targets for 2030 relative to 2005. These are to reduce the health impacts of air pollution by 55 % and to reduce the EU ecosystems threatened by air pollution by 25 %.

The EU has developed a comprehensive suite of air quality policies ([96]). These set health-based EU air quality standards ([97]) and stipulate Member States' national emission reduction commitments ([98]) for several air pollutants.

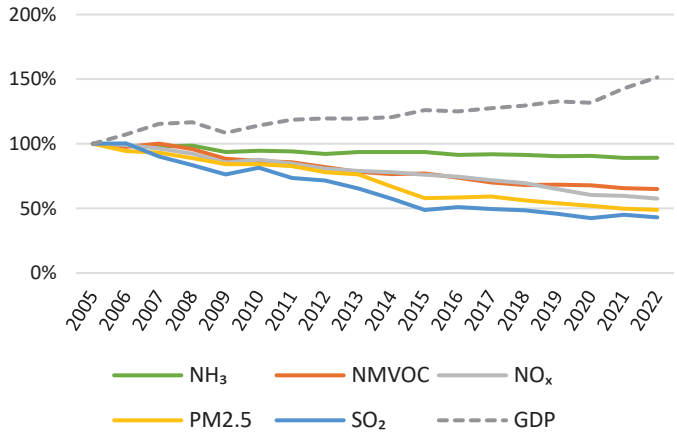
The air quality in Sweden is generally good, with some exceptions.

The latest available annual estimates (for 2022) of the EEA ([99]) for Sweden attribute 480 deaths each year (or 4 500 years of life lost (YLL)) to fine particulate matter ($PM_{2.5}$) ([100]), 60 deaths each year (or 540 YLL) to nitrogen dioxide (NO_2) ([101]) and 740 deaths each year (or 7 000 YLL) to ozone ([102]).

The emissions of several air pollutants have decreased significantly in Sweden since 2005, while GDP growth has continued (see Figure 16). According to the inventories submitted under Article 10(2) of the National Emission Reduction Commitments Directive (NECD) ([103]) in 2024, Sweden has met its emission reduction commitments for 2020–2029 for air pollutants nitrogen oxides (NO_x), non-methane volatile organic compounds (NMVOC), sulphur dioxide (SO_2) and $PM_{2.5}$, and has not met them for ammonia (NH_3). According to the latest projections submitted under Article 10(2) of the NECD, Sweden is projected to meet its emission reduction commitments for 2030 onwards for NMVOC, SO_2 and $PM_{2.5}$, but not for NO_x and NH_3.

Sweden submitted its updated national air pollution control programme (NAPCP) to the Commission on 1 February 2024.

Figure 16: Emission trends of main pollutants / GDP in Sweden (%), 2005–2022



Source: EEA, 'National air pollutant emissions data viewer 2005–2022', 25 June 2024, https://www.eea.europa.eu/en/topics/in-depth/air-pollution/national-air-pollutant-emissions-data-viewer-2005-2022.

([96]) European Commission, 'Air', European Commission website, https://environment.ec.europa.eu/topics/air_en.

([97]) European Commission, 'EU air quality standards', European Commission website, https://environment.ec.europa.eu/topics/air/air-quality/eu-air-quality-standards_en.

([98]) European Commission, 'Reducing emissions of air pollutants', European Commission website, https://environment.ec.europa.eu/topics/air/reducing-emissions-air-pollutants_en.

([99]) EEA, *Harm to human health from air pollution in Europe: Burden of disease 2024*, briefing No 21/2024, Copenhagen, 2024, https://www.eea.europa.eu/en/analysis/publications/harm-to-human-health-from-air-pollution-2024.

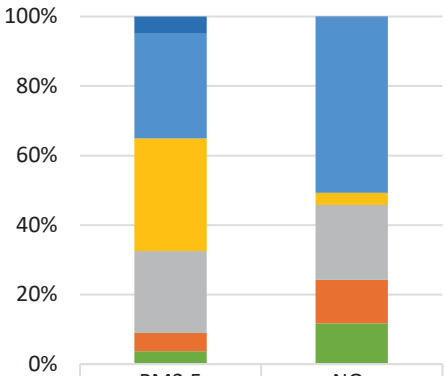
([100]) Particulate matter (PM) is a mixture of aerosol particles (solid and liquid) covering a wide range of sizes and chemical compositions. PM_{10} refers to particles with a diameter of 10 µm or less. $PM_{2.5}$ refers to particles with a diameter of 2.5 µm or less. PM is emitted from many human sources, including combustion.

([101]) Nitrogen dioxide (NO_2) here pertains to a group of gases called NO_x, which also comprises nitrogen monoxide (NO). NO_x is emitted during fuel combustion – for example, from industrial facilities and the road transport sector.

([102]) Low-level ozone is produced by photochemical action on pollution. This year, for the first time, the impact of long-term exposure to ozone has also been taken into account. In previous analysis by the EEA, only the impact of short-term exposure was estimated.

([103]) Directive (EU) 2016/2284 of the European Parliament and of the Council of 14 December 2016 on the reduction of national emissions of certain atmospheric pollutants, amending Directive 2003/35/EC and repealing Directive 2001/81/EC (OJ L 344, 17.12.2016, p. 1), https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv:OJ.L_.2016.344.01.0001.01.ENG.

Figure 17: $PM_{2.5}$ and NO_x emissions by sector in Sweden (%), 2022



	PM2.5	NO_x
Waste	4,95%	0,15%
Transport	30,08%	50,52%
Residential, commercial & institutional	32,43%	3,50%
Manufacturing and extractive industry	23,57%	21,57%
Energy supply	5,29%	12,58%
Agriculture	3,67%	11,67%

Source: EEA, 'National air pollutant emissions data viewer 2005–2022', 25 June 2024, https://www.eea.europa.eu/en/topics/in-depth/air-pollution/national-air-pollutant-emissions-data-viewer-2005-2022.

In 2023, exceedances above the limit values set by the Ambient Air Quality Directive (AAQD) ([104]) were registered for carbon monoxide (CO) in one air quality zone ([105]) and for PM_{10} in two air quality zones ([106]) in Sweden ([107]).

Persistent breaches of air quality requirements, which have severe negative effects on health and the environment, are being followed up by the European Commission through infringement procedures covering all Member States concerned, including Sweden, for exceedances of PM_{10} limit values ([108]). The aim is that appropriate measures will be put in place to bring all zones into compliance. Infringement procedures have also been opened for Member States not meeting the emission reduction commitments for 2020–2029, including for Sweden with regard to NH_3 ([109]).

In the 2022 EIR, Sweden received two priority actions. The first priority action was to further reduce emissions in the context of the NAPCP. Sweden has not made progress on this action, as the latest reported data show continued non-compliance with the 2020–2029 emission reduction commitment for NH_3 and also projects non-compliance with 2030-onwards emission reduction commitments for NO_x and NH_3. The second priority action was to ensure full compliance with EU air quality standards and maintain downward emission trends. Based on the latest data, Sweden has made some progress in this regard. Since 2019, downward emission trends have been reported for all main pollutants. However, exceedances above the limit values remain for CO and PM_{10}, requiring further action.

2025 priority actions

- As part of the NAPCP, take action to reduce emissions of air pollutants.
- Ensure full compliance with the current AAQD standards, also in light of future stricter requirements under the revised AAQD.

Industrial emissions

The main objectives of EU policy on industrial emissions are to:

(i) protect air, water and soil and to prevent harmful effects on human health and the environment;
(ii) prevent and manage waste;
(iii) improve energy and resource efficiency;
(iv) clean up contaminated sites.

The cornerstone of the policy is the Industrial Emissions Directive (IED), which was revised in 2024 ([110]). The revision improves the directive's contribution to the zero pollution objective. It has a strong focus on innovation, and builds solid links between depollution, decarbonisation and circularity, making it a key regulatory tool to accompany the green transformation of EU industry by 2050.

The overview of industrial activities regulated by the IED below is based on data reported to the EU Registry in 2022 ([111]).

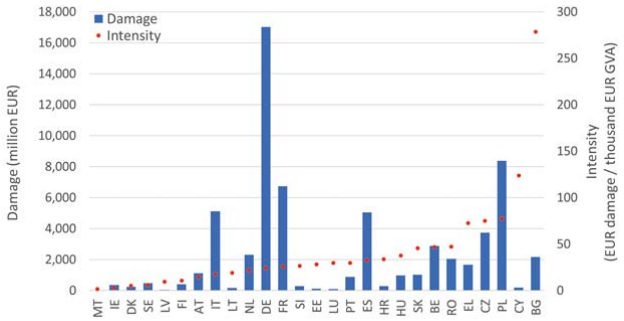
([104]) Directive 2008/50/EU of the European Parliament and of the Council of 21 May 2008 on ambient air quality and cleaner air for Europe (OJ L 152, 11.6.2008, p. 1), https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32008L0050.
([105]) Zone SW4, Stockholm Agglomeration.
([106]) Zone SW1, North Sweden, and Zone SW3, South Sweden.
([107]) EEA, Eionet Central Data Repository (https://cdr.eionet.europa.eu/).
([108]) INFR(2012)2216.
([109]) INFR(2022)2080.
([110]) Directive 2010/75/EU of the European Parliament and of the Council of 24 November 2010 on industrial emissions and livestock rearing (integrated pollution prevention and control) (OJ L 334, 17.12.2010, p. 17), as amended by Directive (EU) 2024/1785 of the European Parliament and of the Council of 24 April 2024, https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A02010L0075-20240804&qid=1725983863299.
([111]) EEA, European Industrial Emissions Portal, https://industry.eea.europa.eu/, 2022 being the baseline year for all reports.

In Sweden, around 1 300 industrial installations were required to have a permit based on the IED in 2022.

The industrial sectors in Sweden with the most IED installations in 2022 were the waste management sector (29 %), followed by intensive rearing of poultry and pigs (25 %) and the mineral and energy sectors, with 11 % and 9 %, respectively.

Figure 18 shows the damage to human health and the environment due to the main industrial air pollutants. As this depends on, among other factors, the size of the industrial sector in each Member State, the figure also shows the ratio between the damage and the industrial activity (expressed in gross value added (GVA)), which gives an indication of the emissions 'intensity'. Although Sweden has the 16th highest damage in the EU, it comes 24th for emissions intensity, below the EU average of EUR 27.5/EUR 1 000 GVA. The main industrial contributors to emissions to air ([112]) are the energy sector, the mineral industry for NO_X emissions, the waste management and chemical industry for dust emissions, the energy sector, and the metals sector and mineral sector for SO_2 and heavy metals.

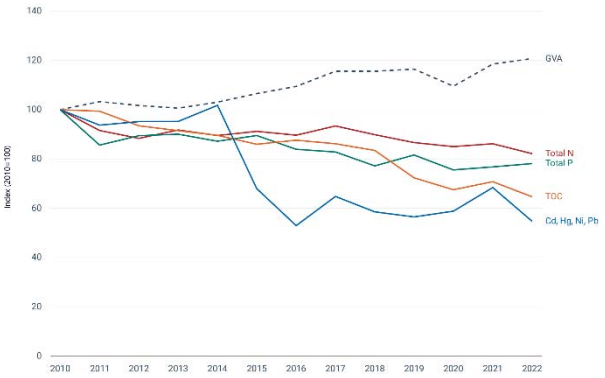
Figure 18: Industrial air pollution damage and intensity, per Member State, 2021



Source: EEA, 'Industrial pollution intensity indicators – EU large industry air pollution damage costs intensity', European Industrial Emissions Portal, 2024, https://industry.eea.europa.eu/analyse/industrial-emissions-indicator.

Overall, the industrial emissions to water in the EU have decreased over time for all the main pollutants. On average in the EU, they appear to be decoupled from the industrial activity, which has increased over the same period (expressed in GVA), as shown in Figure 19.

Figure 19: Industrial releases of pollutants to water and industrial activity in the EU-27

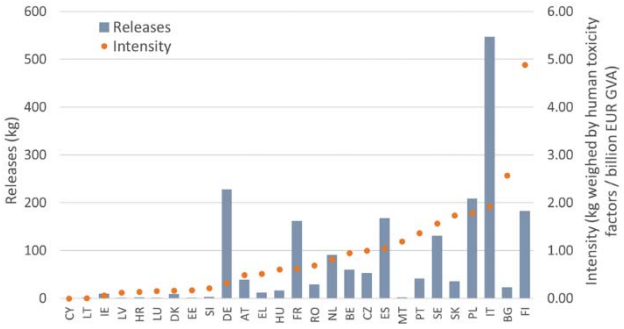


NB: Cd, cadmium; Hg, mercury; Ni, nickel; Pb, lead; total N, total nitrogen; total P, total phosphorous.

Source: EEA, 'Industrial pollutant releases to water in Europe', 30 May 2024, https://www.eea.europa.eu/en/analysis/indicators/industrial-pollutant-releases-to-water.

Concerning Sweden in particular, Figure 20 shows the industrial emissions of heavy metals to water, taking into account the human toxicity of each metal, as well as the emissions intensity, based on its ratio to the industrial activity (expressed in GVA). Sweden has the 7th highest amount of emissions of heavy metals to water and is in 5th position for emission intensity (above the EU average intensity of 0.864 kg/EUR 1 billion GVA).

Figure 20: Industrial releases and intensity of heavy metals to water per Member State, 2022

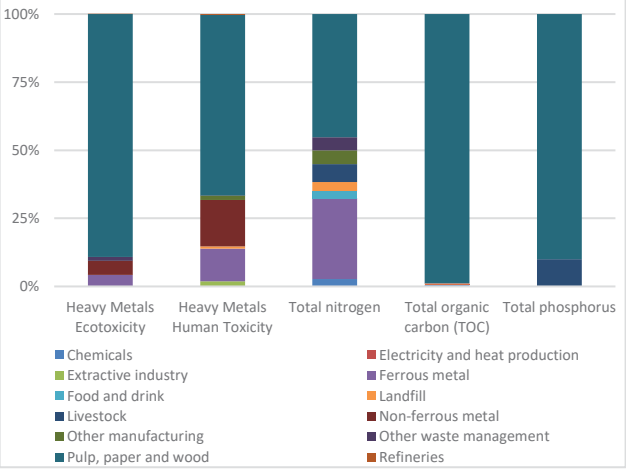


Source: EEA, 'Industrial pollution intensity indicators – EU large industry water pollution intensity', European Industrial Emissions Portal, 2024, https://industry.eea.europa.eu/analyse/industrial-emissions-indicator.

As shown in Figure 21, the main industrial contributors to emissions to water in Sweden are the pulp and paper industry for all pollutants, and the metal production and processing sector for heavy metals and nitrogen.

([112]) European Environment Agency, LRTAP, Air pollutant emissions data viewer (Gothenburg Protocol, LRTAP Convention) 1990-2022, https://www.eea.europa.eu/en/topics/in-depth/air-pollution/air-pollutant-emissions-data-viewer-1990-2022.

Figure 21: Relative releases to water from industry in Sweden (%), 2022



Source: EEA, 'Industrial reporting under the Industrial Emissions Directive 2010/75/EU and European Pollutant Release and Transfer Register Regulation (EC) No 166/2006 – ver. 12.0 Sep. 2024 (tabular data)', EEA Geospatial Data Catalogue, 13 September 2024, https://sdi.eea.europa.eu/catalogue/srv/api/records/cf5e54c1-be99-4426-bcad-baa26c4f27a0?language=all.

IED provisions on public information and participation require Member States to adopt transposition legislation enabling members of the public to have access to relevant information and participate in the approval process for potentially polluting installations. Thus, the public and non-governmental organisations (NGOs), alongside competent authorities, play a role in ensuring compliance of these permits with EU legislation. The IED contains mandatory requirements on environmental inspections, requiring a site visit to take place at least every 1–3 years, using risk-based criteria. In addition, IED enforcement provisions require Member States to determine effective, proportionate, and dissuasive penalties applicable to infringements of IED-based national provisions. In the revised directive, the provisions set that worst infringements can be sanctioned by fines of at least 3% of the annual EU turnover of the legal person. The revised IED will also introduce a right to compensation for people whose health has been harmed by such infringements.

The development of best available techniques (BATs), BAT reference documents and BAT conclusions ensures effective collaboration between stakeholders and enables better implementation of the IED.

Since the 2022 EIR, the Commission has adopted BAT conclusions on (i) ferrous metal processing; (ii) textiles industry; (iii) common waste gas management and treatment systems in the chemical sector; (iv) slaughterhouses, animal by-products and/or edible co-products industries; and (v) smitheries and foundries.

The Commission relies on the efforts of national competent authorities to implement the legally binding BAT conclusions and associated BAT emission levels specified in environmental permits. This should result in considerable and continuous reductions in pollution.

2025 priority actions

- Reduce industrial air pollution damage and intensity.
- Reduce industrial releases to water and their intensity.
- Engage with industry and environmental NGOs to ensure proper contribution to and implementation of BAT conclusions and ensure timely updates to permits following the publication of BAT conclusions.
- Ensure effective public participation and access to justice in relation to the IED.

Major industrial accidents prevention – Seveso

The main objectives of EU policy on the prevention of major industrial accidents are to:

(i) control major-accident hazards involving dangerous substances, especially chemicals;
(ii) limit the consequences of such accidents for human health and the environment;
(iii) continuously improve the prevention of, preparedness for and response to major accidents.

The cornerstone of the policy is Directive 2012/18/EU (the Seveso III Directive) ([113]).

The overview below of industrial plants regulated by the Seveso III Directive ('Seveso establishments') is based on data reported on eSPIRS (e-Seveso Plants Information Retrieval System) for 2022–2024 ([114]) and the report by Sweden on the implementation of the Seveso III Directive for 2019–2022 ([115]).

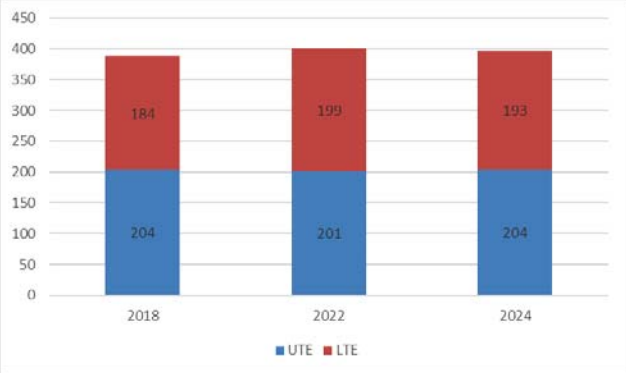
As of 2024, in Sweden, out of the 387 Seveso establishments, 185 are categorised as lower-tier establishments and 202 as upper-tier establishments (UTEs), based on the quantity of hazardous substances likely to be present. UTEs are subject to more stringent requirements. The change in the number of Seveso establishments is presented in Figure 22.

([113]) Directive 2012/18/EU of the European Parliament and of the Council of 4 July 2012 on the control of major-accident hazards involving dangerous substances, amending and subsequently repealing Council Directive 96/82/EC (OJ L 197, 24.7.2012, p. 1), https://eur-lex.europa.eu/eli/dir/2012/18/oj.

([114]) https://espirs.jrc.ec.europa.eu/en/espirs/content; data extracted in September 2024.

([115]) As provided for by Article 21(2) of the Seveso III Directive.

Figure 22: Number of Seveso establishments in Sweden, 2018, 2022 and 2024

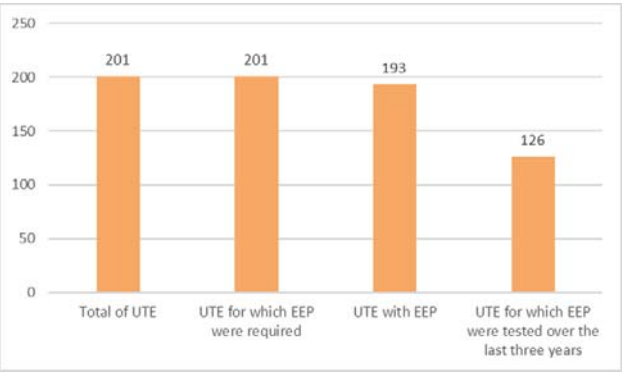


NB: LTE, lower-tier establishment.

Sources: European Commission: Directorate-General for Environment, *Assessment and summary of Member States' implementation reports for Implementing Decision 2014/896/EU (implementing Directive 2012/18/EU on the control of major accident hazards involving dangerous substances)*, Publications Office of the European Union, Luxembourg, 2022, https://op.europa.eu/en/publication-detail/-/publication/94d57d74-735b-11ec-9136-01aa75ed71a1/language-en/format-PDF/source-search; eSPIRS data, extractions from 2022 and 2024; Analysis and summary of Member States' reports on implementation of Directive 2012/18/EU on the control of major accident hazards involving dangerous substances according to the format established by Commission Implementing Decision 2014/896/EU - Publications Office of the EU, https://op.europa.eu/en/publication-detail/-/publication/9bd73087-e9b8-11ef-b5e9-01aa75ed71a1/language-en.

Member States are required to draw up external emergency plans (EEPs) for certain UTEs. These EEPs are essential to allow proper preparation and effective implementation of the necessary actions to protect the environment and the population should a major industrial accident occur. According to Sweden, in 2022, an EEP was required for all 201 UTEs; 193 UTEs had an EEP and 126 of these EEPs had been tested over the last three years. The summary is shown in Figure 23.

Figure 23: Situation regarding EEPs in Sweden, 2022

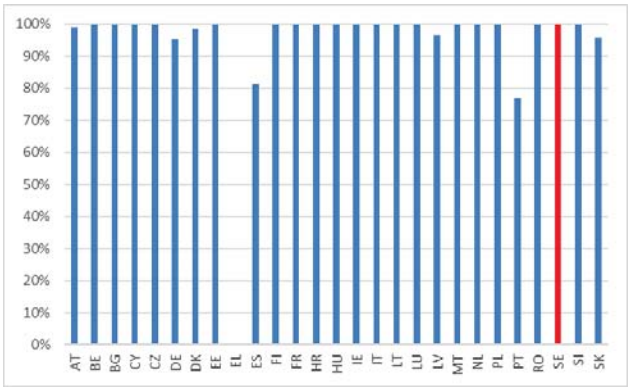


Sources: European Commission: Directorate-General for Environment, *Assessment and summary of Member States' implementation reports for Implementing Decision 2014/896/EU (implementing Directive 2012/18/EU on the control of major accident hazards involving dangerous substances)*, Publications Office of the European Union, Luxembourg, 2022, https://op.europa.eu/en/publication-detail/-/publication/94d57d74-735b-11ec-9136-01aa75ed71a1/language-en/format-PDF/source-search; eSPIRS data, extractions from 2022 and 2024; Analysis and summary of Member States' reports on implementation of Directive 2012/18/EU on the control of major accident hazards involving dangerous substances according to the format established by Commission Implementing Decision 2014/896/EU - Publications Office of the EU, https://op.europa.eu/en/publication-detail/-/publication/9bd73087-e9b8-11ef-b5e9-01aa75ed71a1/language-en.

The information for the public referred to in Annex V to the Seveso III Directive – especially regarding how the public concerned will be warned in case of a major accident, the appropriate behaviour in the event of a major accident, and the date of the last site visit – is permanently available for all Seveso establishments in Sweden.

The shares of UTEs for which information on safety measures and requisite behaviours was made available to the public in recent years is presented in Figure 24. This provision on knowledge is an important provision of the Seveso III Directive, as public awareness may mitigate the consequences of a major industrial accident.

Figure 24: Share of UTEs for which information on safety measures and requisite behaviours were actively made available to the public in per Member State (%), 2022



NB: No data available for Greece.

Sources: European Commission: Directorate-General for Environment, *Assessment and summary of Member States' implementation reports for Implementing Decision 2014/896/EU (implementing Directive 2012/18/EU on the control of major accident hazards involving dangerous substances)*, Publications Office of the European Union, Luxembourg, 2022, https://op.europa.eu/en/publication-detail/-/publication/94d57d74-735b-11ec-9136-01aa75ed71a1/language-en/format-PDF/source-search; eSPIRS data, extractions from 2022 and 2024; Analysis and summary of Member States' reports on implementation of Directive 2012/18/EU on the control of major accident hazards involving dangerous substances according to the format established by Commission Implementing Decision 2014/896/EU - Publications Office of the EU, https://op.europa.eu/en/publication-detail/-/publication/9bd73087-e9b8-11ef-b5e9-01aa75ed71a1/language-en.

In 2022, Sweden received priority actions to strengthen control and enforcement to ensure compliance with Seveso-III Directive provisions, especially on EEP. Data reported on implementation of the directive for 2019–2022 for Sweden shows that improvement is still needed

to establish EEPs for all UTEs, and to test them at least every three years.

2025 priority action

- Strengthen compliance with requirements on safety measures to prevent major accidents and ensure appropriate preparedness and response in relation to UTEs, in particular as regards reviewing, testing and updating EEPs, at intervals of no more than three years.

Mercury Regulation

The Mercury Regulation establishes measures and conditions concerning the use and storage of and trade in mercury, mercury compounds and mixtures of mercury, the manufacture and use of and trade in mercury-added products and the management of mercury waste, in order to ensure a high level of protection of human health and the environment from anthropogenic emissions and releases of mercury and mercury compounds. The revision of the Mercury Regulation adopted in 2024 sets out rules to address the last intentional uses of mercury in the EU by phasing out the use of dental amalgam by 1 January 2025 except when deemed strictly necessary by the dental practitioner based on the specific medical needs of the patient, and prohibiting the manufacture and export of additional mercury-containing lamps from 1 January 2026 or 1 January 2027 (depending on the lamp category).

Sweden already completely phased out dental amalgam more than a decade ago. Sweden will also need to ensure that the manufacture and export of mercury-containing lamps are prohibited by the deadlines required by the Mercury Regulation.

Noise

The Environmental Noise Directive ([116]) requires a common approach to avoid, prevent and reduce the harmful effects of noise. The designated authorities are responsible for making and approving noise maps and action plans for agglomerations, major roads, major railways and major airports. Member States decide on noise limits that are not set at the EU level. Nevertheless, the zero pollution action plan sets as a 2030 target a 30 % reduction compared with 2017 in the share of people chronically disturbed by transport noise.

Excessive noise from aircraft, railways and roads is one of the main causes of environmental health-related issues in the EU. It can cause ischaemic heart disease, stroke, interrupted sleep, cognitive impairment and stress ([117]).

In Sweden, environmental noise is estimated to cause at least around 580 cases of ischaemic heart disease annually ([118]) and some 132 000 people to suffer from disturbed sleep([119]).

Based on the latest set of information analysed, Sweden has completed its noise mapping of agglomerations, roads, railways and airports.

Action plans for noise management for agglomerations, roads, railways and airports must be updated and submitted to the Commission every five years. The deadline for reporting noise action plans under the most recent reporting cycle was 18 January 2025; these plans have not been assessed yet.

2025 priority action

- Complete and implement action plans on noise management.

Water quality and management

EU legislation and policy requires that the impact of pressures on transitional waters, coastal waters and fresh water (including surface waters and groundwater) be significantly reduced. Achieving, maintaining or enhancing a good status of waterbodies as defined by the Water Framework Directive will ensure that EU citizens and the environment benefit from good-quality and safe drinking and bathing water. It will further ensure that the nutrient cycle (nitrogen and phosphorus) is managed in a more sustainable and resource-efficient way.

([116]) Directive 2002/49/EC of the European Parliament and of the Council of 25 June 2002 relating to the assessment and management of environmental noise – Declaration by the Commission in the Conciliation Committee on the directive relating to the assessment and management of environmental noise (OJ L 189, 18.7.2002, p. 12), https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32002L0049.

([117]) WHO, *Environmental Noise Guidelines for the European Region*, Copenhagen, 2018, https://www.who.int/europe/publications/i/item/9789289053563.

([118]) These figures are an estimation by the EEA based on (i) the data reported by Member States on noise exposure covered by Directive 2002/49/EC for the round of noise mapping of 2022; (ii) European Topic Centre on Air Pollution, Transport, Noise and Industrial Pollution (ETC/ATNI), 2021, *Noise Indicators under the Environmental Noise Directive 2021: Methodology for estimating missing data*, Eionet report ETC/ATNI No 2021/06, Kjeller, 2021; and (iii) the methodology for health impact calculations in European Topic Centre on Air Pollution and Climate Change Mitigation (ETC/ACM), *Implications of environmental noise on health and wellbeing in Europe*, Eionet report ETC/ACM No 2018/10, Bilthoven, 2018, https://www.eionet.europa.eu/etcs/etc-atni/products/etc-atni-reports/eionet_rep_etcacm_2018_10_healthimplicationsnoise.

([119]) More information on the adverse health effects of noise pollution is available at: https://www.eea.europa.eu/themes/human/noise/noise-2

Water Framework Directive

The Water Framework Directive ([120]) is the cornerstone of EU water policy ([121]). The Water Framework Directive and other water-related directives ([122]) form the basis of sustainable and integrated water management in the EU. They aim to achieve a high level of protection of water resources, prevention of further deterioration, and restoration to good status. These objectives are very important for the EU's competitiveness, strategic autonomy and security, yet have become even more challenging in the face of climate change affecting our precious water resources.

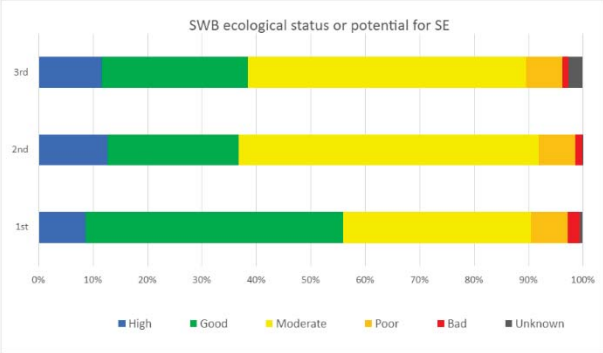
The Water Framework Directive establishes a procedural framework for reaching good ecological and chemical status of surface water and good quantitative and chemical status of groundwater. This implies monitoring and classification of all waterbodies, assessment of pressures and impacts, and identification of the most cost-effective measures to achieve the objectives of the directive. The directive dates from 2000 and set an initial deadline of 2015 for achieving its objectives, with the option to extend the deadline to the end of 2027. Every six years, Member States must report their river basin management plans (RBMPs) to the Commission. They should cover river basin districts, some of which may be shared with other countries. The Commission has assessed the third cycle of RBMPs, which were to be submitted by March 2022, and reported its findings to the European Parliament and to the Council on 4th February 2025 ([123]).

Sweden has 23 813 surface waterbodies and 3 704 groundwater bodies, divided over five river basin districts (the North Baltic, the South Baltic, the Bothnian Bay, the Bothnian Sea, and Skagerrak and Kattegat). Approximately 3 % of surface waters are designated as 'heavily modified' and about 0.2 % as 'artificial'. Heavily modified and artificial waterbodies must reach good ecological potential rather than good ecological status, which means that all measures must be taken to mitigate the adverse impact of the sustainable human development activities causing the waterbody to be heavily modified / artificial, while not significantly affecting these activities.

It follows from the assessment of the third RBMPs that there has been a minor improvement in the ecological status/potential of surface waterbodies, and no improvement in their chemical status, as compared with the status reported in the second RBMPs (covering 2015–2021). There has been a slight deterioration in the quantitative status and chemical status of groundwater bodies.

The following figures show the evolution of the ecological status/potential and the chemical status of surface waters, and of the quantitative and chemical status of groundwater in 2010, 2015 and 2021.

Figure 25: Ecological status/potential of surface waterbodies in each RBMP cycle



About 41 % of surface waterbodies are in good or better ecological status/potential, showing some improvement compared with the second RBMPs. However, the monitoring extent has reduced: now only 21 % of surface waterbodies are monitored to assess ecological status/potential.

According to the Swedish Agency for Marine and Water Management, hydropower is the most extensive pressure on lake and river waterbodies in Sweden ([124]). Almost 4 000 river waterbodies and 1 000 lake waterbodies are affected by water regulation or lack of connectivity.

([120]) https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32000L0060.

([121]) https://environment.ec.europa.eu/topics/water_en.

([122]) These include the Groundwater Directive (https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32006L0118), the Environmental Quality Standards Directive (https://eur-lex.europa.eu/eli/dir/2008/105/oj), the Floods Directive (https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32007L0060), the Bathing Water Directive (https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32006L0007), the Urban Wastewater Treatment Directive (https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A31991L0271), the New Drinking Water Directive (https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32020L2184), the Nitrates Directive (https://eur-lex.europa.eu/legal-content/EN/ALL/?uri=celex%3A31991L0676), the MSFD (https://eur-lex.europa.eu/legal-content/en/TXT/?uri=CELEX%3A32008L0056) and the IED (https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32010L0075).

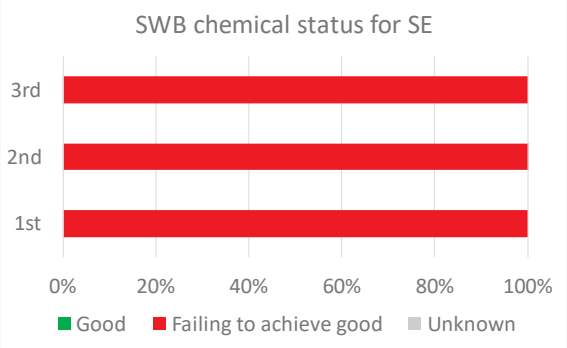
([123]) ENV - Bibliothèque

([124]) Swedish Agency for Marine and Water Management, 'Towards sustainable hydropower in Sweden', Swedish Agency for Marine and Water Management website, 27 November 2019, https://www.havochvatten.se/en/eu-and-international/towards-sustainable-hydropower-in-sweden.html.

While Sweden has introduced a national assessment plan ([125]) to review the permits of hydropower plants that have a significant effect on waterbodies, the review process is expected to take until the early 2040s, which means that Sweden does not expect improvements in hydromorphological conditions to be achieved by 2027.

Coastal waterbodies are also under pressure, with 79 % below a good ecological status. Furthermore, only 2 % of highly modified and artificial surface waterbodies have good ecological potential. By 2027, less than 50 % of surface waterbodies are expected to reach good ecological status/potential.

Figure 26: Chemical status of surface waterbodies in each RBMP cycle (%)

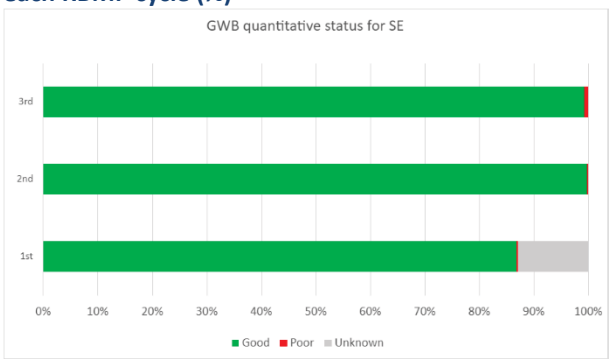


In total, 9 % of surface waterbodies are monitored for chemical status, covering all three matrices: water, sediments and biota. Nevertheless, all 45 priority substances are monitored with a network set at a risk-based approach.

A total of 100 % of surface waterbodies are expected to fail to achieve a good chemical status in 2027, which has been the case since the first RBMPs.

Failure to achieve good chemical status is mostly due to ubiquitous persistent bioaccumulative and toxic substances (uPBTs), which are difficult to address and often have transboundary sources. In Sweden, these uPBTs are mainly mercury and polybrominated diphenyl ether.

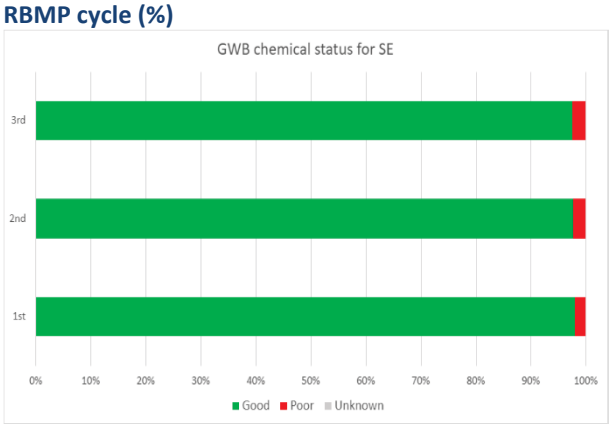
Figure 27: Quantitative status of groundwater bodies in each RBMP cycle (%)



The percentage of groundwater bodies not achieving good quantitative status has increased to 0.8 % since the second RBMPs. However, the total number of groundwater bodies has increased by 12 % due to re-delineation.

3.1 % of groundwater bodies are at risk of failing to achieve a good quantitative status by 2027.

Figure 28: Chemical status of groundwater bodies in each RBMP cycle (%)



97.6 % of groundwater bodies in Sweden have a good chemical status, showing a slight deterioration from the second RBMPs. 4 % of groundwater bodies are at risk of failing to maintain good chemical status by 2027.

Until the end of 2027, Member States can still apply for time-related exemptions, subject to providing evidence of compliance with the strict criteria set out in the Water Framework Directive. After 2027, the possibilities for applying for exemptions will be much more limited.

In the 2022 EIR, it was recommended that Sweden assess new physical modifications of waterbodies in line with Article 4(7) of the Water Framework Directive, considering alternative options and adequate mitigation measures. Some progress has been made in following up with that priority action.

([125]) Swedish Energy Agency, 'Nationell plan för omprövning av vattenkraft', Swedish Energy Agency website, 12 January 2024, https://www.energimyndigheten.se/energisystem-och-analys/elproduktion/vattenkraft/nationell-plan-for-moderna-miljovillkor/#:~:text=Den%201%20oktober%202019%20lämnade,beräknas%20ta%20ca%2020%20år.

A positive point is that, to tackle pollution from non-agricultural, diffuse pollution from both nutrients and other chemicals, Sweden introduced several concrete measures, implemented at the waterbody level and specified by the relevant authority. For example, discharge permits are subject to review and appropriate requirements are added to comply with the stricter objectives. For nutrients, Sweden has set reduction targets covering nitrogen and phosphorus for various sectors at a waterbody level. To support measures to tackle agricultural pollution, the Swedish CAP SP for 2023–2027 envisaged EUR 1.3 billion of funding to support environmental and climate objectives, including the implementation of environment-friendly practices as well as raising awareness among farmers on these issues. The agriculture sector finances 30 % of the cost of measures and the rest is funded by the CAP and/or other public support.

2025 priority actions

Without prejudice to the list of recommended actions in the Commission report to the European Parliament and to the Council on the assessment of the third RBMPs, the following priority actions can be highlighted.

- Improve river continuity and ecological flows, boosting efforts on nature-based solutions to reduce hydromorphological pressures
- Ensure periodic reviews of permits for discharges, abstractions and other water uses, including hydropower pressures.
- Reduce pollution from nutrients, chemicals, metals and saline discharges.
- Improve the classification of water bodies and strengthen monitoring systems.
- Develop more robust programmes of measures, tackle obstacles identified in the implementation of measures and ensure adequate financing for implementation, including through better use of the cost recovery and polluter pays principle.

Floods Directive

Every six years, following the same reporting cycle as the RBMPs, all Member States also report their flood risk management plans (FRMPs), based on the flood hazard and risk maps (FHRMs) and the preliminary flood risk assessments drawn up during the second cycle (2016–2021).

The Commission assessed the FRMPs and reported its findings to the European Parliament and to the Council on 4th February 2025, together with the assessment of the RBMPs.

Three of the five Swedish FRMPs provide an overview of the achievements of the objectives in the respective first plans. The second FRMPs provide more specific and measurable information on the implementation of measures, including some information on the costs and the progress made. Three FRMPs refer to nature-based solutions, and four discuss cultural heritage. Moreover, four FRMPs mention damage costs and insurance-related issues, which was not assessed in the first FRMPs. Two FRMPs refer to cost–benefit analysis in detail, while only one of the first FRMPs (briefly) did so. All FRMPs refer to coordination with regional strategies for climate adaptation.

2025 priority actions

- FRMPs should provide details on how the FHRMs were used in the choice of measures and how to consider pluvial flooding.
- Better explain the choice and implementation of flood prevention and protection measures (prioritisation, monitoring, costs of measures).
- Improve public consultation and stakeholder involvement.

Drinking Water Directive

The recast Drinking Water Directive is now applicable, and Member States were required to transpose its provisions into their national legal systems by 12 January 2023. Since the entry into force of the recast directive, the Commission has adopted several delegated and implementing acts establishing (i) a watch list of substances and compounds of concern for drinking water ([126]), (ii) a methodology for measuring microplastics in drinking water ([127]) and (iii) an EU system for testing and approving materials that will be allowed to be in contact with drinking water ([128]). Member States will have to take

([126]) https://environment.ec.europa.eu/publications/implementing-decision-drinking-water-directive-watch-list_en.

([127]) Commission Delegated Decision (EU) 2024/1441 of 11 March 2024 supplementing Directive (EU) 2020/2184 of the European Parliament and of the Council by laying down a methodology to measure microplastics in water intended for human consumption (notified under document C(2024) 1459) (OJ L, 2024/1441, 21.5.2024), http://data.europa.eu/eli/dec_del/2024/1441/oj.

([128]) OJ L, 2024/365, 23.4.2024, http://data.europa.eu/eli/dec_impl/2024/365/oj; OJ L, 2024/367, 23.4.2024, http://data.europa.eu/eli/dec_impl/2024/367/oj; OJ L, 2024/369, 23.4.2024, http://data.europa.eu/eli/reg_del/2024/369/oj; OJ L, 2024/368, 23.4.2024, http://data.europa.eu/eli/dec_impl/2024/368/oj; OJ L, 2024/370, 23.4.2024, http://data.europa.eu/eli/reg_del/2024/370/oj; OJ L, 2024/371, 23.4.2024, http://data.europa.eu/eli/reg_del/2024/371/oj; see the Commission web page on all six delegated acts for more information (https://environment.ec.europa.eu/publications/delegated-acts-drinking-water-directive_en).

these various Commission acts into account when implementing the recast directive.

Finally, the Commission has now received data from Member States on the quality of drinking water in 2017–2019. The quality of drinking water (supplied by large water suppliers) in Sweden does not give rise to concern ([129]).

Sweden, however, is subject to an infringement procedure for failing to communicate its national laws transposing the recast Drinking Water Directive ([130]).

From January 2026, the European quality standards for per- and polyfluoroalkyl substances (PFAS) in drinking water will apply, ensuring harmonised Member States' reporting of PFAS monitoring data in the future.

2025 priority action

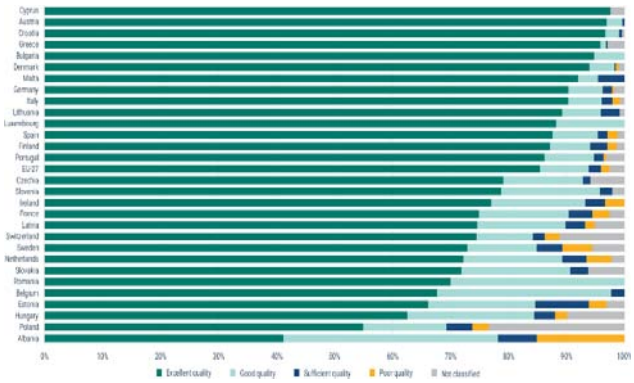
- Take actions to ensure full compliance with the Drinking Water Directive.

Bathing Water Directive

The Bathing Water Directive requires Member States to monitor and assess bathing water. It requires that, during the bathing season, Member States actively and promptly disseminate information on bathing water quality to the public. In particular, notices banning or advising against bathing should be rapidly and easily identifiable.

It should be highlighted that in 2023, out of the 468 Swedish bathing waters, 72.9 % were of excellent quality, 12 % were of good quality and 4.5 % were of sufficient quality. 5.1 % were found to be of poor quality and 5.6 % were not classified.

Figure 29: Bathing water quality per Member State, Albania and Switzerland (%), 2023 season



Source: EEA, *European Bathing Water Quality in 2023*, briefing No 04/2024, Copenhagen, 2024, https://www.eea.europa.eu/publications/european-bathing-water-quality-in-2023/.

Nitrates Directive

The Nitrates Directive ([131]) aims to protect water quality across Europe by preventing nitrates from agricultural sources that can pollute groundwater and surface waters and by promoting the use of good farming practices. The latest Commission report on the implementation of the Nitrates Directive ([132]), dating back to 2021, warns that nitrates are still causing harmful pollution to water in the EU. Excessive nitrates in water are harmful to both human health and ecosystems, causing oxygen depletion and eutrophication. Cleaning of waters by national authorities or farmers, where it has been undertaken, has had a positive impact on the drinking water supply and on biodiversity. It has also benefited the sectors – such as fisheries and tourism – that depend on biodiversity and on a good supply of drinking water. Nevertheless, excessive fertilisation remains a problem in many parts of the EU. The report on the implementation of the Nitrates Directive covering 2020–2023 will be available in 2025.

The analysis of Sweden's RBMPs has identified nutrients from agriculture as an important pressure on groundwater / surface water that is affecting water status and as one of the main factors for Sweden not meeting the Water Framework Directive objectives.

2025 priority action

- Tackle nutrient pollution, especially nitrates from agriculture, through the implementation of the Nitrates Directive.

Urban Wastewater Treatment Directive

The Urban Wastewater Treatment Directive (UWWTD) aims to protect human health and the environment from the effects of untreated urban wastewater. It therefore requires Member States to collect and treat (secondary or biological treatment) waste water in all urban areas of more than 2 000 people, and to apply a more stringent treatment than secondary, with nitrogen and/or phosphorus removal, to the waste waters generated in urban areas, also known as agglomerations, of more than 10 000 people, before they are discharged into waters and their catchments, when they are sensitive to nitrogen and/or phosphorus (i.e. eutrophic or tending to become eutrophic).

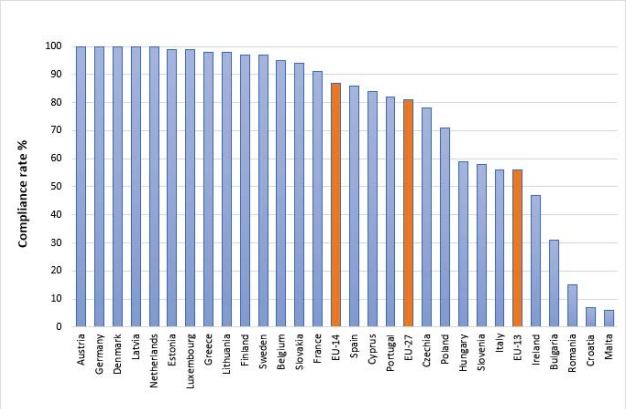
([129]) In summary, the compliance for all parameter groups in Sweden was at least 99.56 % in 2017, 99.37 % in 2018 and 99.41 % in 2019.

([130]) https://eur-lex.europa.eu/eli/dir/2020/2184/oj; INFR(2023)0098.

([131]) https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1561542776070&uri=CELEX:01991L0676-20081211.

([132]) https://environment.ec.europa.eu/topics/water/nitrates_en.

Figure 30: Proportion of urban wastewater that fully complies with the UWWTD (%), 2020



Source: 12th technical assessment of UWWTD implementation - Publications Office of the EU

The revised directive ([133]) builds on the current *acquis*, strengthens existing treatment standards and establishes a new additional treatment of micropollutants in urban wastewater. Other new requirements relate to moving towards the energy neutrality of the sector, establishing an extended producer responsibility system to ensure sustainable financing of micropollutant treatment by the most polluting industries, and ensuring access to sanitation, especially for vulnerable and marginalised groups. Sweden has until 31 July 2027 to transpose the new directive into its national legal system.

2025 priority actions

- Take the necessary measures to ensure full implementation of the current urban wastewater treatment directive, taking into account the new requirements of the recast directive.

Chemicals

The EU seeks to ensure that chemicals are produced and used in a way that minimises any significant adverse effects on human health and the environment. In October 2020, the Commission published its chemicals strategy for sustainability towards a toxic-free environment ([134]), which led to some systemic changes in EU chemicals legislation. The strategy is part of the EU's zero pollution ambition – a key commitment of the European Green Deal.

The EU's chemicals legislation ([135]) provides a baseline protection for human health and the environment. It also ensures stability and predictability for businesses operating in the internal market.

Since 2007, the Commission has gathered information on the enforcement of the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) Regulation and the Classification, Labelling and Packaging (CLP) Regulation. In December 2020, the Commission assessed the Member States' reports ([136]) on the implementation and enforcement of these regulations ([137]). It is apparent from the Commission's report that there are still many disparities in the implementation of the REACH and CLP Regulations, notably in the area of law enforcement. Recorded compliance levels in Member States, generally quite stable over time, appear to be getting slightly worse. This may be because (i) enforcement authorities are becoming more effective in detecting non-compliant products/companies; and (ii) more non-compliant products are being placed on the EU market.

In August 2021, the Commission published a measurable assessment of the enforcement ([138]) of the two main EU

([133]) Directive (EU) 2024/3019 of the European Parliament and of the Council of 27 November 2024 concerning urban wastewater treatment (recast).

([134]) Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions – Chemicals strategy for sustainability: Towards a toxic-free environment, COM(2020) 667 final of 14 October 2020, https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=COM%3A2020%3A667%3AFIN; Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006 (OJ L 353, 31.12.2008, p. 1), https://publications.europa.eu/resource/cellar/c6b6a31d-8359-11ee-99ba-01aa75ed71a1.0004.02/DOC_2.

([135]) Namely, Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the registration, evaluation, authorisation and restriction of chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC (OJ L 396, 30/12/2006, p. 1), https://eur-lex.europa.eu/legal-content/en/TXT/?uri=CELEX%3A32006R1907; and Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006 (OJ L 353, 31.12.2008, p. 1), https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A02008R1272-20221217.

([136]) European Commission, *Technical assistance to review the existing Member States reporting questionnaire under Articles 117(1) of REACH and 46(2) of CLP – Final report*, Publications Office of the European Union, Luxembourg, 2020, https://circabc.europa.eu/ui/group/8ee3c69a-bccb-4f22-89ca-277e35de7c63/library/a4abce8c-8425-455f-b7e6-0ead917bde6b/details.

([137]) In line with Article 117(1) of the REACH Regulation and Article 46(2) of the CLP Regulation.

([138]) European Commission: Directorate-General for Internal Market, Industry, Entrepreneurship and SMEs, *REACH and CLP Enforcement: EU-level enforcement indicators*, Publications Office of the European Union, Luxembourg, 2021,

regulations on chemicals using a set of indicators on different aspects of enforcement. Since 2021, the list of chemicals subject to restrictions has been expanded as new entries have been added to Annex XVII to the REACH Regulation([139]).

In 2023, new hazard classes were added to the CLP Regulation, and the revision of the regulation was tabled (published on 20 November 2024) ([140]). The new hazard classes cover endocrine disruptors and persistence-related hazards while the revision of the regulation encompasses new rules on online sales to better tackle non-compliances observed over the years. Also in 2023, the Conference of the Parties of the Stockholm Convention (COP) decided to include, in its Annex A (which lists banned substances), three new chemicals ([141]). The Commission is working on the delegated acts to include these substances in Annex I to the Persistent Organic Pollutants Regulation by 2025 at the latest.

Responsibility for checking compliance with the REACH Regulation in Sweden lies with the following authorities ([142]):

- Swedish Chemicals Agency,
- Swedish Work Environment Authority,
- Swedish county administrative boards,
- Swedish municipal authorities.

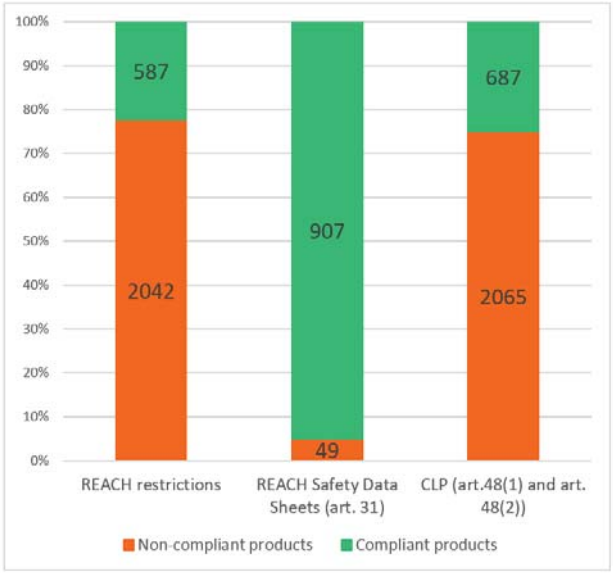
Sweden has devised and implemented enforcement strategies for both the REACH and CLP Regulations ([143]).

In 2020, Sweden reported that between 9 000 and 9 500 person-hours annually were allocated to REACH Regulation enforcement and 7 700 person-hours to CLP Regulation enforcement ([144]), not including the work done by staff members of the 300 national and 290 municipal authorities.

The Member States' reporting exercise set out in Article 117 of the REACH Regulation and Article 46 of the CLP Regulation is conducted every five years. The results of the coming one are expected in 2025, hence the lack of new country-specific data on enforcement since 2022.

In 2020, Sweden participated in an EU coordinated enforcement project on products sold online, called the REACH-EN-FORCE (REF)-8 project ([145]). The report was adopted in November 2021, so it could not be taken into account in the previous EIR.

Figure 31: Compliances of imported products – results of the REF-8 project (%)



A risk approach was used for the targeting of control measures in order to maximise the chances of identifying non-compliances. Therefore, the non-compliance rates presented above cannot be considered the average non-compliance rates of products in the EU. However, the

https://op.europa.eu/en/publication-detail/-/publication/e5c3e461-0f85-11ec-9151-01aa75ed71a1/.

([139]) These are substances in tattoo inks and permanent make-up, *N*,*N*-dimethylformamide, formaldehyde (and formaldehyde releasers), lead in PVC (polyvinyl chloride), siloxanes (D4, D5, D6) and, finally, microplastics.

([140]) Regulation (EU) 2024/2865 of the European Parliament and of the Council of 23 October 2024 amending Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures, OJ L, 2024/2865, 20.11.2024, p.1 (Regulation - EU - 2024/2865 - EN - EUR-Lex).

([141]) These are methoxychlor, dechlorane plus and UV-328. In the case of the pesticide methoxychlor, there are no exemptions from the ban. However, for the two plastic additives, dechlorane plus and UV-328, the COP decision lists some time-limited specific exemptions.

([142]) European Commission, *Technical assistance to review the existing Member States reporting questionnaire under Articles 117(1) of REACH and 46(2) of CLP – Final report*, Publications Office of the European Union, Luxembourg, 2020, p. 71, https://circabc.europa.eu/ui/group/8ee3c69a-bccb-4f22-89ca-277e35de7c63/library/a4abce8c-8425-455f-b7e6-0ead917bde6b/details.

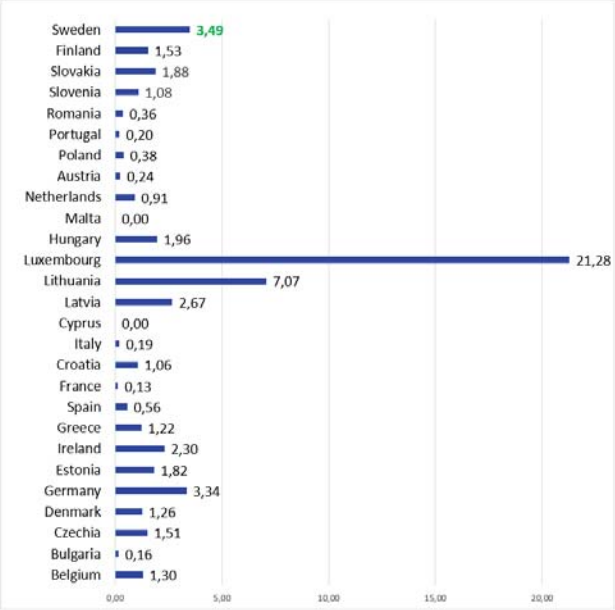
([143]) European Commission, *Technical assistance to review the existing Member States reporting questionnaire under Articles 117(1) of REACH and 46(2) of CLP – Final report*, Publications Office of the European Union, Luxembourg, 2020, p. 76, https://circabc.europa.eu/ui/group/8ee3c69a-bccb-4f22-89ca-277e35de7c63/library/a4abce8c-8425-455f-b7e6-0ead917bde6b/details.

([144]) European Commission, *Technical assistance to review the existing Member States reporting questionnaire under Articles 117(1) of REACH and 46(2) of CLP – Final report*, Publications Office of the European Union, Luxembourg, 2020, p. 75, https://circabc.europa.eu/ui/group/8ee3c69a-bccb-4f22-89ca-277e35de7c63/library/a4abce8c-8425-455f-b7e6-0ead917bde6b/details.

([145]) European Chemicals Agency, *REF-8 project report on enforcement of the CLP, REACH and BPR duties related to substances, mixtures and articles sold online*, Helsinki, 2021, p. 20, https://echa.europa.eu/documents/10162/17088/project_report_ref-8_en.pdf/ccf2c453-da0e-c185-908e-3a0343b25802?t=1638885422475.

proportion of non-compliance cases found in the REF-8 project are of concern.

Figure 32: Number of REF-8 checks performed per 100 000 inhabitants (EU average = 1.24)



Swedish participation in the REF-8 project was above the EU average, which is rather low because of the lack of involvement of certain large Member States.

In this and other projects conducted with the help of European Chemicals Agency in the past years, online sales have been proved to consistently correspond to higher non-compliance rates in checks performed across the EU, in particular when related to imported products.

In 2022, Sweden received a priority action related to the upgrading administrative capacities in implementation and enforcement to move towards a policy of zero tolerance for instances of non-compliance. In the absence of reporting since 2022, no progress has been reported and this priority action remains valid in 2025, partly because of the experience with the REF-8 project.

2025 priority actions

- Upgrade the administrative capacities in implementation and enforcement to move towards a policy of zero tolerance of non-compliance.
- Increase customs checks and checks of products sold online with regard to compliance with chemicals legislations.

4. Climate action

The impacts of climate change have continued to increase in recent years, inflicting damage and suffering in the EU and around the world. Globally, 2023 was the hottest year on record, while Europe has been warming twice as quickly as the global average, and is now the fastest-warming continent. The frequency and severity of extreme climate events are also increasing. Against this backdrop, the EU has demonstrated its determination to implement the European Green Deal and to become climate neutral and resilient by 2050, ensuring sustainable competitiveness and supporting EU industry in the net-zero transition. The European Climate Law is the EU's response to the need for action. It sets the objective of achieving climate neutrality by 2050 and a midterm target of a reduction in GHG emissions of at least 55 % by 2030, and outlines the adaptation efforts necessary to adjust to climate change's present and future impacts. Almost all the 'Fit for 55' proposals set out in the European Green Deal have been agreed in law, and the European Commission recommended a new intermediate climate target of a 90 % reduction in emissions by 2040. In 2024, the Member States submitted updated National Energy and Climate Plans (NECPs) for 2021–2030, reflecting the increased ambition of the revised EU legislation. In 2024, the European Commission also released, jointly with the EEA, the first-ever European climate risk assessment.

Over the last three decades, since 1990, the EU has achieved steady decreases in its emissions, reaching a running total in 2022 of – 32.5 % ([146]). However, the EU and its Member States need to step up their implementation efforts and accelerate emissions reduction to stay on track to reach their targets of a 55 % reduction in net GHG emissions by 2030 and climate neutrality by 2050. Between 1990 and 2022, net GHG emissions of Sweden decreased by 80 %, making it one of the countries with an above-average decrease.

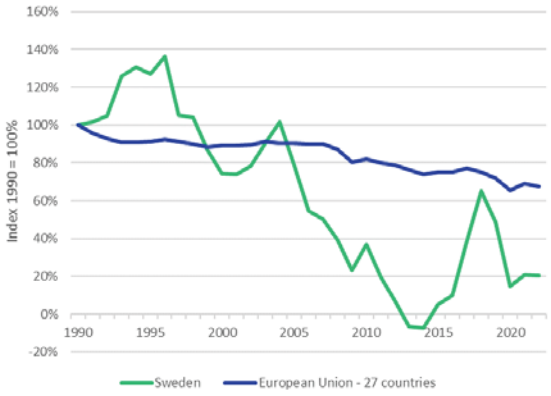
The 'Fit for 55' legislative package reflects the need to speed up the green transition. It includes (i) strengthening and expanding the EU emissions trading system (ETS), with the creation of a new, second, ETS for transport and buildings together with a dedicated Social Climate Fund to help citizens during the transition; (ii) increasing targets under the effort sharing regulation; and (iii) a revised regulation for Land Use, Land Use Change and Forestry ([147]). The package has been fully adopted, and the Member States have been implementing the legislation.

The key strategic document at the country level is the NECP ([148]). Sweden submitted its updated plan in June 2024 in line with the deadline set by the Regulation on the Governance of the Energy Union and Climate Action ([149]). The European Commission assessed the plan and the extent to which Sweden has followed the recommendations for the draft version. The findings from the assessment are:

- Emissions under the Effort Sharing Regulation will decrease by 44% in 2030 compared to 2005, and Sweden will have to use flexibilities to meet its target of 50%.
- The latest projections show a gap to the Land Use, Land-Use Change and Forestry (LULUCF) Regulation target, meaning that current levels of removals have been insufficient.
- Sweden has a gap to its target for the share of renewable energy and energy efficiency targets.

To minimise the impacts of climate policies on vulnerable people and sectors, Sweden is using the Just Transition Fund and will use Social Climate Fund from 2026 (for more information, see Chapter 5 Financing).

Figure 33: Total GHG emissions (excluding international aviation) (%), 1990–2022



([146]) EU net domestic emissions, including the land use, land-use change and forestry (LULUCF) sector and excluding international aviation.

([147]) A full overview of the Fit for 55 package is available at https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/european-green-deal/delivering-european-green-deal/fit-55-delivering-proposals_en.

([148]) More information about NECP is on the dedicated website https://energy.ec.europa.eu/topics/energy-strategy/national-energy-and-climate-plans-necps_en.

([149]) Article 14 of regulation 2018/1999 on the Governance of the Energy Union and Climate Action.

The EU emissions trading system

The EU ETS is the key tool for reducing GHG emissions cost-effectively across all Member States. It is the world's biggest carbon market, covering around 40% of the EU's total GHG emissions from electricity and heat generation, the manufacturing industry, aviation within Europe ([150]) and, from 2024, also maritime transport.

The system sets a limit or cap on the total amount of GHGs that can be emitted at the EU level. Within this limit, companies buy emissions allowances (one allowance gives the right to emit 1 tonne of CO_2 equivalent), in auctions or through trading allowances with others. The cap is reduced annually to ensure that overall emissions in the sectors covered decrease over time.

In Sweden, the emissions under the ETS decreased by 15% from 2005 to 2023.

In 2023, only 18 % of GHGs emitted by Sweden's ETS installations came from power generation. Of the total emissions from all industry sectors, cement and lime production emitted 16 %, the metals industry emitted 43 %, refineries accounted for 19 %, and 21 % came from other industries. With 1 %, the share of the chemicals industry was negligible. Between 2019 and 2023, emissions from the power sector decreased by 40 %, while the industry sectors slightly increased emissions, by 1 % (EU averages: 26 % and 14 %, resulting in an overall decrease of 14 %). Between 2013 and 2023, GHG emissions declined by 56 % in power generation but increased by 5 % in industrial manufacturing, driven mainly by metals but also by refineries.

From 2027, a new emissions trading system, called ETS2, for buildings, road transport and additional sectors (mainly industry not covered by the current ETS) will become fully operational ([151]). Member States should have notified full transposition of the provisions of the revised EU ETS Directive related to the new ETS2 into national law by 30 June 2024.

Sweden did not communicate full transposition into national law by this deadline. Therefore, on 25 July 2024, the Commission opened an infringement procedure against Sweden for its failure to fully transpose the provisions into national law. Sweden has since notified transposition of the relevant provisions of the ETS2 Directive to the Commission. The monitoring and reporting requirements and the obligation to hold a permit to carry out activities under ETS2 commenced on 1 January 2025.

The Commission also opened infringement procedures against Sweden on 25 January 2024 for its failure to fully transpose previous revisions of ETS Directive ([152]) into national law. Sweden has since notified full transposition of the abovementioned directives to the Commission.

Effort sharing

The Effort Sharing Regulation (ESR) ([153]) covers GHG emissions from domestic transport (excluding CO_2 emissions from aviation), buildings, agriculture, small industry and waste. Emissions from these sectors account for around 60 % of the EU's domestic emissions. The regulation sets the EU-wide target to reduce emissions from the effort sharing sectors by 40 % by 2030 compared to 2005 levels. This overall target for the EU translates to binding national emission reduction targets for each Member State. Sweden's target is –50%.

In addition to the 2030 targets, Member States have annual GHG emissions limits (annual emission allocations), reducing every year until 2030.

There is some flexibility to take account of annual fluctuations in emissions, by trading emissions and transfers from the ETS and LULUCF.

Based on historical emissions and the most updated projections, Sweden will need to implement new measures and/or use available flexibilities to achieve its 2030 ESR target. The projected gap is 6.2 percentage points to the 2030 target.

The largest contributor is the domestic transport sector, which accounted for 50 % of all effort sharing emissions in 2022.

Sweden is an EU frontrunner in sustainable transport. Standing at 6.1 % in 2023, Sweden has the highest share of battery electric vehicles in its passenger car fleet of all EU countries. Its 31 800 publicly accessible charging points provided one charging point for every 15 e-vehicles in 2023 (below the EU average of 1:10). The composition of road transport is very similar to the EU

([150]) Flights between the EU Member States including departing flights to Norway, Iceland, Switzerland and the United Kingdom.

([151]) Directive (EU) 2023/959 (https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv:OJ.L_.2023.130.01.0134.01.ENG).

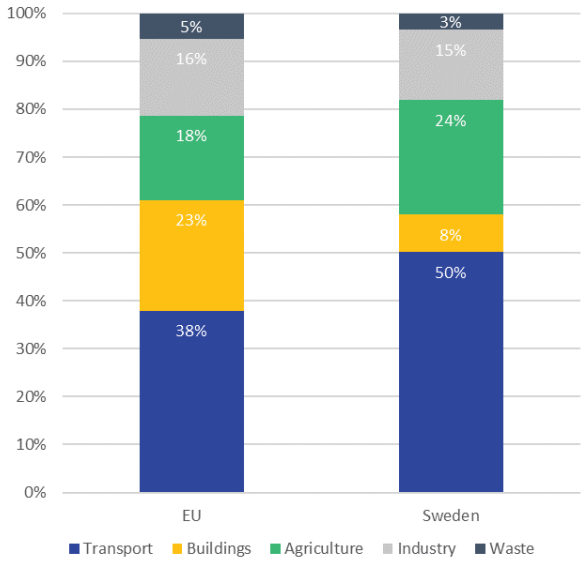
([152]) Directive - 2023/959 - EN - EUR-Lex and Directive - 2023/958 - EN - EUR-Lex.

([153]) Regulation (EU) 2018/842 (https://eur-lex.europa.eu/eli/reg/2018/842).

average, with passenger cars accounting for 83 % of distances travelled, and rail and buses and coaches together for 15 %. On the transport of freight, the split between modes of transport is relatively more balanced, with railways accounting for 29 % and road transport accounting for 71 % of freight movements. 75 % of the Swedish rail network is electrified, which is above the EU average of 56 %.

Sweden's buildings are among the most efficient in the EU. Although the pace has slowed down in the recent years, energy consumption and emissions from buildings are continuously declining. Buildings accounted for just 8 % of effort sharing emissions.

Figure 34: Effort-sharing emissions by sector (%), 2022



Land use, land-use change and forestry

The Land Use, Land-Use Change and Forestry (LULUCF) sector plays a significant role in achieving the EU's climate neutrality goal. In the EU, this sector absorbs more GHGs than it emits, removing significant volumes of carbon from the atmosphere. Thus, it is the only sector with negative emissions.

Sweden is facing significant challenges in enhancing the carbon-absorbing capacity of its land-use sector, as carbon removals have declined at a worrying speed in recent years.

Sweden's target for 2030 is to enhance land removals by additional –4.0 Mt of CO_2 equivalent compared with the yearly average of the period 2016–2018. The latest available projections show a gap to target of 13.3 Mt of CO_2 equivalent in 2030. Therefore, Sweden needs to apply additional measures to reach its 2030 target.

Adaptation to climate change

Halting all GHG emissions would still not prevent climate impacts that are already occurring. Therefore, adaptation to climate change is also a key component of climate policy.

Sweden has one out of three region categories identified as hotspots of climate risks most affected by climate change – low-lying coastal regions ([154]).

Climate change will have a significant impact on Sweden's natural and built environment and give rise to major societal challenges. Projected impacts and challenges include landslides and erosion, floods, and water shortages. Climate change is also expected to considerably impact Sweden's forests. Sweden has earmarked a budget for climate adaptation that can be deployed at short notice. It has also created an adaptation fund for municipalities and increased their funding to prevent natural disasters such as landslides and floods. Despite stepping up its efforts on climate adaptation, Sweden's forestry sector is still facing significant challenges due to new risks associated with climate change.

Sweden adopted its national adaptation strategy in 2009 and updated it in 2018 and in 2024. Sweden also has sectoral and regional adaptation plans with regular updates.

European Commission identified five priority actions in the 2022 EIR.

Despite being the front runner in sustainable transport and energy efficiency of buildings, Sweden needs to do more to achieve its interim and 2045 climate neutrality targets.

Sweden's share of renewable energy is the highest in the EU and it is growing steadily. Nevertheless, the current target is still below the required contribution and Sweden needs to do more to increase the share.

([154]) European Climate Risk Assessment (EUCRA). 2024. Available at European Climate Risk Assessment (europa.eu).

The Sustainability Act ([155]) regulates the national REDII sustainability criteria scheme. Within the scheme, sustainability decisions can be granted by the Swedish Energy Agency. These decisions also are used to demonstrate compliance with the REDII sustainability requirements for biomass fuels as of January 2022.

Sweden requires new transmission grid investments and renewal of extensive parts of the existing transmission network. In its 2022–2031 network development plan, Sweden has identified a need to construct around 800 km of new transmission lines and 25 new substations, and to renew 1 700 km of lines and 45 substations.

2025 priority action

- Implement all polices and measures that are needed to achieve targets laid down in the Effort Sharing Regulation (ESR) and the Land Use and Land-Use Change and Forestry (LULUCF) Regulation. More detailed priority actions are set out in the assessment of the final National Energy and Climate Plan (NECP) ([156]).

([155]) Act (2010:598) on sustainability criteria for biofuels and biofuels. Lag (2010:598) om hållbarhetskriterier för biodrivmedel och biobränslen | Sveriges riksdag

([156]) National energy and climate plans.

Part II: Enabling framework – implementation tools

5. Financing

The EU budget supports climate investment in Sweden with significant amounts in 2021–2027, with revenues from the ETS also feeding into the national budget. During 2020–2022, Sweden's revenues from auctioning reached EUR 633 million in total, with 84 % spent on climate and energy.

In addition, the annual investment needed to meet its environmental objectives in the areas of pollution prevention and control, the circular economy and waste, water protection and management, and biodiversity and ecosystems is estimated to be EUR 13.9 billion per year in Sweden.

These four environmental areas currently receive total funding of around EUR 5.4 billion per year; thus, there is a gap of EUR 8.5 billion per year.

Of the annual environmental investment gap, EUR 6.1 billion concerns biodiversity and ecosystems, EUR 1 billion pollution prevention and control, and around EUR 500 million water and EUR 900 million the circular economy objective.

Climate finance landmarks

EU funding for climate action

The EU budget supports climate action in the EU-27 with EUR 657.8 billion in the 2021–2027 budgetary period across the various programmes and funds, representing an overall 34.3 % contribution level. Of this, cohesion policy provides EUR 120 billion (over half of it through the European Regional Development Fund (ERDF)), the recovery and resilience facility (RRF) EUR 275.7 billion, and CAP EUR 145.9 billion ([157]).

In Sweden, the EU cohesion policy (considering the EU contribution amount) provides EUR 429 million for climate action in 2021–2027 (with around half of this via the ERDF), with a further EUR 80.3 million from the European Maritime, Fisheries and Aquaculture Fund (EMFAF) ([158]).

The RRF contributes to climate finance in Sweden with EUR 1.5 billion up to 2026, representing 43.6 % of Sweden's recovery and resilience plan (RRP) ([159]).

The European Investment Bank (EIB) provided EUR 109.9 billion financing across the EU-27 between 2021 and mid-2024 to support energy, transport and industry projects that are aligned with the EU's climate objectives. Of this amount, EUR 4.9 billion was assigned to Sweden in the reference period ([160]).

National financing, including EU emissions trading system revenues

Revenues from the auctioning of emission allowances under the EU ETS, which feed directly into national budgets, amounted to EUR 128 million in 2020, EUR 222 million in 2021 and EUR 283 million in 2022 in Sweden, totalling at EUR 633 million in the three-year period. In Sweden, revenues are not earmarked; for example, projects have been reported for at least the minimum required spending on energy and climate purposes ([161]).

From the remaining part of the EU ETS revenues that feed into the Innovation Fund and the Modernisation Fund, further support is available to climate action at the EU level.

It should be noted that investment in climate action also supports the environment and, therefore, the environmental investments described in the following sections cannot be regarded as entirely additional to climate investment ([162]).

([157]) European Commission, *Statement of Estimates of the European Commission – For the financial year 2025*, Publications Office of the European Union, Luxembourg, 2024, pp. 94–96, https://commission.europa.eu/document/download/7a0420e1-599e-4246-9131-ccb7d505d6d9_en?filename=DB2025-Statement-of-Estimates_1.pdf. See the Cohesion Open Data Platform (https://cohesiondata.ec.europa.eu/).

([158]) See the Cohesion Open Data Platform (https://cohesiondata.ec.europa.eu/).

([159]) European Commission datasets, and the Recovery and Resilience Scoreboard (https://ec.europa.eu/economy_finance/recovery-and-resilience-scoreboard/index.html).

([160]) A list of financed projects is provided by the EIB (https://www.eib.org/en/projects/loans/index.htm).

([161]) European Commission: Directorate-General for Climate Action, *Progress Report 2023 – Climate action*, Publications Office of the European Union, Luxembourg, 2023, https://climate.ec.europa.eu/news-your-voice/news/climate-action-progress-report-2023-2023-10-24_en.

([162]) NB: Indirect investments (from climate and other policies) in support of the environment are accounted for via the tracking.

Environmental financing and investments

This section describes Sweden's investment needs, current financing and gaps as they relate to the four environmental objectives beyond climate objectives, namely tackling pollution, the circular economy and waste, water protection and management, and biodiversity and ecosystems ([163]).

The environment overall

Investment needs

The overall environmental investment needs to be sufficient to enable Sweden to meet its objectives in the areas of pollution prevention and control, the circular economy and waste, water protection and management, and biodiversity and ecosystems. The required investment is estimated to be EUR 13.9 billion per year (in 2022 prices).

A significant part of the estimated requirement, around EUR 6.7 billion per year, can be attributed to the need to support biodiversity and ecosystems, and EUR 4 billion to support circular economy. For pollution prevention and control, the annual investment needs are estimated to be EUR 1.9 billion; for water they are EUR 1.2 billion (in 2022 prices).

Current investments

To implement the environmental investments needed, the available financing is estimated to currently reach an annual EUR 5.4 billion in Sweden from EU and national sources combined (in 2022 prices).

Total environmental funding from the multiannual financial framework (MFF) is estimated to reach around EUR 2.5 billion for Sweden in total, during 2021–2027 (or EUR 358.5 million per year).

Table 1: Key environmental allocations from EU funds to Sweden (million EUR), 2021–2027

Instrument	Allocations
Cohesion policy	**228.0** ([a])
ERDF	174.8
Just Transition Fund	53.1
CAP	**1 232.5** ([b])
European Agricultural Guarantee Fund	569.5
European Agricultural Fund for Rural Development	663.0
EMFAF	**69.4**
Other MFF sources	979.5 ([c])
RRF ([d]) (2021–2026)	**1 051.7**

([a]) European Commission, 2021-2027 cohesion policy (planned) allocations in *EU amount* excluding national co-financing, based on the tracking in the Common Provisions Regulation (CPR, 2021) Annex I. Please note potential data changes that may have arisen between the EIR preparation cut-off date (31 October 2024) and its publication date. Note that Sweden is not eligible for the Cohesion Fund. Source and further information: https://cohesiondata.ec.europa.eu/2021-2027-Categorisation/2021-2027-Planned-finances-detailed-categorisation/hgvj-gyin/about_data.

([b]) Regulation (EU) 2021/2115 of the European Parliament and of the Council of 2 December 2021 establishing rules on support for strategic plans to be drawn up by Member States under the common agricultural policy (CAP strategic plans) and financed by the European Agricultural Guarantee Fund (EAGF) and by the European Agricultural Fund for Rural Development (EAFRD) and repealing Regulations (EU) No 1305/2013 and (EU) No 1307/2013 (OJ L 435 6.12.2021, p. 1), Annex XI, https://eur-lex.europa.eu/eli/reg/2021/2115.

Note that 2021-2027 combines factual data for 2021 and 2022 and expenditure under the relevant specific objectives (SOs) of the CAP strategic plans from 2023, using the EU biodiversity tracking methodology (https://commission.europa.eu/system/files/2023-06/Biodiversity%20tracking%20methodology%20for%20each%20programme%202023.pdf). Source: European Commission.

([c]) Space Fund, Horizon Europe, LIFE and the Connecting Europe Facility.

([d]) Outside the MFF. Note that the RRF applies a similar environmental tracking scheme (set in the RRF Regulation, Annex VI) as the EU's cohesion policy. RRF dataset version used: July 2024, prior to 2025 revisions. Data source: European Commission.

Sweden, in addition to receiving EU funds earmarked specifically for it in 2021–2027, can also benefit from funding programmes that can be accessed at the EU level and which are open to all Member States. These include the LIFE programme (EUR 5.4 billion) ([164]), Horizon Europe (EUR 95.5 billion) ([165]), the Connecting Europe Facility

([163]) Research, development and innovation is accounted for under each environmental objective. The financing needs, baselines and gap estimates are based on the Directorate-General for Environment's internal analysis (of 2024). Throughout this chapter, specific references are provided to the most important data sources used.

([164]) https://cinea.ec.europa.eu/programmes/life_en.

([165]) European Commission, Horizon Europe (https://research-and-innovation.ec.europa.eu/funding/funding-opportunities/funding-programmes-and-open-calls/horizon-europe_en).

(EUR 37.7 billion) ([166]) and funds that can be mobilised through the InvestEU programme ([167]).

Sweden's RRP supports climate objectives through funding of EUR 1.5 billion (43.6 % of Sweden's total RRP), with an additional 5 % of funds for the environment (EUR 170 million).

The EIB provided around EUR 1.5 billion in environment-related financial contribution to Sweden from 2021 to mid-2024, most of which, EUR 1.2 billion (80 %), in the area of sustainable energy, transport and industrial projects, which provides significant co-benefits to reducing air pollution, environmental noise and other pollution.

The EU's total national expenditure on environmental protection (operating plus capital expenditure) was EUR 298 billion in 2020 and EUR 321 billion in 2021, representing around 2.2 % of EU-27 GDP. In Sweden, the total national environmental protection expenditure was EUR 10 billion in 2020 and EUR 11.3 billion in 2021, both representing 2.1 % of GDP.

Of the total environmental expenditure, the national capital expenditure (investment) on environmental protection amounted to EUR 54.5 billion in 2020 and EUR 59.9 billion in 2021 in the EU-27, representing around 0.4 % of the EU's GDP. In Sweden, the national environmental protection investment reached EUR 2.4 billion in 2020, rising to EUR 2.6 billion in 2021, representing 0.5 % of GDP.

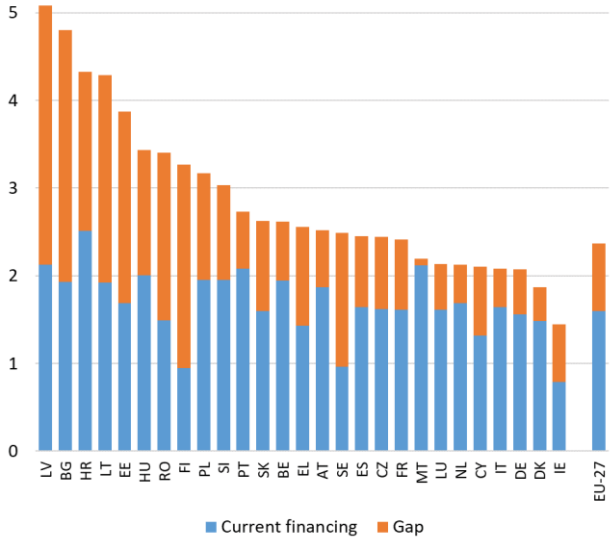
Split by institutional sector, 53 % of Sweden's national environmental protection investment (capital expenditure) comes from the general government budget, with 17 % coming from specialist private-sector producers (of environmental protection services, such as waste and water companies) and 30 % from the business sector, whose environmental activities are usually ancillary to its main activities. At the EU level, 38 % of environmental protection investment comes from governments, 40 % from specialist private-sector producers and 22 % from the general business sector ([168]).

Sweden's total financing for environmental investment reaches an estimated EUR 5.4 billion per year (in 2022 prices), including EU funding and national public and national private expenditure. Of the total, the share of EU fund (including EIB funds) reaches 13 %, with around 87 % national financing. The total public financing (EU plus national public) represents 59 % of the total.

The gap

To meet its four environmental objectives beyond climate change, the additional investment needs over the current levels (i.e. the gap) are estimated to reach EUR 8.5 billion per year in Sweden, representing around 1.5 % of the national GDP, being higher than the EU average (0.77 %).

Figure 35: Environmental financing, needs and gaps per Member State (% of GDP)



Source: Analysis of Directorate-General for Environment.

The following table provides the distributions of Sweden's environmental investment gap (expressed in various forms) by environmental objective.

Table 2: Summary of environmental investment gaps in Sweden per year, 2021–2027, per year

Environmental objective	Investment gap per year		
	Million EUR (2022 prices)	% of total	% of GDP
Pollution prevention and control	1 016	12.0	0.18
Circular economy and waste	902	10.6	0.16
Water management and water industries	473	5.6	0.08

([166]) The Connecting Europe Facility Transport part also includes EUR 11.3 billion transferred from the Cohesion Fund, of which 30 % will be made available, on a competitive basis, to all Member States eligible for the Cohesion Fund. The remaining 70 % will respect the national envelopes until 31 December 2023.

([167]) The InvestEU Fund is set to mobilise over EUR 372 billion of investment through an EU budget guarantee of EUR 26.2 billion to back the investment of financial partners such as the EIB group and others.

([168]) Eurostat, 'Environmental protection expenditure accounts', env_ac_epea.

Biodiversity and ecosystems	6 092	71.8	1.09
Total	**8 432**	**100.0**	**1.5**

Source: Directorate-General for Environment analysis.

Pollution prevention and control

Investment needs

In pollution prevention and control, Sweden's investment needs are estimated to reach EUR 1.9 billion per year (including baseline investments) in 2021–2027. Most of this, EUR 1.3 billion, relates to air pollution control, to comply with the clean air requirements for the five main air pollutants under the National Emission Reduction Commitments Directive (NECD) by 2030. The estimated needs to reduce environmental noise reach EUR 0.8 billion per year, most of which is delivered by the (same) sustainable energy and transport investments that also benefit clean air ([169]). Protection from radiation costs EUR 369 million a year, while industrial site remediation an estimated EUR 102 million per year. Microplastics pollution and the chemicals strategy require around EUR 60–80 million per year (each) ([170]).

Current investments

The current investment levels supporting pollution prevention and control reach an estimated EUR 866 million per year in Sweden in 2021–2027. Most of the financing concerns clean air (EUR 518 million per year). Protection from environmental noise receives around EUR 128 million per year, with a further EUR 31 million spent on site remediation.

In Sweden, the EU MFF provides an estimated 5.9 % of the clean air financing (mostly via cohesion policy), with a further 10.6 % from the RRF, adding up to 16.4 % of the total. EIB financing contributes 19 % and national sources reach 65 % ([171]).

The gap

To meet its environmental objectives concerning pollution prevention and control (towards zero pollution), Sweden needs to provide an additional EUR 1 billion per year (0.18 % of GDP), mostly related to clean air and noise. The adequate implementation of the NECP with the investments included for sustainable energy and transport would largely deliver this, while in many Member States additional measures and investments may be required to comply with the ammonia reduction requirements.

According to the latest (2023) NAPCP review report ([172]), Sweden did not comply with ammonia reduction requirements in 2020 and 2021, while it is not at risk of non-compliance with ammonia concerning the NECD's 2030 emission reduction commitments, based on the policies and measures in its NAPCP that takes into account climate, energy and CAP plans and financing baselines.

Circular economy and waste

Investment needs

Sweden's investment needs in circular economy and waste are estimated to reach an EUR 4 billion per year (including baseline investments). Most of this, around EUR 3.1 billion per year, relates to circular economy measures in the mobility, food and built environment systems, with a further EUR 900 million necessary for waste management (municipal and packaging waste), covering waste collection, biowaste treatment, recycling reprocessors, waste-sorting facilities, and digitalisation of the waste registry. The amount for waste excludes the investments needed for the uptake of circularity and waste prevention across the economy ([173]).

Current investments

Circular economy investments across the economy reach around EUR 2.3 billion per year in Sweden in 2021-2027, with a further EUR 800 million provided for waste management that does not constitute circular economy.

([169]) 2021 Phenomena project assessment (https://op.europa.eu/en/publication-detail/-/publication/f4cd7465-a95d-11eb-9585-01aa75ed71a1) and the Commission's 2023 Environmental Noise Directive implementation report (https://environment.ec.europa.eu/system/files/2023-03/COM_2023_139_1_EN_ACT_part1_v3.pdf).

([170]) European Commission, *Third Clean Air Outlook*, Brussels, 2022, https://environment.ec.europa.eu/topics/air/clean-air-outlook_en. See also the impact assessment for the revision of the AAQD, available from the Commission web page on the proposed revision (https://environment.ec.europa.eu/publications/revision-eu-ambient-air-quality-legislation_en).

([171]) Through the tracking of EU funds, EIB projects and national expenditure (EPEA accounts, Eurostat). Note that the bulk of clean air financing is provided as a contribution from climate (energy and transport) measures, as per the tracking schemes in the Common Provisions Regulation Annex I and the RRF Regulation Annex VI. Further information on clean air tracking: https://commission.europa.eu/document/download/0a80484e-2409-4749-94c6-3b23bc6bae8f_en?filename=Clean%20air%20methodology_0.pdf

([172]) European Commission, 'National air pollution control programmes and projections', European Commission website, https://environment.ec.europa.eu/topics/air/reducing-emissions-air-pollutants/national-air-pollution-control-programmes-and-projections_en.

([173]) See Systemiq and Ellen MacArthur Foundation, *Achieving 'Growth Within'*, 2017; and European Commission: Directorate-General for Environment, *Study on investment needs in the waste sector and on the financing of municipal waste management in Member States*, Publications Office of the European Union, Luxembourg, 2019, https://op.europa.eu/en/publication-detail/-/publication/4d5f8355-bcad-11e9-9d01-01aa75ed71a1.

Around 0.4 % of this combined financing for circularity and waste comes from EU MFF, with a further 0.6 % contribution from the RRF, adding up to 1 % together. EIB loans identified in support of circularity and waste represent 1.1 % of the total. The share of national sources is overwhelming, reaching 98 % of the total financing ([174]).

The gap

To meet its environmental objectives concerning the circular economy and waste, Sweden needs to increase circular economy investments by an estimated EUR 831 million per year, with an additional EUR 71 million concerning waste management action, not belonging to circular economy. Combined, this amounts to EUR 902 million per year, representing 0.16 % of Sweden's GDP.

Of the circular economy gap, EUR 217 million relates to recent initiatives, such as the eco-design for sustainable products, packaging and packaging waste, labelling and digital tools, CRM recycling and measures proposed under the amendment of the Waste Framework Directive, and EUR 613 million constitutes a further investment need to unlock Sweden's circular economy potential.

Water protection and management

Investment needs

The annual water investment needs reach an estimated EUR 1.2 billion (in 2022 prices) in 2021-2027 in Sweden. This comprises investment needs both for the water industry and for the protection and the management of water. Of the total annual need, EUR 957 million relates to the management of wastewater (also including additional costs associated with the revised UWWTD). A further EUR 21 million is necessary for drinking-water-related investments and around EUR 220 million for the protection and management of water ([175]).

Current investments

Water investments in Sweden are estimated to be around EUR 736 million per year (in 2022 prices) in 2021–2027. Of this, EUR 671 million supports wastewater management, EUR 5 million drinking water and around EUR 55 million the other aspects of the Water Framework Directive (water management and protection).

Of the total financing, 1.2 % is provided by the EU MFF (mostly through cohesion policy), with no further support from the RRF. EIB financing is around 1.1 % of the total, while the bulk of financing comes from national sources (98 %) ([176]).

The gap

Sweden's water investment gap to meet the various environmental targets under the Water Framework Directive and the Floods Directive is estimated at EUR 473 million per year (0.08 % of GDP), with EUR 287 million linked to wastewater measures. Drinking water measures require an additional EUR 16 million per year and the other aspects of the Water Framework Directive around EUR 165 million per year over the existing levels of financing.

Biodiversity and ecosystems

Investment needs

The investment needs for biodiversity and ecosystems are estimated to be EUR 6.7 billion per year (in 2022 prices) in Sweden in 2021–2027. This includes the following financing needs:

- Sweden's prioritised action framework ([177]), concerning the Natura 2000 areas: EUR 507 million per year, mostly running costs;
- additional BDS costs ([178]): EUR 4.4 billion per year on top of the framework;
- sustainable soil management costs ([179]): EUR 1.8 billion per year.

Current investments

The current level of biodiversity financing is estimated to be EUR 655 million per year (in 2022 prices) in 2021–2027. 81.3 % of this is considered direct financing to biodiversity

([174]) Waste management and circular economy expenditure tracking in the EU funds, EIB projects and in the national expenditure (Eurostat). Datasets: EPEA accounts (env_epi) and circular economy private investments (cei_cie012).

([175]) See European Commission, 'Estimating investment needs and financing capacities for water-related investment in EU Member States', 28 May 2020, https://commission.europa.eu/news/estimating-investment-needs-and-financing-capacities-water-related-investment-eu-member-states-2020-05-28_en; and OECD, *Financing Water Supply, Sanitation and Flood Protection: Challenges in EU Member States and policy options*, OECD Publishing, Paris, 2020, https://www.oecd-ilibrary.org/environment/financing-water-supply-sanitation-and-flood-protection_6893cdac-en.

([176]) Water investment levels are estimated through tracking EU funds, EIB projects and national expenditure (EPEA accounts, Eurostat).

([177]) European Commission, 'Financing Natura 2000 – Prioritised action frameworks', European Commission website, https://environment.ec.europa.eu/topics/nature-and-biodiversity/natura-2000/financing-natura-2000_en.

([178]) See European Commission: Directorate-General for Environment, *Biodiversity Financing and Tracking – Final report*, Publications Office of the European Union, Luxembourg, 2022, https://op.europa.eu/en/publication-detail/-/publication/793eb6ec-dbd6-11ec-a534-01aa75ed71a1/language-en.

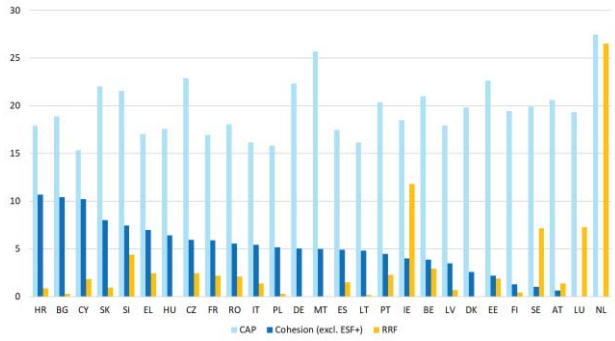
([179]) See Proposal for a directive of the European Parliament and of the Council on soil monitoring and resilience (Soil Monitoring Law), COM(2023) 416 final of 5 July 2023, https://environment.ec.europa.eu/publications/proposal-directive-soil-monitoring-and-resilience_en.

and ecosystems, with a 100 % coefficient in the tracking schemes.

0.2 % of the total financing is estimated to come from EU cohesion policy, 25.1 % from CAP, 9.1 % from Horizon Europe, around 3.5 % from LIFE and 1 % from EMFAF. The EU MFF altogether accounts for 40.1 % of the financing and the RRF for 5 %, adding up to a total of 45.1 % from the EU budget. The rest, 54.9 %, comes from national sources ([180]).

Sweden has a relatively high share of funds dedicated to biodiversity under the RRF (7.2 %) and under the CAP (19.9 %), both well above the EU average. On the other hand, Sweden is among the Member States with the lowest share of cohesion policy funding (considering EU contribution amounts, disregarding ESF+) programmed for measures supporting biodiversity in 2021–2027, at only 1.0 %.

Figure 36: 2021–2027 contributions to biodiversity from the main EU instruments per Member State (% of policy total)



NB: ESF+, European Social Fund Plus.

The gap

To meet the environmental objectives concerning the protection and restoration of biodiversity and ecosystems and other relevant cross-cutting measures, Sweden's investment gap is estimated to be around EUR 6 billion per year, corresponding to 1.09 % of its GDP.

Public financial management

Green budgeting practices

Green budgeting refers to the use of budgetary tools to achieve climate and environmental goals. Some Member States, including Sweden, already use green budgeting tools for identifying and tracking green expenditures and/or revenues ([181]). Green budgeting practices provide increased transparency on the environmental implications of budgetary policies.

The Commission has developed a non-mandatory green budgeting reference framework that brings together methodologies for assessing the impacts of budgets on climate and environmental goals ([182]).

To help Member States develop national green budgeting and thereby improve policy coherence and support the green transition, the Commission facilitated a technical support instrument (TSI) project on green budgeting from 2021 to 2024 ([183]). Sweden did not participate.

Beyond green budgeting, to improve policy outcomes, the Commission has also drawn up climate-proofing and sustainability-proofing guidance ([184]) as tools to assess project eligibility and compliance with environmental legislation and criteria.

Green taxation and tax reform

Total environmental taxes amounted to EUR 10.8 billion in Sweden in 2022, representing 1.9 % of its GDP (EU average: 2.0 %). Energy taxes formed the largest component of environmental taxes, accounting for 1.5 % of GDP, which is lower than the EU average of 1.6 %. Transport taxes, at 0.4 % of GDP, were at the EU average (0.4 %), while taxes on pollution and resources, at 0.06 % were slightly under the EU middle value (EU average: 0.08 %). In 2022, environmental taxes in Sweden accounted for 4.6 % of total revenues from taxes and

([180]) Based on biodiversity tracking in the EU budget (https://circabc.europa.eu/ui/group/3f466d71-92a7-49eb-9c63-6cb0fadf29dc/library/8e44293a-d97f-496d-8769-50365780acde), and national expenditure into biodiversity from the Classification of the Functions of Government accounts.

([181]) European Commission, *Green Budgeting in the EU. Key Insights from the 2023 European Commission Survey of Green Budgeting Practices*, 2023, https://economy-finance.ec.europa.eu/economic-and-fiscal-governance/national-fiscal-frameworks-eu-member-states/green-budgeting-eu_en#:~:text=European%20Commission%20Green%20Budgeting%20Survey%C2%A0.

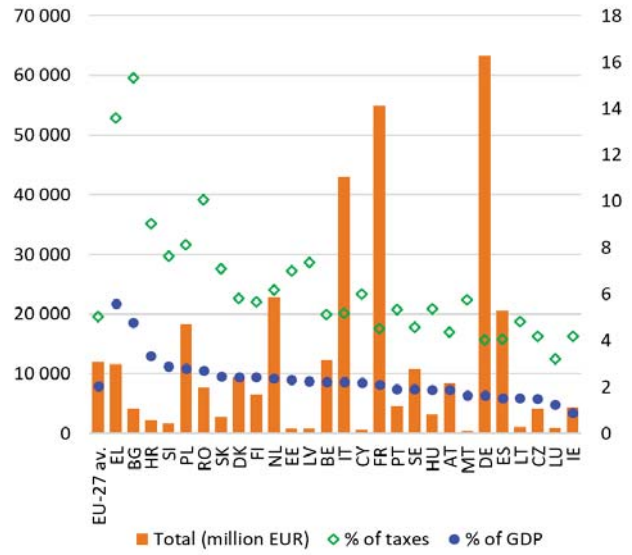
([182]) European Commission, 'European Union green budgeting reference framework', 2022 https://economy-finance.ec.europa.eu/economic-and-fiscal-governance/green-budgeting-eu_en.

([183]) https://reform-support.ec.europa.eu/what-we-do/revenue-administration-and-public-financial-management/supporting-implementation-green-budgeting-practices-eu_en.

([184]) Commission notice – Technical guidance on the climate proofing of infrastructure in the period 2021–2027 (OJ C 373, 16.09.2021, p. 1), https://op.europa.eu/en/publication-detail/-/publication/23a24b21-16d0-11ec-b4fe-01aa75ed71a1/language-en.

social security contributions (slightly under the EU average of 5.0 %) ([185]).

Figure 37: Environmental taxes per Member State, 2022



The EU Green Deal emphasises the role of well-designed tax reforms (e.g. shifts from taxing labour to taxing pollution) to boost economic growth and resilience, and to foster a fairer society and a just transition through the right price signals. The Green Deal promotes the 'polluter-pays principle', which makes polluters bear the costs to prevent, control and remedy pollution.

According to a 2024 study ([186]), Sweden applies emission charges (e.g. for NO_x, sulphur oxides and other sulphur emissions to air), product charges (for vehicles, pesticides and batteries), and user charges (for waste volumes produced and through road pricing). An example of good practices are congestion charges applied in Stockholm that helped reduce PM_{10} pollution by 18 %. On the other hand, Sweden has recently decided to abolish the plastic bag tax.

Green bonds and sustainable bonds

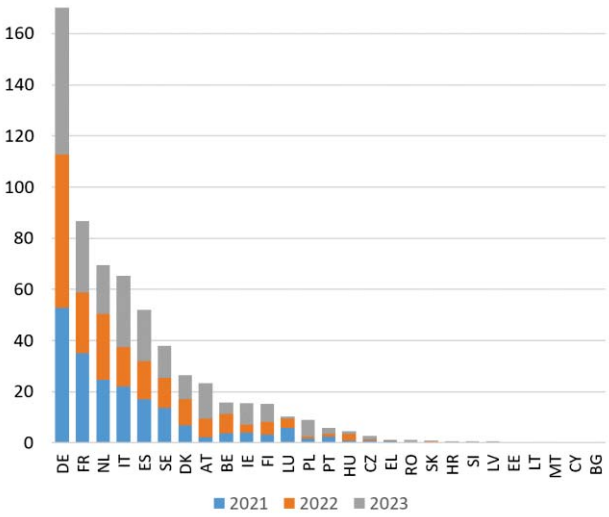
In 2023, the total value of the green bonds issued by Member States was USD 245 billion (EUR 227 billion), up from USD 234 billion (EUR 198 billion) in 2021 ([187]).

During 2021–2023 combined, Sweden issued green bonds worth USD 42 billion (EUR 35.5 billion). Of this, the issuance in 2023 amounted to USD 13.5 billion (EUR 12.5 billion).

During 2014–2023, 83 % of the green bonds issued by European countries (excluding supranational entities) served objectives in energy, buildings or transport, while 5 % supported objectives in water, 5.1 % related to land use (with links to nature and ecosystems) and 3.8 % applied to waste management. By 2023, the combined share of energy, buildings and transport had decreased to 73 %, the shares of waste management and land use had increased (to 5.9 % and 8.4 %, respectively) and the share of water had remained around 5 %.

In 2021–2023, 31.7 % of the European green bonds (excluding supranational issuances) was issued by financial corporates, 29.1 % by sovereign governments and 23.1 % by non-financial corporates. 8.3 % of the issuances was linked to government-backed entities, 6.4 % to development banks and 1.4 % to local governments.

Figure 38: Value of green bonds issued per Member State (billion EUR), 2021, 2022 and 2023



Data source: Climatebonds.net, with some additional data from national sources (e.g. Croatia, Slovenia).

Environmentally harmful subsidies

Addressing and phasing out environmentally harmful subsidies, in particular fossil fuel subsidies (FFS) is a further step towards achieving the eighth environment action

([185]) Eurostat, 'Environmental taxes accounts', env_eta.

([186]) European Commission: Directorate-General for Environment, *Candidates for Taxing Environmental Bads at National Level*, Publications Office of the European Union, Luxembourg, 2024, Annex 1, https://op.europa.eu/en/publication-detail/-/publication/35c1bbdf-2931-11ef-9290-01aa75ed71a1/language-en.

([187]) Climate bonds initiative (https://www.climatebonds.net/). NB. Additionally (and not included in this), national sources indicated EUR 544.8 million issuance for Croatia, in 2022-2023, and a slightly higher amount for Slovenia (+0.27 billion) during 2021-2023 in total.

programme objectives and the enabling conditions ([188]). FFS are costly for public budgets and make it difficult to achieve European Green Deal objectives.

The overall downward trend of FFS mentioned in past EIRs was disrupted from 2022 due to the European response to the 2021 energy crisis and subsequent increase in energy prices.

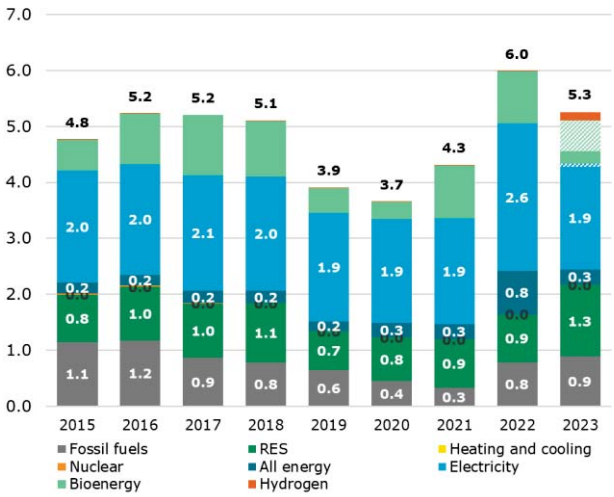
As a direct consequence, annual FFS in the EU have increased to EUR 109 billion in 2023 from EUR 57 billion in 2020. From 2021 to 2023, there was a marked increase in annual FFS of 72 % in the EU ([189]).

For the majority of the Member States (16), the year 2022 saw a peak in the amount of overall FFS. A decline was then observed in 2023 ([190]). In particular, FFS for coal and lignite, natural gas and oil increased in 2022, and a strong increase was observed for natural gas subsidies.

In Sweden, the energy subsidies were relatively stable in 2015–2018, showed a marked decrease in subsequent years (2019–2021), and in 2022, were in line with the EU-wide trend. FFS decreased since 2016 (EUR 1.2 billion), reaching its annual minimum (EUR 300 million) in 2021. In 2022, FFS increased to EUR 800 million, and in 2023 to EUR 900 million.

As a share of GDP, FFS in 2022 ranged from 1.8 % in Croatia to less than 0.1 % in Denmark and Sweden (the EU average was 0.8 %) ([191]).

Figure 39: Energy subsidies by energy carrier (billion EUR), 2015–2023



NB: RES, renewable energy source.

Source: analysis of Directorate-General Energy

In 2022, Sweden received the following priority action:

- Ensure a sufficient level of financing in the coming years through the EU funds, the RRP and national financing, to cover the investment needs for environmental priorities.

Overall, Sweden has a similar environmental investment gap level as at the time of the 2022 EIR, at around 1.5 % of GDP; this gap is above the EU average and is mostly related to biodiversity and ecosystems.

2025 priority action

- Use more national funding (for instance by increasing taxes in favour of the environment and reducing environmentally harmful subsidies), EU funding and private funding to help close the investment gap.

([188]) Article 3(h) and 3(v) of the eighth environment action programme.

([189]) European Commission, 2024 Report on Energy Subsidies in the European Union, COM(2025). https://ec.europa.eu/transparency/documents-register/detail?ref=COM(2025)17&lang=en.

([190]) 16 Member States: BE, EE, IE, EL, ES, FR, HR, IT, CY, LT, HU, NL, AT, PT, RO and SE.

([191]) European Commission, 2024 Report on Energy Subsidies in the European Union, COM (2025). https://ec.europa.eu/transparency/documents-register/detail?ref=COM(2025)17&lang=en.

6. Environmental governance

Information, public participation and access to justice

Citizens can more effectively protect the environment if they rely on the three 'pillars' of the Aarhus Convention: (i) access to information, (ii) public participation in decision-making and (iii) access to justice in environmental matters. It is of crucial importance to public authorities, the public and businesses that environmental information is shared efficiently and effectively ([192]). Public participation allows authorities to make decisions that take public concerns into account. Access to justice is a set of guarantees that allows citizens and NGOs to use national courts to protect the environment, safeguard the rights of citizens and ensure accountability of authorities ([193]). It includes the right to bring legal challenges ('legal standing') ([194]).

Environmental information

This section focuses on the implementation of the Infrastructure for Spatial Information in the European Community (Inspire) Directive. The Inspire Directive aims to set up a European spatial-data infrastructure for sharing environmental spatial information between public authorities across Europe. It is expected that this will help policymaking across boundaries and facilitate public access to this information. Geographic information is needed for good governance at all levels and should be readily and transparently available (Table 3).

Table 3: Sweden dashboard on implementation of the Inspire Directive, 2016–2023

	2016	2023
Effective coordination and data sharing		
Ensure effective coordination	■	■
Data sharing without obstacle	■	■
Inspire performance indicators		
(i) Conformity of metadata	■	■
(ii) Conformity of spatial datasets	■	■
(iii) Accessibility of spatial datasets through view and download services	■	■
(iv) Conformity of network services	■	■

Legend

■ Implementation of this provision is well advanced or (nearly) completed. Outstanding issues are minor and can be addressed easily. Percentage > 89 %

■ Implementation of this provision has started and made some or substantial progress but is still not close to being completed. Percentage = 31–89 %

■ Implementation of this provision is falling significantly behind. Serious efforts are necessary to close the implementation gap. Percentage < 31 %

Source: European Commission, 'Sweden', Inspire Knowledge Base, https://knowledge-base.inspire.ec.europa.eu/sweden_en.

Sweden's performance in implementing the Inspire Directive is substantial and has been reviewed based on its 2023 country fiche ([195]) (see Table 3).

In 2022, Sweden received a priority action on the need to prioritise environmental datasets ([196]). Sweden has

([192]) The Aarhus Convention (https://unece.org/environment-policy/public-participation/aarhus-convention/text), the Access to Environmental Information Directive (Directive 2003/4/EC) (https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32003L0004) and the Inspire Directive (Directive 2007/2/EC) (https://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX:32007L0002) together create a legal foundation for the sharing of environmental information between public authorities and with the public.

([193]) These guarantees are explained in the European Commission's 2017 notice on access to justice in environmental matters (https://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX:52017XC0818(02)) and a related 2018 citizen's guide (https://op.europa.eu/en/publication-detail/-/publication/2b362f0a-bfe4-11e8-99ee-01aa75ed71a1/language-en/format-PDF).

([194]) This EIR focuses on the means used by Member States to guarantee rights of access to justice and legal standing and to overcome other major barriers to bringing cases on environmental protection.

([195]) European Commission, 'Sweden', Inspire Knowledge Base, https://knowledge-base.inspire.ec.europa.eu/sweden_en.

([196]) An overview of these datasets can be found online (https://github.com/INSPIRE-MIF/need-driven-data-

made good progress on making priority environmental data accessible, but more efforts are needed. Therefore, the 2022 priority action is repeated.

Public participation

Public involvement at both the planning and the project phase maximises transparency and social acceptance of programmes and projects. Consultation with the public (including NGOs) and environmental, local and regional authorities is a key feature of an effective impact assessment procedure. Such consultation also provides an opportunity for public authorities and project promoters to engage with the public actively and meaningfully by making information on the likely significant effects widely available. If carried out with due diligence and taking into consideration useful public input, this process leads to better-informed decision-making and can promote public acceptance. Making information available increases stakeholder involvement, thus lessening resistance and preventing (or minimising) litigation. On the other hand, it is paramount that the procedure is effective.

This section examines how public involvement and transparency are ensured under two instruments, namely the Environmental Impact Assessment (EIA) Directive ([197]) and the Strategic Environmental Assessment (SEA) Directive ([198]).

EU law provides for a flexible framework concerning EIAs. The aim of this framework is to ensure the application of the necessary environmental safeguards, while enabling speedy approval of projects. The Commission has contributed to simplifying and accelerating permitting for renewable energy projects and continues to support the Member States in this regard ([199]). Sweden has already taken steps aiming to accelerate permit-issuing procedures taking advantages of the broad flexibilities offered by the EU legal framework, such as the establishment of one-stop shops and accelerated short deadlines for issuing permits for renewable energy projects.

The average speed in the EU for issuing permits involving an EIA procedure is 20.6 months, with a minimum duration of 11.4 months and a maximum duration of 75.7 months ([200]). The duration of each step in an EIA process (screening, scoping, EIA report, public consultation, reasoned conclusion, development consent) varies considerably between Member States and projects. The available data for Sweden do not cover all the steps of the EIA to draw overall conclusions. Moreover, Sweden reported a relatively large difference between the minimum and maximum duration of the screening (0–20 months) and of the development consent step (1.2–22 months). Effective use of EU procedures can positively influence the timely approval of activities underpinning the decarbonisation of the economy on the way to net zero by 2050.

A new report is not yet available on the application and effectiveness of the SEA Directive in the EU. Nevertheless, a support study has been published with information by Member State ([201]).

Publication of the initiation of EIA and SEA procedures, and the possibility for the public to submit views regarding plans or projects which require an EIA or SEA, are a mandatory part of the procedures. However, centralised statistical information regarding the level of public participation in decision-making processes regarding EIA and SEA procedures has not been found on the relevant websites. The websites of individual county administrative boards and permitting authorities provide information for those seeking a permit as well as information on public participation in EIAs.

In the 2022 EIR, it was recommended that Sweden measure and track the level of public participation in EIA procedures, to identify whether the full benefit of public views is being effectively integrated into the decision-making process, and whether steps at the national or local levels are needed to encourage higher

prioritisation/blob/main/documents/INSPIRE_EEA_Reporting_blueprint_v1.0.pdf).

([197]) Directive 2011/92/EU of the European Parliament and of the Council of 13 December 2011 on the assessment of the effects of certain public and private projects on the environment (OJ L 26, 28.1.2012, p. 1), https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32011L0092.

([198]) Directive 2001/42/EC of the European Parliament and of the Council of 27 June 2001 on the assessment of the effects of certain plans and programmes on the environment (OJ L 197, 21.7.2001, p. 30), https://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX:32001L0042.

([199]) Commission Staff Working Document (SWD/2022/0149 final), 18 May 2022, https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52022SC0149&qid=1653034229953.

([200]) European Commission: Directorate-General for Environment, *Collection of information and data on the implementation of the revised Environmental Impact Assessment (EIA) Directive (2011/92/EU) as amended by 2014/52/EU)*, Publications Office of the European Union, Luxembourg, 2024, Tables 5 and 6, https://op.europa.eu/en/publication-detail/-/publication/8349a857-2936-11ef-9290-01aa75ed71a1/.

([201]) European Commission: Directorate-General for Environment, Lundberg, P., McNeill, A., McGuinn, J., Cantarelli, A. et al., *Study supporting the preparation of the report on the application and effectiveness of the SEA Directive (Directive 2001/42/EC) – Final study*, Publications Office of the European Union, 2025, https://data.europa.eu/doi/10.2779/1615072

levels of participation. There is no information available about the progress on this priority action.

Sweden is subject to an infringement case for non-compliance in transposing the EIA Directive ([202]).

Access to justice

Access to justice, guaranteed by Article 19(1) of the Treaty on European Union and Article 47 of the EU Charter of Fundamental Rights, is a fundamental right and part of the democratic process. It is vital to ensure the full application of EU law in all Member States and the legal protection of the rights of individuals, including in environmental matters. Access to justice is essential to enable judicial review of the decisions of public authorities and to allow the correction of any wrongdoing committed by these authorities.

This section provides a snapshot of the state of play of access to courts by the public, particularly when it comes to challenging plans, or the non-adoption of plans, under EU law, in the areas of water, waste, air quality and noise, irrespective of the form of the legal act (i.e. regulatory act or administrative decision).

As mentioned in the 2022 EIR, individuals and NGOs meeting the requirements stipulated in the Swedish Environmental Code may challenge administrative decisions.

Plans and programmes are not considered administrative acts under Swedish law as – in general – they are not binding for the public, but only indicative or binding for authorities. They are therefore not considered to be decisions that can be appealed by individuals or NGOs. There is no legal remedy against these legal instruments. An exception is municipal comprehensive and regional planning in accordance with the Planning and Building Act, which may be challenged through legal review.

There is no organised communication regarding where to find the rules on access to justice that are available in Sweden. However, rudimentary information may be found on the websites of some of the main environmental protection authorities, such as the Swedish Environmental Protection Agency (SEPA) ([203]), and the National Board of Housing, Building and Planning ([204]). Some general information on access to justice can also be found on the website of the Swedish courts ([205]).

In 2022, two priority actions were addressed to Sweden about access to justice, namely to (i) better inform the public about their rights in this field and (ii) improve access to courts for the public concerned when it comes to challenging administrative or regulatory decisions. It is concluded that no progress has been made. The priority actions are therefore reiterated.

2025 priority actions

- Make spatial data more widely accessible and prioritise environmental datasets in implementing the Inspire Directive, especially those identified as high-value spatial datasets for implementing environmental legislation.
- Ensure correct transposition of the revised EIA Directive.
- Improve access to courts in national environmental cases by the public concerned and eliminate practical barriers, such as length of proceedings and excessive costs in some Member States.

Compliance assurance

Environmental compliance assurance covers all work undertaken by public authorities to ensure that industries, farmers and others fulfil their obligations to protect water, air and nature, to manage waste ([206]) and to remedy any environmental damage. It includes measures such as (i) compliance promotion, (ii) compliance monitoring (i.e. inspections and other checks), (iii) enforcement, that is, steps taken to stop breaches and impose sanctions, and (iv) ensuring damage prevention and remediation in line with the polluter-pays principle.

Compliance promotion, monitoring and enforcement

Non-compliance with environmental obligations may occur for different reasons, including poor understanding or lack of acceptance of the rules, opportunism or even criminality. Compliance promotion activities help duty-holders to comply by providing information, guidance and other support. This is particularly important in areas where new and complex legislation is put in place.

([202]) INFR(2019)2222.
([203]) https://www.naturvardsverket.se/en.
([204]) https://www.boverket.se/en/start/.
([205]) https://www.domstol.se.
([206]) The concept is explained in detail in the European Commission's 2018 communication on EU actions to improve environmental compliance and governance (https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52018DC0010) and the related Commission staff working document (https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52018SC0010).

When inspections and other control activities identify problems, a range of responses may be appropriate, including the use of administrative and criminal enforcement tools.

Since the 2022 EIR, the Swedish National Council for Crime Prevention (Brottsförebyggande rådet (Brå)) has continued to oversee and publish detailed crime statistics, including on environmental crimes. Brå's platform provides updated data on the types and frequencies of environmental offences, the outcomes of legal proceedings and crime trends through 2023, with accessible data on their website for public review ([207]).

It appears that inter-agency cooperation remains crucial. This includes involvement from SEPA, county administrative boards and local authorities, with continued attention being paid to the enforcement of waste management and pollution regulations ([208]).

The new EU Environmental Crime Directive

The EU has recently strengthened its legal framework on tackling the most serious breaches of environmental obligations, notably by the adoption of the new Environmental Crime Directive (ECD) (Directive (EU) 2024/1203) ([209]) and new sectoral legislation with stronger provisions on compliance monitoring, enforcement and penalties. Issues important for the transposition and the implementation of the relevant new instruments are highlighted below; a detailed assessment of these topics will be included in the next EIR once more implementation measures are put in place and more systematic information is available.

The new ECD replaced the 2008 ECD and introduced several new offence categories, such as unlawful ship recycling, unlawful water abstraction, and serious breaches of EU legislation on chemicals, mercury, fluorinated GHG and IAS of EU concern. It also covered the establishment of qualified offences, subject to more severe penalties where one of the offences defined in the Directive leads to serious widespread and substantial damage or destruction of the environment. Concrete provisions on the types and levels of penalties for natural and legal persons, who commit an offence were also introduced. Other provisions will help considerably to improve the effectiveness in combating environmental crime of all actors along the enforcement chain. These include obligations to ensure adequate resources and investigative tools, specialised regular training and the establishment of cooperation mechanisms within and between Member States as well as national strategies on combating environmental crime.

Member States are required to transpose the new ECD into national law by 21 May 2026 and to take additional measures to more effectively combat environmental crime, in particular through training, coordination, cooperation and strategic approaches. The Commission will provide support, including by facilitating the identification and sharing of good practices. Member States are expected to ensure the necessary resources and specialised skills required and they are invited to encourage their authorities to support and cooperate with the recognised EU-level networks of environmental enforcement practitioners, such as the EU Network for the Implementation and Enforcement of Environmental Law ([210]), EnviCrimeNet ([211]), the European Network of Prosecutors for the Environment ([212]) and the EU Forum of Judges for the Environment ([213]). The European Union Agency for Law Enforcement Cooperation and European Union Agency for Criminal Justice Cooperation mechanisms for cooperation on cross-border cases should be used more systematically for environmental offences.

Environmental Liability Directive

The Environmental Liability Directive (ELD) ([214]) aims to ensure that environmental damage is remediated in kind at the expense of those who have caused it, in line with the polluter-pays principle. It helps to halt the net loss in biodiversity, as well as reducing the number of contaminated sites and protecting the environmental quality of groundwater and surface waters. The ELD is

([207]) https://bra-se.translate.goog/bra-in-english/home/crime-and-statistics.html?_x_tr_sl=sv&_x_tr_tl=en&_x_tr_hl=it&_x_tr_pto=wapp.

([208]) For example, please see 'Working together to meet the objectives' in SEPA, *Sweden's Environmental Objectives – An introduction*, Stockholm, 2018, p. 6, https://www.naturvardsverket.se/publikationer/8800/swedens-environmental-objectives--an-introduction/#:~:text=The%20overall%20goal%20of%20Swedish,health%20problems%20outside%20Sweden's%20borders.

([209]) Directive 2024/1203/EU on the protection of the environment through criminal law https://eur-lex.europa.eu/eli/dir/2024/1203/oj/eng

([210]) https://www.impel.eu/en.

([211]) LIFE+SATEC project (https://webgate.ec.europa.eu/life/publicWebsite/project/LIFE20-PRE-ES-000001/fight-against-environmental-crime-at-a-strategic-level-through-the-strengthening-of-envicrimenet-network-of-experts-in-environmental-criminal-investigations).

([212]) https://www.environmentalprosecutors.eu.

([213]) https://www.eufje.org/index.php?lang=en.

([214]) Directive 2004/35/EC on environmental liability with regard to the prevention and remedying of environmental damage, https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A02004L0035-20190626.

a cross-cutting tool and a key enabler for better implementation of EU environmental law.

The ELD addresses cases of significant environmental damage to protected species and natural habitats, and, when caused by operators carrying out certain potentially hazardous activities, also damages to water and to soil. The Commission has the legal obligation to periodically evaluate the ELD. The ELD has undergone the second evaluation ([215]), which will be finalised in 2025, and which was supported by an external study ([216]), containing, among other things, evidence, views, reports and other relevant information gathered from different stakeholder groups, including Member States.

One of the most relevant indicators in assessing implementation and enforcement of the ELD is the number of environmental damage cases handled under the ELD, especially when this number is compared with the previous reporting period. Fewer ELD cases were reported in the second reporting period (2013–2022) than in the first one (2007–2013). However, the downward tendency in the number of ELD occurrences and their overall low number do not necessarily mean that the ELD has achieved its objectives, as it needs to be compared with the overall number of environmental damage cases, some of which may have been handled under the other liability instruments.

The ELD has not always been effective in ensuring that the polluter pays, because the liable operators often lack financial capacity to carry out remediation measures. While the ELD does not provide for a mandatory financial security system, it explicitly calls for Member States to encourage the development of financial security instruments and markets, with the aim of enabling operators to use financial guarantees to cover their responsibilities under this directive.

From 1 May 2013 to 31 December 2021, Sweden reported two occurrences of environmental damage under the ELD (both concerning land and water damage). In the previous reporting period, there were four occurrences of environmental damage reported under the ELD.

Sweden does not impose mandatory financial security for ELD liabilities. However, insurance for ELD liabilities is available in environmental insurance policies. Such policies provide cover for pollution and other types of environmental damage, and gradual as well as sudden and accidental damage. However, demand for the policies is moderate.

The 2022 EIR recommended in relation to the ELD that Sweden develop a national database of environmental damage cases, highlighting cases under the ELD and providing full information on relevant financial sanctions. There is no information available about the progress made on this priority action and, therefore, efforts to implement it should continue along with those addressing the 2025 priority actions.

2025 priority action

- Encourage the use of training programmes provided by the Commission (or developed at the national level) covering the ELD and its interactions with the other national liability-related instruments, to ensure more efficient ELD implementation, improve expertise of the competent authorities and raise awareness among all stakeholder groups.

EU-supported environmental capacity building

The Commission's 2023 Compact ([217]) initiative to enhance the administrative space identifies the capacity to lead the green transition as one of three key pillars, along with the public administration skills agenda and the capacity for Europe's Digital Decade. Compact also recognises the role of the EIR reporting tool in improving environmental governance. The two main capacity-building opportunities for the environment provided by the TAIEX-EIR PEER 2 PEER tool ([218]). The technical assistance available through the cohesion policy is subject to shared management and is not dealt with in this subsection.

The Commission's technical support instrument

The TSI provides Member States with tailor-made technical expertise on the design and implementation of reforms. The support is demand driven and does not require national co-financing.

([215]) Commission staff working document - Evaluation of the Environmental Liability Directive, forthcoming 2025.

([216]) European Commission: Directorate-General for Environment and Fogleman, V., *Study in support of the evaluation of the Environmental Liability Directive and its implementation – Final report*, Publications Office of the European Union, Luxembourg, 2024, https://op.europa.eu/en/publication-detail/-/publication/006d90e5-980a-11ef-a130-01aa75ed71a1/language-en.

([217]) See the European Commission web page on Compact (https://reform-support.ec.europa.eu/public-administration-and-governance-coordination/enhancing-european-administrative-space-compact_en).

([218]) See the European Commission web page on the TAIEX-EIR PEER 2 PEER tool (https://environment.ec.europa.eu/law-and-governance/environmental-implementation-review/peer-2-peer_en). TAIEX: Technical Assistance and Information Exchange.

Under the TSI 2022, Sweden was granted technical support for a shared project with Finland on the implementation capacity of sustainable green development in European Arctic northern sparsely populated areas (Northern Sweden Office). In the TSI 2024, the Swedish Agency for Economic and Regional Growth was granted support for the project 'Pathway to net zero: Driving Swedish manufacturing SMEs towards sustainability and competitiveness in the green and digital economy'.

The Commission's TAIEX-EIR PEER 2 PEER tool

The Commission launched the TAIEX-EIR PEER 2 PEER tool in 2017. It aims to facilitate peer-to-peer learning among Member States' environmental authorities through workshops (single or multi-country), expert missions (where a delegation of experts travels to the requesting institution) and study visits (where a delegation from the requesting institution travels to a host country). Flagship multi-country workshops are those requested by the European Commission to present new and upcoming environmental legislation and policy in all Member States ([219]).

Workshops involving Sweden are as follows:

- New aspects in the cross-border cooperation against environmental crime (19–20 November 2024);
- Online platforms: EU Batteries, Packaging and Packaging Waste Regulation (28–29 October 2024);
- Biodiversity, nature conservation and large predators: Examples across European regions (4–6 June 2024);
- Best practice in applying Article 6(3) of the Habitats Directive: Practical solutions to carry out Natura impact assessments effectively (25–27 October 2023);
- Make space for biodiversity: Regional action to mainstream biodiversity and empower stakeholders (21–23 March 2023);
- Future challenges in the air protection in Europe (24 November 2022) with the Czech EU Presidency;
- Circular economy (in the Irish Midlands) (4–6 October 2022);
- Climate adaptation and blue infrastructures: Examples across European regions (30 May–1 June 2022).

On 18–21 September 2023, Sweden hosted a study visit for Estonian authorities on best practice in applying Article 6(3) of the Habitats Directive on renewable energy planning and assessment. France (Occitanie) hosted a study visit from the Västra Götaland region in Sweden on Integrating biodiversity in regional land-use planning: data, decision making and local action in Montpellier, 29 - 31 January 2025.

2025 priority action

- Improve overall national environmental governance, in particular administrative capacity to support the green transition and coordination at the regional and local levels.

([219]) Flagship multi-country workshops in the reporting period are: Recast Drinking Water Directive (3 April 2025); Environmental compliance and governance (18 March 2025); Planning of Renewable Energy Projects (20 February 2025); Air Quality: Implementation of the revised Air Quality Directive (16 January 2025); Industrial safety: awareness raising of emerging risks linked with climate change and decarbonation (12 December 2024); Air quality: implementation of the NEC Directive to further mainstream air and broader pollution reduction in agricultural policy (25 September 2024); Industrial emissions transposition and implementation of the revised directive (12 September 2024); Noise: progress towards meeting Member States' noise limit values and EU reduction targets (5 June 2024); Best practice use of environmental footprint methods on the EU market (30 May 2024); Sustainable finance (9 November 2023); Textile waste separate collection, treatment and markets (3 October 2023); EU environmental funding and support (13 June 2023); Advisory service for businesses to go circular (24 April 2023); Digital product passport implementation (6 December 2022); Public involvement in planning and approval of renewable energy projects (17 November 2022); Environmental compliance and governance (14 November 2022); Biowaste management (19–20 September 2022); and Renewable energy projects: permit granting processes (13 June 2022). NB: The first flagship workshop on zero pollution for air, water and soil took place 9 February 2022.

Annex

2025 priority actions

Circular economy and waste management

Transitioning to a circular economy

- Adopt measures to increase the circular material use.

Waste management

- Further shift reusable and recyclable waste away from incineration, including through economic instruments.
- Improve municipal waste preparation for reuse and recycling.
- Increase the collection and recycling rate of electronic and electric equipment waste.
- Invest in waste prevention measures to reduce the total amount of waste generated.
- Ensure the achievement of the 2025 waste targets, following the recommendations made by the Commission in the early warning reports where applicable.

Biodiversity and natural capital

Nature protection and restoration – Natura 2000

- Complete the Natura 2000 site designation process.

Recovery of species

- Strengthen the integration of biodiversity actions into other policies (e.g. on energy, agriculture, fisheries, forestry, urban and infrastructure planning, and sustainable tourism), and promote communication between stakeholders.
- Reinforce action for habitats and species in unfavourable conservation status, for example through restoration measures, increased connectivity, better policy coordination and integration, and increased funding.

Recovery of ecosystems

- Implement eco-schemes and agri-environmental measures and practices to address the environmental needs of Sweden.
- Improve the conservation status of forests by promoting sustainable forest management and ensuring compliance with the Habitats Directive before granting/renewing permits for forest logging.
- Implement peatland conservation and restoration measures and include such measures and objectives in the national restoration plans.

Prevention and management of invasive alien species

- Step up implementation of the IAS Regulation, including with regard to enforcement and capacity of inspection authorities.

Zero pollution

Clean air

- As part of the NAPCP, take action to reduce emissions of air pollutants.
- Ensure full compliance with the current AAQD standards, also in light of future stricter requirements under the revised AAQD.

Industrial emissions

- Reduce industrial air pollution damage and intensity.
- Reduce industrial releases to water and their intensity.
- Engage with industry and environmental NGOs to ensure proper contribution to and implementation of BAT conclusions and ensure timely updates to permits following the publication of BAT conclusions.
- Ensure effective public participation and access to justice in relation to the IED.

Major industrial accidents prevention – Seveso

Strengthen compliance with requirements on safety measures to prevent major accidents and ensure appropriate preparedness and response in relation to UTEs, in particular as regards reviewing, testing and updating EEPs, at intervals of no more than three years.

Noise

- Complete and implement action plans on noise management.

Water quality and management

Water Framework Directive

- Improve river continuity and ecological flows, boosting efforts on nature-based solutions to reduce hydromorphological pressures.
- Ensure periodic reviews of permits for discharges, abstractions and other water uses, including hydropower pressures.
- Reduce pollution from nutrients, chemicals, metals and saline discharges.
- Better justify exemptions to the achievement of good status.
- Improve the classification of water bodies and strengthen monitoring systems.
- Develop more robust programmes of measures, tackle obstacles identified in the implementation of measures and ensure adequate financing for implementation, including through better use of the cost recovery and polluter pays principle.

Floods Directive

- FRMPs should provide details on how the FHRMs were used in the choice of measures and how to consider pluvial flooding.
- Better explain the choice and implementation of flood prevention and protection measures (prioritisation, monitoring, costs of measures).
- Improve public consultation and stakeholder involvement.

Drinking Water Directive

- Take actions to ensure full compliance with the Drinking Water Directive.

Nitrates Directive

- Tackle nutrients pollution, especially nitrates from agriculture, through the implementation of the Nitrates Directive.

Urban Wastewater Treatment Directive

- Take the necessary measures to ensure full implementation of the current urban wastewater treatment directive, taking into account the new requirements of the recast directive.

Chemicals

- Upgrade the administrative capacities in implementation and enforcement to move towards a policy of zero tolerance of non-compliance.
- Increase customs checks and checks of products sold online with regard to compliance with chemicals legislation.

Climate action

- Implement all polices and measures that are needed to achieve targets laid down in the Effort Sharing Regulation (ESR) and the Land Use and Land-Use Change and Forestry (LULUCF) Regulation. More detailed priority actions are set out in the assessment of the final National Energy and Climate Plan (NECP).

Financing

- Use more national funding (for instance by increasing taxes in favour of the environment and reducing environmentally harmful subsidies), EU funding and private funding to help close the investment gap.

Environmental governance

Information, public participation and access to justice

- Make spatial data more widely accessible and prioritise environmental datasets in implementing the Inspire Directive, especially those identified as high-value spatial datasets for implementing environmental legislation.
- Ensure correct transposition of the revised EIA Directive.
- Improve access to courts in national environmental cases by the public concerned and eliminate practical barriers, such as length of proceedings and excessive costs in some Member States.

Compliance assurance

- Encourage the use of training programmes provided by the Commission (or developed at the national level) and covering the ELD and its interactions with the other national liability-related instruments, to ensure more efficient ELD implementation, improve the expertise of the competent authorities and raise awareness among all stakeholder groups.

EU-supported environmental capacity building

- Improve overall national environmental governance, in particular administrative capacity to support the green transition and coordination at the regional and local levels.