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2025 Environmental Implementation Review

Country Report - GERMANY

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

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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 on environmental legal implementation in Germany. The purpose of this report is to provide information on the implementation performance and highlight the most effective ways to address the implementation gaps which 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 account factors such as the gravity of the environmental implementation issue in light of the impact on the quality of life of the citizens, the distance to target and financial implications. In Germany such challenges have lingered since the first Environmental Implementation Review in 2017 and require urgent action. Despite many nature restoration efforts of Germany, **the condition of many ecosystems has continued to deteriorate**. In Germany, the status of 63 % of the species and 69 % of the habitat types listed in the Habitats Directive is classified as "unfavorable-inadequate" or "unfavorable-bad", and only 9 % of surface waters are in good or better ecological status. Habitat types like the hay meadow have significantly diminished in size or disappeared completely at various sites in recent years. Also, the populations of bird species protected by the Birds Directive in Germany have decreased to a significant extent. Further restoration measures and change in land use practices are needed.

Pollution from agriculture and industry puts significant pressure on water bodies and soils, with nitrate being the worst pollutant, causing failure to achieve good chemical status in groundwater.

Germany is among the best performers in the EU with regard to **waste management**. The recycling rate of packaging waste stands at 69% in 2022 and the landfill rate is below 1%. However, Germany also generates far more waste than the EU average. Overall, there appears to be a very small decoupling of waste generation from economic growth throughout the period 2010-2022. Nevertheless, most recently a positive trend can be observed, as waste generation declined across nearly all waste categories.

The overall **investment needs** to enable Germany to meet its objectives in the main environmental areas amount to EUR 80.2 billion per year, broken down as follows: circular economy (EUR 42 billion); water (EUR 19.4 billion); pollution prevention and control (EUR 13.4 billion) and biodiversity and ecosystems (EUR 5.7 billion). To meet these four environmental objectives beyond climate change, the additional investment need over the current levels – **the investment gap** – is estimated at EUR 20 billion per year in Germany, representing around 0.52% of the national GDP, being lower than the EU-average (0.77%).

In terms of **governance**, Germany has provided better public information on access to justice by linking to the European eJustice Portal factsheet on a German government website. Germany makes environmental implementation assessment portals available at the federal and *Länder* levels. These portals provide information on projects, including short summaries and details on public participation, the progress made on the authorisation procedure, and the final decision on the approval of the project.

Germany's **circular use of materials** has been increasing steadily over the past decade, reaching 14% in 2023, compared to the EU average of 11.8%. With the adoption of Germany's first comprehensive national circular economy strategy in December 2024 this positive trend will be further supported.

Through its "Action Plan on Nature-based Solutions for Climate and Biodiversity" (ANK) – funded by EUR 3.5 billion from 2024 to 2027 – the government intends to strengthen the resilience and climate protection performance of German ecosystems. The restoration and rewetting of peatlands is an essential component.

([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.

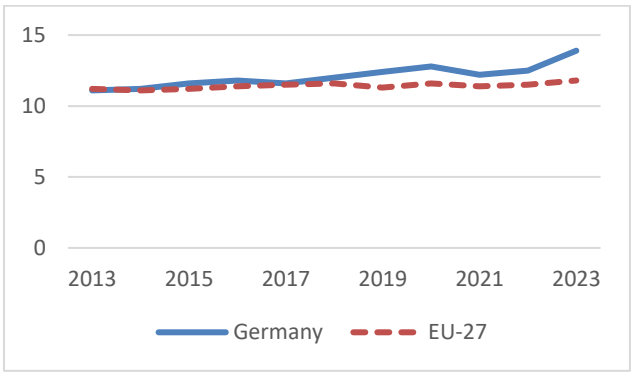
The 2020 CEAP launched the legislative process for a set of initiatives that will now have to be implemented by national governments across the EU. These initiatives were all introduced following a holistic life-cycle approach, with measures addressing the different stages of a product's life cycle,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

Germany's circular use of materials has been increasing steadily over the past decade, reaching 14 % in 2023, compared to the EU average of 11.8 %.

Figure 1: CMUR (%), 2013–2023

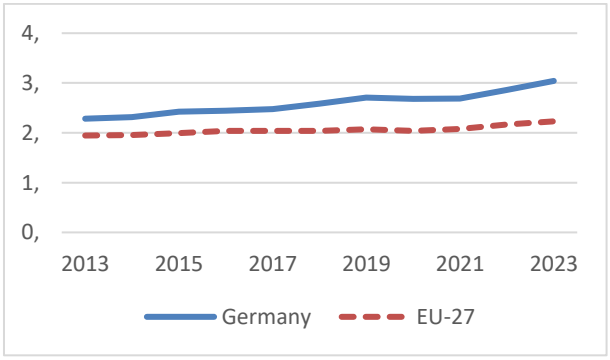


Source: Eurostat, 'Circular material use rate', env_ac_cur, last updated 13 November 2024, accessed 10 December 2024, https://ec.europa.eu/eurostat/databrowser/product/view/env_ac_cur.

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 3.04 generated per kg of material consumed in 2023, resource productivity in Germany is well above the EU average of EUR 2.23 per kg. This positive performance is further supported by a continuous increase in Germany's resource productivity over the last decade.

Figure 2: Resource productivity (EUR/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.

([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.

Source: Eurostat, 'Resource productivity', env_ac_rp, last updated 7 August 2024, accessed 10 December 2024, https://ec.europa.eu/eurostat/databrowser/product/view/env_ac_rp.

Policies and measures

In parallel with European initiatives under the 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 December 2024, Germany adopted its first comprehensive national circular economy strategy ([5]). With the strategy, the German government aims to reduce raw material consumption by examining production and consumption over the entire life cycle and identifying ways to fully harness opportunities for conserving resources through resource efficiency and circularity in all phases.

Fragmented strategies and initiatives that address many aspects of the circular economy were already in place. Germany's resource efficiency programme's second update (ProgRess III ([6])) included many initiatives aiming to increase circularity in the country. The overarching goal of the ProgRess programme is to make the extraction and use of natural resources more sustainable and meet the country's responsibility to future generations by helping to secure the natural foundations of life for the long term. The programme aims to achieve this goal by implementing 120 measures along the entire value chain. ProgRess III aims to close material cycles as much as possible and emphasises the particular importance of product design in this context.

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, PaaS (platform as a service) second hand) can help drive the demand for sustainable products that meet reparability and recyclability standards.

Given that the federal authorities aim to be climate neutral by 2045, a stricter and more comprehensive regulation of green public procurement called AVV Klima entered into force on 1 January 2022. The elements it introduced include life-cycle costing, a list banning certain single-use plastics, encouragement of alternatives to buying (emphasising genuine benefit rather than ownership), and prioritisation of recycled products. The German government used the occasion of transposing the 2018 waste package into national waste law to make the green public procurement of recycled products mandatory.

No further measures have been brought to the Commission's attention since the 2022 Environmental Implementation Review (EIR).

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, Germany had 9 798 products out of 98 977 and 465 licences out of 2 983 registered in the EU Ecolabel scheme. Germany ranks first on registered licences and fourth on products in Europe ([7]). Moreover, as of October 2024, 1 181 organisations from Germany were registered in EMAS, 66 more than in 2021 ([8]).

The 2019 and 2022 EIRs suggested Germany strengthen its policy framework on circular economy. With the adoption of the national circular economy strategy, Germany made a big step forward.

([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]) https://www.bmuv.de/download/nationale-kreislaufwirtschaftsstrategie-nkws.

([6]) https://www.bmuv.de/publikation/deutsches-ressourceneffizienzprogramm-iii-2020-bis-2023.

([7]) European Commission, 'EU Ecolabel facts and figures', European Commission website, http://ec.europa.eu/environment/ecolabel/facts-and-figures.html.

([8]) European Commission, 'EMAS register', European Commission website, https://webgate.ec.europa.eu/emas2/public/registration/list.

2025 priority action

- Speed up the transition to a circular economy by implementing the national strategy and the EU framework and recommendations, in particular complement it with upstream circularity measures.

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 (CRMs), 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.

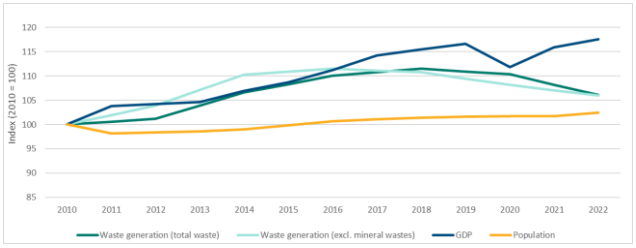
One of the main objectives of EU waste law is to decouple economic growth from its environmental impacts.

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 Germany has increased over the last 12 years (Figure 3). This trend is primarily driven by the largest waste categories, namely soils and mineral waste from construction and demolition. Excluding the major mineral waste categories does not affect the overall trend as there is still a small increase observed, mainly driven by the remaining largest waste categories, namely mixed waste and recyclable waste. Most recently, waste generation declined again across nearly all waste categories. Germany's GDP showed a steady growth until 2019, but dropped significantly in 2020, most likely due to the COVID-19 outbreak. Overall, there appears to be a very small decoupling of waste generation from economic growth throughout 2010–2022.

Figure 3: Generation of waste (total and excluding major mineral waste), 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, last updated 30 September 2024, accessed 22 October 2024, https://ec.europa.eu/eurostat/databrowser/view/env_wasgen/default/table?lang=en; 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

Germany focuses on key products that contain a high level of CRMs, such as batteries (e.g. through extended producer responsibility (EPR)), electrical and electronic equipment (collection systems) and vehicles (individual EPR). In addition, the newly adopted national strategy on circular economy integrates issues on CRMs through measures to increase the security of raw material supply and raw material sovereignty. In some federal states, there are repair bonus schemes set up for electrical and electronical equipment that support the sustainability of using products that contain CRMs.

Construction and demolition waste

Construction and demolition waste accounts for almost 40 % of all waste generated in the EU. A recent study ([9]) by the Joint Research Centre shows that preparing for reuse

([9]) European Commission: Joint Research Centre, Cristóbal García, 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.

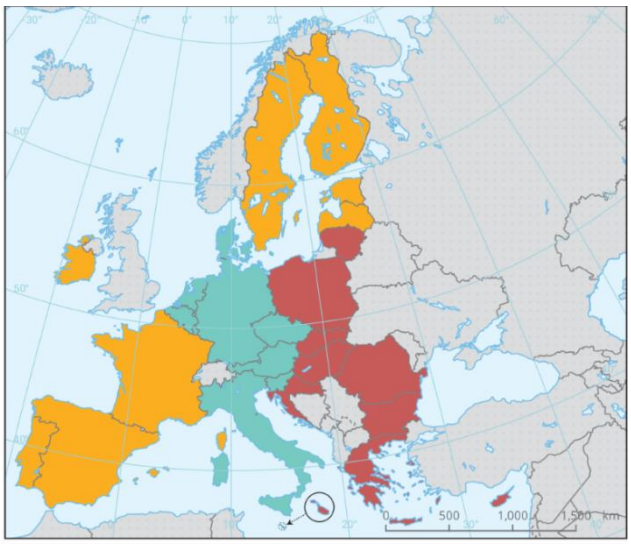
and recycling operations are preferred over incineration and landfilling from an environmental perspective for most of the different streams of construction and demolition waste. However, the economics are often unfavourable for preparing for reuse and recycling compared with incineration and landfilling. If available technology were to be applied, it is estimated that the increase in preparing for reuse and recycling would lead to an additional 33 Mt of greenhouse gas (GHG) emission savings annually (more than, for example, the combined annual GHG emissions of Estonia, Latvia and Luxembourg).

The preparing for reuse and recycling rate of mineral construction and demolition waste in Germany in 2022 was 86.5 %, compared with the EU average of 79.8 %. Measures to further increase the preparing for reuse and recycling rate of construction and demolition waste include separate collection at source – for instance through digitalised pre-demolition audits ([10]) ('resource assessments') – EPR and other economic instruments, and upstream measures such as increasing the recycled content in construction products and the circular design ([11]) of construction works.

Boosting implementation – the 2023 *Waste Early Warning Report*

This section focuses on the management of municipal waste ([12]), for which EU law sets mandatory recycling targets. In June 2023, the Commission published the *Waste Early Warning Report* ([13]) identifying the general trends in waste management and the Member States at risk of missing 2025 waste targets (see Figure 4). Germany is not at risk of missing the recycling targets for municipal waste or packaging waste.

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 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 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

([10]) European Commission: Directorate-General for Internal Market, Industry, Entrepreneurship and SMEs, *EU Construction & 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.

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

([12]) 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).

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

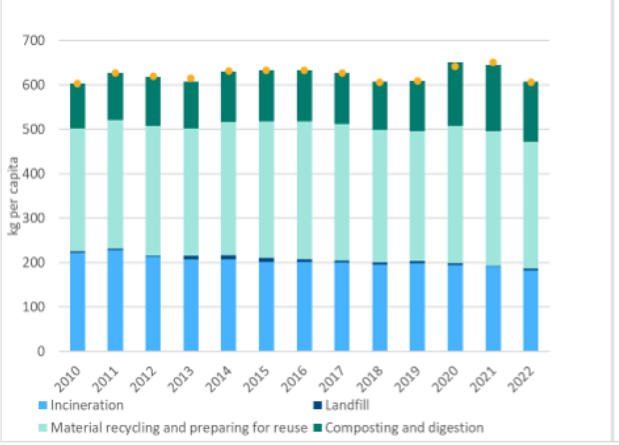
2025 targets, 11 Member States, not including Germany, have used this prerogative.

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 ([14]), the Packaging and Packaging Waste Directive ([15]) and the Directive on Waste Electrical and Electronic Equipment ([16]).

Municipal waste

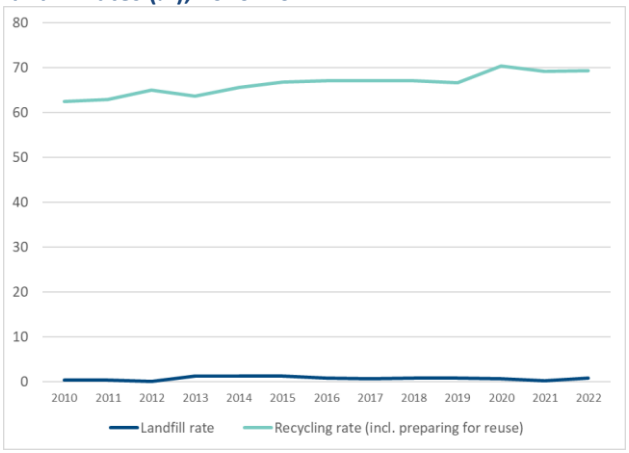
Germany's waste generation rate has been generally stable since 2010, with a slight decrease in 2022, reaching 593 kg per capita, which is still above the EU average. The rate of preparing for reuse and recycling of municipal waste has stagnated over the past few years at a high level, reaching 69 % in 2022, which is significantly above the (estimated) EU-27 average of 49 % in the same year ([17]). The incineration rate slightly decreased during the same period, reaching 30 % in 2022. Germany has a landfill rate below 1 %.

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: From reference year 2020 onwards, new reporting rules apply for calculating recycled municipal waste pursuant to the targets set out in Article 11.2(c–e) of Directive 2008/98/EC. The calculation points referred to in Article 6c(1)(a) are corrected for non-target materials, thus excluding material rejected from recycling facilities. Germany applied the new calculation rules for the first time for reference year 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.

Packaging waste

Germany's packaging waste generation has significantly increased since 2010 (Figure 7). The country generated 227 kg per capita in 2022, which is significantly above the estimated European average of 186 kg per capita in the same year ([18]).

([14]) 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.

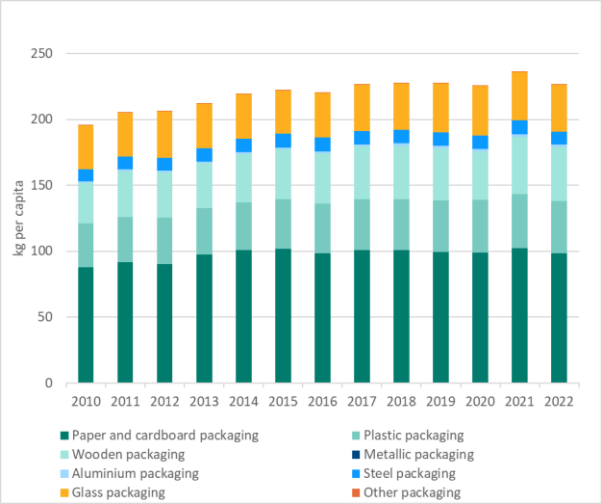
([15]) European Parliament and Council Directive 94/62/EC of 20 December 1994 on packaging and packaging waste (OJ L 365, 31/12/1994, p. 10–23), Directive - 94/62 - EN - EUR-Lex.

([16]) 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.

([17]) The EU average might have been influenced by not all Member States fully applying the reporting rules for municipal waste set out in the Waste Framework Directive as amended in 2018.

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

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 is a break in the series for paper and cardboard, plastic, wooden, glass and aluminium packaging types in 2019. Germany applied the new calculation rules in accordance with Commission Implementing Decision 2019/665 for the first time in 2019.

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 the past decade, the overall packaging waste recycling rate was above 65 %, with the exception of 2019, and stands at 69 % in 2022. The overall recycling rate is mainly influenced by paper and cardboard as this is the largest fraction with a high recycling rate. In 2019 there was a notable drop in paper and cardboard, glass, metallic and plastics packaging recycling rates, which slightly diminished the overall recycling rate for that year. This drop is attributable to the application of new calculation rules ([19]). A comparison of the data under the new rules with a calculation under the old rules for 2018–2021 indicates an increase in the recycling rate from 2018–2021 ([20]).

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).

Germany's current national waste prevention programme for 2021–2027 is the country's second prevention programme ([21]). The new programme focuses on possible measures to be taken by industries, households and other stakeholders ([22]). No specific budget for implementation is included in the programme ([23]).

Prioritised waste streams are food and organic waste, construction and demolition waste, hazardous waste, detergents, household and municipal waste, packaging waste, textiles, waste electrical and electronic equipment, waste batteries, manufacturing waste, bulky waste and other miscellaneous waste. Quantitative targets have been set for reusable beverage containers, the reduction of food waste at the retail and consumer levels, the reduction of food losses along production and supply chains, and the continued decrease of municipal solid waste ([24]). The recently adopted German [25] the circular economy aims to consolidate goals and measures relating to the circular economy and promote resource efficiency based on existing raw material policy strategies. One of the strategy's strategic targets is to reduce the generation of municipal waste per capita by 10 % and 2 % by 2030 and 2045, respectively.

Policies to encourage separate collection and recycling

Residual waste and biowaste (food and garden waste) are mainly collected through separate door-to-door collection, which is supplemented with collection at civic amenity sites for garden waste. Door-to-door collection is predominantly applied for paper and cardboard (separate) and for plastics, metals and composite packaging waste (commingled), complemented by drop-off point collection. Collection of glass packaging occurs mainly through drop-off points and in some areas through door-to-door collection. In most municipalities, door-to-door

([19]) (ETC/CE, 2022).
([20]) (UBA, 2024).
([21]) (BMUV, 2020).
([22]) (BMK, 2023).
([23]) (EEA, 2023).
([24]) (EEA, 2023).
([25]) (BMUV, 2024).

collection or collection through drop-off points is limited to packaging waste. The non-packaging waste streams are usually collected at civic amenity sites or by private companies (scrap trade). Furthermore, Germany mandates the separate collection of packaging waste from non-household sources ([26]).

While pay-as-you-throw systems are important to improve separation at source, German municipalities are not obliged to apply such systems. Consequently, the population coverage is only about 30 % and the fees are modulated based on the number of yearly emptied containers or the amount of disposed residual waste ([27]). Hence, the European Commission suggested that German waste management could benefit from implementing a mandatory pay-as-you-throw system across the whole country ([28]).

The national deposit-return system in Germany was one of the first in Europe. Today a mandatory scheme covers nearly all single-use drink cans and bottles made of aluminium, glass and plastic (polyethylene terephthalate), and previous exemptions (e.g. for some alcoholic beverages and dairy products) have been removed by the Packaging Act (VerpackG) amendments in 2022 and 2024. Additional voluntary deposit-return systems are in place for certain plastic crates and some wooden packaging ([29]). Furthermore, the Packaging Act requires a deposit-return system for refillable packaging, requiring sufficient logistics and incentive for take-back and reuse.

Policies to discourage landfilling or incineration

As mentioned earlier, Germany landfills less than 1 % of its generated municipal waste (Figure 6). While there is no landfill tax in place, a landfill ban has existed since 2005 for waste with a total organic carbon content above 3 % (1 % for mechanically or biologically treated waste) ([30]).

Similarly, Germany does not impose taxes on municipal waste incineration. Nevertheless, as the country's incineration rate has been generally stagnant since 2015, the 2022 EIR suggested that introducing incineration taxes could serve as an incentive to direct more waste away from incineration to recycling ([31]). However, since 2023 waste incineration has been eligible for national emissions trading for fuels in accordance with the Fuel Emission Allowance Trading Act. Since 1 January 2024, carbon dioxide (CO_2) certificates must be purchased for every 1 t of non-biogenic CO_2 emitted. In 2024, prices were set to EUR 45/t, and they will increase significantly in the coming years. This may well have a significant influence in the future on the amount of waste incinerated ([32]).

Germany has made some progress when it comes to shifting reusable and recyclable waste away from incineration, but more progress is needed. While the amount of incinerated waste recently decreased, the share of municipal waste being incinerated remained largely the same. Several German Länder have adopted revised waste management plans and informed the Commission of those in accordance with the Waste framework directive, including Nordrhein-Westfalen, Saxony, Lower Saxony, Brandenburg and Baden-Württemberg.

2025 priority actions

- Further shift reusable and recyclable waste away from incineration, including through economic instruments.
- Increase the collection and recycling rate of waste electrical and electronic equipment.
- 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 early warning reports where applicable.

([26]) (ETC/CE, 2022).
([27]) (ETC/CE, 2022).
([28]) (EC, 2023).
([29]) (ETC/CE, 2022)
([30]) (ETC/CE, 2022).
([31]) (EC, 2022).
([32]) (UBA, 2024).

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 ([33]) and a dashboard of indicators ([34]) provide information on implementation progress. The recently adopted EU Nature Restoration Regulation ([35]) 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.

In December 2024, Germany adopted a new national biodiversity strategy for 2030 (NBS 2030)[36] that takes into account the EU and global biodiversity targets. It bundles the central topics and goals for biodiversity conservation in 21 fields of action with 64 goals under one strategic roof. In addition to the strategy part, the NBS 2030 places a special focus on the implementation to achieve these goals. To this end, a 1st action plan lists around 250 concrete measures that the federal government wants to implement by 2027.

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 for Germany, see Chapter 5.

Nature protection and restoration – Natura 2000

Natura 2000 ([37]), 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

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

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

([35]) 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).

36 Nationale Strategie zur Biologischen Vielfalt 2030, https://www.bmuv.de/download/die-nationale-strategie-zur-biologischen-vielfalt-2030-nbs-2030

([37]) 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.

conservation (SACs) ([38]); 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.

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. The Natura 2000 network enables 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.

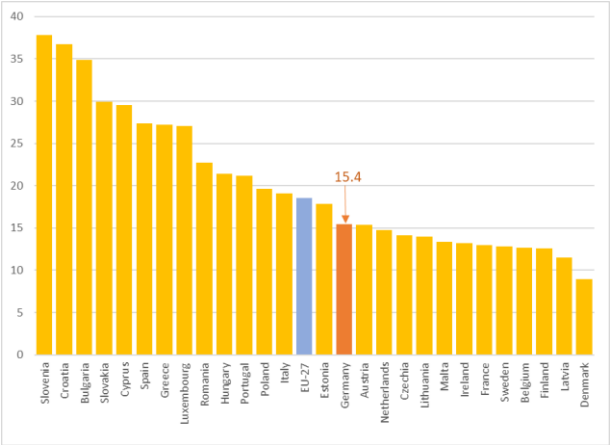
Germany hosts 93 habitat types ([39]) and 195 species ([40]) covered by the Habitats Directive. The country also hosts populations of nearly 120 bird taxa listed in Annex I to the Birds Directive ([41]).

Nature protection in Germany falls within the competence of the 16 *Länder*, and the federal authorities are responsible for the exclusive economic zone.

In 2023, 15.4 % of the national land territory of Germany was covered by Natura 2000 (EU coverage: 18.6 %), with special protection areas (SPAs) classified under the Birds Directive covering 11.3 % (EU coverage: 12.8 %) and SCIs under the Habitats Directive covering 9.4 % (EU coverage: 14.3 %) of Germany's territory ([42]).

Considering both Natura 2000 sites and other nationally designated protected areas, Germany legally protects 38.5 % of its terrestrial area (EU-27 coverage: 26.1 %) and 45.3 % of its marine area (EU-27 coverage: 12.3 %) ([43]). To this effect, there are different levels of protection for nature conservation, of which landscape conservation areas (*Landschaftsschutzgebiete*) and nature parks have the lowest ([44]). Germany strictly protects only 7.2 % of the EU's protected areas (SCIs and SPAs).

Figure 9: Natura 2000 terrestrial protected area coverage per Member State (%), 2023



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

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. Such site-specific conservation should define attributes and targets that describe the habitats or species' condition as favourable or unfavourable, addressing key pressures and threats. Under Article 6 of the Habitats Directive Member States must establish and implement measures to achieve these objectives.

The Court of Justice of the European Union (CJEU) instructed Germany in a court ruling ([45]) that the

([38]) 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.

([39]) European Environment Agency (EEA), 'Number of habitats and species per Member State', Article 17 dashboard, Annex I total, 19 December 2019, https://www.eea.europa.eu/themes/biodiversity/state-of-nature-in-the-eu/article-17-national-summary-dashboards/general-information-on-habitats-and-species.

([40]) EEA, 'Number of habitats and species per Member State', Article 17 dashboard, 19 December 2019, https://www.eea.europa.eu/themes/biodiversity/state-of-nature-in-the-eu/article-17-national-summary-dashboards/general-information-on-habitats-and-species.

([41]) 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/themes/biodiversity/state-of-nature-in-the-eu/article-12-national-summary-dashboards/general-information-on-bird-species-populations. This counting only takes into account bird taxa for which information was requested.

([42]) https://www.bfn.de/natura-2000-gebiete.

([43]) Eurostat dataset env_bio4, terrestrial and marine protected area percentage for 2022 , accessed March 2025, https://ec.europa.eu/eurostat/databrowser/view/env_bio4/default/table?lang=en. See also the EU Biodiversity Strategy Dashboard (https://dopa.jrc.ec.europa.eu/kcbd/dashboard/#COHERENT%20NETWORK%20OF%20PROTECTED%20AREAS).

([44]) See section 26 and 27 of the Federal Nature Conservation Act.

([45]) Judgment of 21 September 2023, *European Commission* v *Federal Republic of Germany*, C-116/22, EU:C:2023:687.

remaining SAC designations and conservation measures must be finalised.

In particular, the conservation objectives have not been set for 88 of the 4 606 SCIs at issue, and necessary conservation measures for 737 sites have not been adopted, in breach of Article 6(1) of the Habitats Directive.

In addition, several SPAs under the Birds Directive are still not legally protected under national law, and many SPAs are still missing conservation measures. These deficiencies are the subject of an ongoing infringement procedure initiated in March 2024.

2025 priority action

- Finalise the establishment of site-specific conservation objectives and measures for all Natura 2000 sites (including by adopting their management plans) and ensure their effective implementation.

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 ([46]).

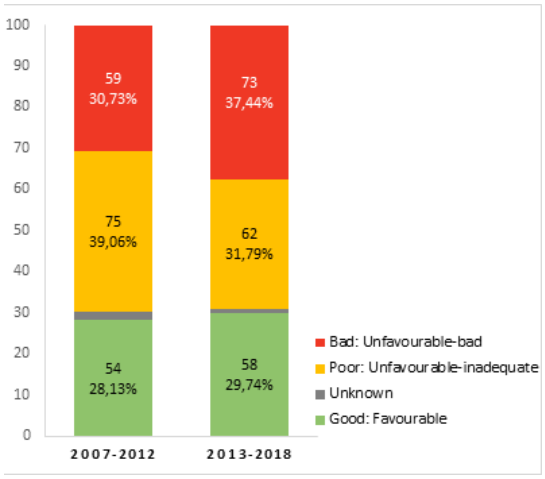
One of the primary objectives of the Habitats Directive is the maintenance of or restoration to favourable conservation status of all species of community interest. Moreover, the Birds Directive also aims to ensure that all wild birds in the EU enjoy a secure status. In order to achieve these objectives, 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.

According to the report for 2013–2018 submitted by Member States on the conservation status of habitats and species, as required under Article 17 of the Habitats Directive, 29.7 % of habitats had a good conservation status in 2019 compared with 28.1 % in the previous reporting period (2007–2012). As for protected species, 25.6 % had a good conservation status in 2018 compared with 24.6 % in the previous reporting period (2007–2012). However, less than 10 % of German protected grassland habitat types have a favourable conservation status ([47]). Regarding birds, 61 % of the breeding species showed short-term increasing or stable population trends.

Over the same period, the share of habitats with unfavourable conservation status decreased slightly from 69.8 % to 69.2 %, while the share of species with unfavourable conservation status grew from 60.4 % to 63.3 %. The main pressures are agriculture and changes in land use (both intensification and abandonment) together with nitrogen deposition from agriculture and traffic sources.

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. Figures 10 and 11 show the latest available conservation status data.

Figure 10: Assessments on conservation status for habitats for 2007–2012 and 2013–2018 reporting periods (% of assessments)



NB: The values shown for 2007–2012 with those for 2013–2018 are not necessarily directly comparable because changes in area conservation status in a Member State may result from changes to methods or use of better data, rather than reflecting genuine changes.

Source: EEA, 'Conservation status and trends of habitats and species', 19 December 2019, accessed December 2021, https://www.eea.europa.eu/en/analysis/maps-and-charts/conservation-status-and-trends-article-17-national-summary-dashboards-archived.

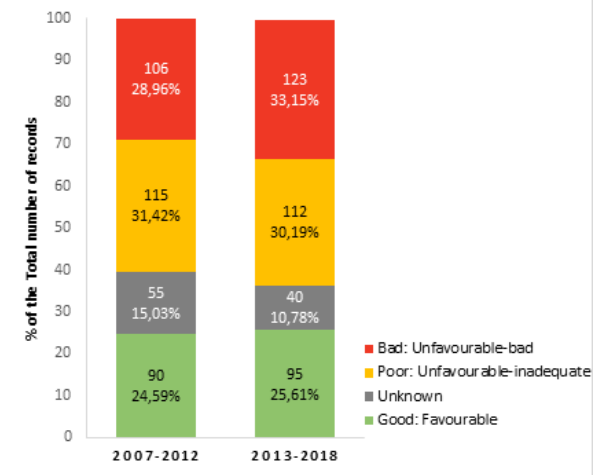
([46]) EEA, *State of Nature in the EU: Results from reporting under the Nature Directives 2013–2018*, Publications Office of the European Union, Luxembourg, 2020, https://www.eea.europa.eu/publications/state-of-nature-in-the-eu-2020.

([47]) 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.

On 2 December 2021 the Commission decided to refer Germany to the CJEU for failing to comply with its obligation to prevent the deterioration of two habitat types: lowland hay meadows and mountain hay meadows ([48]). With its judgment of 14 November 2024, the CJEU confirmed the Commission's view. These habitat types have significantly diminished in size or disappeared completely at various sites in recent years. The two habitat types play a vital role for pollinating insects, for example bees and butterflies, and are protected as part of the Natura 2000 network.

The Commission has also found that the populations of bird species protected by the Birds Directive in Germany have decreased to a significant extent ([49]). According to the data provided by the German Federal Agency for Nature Conservation for the 24-year trend over 1992–2016, Germany lost around 14 million breeding birds during this period. Of these, about 4 million birds have disappeared from open land and around 5 million birds have disappeared from settlement areas. The losses mainly occurred in the first half of the reporting period.

Figure 11: Assessments on conservation status for species for 2007–2012 and 2013–2018 reporting periods (% of assessments)



NB: The values shown for 2007–2012 and 2013–2018 are not necessarily directly comparable because changes in area conservation status in a Member State may result from changes to methods or use of better data, rather than reflecting genuine changes.

Source: EEA, 'Conservation status and trends of habitats and species', 19 December 2019, accessed December 2021, https://www.eea.europa.eu/en/analysis/maps-and-charts/conservation-status-and-trends-article-17-national-summary-dashboards-archived.

Germany has one of the highest shares of red-listed species and habitat types for several classes. These still show a negative tendency.

Germany is among the countries with a high percentage of peatlands. However, less than 5 % of near-natural peatlands remain in Germany. The conservation status of habitats in the continental and Atlantic zones is reported to be either unfavourable or bad. Peatlands contribute to 7 % of Germany's GHG emissions overall, but contribute a much higher share in the northern *Länder*, where peatlands are concentrated ([50]).

Through its action plan on nature-based solutions for climate and biodiversity (*Aktionsprogramm Natürlicher Klimaschutz*) ([51]), the federal government intends to contribute to improving the general state of Germany's ecosystems. From 2024 to 2027, a total of EUR 3.5 billion is available for various measures. The restoration and rewetting of peatlands is an essential component.

In 2022, Germany received two priority actions on conservation objectives and conservation measures for Natura 2000 sites, and on balancing pressures from agriculture with nature protection needs.

Germany made progress with the priority action on establishing conservation measures.

2025 priority actions

- Reinforce action for habitats and species with unfavourable conservation status through, for example, 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

([48]) Judgment of 14 November 2024, *European Commission* v *Federal Republic of Germany*, C-47/23, EU:C:2024:95.
([49]) https://nature-art12.eionet.europa.eu/article12/.
([50]) National strategy for peatland protection 2022, https://www.bmuv.de/fileadmin/Daten_BMU/Pools/Broschueren/nationale_moorschutzstrategie_bf.pdf
([51]) Federal Ministry for the Environment, Nature Conservation, Nuclear Safety and Consumer Protection, *Federal action plan on nature-based solutions for climate and biodiversity*, Berlin, 2023, https://www.bmuv.de/fileadmin/Daten_BMU/Pools/Broschueren/ank_publikation_en_bf.pdf.

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" ([52]), 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.

The CAP and national CAP strategic plans that establish the framework for the transition to a sustainable agriculture 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. CAP is the largest source of funding for the implementation of EU environment policy and strategic plans should lead to better protection of soil, water, air quality and biodiversity.

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

The utilised agricultural area in Germany increased from 16 667 300 ha in 2012 to 16 730 700 ha in 2015 and decreased to 16 594 900 ha in 2022 ([53]).

With regard to environmental performance, the situation of Germany's agricultural sector varies depending on the part of the country. Some *Länder*, especially in the north-west and south-east, have high livestock density and intensive land-use, which significantly affect ecosystems. Diffuse agriculture pollution is the most significant pressure on both surface waterbodies and groundwater bodies, with nitrate being the worst pollutant, causing failure to achieve good chemical status in groundwater. Sales of pesticides have stagnated at a high level for years. The German national action plan for the sustainable use of pesticides is currently being revised and a pesticide reduction strategy is in development ([54]).

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 by non-productive landscape features in Germany is 5.4 %, slightly below the EU average. At the EU level, landscape features cover 5.6 % of agricultural land.

In 2024, the CAP basic regulations were amended ([55]) to simplify certain rules, 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 area or landscape features in their farms. The amended regulations set out, however, 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 the establishment of new landscape features on arable land.

The recently adopted Nature Restoration Regulation ([56]) 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 ([57]). 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 9.83 % of Germany's land area is used for organic

52 https://agriculture.ec.europa.eu/overview-vision-agriculture-food/vision-agriculture-and-food_en

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

([54]) https://www.bmel.de/SharedDocs/Downloads/DE/_Landwirtschaft/Pflanzenbau/Pflanzenschutz/zukunftsprogramm-pflanzenschutz.pdf?__blob=publicationFile&v=5.

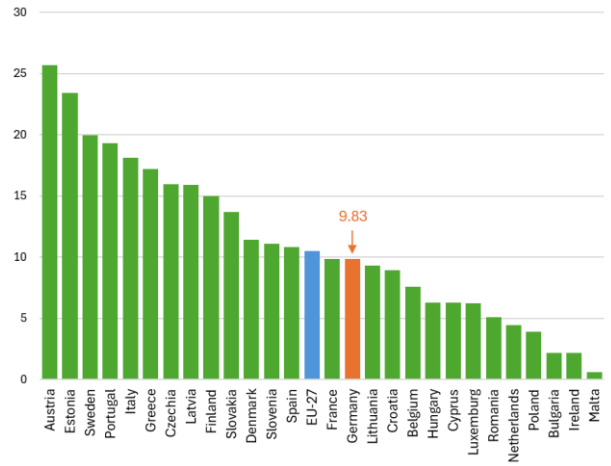
([55]) Regulation (EU) 2024/1468 of the European Parliament and of the Council of 14 May 2024 amending Regulations (EU) 2021/2115 and (EU) 2021/2116 as regards good agricultural and environmental condition standards, schemes for climate, environment and animal welfare, amendment of the CAP strategic 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.

([56]) 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.

([57]) 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'.

farming. This is lower than the EU average of 10.50 % ([58]). Although there is a moderate positive trend, Germany is still not contributing sufficiently to achieving the target of 25 % of the EU's agricultural land being used for organic farming by 2030, nor is it on track to reach its (outgoing) government's even more ambitious objective of 30 % of German agricultural land being used for organic farming by 2030 ([59]).

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 actions

- Implement eco-schemes and agri-environmental measures and practices to address the environmental needs of Germany.
- Implement and scale up the uptake of organic farming practices.

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 ([60]) 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 Germany ([61]).

28 % of German soils have a concentration of nitrogen exceeding 50 kg/ha, and 20 % have a concentration of phosphorus exceeding 50 mg/kg. Phosphorus concentrations are particularly high in the north-west, while nitrogen concentrations are high in both the north-west and the south-east of the country. A fifth of the national territory is affected by loss of soil organic carbon

([58]) 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-farming_fr.pdf&prefLang=en.

([59]) BMEL - Ökologischer Landbau - Bio-Strategie 2030 – Nationale Strategie für 30 Prozent ökologische Land- und Lebensmittelwirtschaft bis 2030.

([60]) 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.

([61]) 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 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.

in mineral soils ([62]), and 19 % experiences unsustainable soil erosion by water, wind, tillage and harvest.

In its national sustainability strategy (*Deutsche Nachhaltigkeitsstrategie*), Germany set itself the target of restricting daily land take to under 30 ha by 2030. Daily land take for 2019–2022 was 52 ha. For 2022, a slight decrease in the land take can be observed compared with the previous year.

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.

According to Germany's Article 17 report ([63]), most grassland habitat types have either an unfavourable–inadequate (U1) or an unfavourable–bad (U2) conservation status, most of them still showing a negative trend even in nature conservation sites. The main pressure are unsustainable farming practices due to excessive fertilisation and premature mowing which prevents flowers from seeding. The Commission launched an infringement case against Germany for the grassland habitat types 6510 and 6520 based on Article 6(2) of the Habitats Directive. The ruling by the CJEU was announced on 14 November 2024.

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 to 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.

According to Germany's Article 17 report, most peatland habitat types have either an unfavourable-inadequate (U1) or an unfavourable-bad (U2) conservation status, most of them still showing a negative trend even in nature conservation sites. The main pressure is unsustainable farming practices due to excessive fertilisation or drainage of farmland.

2025 priority action

- Implement peatland conservation and restoration measures and include such measures and objectives in the national restoration plans.

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 ([64]) 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 EU forest area protected under the Habitats Directive, less than 15 % is

([62]) De Rosa, D., Ballabio, C., Lugato, E. et al., 'Soil organic carbon stocks in European croplands and grasslands: How much have we lost in the past decade?', *Global Change Biology*, Vol. 30, No 1, 2023, e16992, https://doi.org/10.1111/gcb.16992.

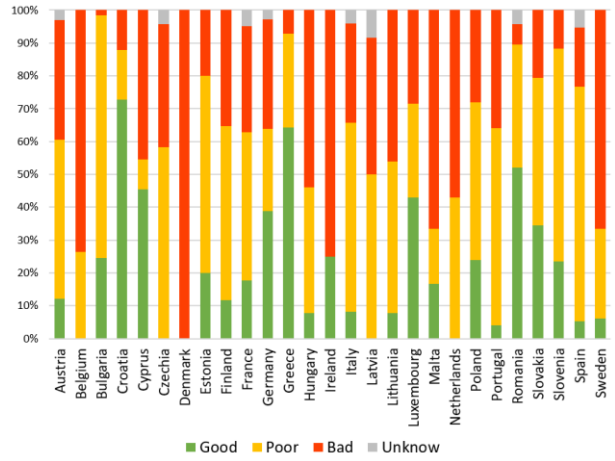
([63]) https://www.bfn.de/ffh-bericht-2019.

([64]) Proposal for a Regulation of the European Parliament and of the Council on a monitoring framework for resilient European forests, COM(2023)728, 22 November 2023, https://ec.europa.eu/transparency/documents-register/detail?ref=COM(2023)728&lang=en

of favourable conservation status ([65]). The share of forested areas in the EU with a bad conservation status increased from 27 % in 2015 to 31 % in 2018.

Forests covered 32.7 % of Germany's territory in 2020 ([66]), but less than 40 % of assessments of EU-protected forest habitats show a good conservation status ([67]). German forests are affected by a combination of factors: exceptional heatwaves, droughts, bark beetle outbreaks and forest fires. Climate change and unsustainable forest management practices (e.g. monocultures) have led to high economic losses for foresters due to emergency woodcutting.

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



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.

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Among forest disturbances contributing to loss of forest integrity and related biodiversity loss, wildfires constitute a particular reason for concern. In 2022, the EU saw a record number (2 700) of wildfires affecting more than 30 ha, which led to the destruction of 785 605 ha of forest, the second highest annual figure recorded. Recent years have also witnessed the occurrence of widespread uncontrollable fires (so-called megafires), which are associated with loss of life and an enormous cost in terms of damage to the environment, businesses and society (over EUR 2 billion annually) and CO_2 emissions. Megafires are practically beyond suppression capacity and can be prevented only by an integrated risk management approach. Wildfires prevention is also essential to preserve resources for the bioeconomy.

The 2023 fire season in Germany was relatively light after the extreme year of 2022; 39 fires were mapped, burning a total of 1 194 ha. Half of this total came from a single fire in June that covered over 600 ha. Most of the year's total (1 137 ha, 95 %) occurred on Natura 2000 sites, amounting to 0.016 % of the protected area in the country. The most affected province (*Land*) in terms of both number of fires and total burnt area was Brandenburg ([68]).

The EU Timber Regulation (EUTR) ([69]) prohibits the placing on the EU market of illegally harvested timber.

On 29 June 2023, the Regulation on Deforestation-free Products (EUDR) ([70]) entered into force. 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.([71])

Marine ecosystems

The Marine Strategy Framework Directive (MSFD) requires Member States to achieve good environmental status (GES) for their marine waters. To that end,

([65]) 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.

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

([67]) 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.

([68]) San-Miguel-Ayanz, J., Durrant, T., Boca, R. et al., *Forest Fires in Europe, Middle East and North Africa 2023*, Publications Office of the European Union, Luxembourg, 2024, https://publications.jrc.ec.europa.eu/repository/handle/JRC139704.

([69]) 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.

([70]) Regulation (EU) 2023/1115 of the European Parliament and of the Council of 31 May 2023 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.

([71]) In December 2024, the Commission proposal giving concerned parties additional time to prepare has been approved by the co-legislators and the law will therefore enter into application on 30 December 2025 for large and medium companies and 30 June 2026 for micro- and small enterprises.

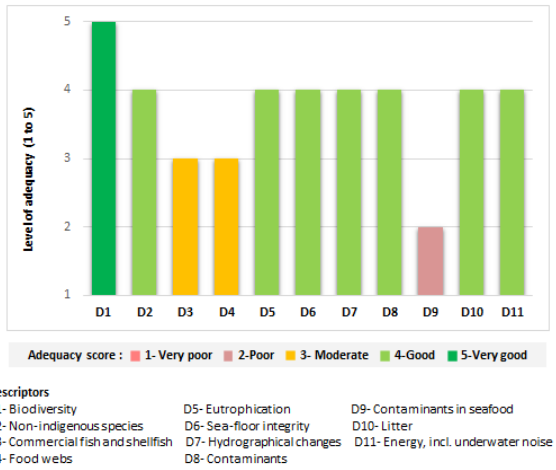
Member States must draw up marine strategies for their marine waters and cooperate with other Member States sharing the same marine region or subregion. These marine strategies comprise different steps to be developed and implemented over six-year cycles.

Since the 2022 EIR report, no additional data regarding Member States' set of GES characteristics for each descriptor in the MSFD have become available. Nevertheless, Member States had to report updates by October 2024. In the context of this next round of reporting, in accordance with the MSFD and the Commission GES decision ([72]), 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 ([73]). Germany, has reported the data related to Articles 8, 9 and 10 of the MSFD as required by Article 17; these data are now under the assessment of the Commission.

The Commission assessed the updated monitoring programme reported by Member States in 2020 ([74]). 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 programme 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 Germany'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 Germany in June 2022.

Germany's updated programme of measures scores a positive level of adequacy for most descriptors ('good' or 'very good'), including biodiversity (D1) (due in part to targeted measures on fishing), non-indigenous species (D2), eutrophication (D5), sea-floor integrity (D6), hydrographical changes (D7), contaminants (D8), litter (D10) and energy (D11).

However, only moderate progress is noted for the commercial fish and shellfish (D3) and food webs (D4) descriptors, while measures addressing contaminants in seafood (D9) fall short of fully addressing relevant pressures.

Prevention and management of invasive alien species

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

([72]) 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), https://eur-lex.europa.eu/eli/dec/2017/848/oj/eng.

([73]) Communication from the Commission of 11 March 2024 – Commission notice on the threshold values set under the Marine Strategy Framework Directive (Directive 2008/56/EC) and Commission Decision (EU) 2017/848 (OJ C, C/2024/2078, 11.3.2024), http://data.europa.eu/eli/C/2024/2078/oj.

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

list'), which is regularly updated ([75]).

The third update of the Union list ([76]) entered into force on 2 August 2022. The fourth update is in preparation.

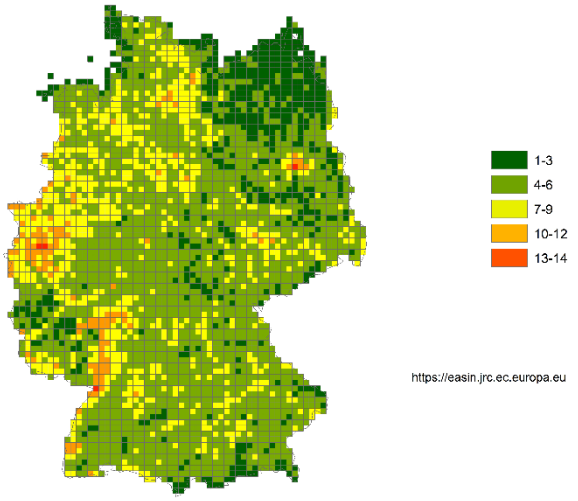
The IAS Regulation ([77]) currently lists 88 species subject to restrictions on keeping, importing, selling, breeding, growing and releasing into the environment. Member States are required to take measures to (i) prevent the introduction of IAS, (ii) ensure early detection and rapid eradication of IAS 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 ([78]). More recent studies have put this cost at USD 28 billion per year in the EU, increasing to USD 148.2 billion by 2040 ([79]), and at USD 423 billion annually at the global level ([80]).

The total number of IAS of Union concern in the country is 48. This includes 38 species recorded in the previous second updated list of invasive alien species of Union concern (2019)[81] and 10 additions[82].

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



2025 priority actions

- Step up implementation of the IAS Regulation, including with regard to enforcement and 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 ([83]) aims to ensure the full integration of biodiversity and its multiple values into policy and planning and, as appropriate, national accounting. This requires effective and coherent

([75]) 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.

([76]) 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.

([77]) 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).

([78]) 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.

([79]) 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.

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

([81]) https://www.bfn.de/sites/default/files/BfN/service/Dokumente/skripten/skript574.pdf

([82]) https://bfn.bsz-bw.de/frontdoor/deliver/index/docId/1133/file/Schrift654.pdf

([83]) Decision 15/4 adopted by the Conference of the Parties to the Convention on Biological Diversity: Kunming–Montreal global biodiversity framework (https://www.cbd.int/doc/decisions/cop-15/cop-15-dec-04-en.pdf).

biodiversity observation and reporting on ecosystem condition in the EU ([84]).

The (EU) No 691/2011 on European environmental economic accounts ([85]) 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.

An increasing number of platforms, networks, communities of practice and projects involve businesses in protecting biodiversity, including the EU Business & Biodiversity Platform ([86]). 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.

There are two networks of businesses for biodiversity active in Germany: Biodiversity in Good Company and the Global Nature Fund, which frequently work together. Both are active members of the EU Business & Biodiversity Platform.

([84]) 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.

([85]) 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.

([86]) 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 ([87]). These set health-based EU air quality standards ([88]) and stipulate Member States' national emission reduction commitments ([89]) for several air pollutants.

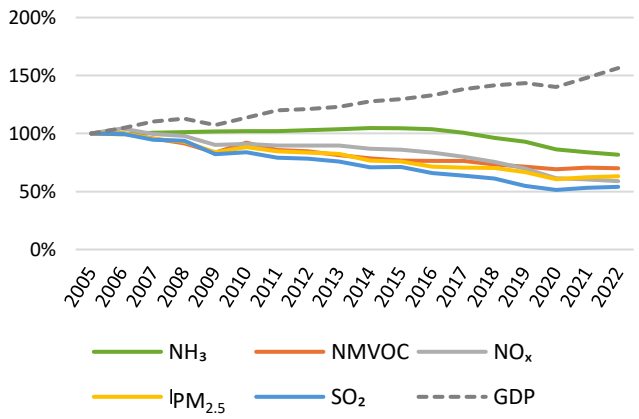
Air quality in Germany has improved substantially over recent years. Only isolated areas within two air quality zones still register exceedances of limit values. Nevertheless, air pollution remains a relevant factor impacting public health, calling for sustained efforts to continue the positive trend.

The latest available annual estimates (for 2022) by the EEA ([90]) for Germany attribute 32 600 deaths each year (or 312 800 years of life lost (YLL)) to fine particulate matter ($PM_{2.5}$) ([91]); 9 400 deaths each year (or 90 500 YLL) to nitrogen dioxide (NO_2) ([92]); and 15 200 deaths each year (or 146 300 YLL) to ozone ([93]).

The emissions of several air pollutants have decreased significantly in Germany 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) ([94]) in 2024, Germany 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), ammonia (NH_3) and $PM_{2.5}$. According to the projections submitted under Article 10(2) of the NECD in 2023, Germany is projected to meet its emission reduction commitments for 2030 onwards for NO_x, NMVOC, SO_2, NH_3 and $PM_{2.5}$.

Germany submitted its updated national air pollution control programme (NAPCP) to the Commission on 21 May 2024.

Figure 16: Emission trends of main pollutants / GDP in Germany (%), 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.

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

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

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

([90]) 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.

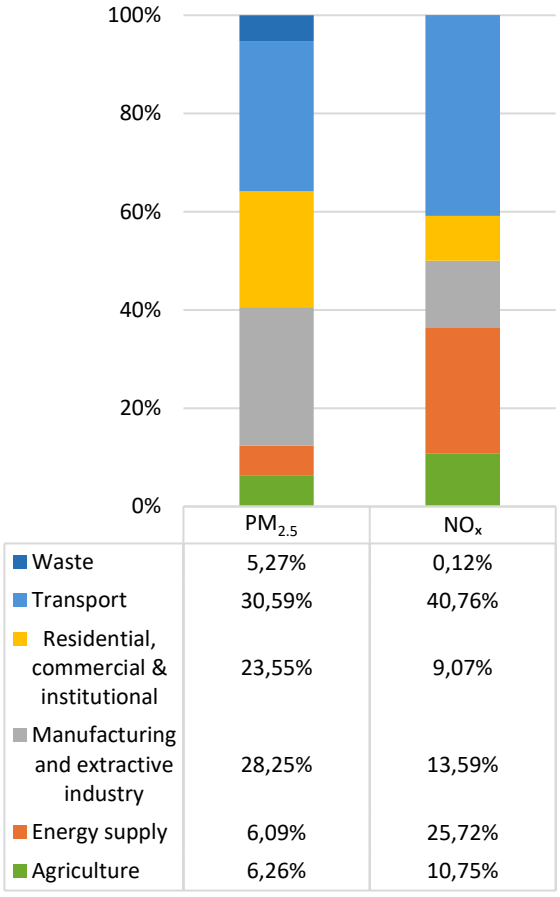
([91]) Particulate matter (PM) is a mixture of aerosol particles (solid and liquid) covering a wide range of sizes and chemical compositions. PM_{10} refers to particles with a diameter of 10 µm or less. $PM_{2.5}$ refers to particles with a diameter of 2.5 µm or less. PM is emitted from many human sources,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

([92]) 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.

([93]) 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.

([94]) 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 Germany (%), 2022



	$PM_{2.5}$	NO_x
Waste	5,27%	0,12%
Transport	30,59%	40,76%
Residential, commercial & institutional	23,55%	9,07%
Manufacturing and extractive industry	28,25%	13,59%
Energy supply	6,09%	25,72%
Agriculture	6,26%	10,75%

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) ([95]) were registered for NO_2 in two air quality zones ([96]) in Germany, down from 26 zones in 2016. Furthermore, the target values for ozone concentrations have not been met for several air quality zones, as well as the target value for arsenic concentration in one air quality zone ([97]).

The main reason for not meeting NO_x limit values is diesel vehicle traffic. Local diesel access bans have been implemented in a number of cities, although some of these are being lifted as limit values are being met. The federal government helped cities with a special investment programme of EUR 1.5 billion for retrofitting buses and taxis. Further investments in rail infrastructure, urban public transport and e-mobility as part of the recovery and resilience plan (RRP) will also help to improve air quality.

In the 2022 EIR, Germany received two priority actions. The first priority action was to further reduce emissions in the context of the NAPCP. Germany has made substantial progress on this, as the latest reported data shows that the 2020–2029 emission reduction commitments have been met and that the emission reduction commitments for 2030 onwards are projected to be reached. The second priority action was to ensure full compliance with EU air quality standards and maintain downward emission trends. Based on the latest data, Germany has made some progress in this regard. Since 2019, downward emission trends have been reported for all main air pollutants. However, exceedances above limit values and target values remain for NO_2, ozone and arsenic, 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, including water;
(iv) contribute to decarbonisation.

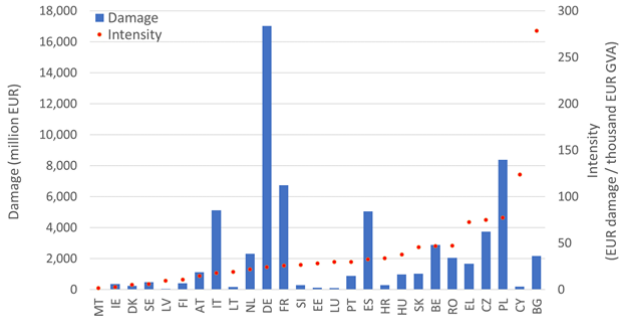
The cornerstone of the policy is the Industrial Emissions Directive (IED), which was revised in 2024 ([98]). The revision improves the directive's contribution to the zero pollution objective. It has a strong focus on innovation, and builds solid links between depollution, decarbonisation and circularity, making it a key regulatory tool to accompany the green transformation of EU industry by 2050.

([95]) 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.
([96]) Munich metropolitan area and Essen.
([97]) EEA, Eionet Central Data Repository ().
([98]) Directive 2010/75/EU of the European Parliament and of the Council of 24 November 2010 on industrial and livestock rearing emissions (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.

The overview of industrial activities regulated by the IED below is based on data reported to the EU Registry in 2022 ([99]). In Germany, there were about 13 300 installations covered by the IED in 2022, with a third of them (33 %) being installations from the waste management sector. The other main sectors are intensive rearing of poultry or pigs (23 %), the chemical sector (14 %) and the metals sector (11 %).

Figure 18 shows the damage to 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 Germany has the highest damage level in the EU, it comes 17th for emissions intensity, below the EU average of EUR 27.5/EUR 1 000 GVA. The main industrial contributors to emissions to air ([100]) are the energy sector and the mineral industry for NO_X, SO_2 and heavy metals emissions.

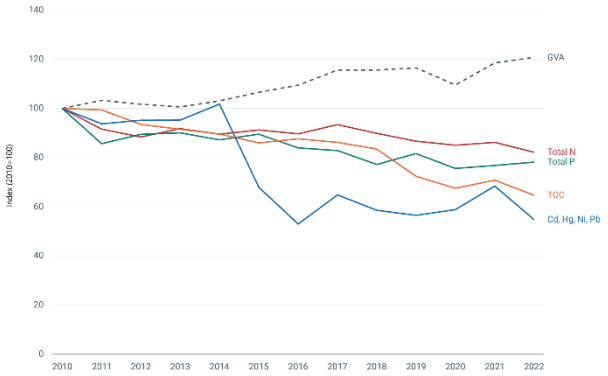
Figure 18: Industrial air pollution damage and intensity per Member State, 2021



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

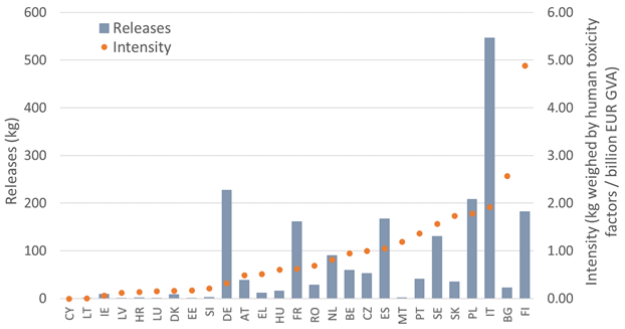


NB: Cd, cadmium; Hg, mercury; Ni, nickel; Pb, lead; total N, total nitrogen; total P, total phosphorous.

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 Germany 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 with industrial activity (expressed in GVA). Germany has the second highest emissions of heavy metals to water and is in 18th position for emissions intensity (below the EU average intensity of 0.864 kg/EUR 1 billion GVA). As shown in Figure 21, the main industrial contributors to emissions to water in Germany are the chemicals sector and the energy sector for heavy metals and total nitrogen, and the pulp and paper industry for total organic carbon.

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

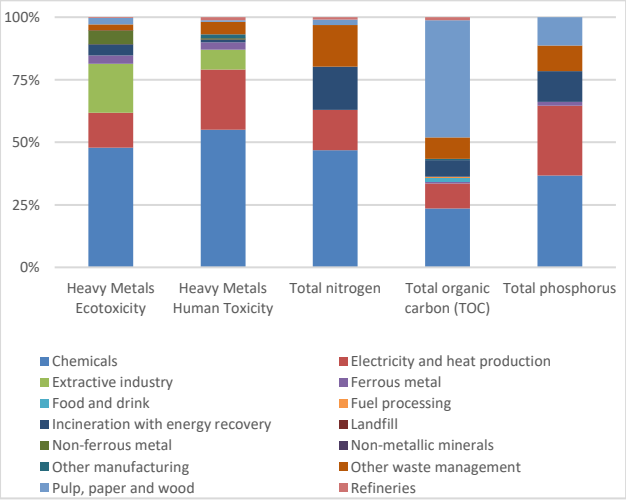


Source: EEA, 'Industrial pollution intensity indicators – EU large industry water pollution intensity', European Industrial Emissions Portal, 2024, https://industry.eea.europa.eu/analyse/industrial-emissions-indicator.

([99]) EEA, European Industrial Emissions Portal, https://industry.eea.europa.eu/, 2022 being the baseline year for all reports.

([100]) 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 Germany (%), 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://doi.org/10.2909/cf5e54c1-be99-4426-bcad-baa26c4f27a0.

Germany has been subject to an infringement procedure for not conforming with the transposition of the IED since 2020. This procedure is still ongoing.

In 2022 Germany received priority actions to continue addressing pollution from large combustion plants (especially lignite-firing plants) and to improve its reporting to the European Pollutant Release and Transfer Register. The energy sector still remains among the main sources of industrial emissions. As regards reporting, the action has been fulfilled, and Germany submits data on time.

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 one to three 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 also introduces 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) the textiles industry, (iii) common waste gas management and treatment systems in the chemical sector and (iv) 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 in environmental permits. This should result in considerable and continuous reductions in pollution.

2025 priority actions

- Complete the correct transposition of the IED 1.0.
- 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 ([101])).

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 ([102]) and the report by

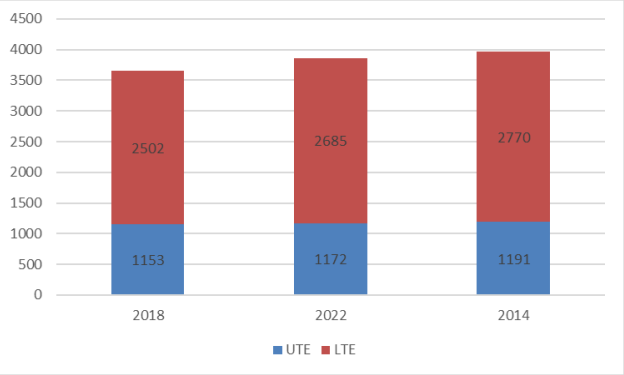
([101]) Directive 2012/18/EU of the European Parliament and of the Council of 4 July 2012 on the control of major-accident hazards involving dangerous substances, amending and subsequently repealing Council Directive 96/82/EC (OJ L 197, 24.7.2012, p. 1), https://eur-lex.europa.eu/eli/dir/2012/18/oj.

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

Germany on the implementation of the Seveso III Directive for 2019–2022 ([103]).

In Germany, in 2024, among the 3 961 Seveso establishments, 2 770 were categorised as lower-tier establishments and 1 191 as upper-tier establishments (UTEs), based on the quantity of hazardous substances likely to be present. UTEs are subject to more stringent requirements. Figure 22 shows the trend in the number of Seveso establishments.

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



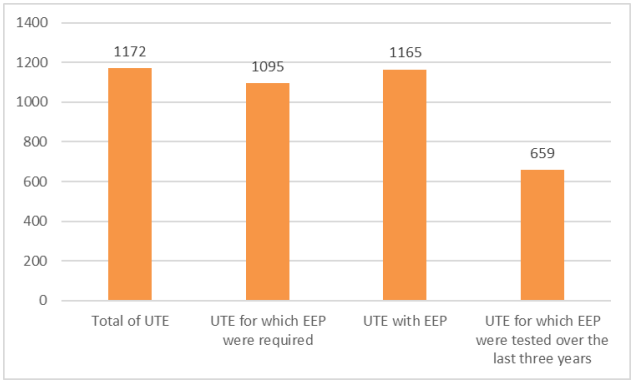
NB: LTE, lower-tier establishment.

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). 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 Germany, in 2022, an EEP was required for 1 095 UTEs; 1 165 such establishments had an EEP, which is more than required. However, only 659 EEPs had been tested over the last three years. The summary is shown in Figure 23.

Figure 23: Situation regarding EEPs in Germany, 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.

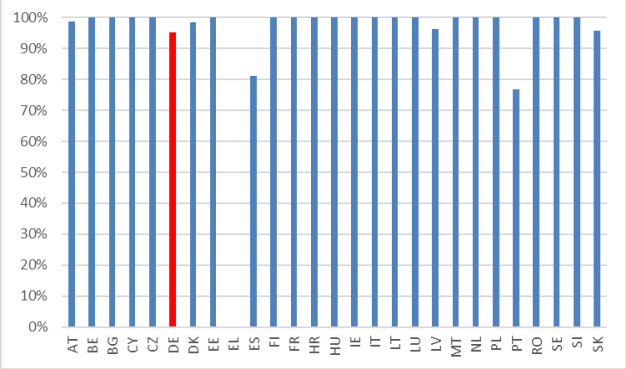
Information for the public referred to in Annex V to the Seveso III Directive – especially about how the public concerned will be warned in case of a major accident, the appropriate behaviour in the event of a major accident, and the date of the last site visit – is permanently available for 95 % of the Seveso establishments in Germany.

Figure 24 presents the share of UTEs for which information on safety measures and requisite behaviours was actively made available to the public in 2022 in the EU-27. This is an important provision of the Seveso III Directive as the public's awareness of this information may reduce the consequences of a major industrial accident.

Germany is subject to an infringement procedure related to the transposition of the Seveso III Directive. Germany has not correctly transposed the directive in relation to notification requirements, major accident prevention policy, information for the public, public consultations and participation rights in decision-making, and time limits regarding safety reports and emergency plans.

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

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



N.B. 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. No data available for Greece.

In 2022, Germany received a priority action to strengthen control and enforcement to ensure compliance with the Seveso III Directive provisions, especially those on information for the public and EEPs. Data reported on implementation of the directive for 2019–2022 show improvement in the number of EEPs established for UTEs in Germany. However, testing of those EEPs over the last three years is insufficient.

2025 priority actions

- Ensure full and correct transposition of the Seveso III Directive.
- 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.
- Ensure access to transparent and clear information for citizens on risks and behaviour in the event of an accident.

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).

Measures should have been put in place in Germany to ensure a socially and economically sound phase-out of dental amalgam, including an adequate reimbursement of the alternatives to dental amalgam through the health insurance scheme and the training of dental practitioners. The Commission is monitoring whether the phase-out has taken place under the terms and conditions of the regulation. Germany will also need to ensure that the manufacture and export of mercury-containing lamps are prohibited by the deadlines set out in the Mercury Regulation.

Noise

The Environmental Noise Directive ([104]) 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

([104]) 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.

the EU. It can cause ischaemic heart disease, stroke, interrupted sleep, cognitive impairment and stress ([105]).

In Germany, environmental noise is estimated to cause at least around 6 000 cases of ischaemic heart disease annually ([106]) and some 980 000 people to suffer from disturbed sleep ([107]).

Based on the latest set of information analysed, Germany 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.

There is an ongoing infringement procedure for Germany related to a lack of reporting on the strategic noise maps and the adoption of noise action plans.

Germany received a priority action in the 2022 EIR to complete and/or implement action plans on noise management. Given that reporting under the most recent cycle for noise action plans was due in early 2025, these plans have not yet been assessed. Therefore, this priority action is repeated for the 2025 EIR.

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.

Water Framework Directive

The Water Framework Directive ([108]) is the cornerstone of EU water policy in the 21st century ([109]). The Water Framework Directive and other water-related directives ([110]) 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 surface water ecological and chemical status and good groundwater quantitative and chemical status. 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 in their countries, 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

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

([106]) 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), *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.

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

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

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

([110]) 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).

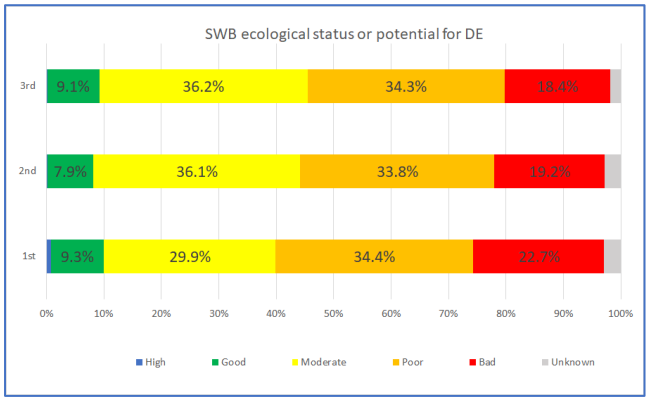
reported its findings to the European Parliament and to the Council on 4th February 2025([111]).

Germany's 10 river basin districts count 9 744 surface waterbodies and 1 291 groundwater bodies. 35 % of the surface waterbodies are heavily modified and 17 % are artificial.

Figures 25–28 show the change in ecological status/potential and chemical status of surface waters, and the quantitative and chemical status of groundwater in 2010, 2015 and 2021. 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 the ecological status/potential of surface waterbodies has only slightly improved, whereas 100 %, that is, all surface waterbodies, do not have good chemical status, the same as in the second RBMPs (covering 2015–2021).

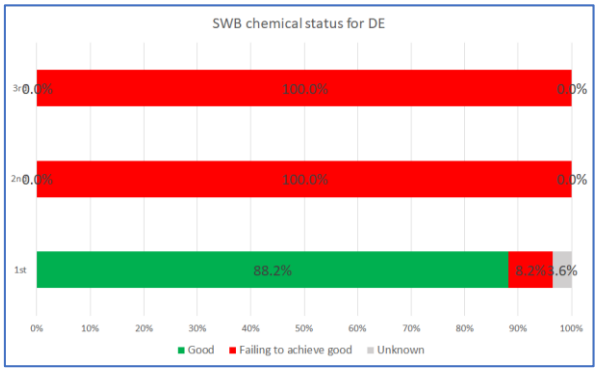
Figure 25: Ecological status/potential of surface waterbodies in each RBMP cycle (%)



Only 9.1 % of surface waterbodies have good or better ecological status/potential.

In general, diffuse nutrient pollution from agriculture and physical alterations to surface waterbodies for agriculture and flood protection purposes are identified as significant pressures in all river basin districts. The largest gap in status is due to agricultural pollution for all surface waters including coastal waters. Although water abstraction is not identified as a significant pressure in all river basin districts, several studies point to emerging water scarcity issues, for example in eastern Germany.

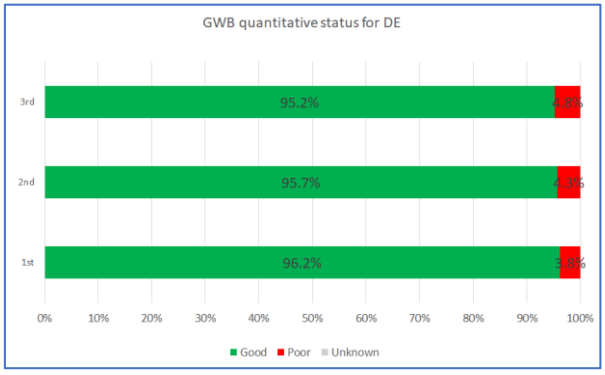
Figure 26: Chemical status of surface waterbodies in each RBMP cycle (%)



Failure to achieve good chemical status is mainly due the ubiquitous persistent, bioaccumulative and toxic substances (uPBTs), mercury and polybrominated diphenyl ethers. These substances are mainly emitted during combustion of fossil fuels and industrial use, and enter surface waters through atmospheric deposition, which is the main pressure on surface waterbodies in Germany. If one excludes uPBTs, chemical status improves, ranging from 59 % of surface waterbodies in good chemical status in the Rhine river basin district to 95 % in good status in the Ems river basin district. Other substances of concern depend on the region. Among them are pesticides, perfluorooctanesulfonic acid from industrial emissions, and fluoranthene from fossil combustion. In the North Rhine-Westphalia Rhine catchment, for example, perfluorooctanesulfonic acid from industrial use puts pressure on surface waterbodies.

Since the second RBMPs, the number of groundwater bodies has increased by 10 % due to aggregation and splitting. This affects the observed trend in quantitative status, which shows a slight decrease in groundwater bodies with good status (95.2 %) compared with the second RBMPs.

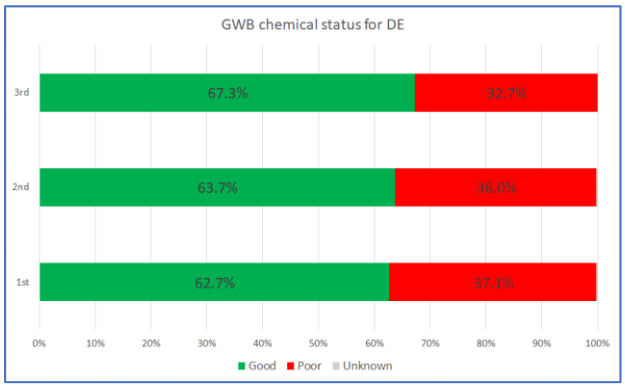
Figure 27: Quantitative status of groundwater bodies in each RBMP cycle (%)



([111]) ENV - Bibliothèque

Failure to achieve good status is mostly due to over-abstraction, followed by damages to dependent terrestrial ecosystems and associated surface waters. Recent studies show that Germany is experiencing climate-change-induced water loss from soils and vegetation and record-low levels of groundwater bodies throughout different regions.

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



The chemical status of groundwater bodies has improved slightly, with 67.3 % having good chemical status. For groundwater, 'diffuse – agricultural' is the pressure reported to affect the highest percentage of groundwater bodies.

Until the end of 2027, Member States can still apply 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 exemptions will be much more limited.

The 2022 EIR identified the following priority actions.

- Take steps to improve quality and frequency of monitoring.
- Continue efforts to counteract nutrient pollution from agriculture.

Germany has made limited progress, insofar as most of the measures included in the third RBMPs relate to hydromorphological alterations, with about 56 % of surface waterbodies projected to benefit from such measures until 2027. In addition, in 83 % of all surface waters, measures are planned to reduce pollution from flow regulation and morphological changes.

It is positive that climate change effects have been acknowledged in the first ever national water strategy and that Germany has adopted a uniform approach to financing measures, which will contribute to the successful implementation of measures.

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;
- 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

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 and the preliminary flood risk assessments drawn up during the second cycle (2016–2021).

The Commission assessed the FRMPs, and in 2024 reported on both the third RBMPs and second FRMPs (first FRMP reporting was in March 2016) to the European Parliament and to the Council.

The main progress resulting from the assessment of the five German FRMPs from the second cycle is an improved national flood web portal and a mobile application providing up-to-date information on water and flood levels, as well as a more uniform approach and closer coordination among the federal states on flood risk management. A system to assess progress is now in place. The second FRMPs clearly describe criteria for prioritisation of measures, based on cost–benefit assessment. As regards climate change effects, all five FRMPs now refer to coordination with Germany's national adaptation strategy.

2025 priority actions

- Consider future climate scenarios in the FRMPs.
- Better explain how flood hazard and risk maps were used in the FRMPs.

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 ([112]), (ii) a methodology for measuring microplastics in drinking water ([113]) and (iii) an EU system for testing and approving materials that will be allowed to be in contact with drinking water ([114]). Member States will have to take 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 Germany does not give rise to concern ([115]).

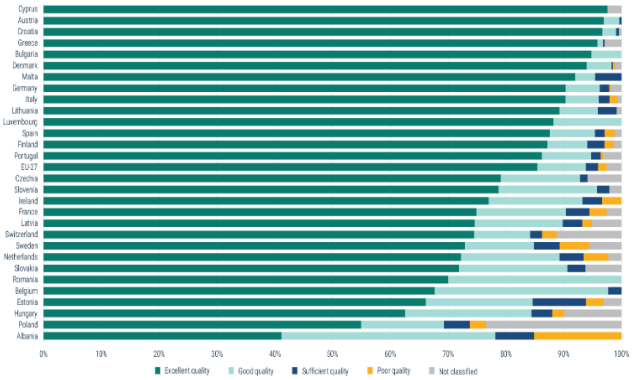
From January 2026, the European quality standards for per- and polyfluoroalkyl substances in drinking water will apply, ensuring harmonised Member States' reporting of per- and polyfluoroalkyl substances monitoring data in the future.

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 disseminate to the public information on bathing water quality actively and promptly. In particular, notices banning or advising against bathing should be rapidly and easily identifiable.

Figure 29 shows that in 2023, out of the 2 291 bathing waters in Germany, 2 069 (90.3 %) were of excellent quality, 136 (5.9 %%) were of good quality and 37 (1.6 %) were of sufficient quality, while 7 (0.3 %) were of poor quality ([116]). Detailed information is available on the German dedicated website ([117]) and through an interactive map viewer from the EEA ([118]).

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



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 ([119]) 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 ([120]), 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 Germany's RBMPs has identified nutrients from agriculture as an important pressure on

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

([113]) 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.

([114]) 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).

([115]) In summary, the compliance for all parameter groups in Germany was at least 99.64 % in 2017, 99.51 % in 2018 and 99.61 % in 2019.

([116]) Forty-two bathing waters (1.8 %) were not classified.

([117]) https://www.umweltbundesamt.de/wasserqualitaet-in-badegewaessern.

([118]) EEA, 'State of bathing waters in 2023', EEA website, last updated 28 May 2024 (8 June 2023), https://www.eea.europa.eu/en/analysis/maps-and-charts/state-of-bathing-waters-in-2023.

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

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

groundwater / surface waters that is affecting these waters' good status and as one of the main factors in not meeting the Water Framework Directive objectives.

In 2022, Germany received a priority action on tackling nutrient pollution, especially from agriculture, through the implementation of the Nitrates Directive. Since the report on the implementation of the Nitrates Directive covering 2020–2023 will be available in 2025, the 2022 EIR priority action cannot be assessed and is repeated.

2025 priority action

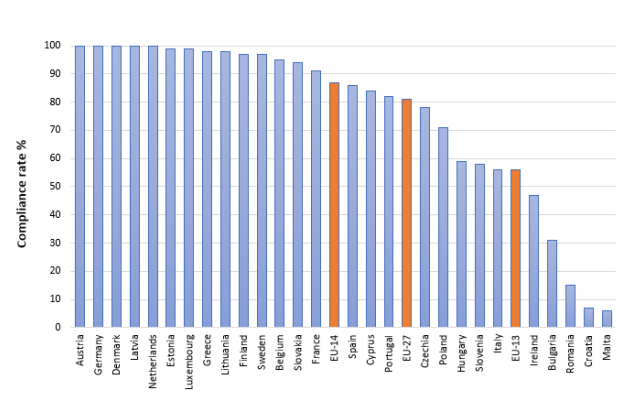
- Tackle nutrient pollution, especially nitrates from agriculture, through the implementation of the Nitrates Directive.

Urban Wastewater Treatment Directive

The Urban Wastewater Treatment Directive (UWWTD) aims to protect human health and the environment from the effects of untreated urban waste water. 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 water 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).

Overall, in Germany, the compliance rate was 99.9 % in 2020. Only five agglomerations, generating 56 593 population equivalent of urban waste water, are not compliant with the requirements of the directive.

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



Source: European Commission, *12th UWWTD Implementation Report*, 2024, 12th technical assessment of UWWTD implementation - Publications Office of the EU.

The directive has been revised. The revised directive builds on the current *acquis*, strengthens existing treatment standards and establishes an additional treatment of micropollutants in urban waste water. Other new requirements relate to moving towards the energy neutrality of the sector, establishing an EPR system to ensure sustainable financing of micropollutant treatment by the most polluting industries and ensuring access to sanitation, especially for vulnerable and marginalised groups. Germany has until 31 July 2027 to transpose the new directive into its national legal system.

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 ([121]), 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 ([122]) provides a baseline protection for human health and the environment. It also

([121]) 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.

([122]) 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-

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 ([123]) on the implementation and enforcement of these regulations ([124]). 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 ([125]) of the two main EU 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 ([126]).

In 2023, new hazard classes were added to the CLP Regulation, and the revision of the regulation was tabled (published on 20 November 2024) ([127]). 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 ([128]). 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 both the REACH and CLP Regulations in Germany lies with the *Länder* authorities ([129]). Each of the 16 *Länder* has its own hierarchy of authorities and the respective responsibilities vary between the federal states.

Germany has drawn up and fully implemented enforcement strategies for both the REACH and CLP Regulations ([130]). 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 absence of new country-specific data on enforcement since 2022.

In Germany, resources were considered proportionate to REACH and CLP enforcement ([131]) in the previous reporting period.

In 2020, Germany participated in an EU-coordinated enforcement project on products sold online, called the

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.

([123]) 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.

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

([125]) 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, https://op.europa.eu/en/publication-detail/-/publication/e5c3e461-0f85-11ec-9151-01aa75ed71a1/.

([126]) 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.

([127]) 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 (Text with EEA relevance), OJ L, 2024/2865, 20.11.2024, p.1 (Regulation - EU - 2024/2865 - EN - EUR-Lex)

([128]) 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.

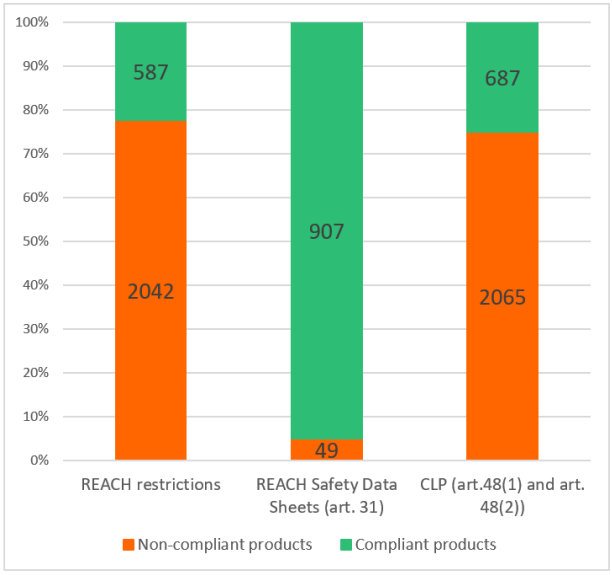
([129]) European Commission, *Technical assistance to review the existing Member States reporting questionnaire under Articles 117(1) of REACH and 46(2) of CLP – Final report*, Publications Office of the European Union, Luxembourg, 2020, p. 68, https://circabc.europa.eu/ui/group/8ee3c69a-bccb-4f22-89ca-277e35de7c63/library/a4abce8c-8425-455f-b7e6-0ead917bde6b/details.

([130]) 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.

([131]) 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. 74, https://circabc.europa.eu/ui/group/8ee3c69a-bccb-4f22-89ca-277e35de7c63/library/a4abce8c-8425-455f-b7e6-0ead917bde6b/details.

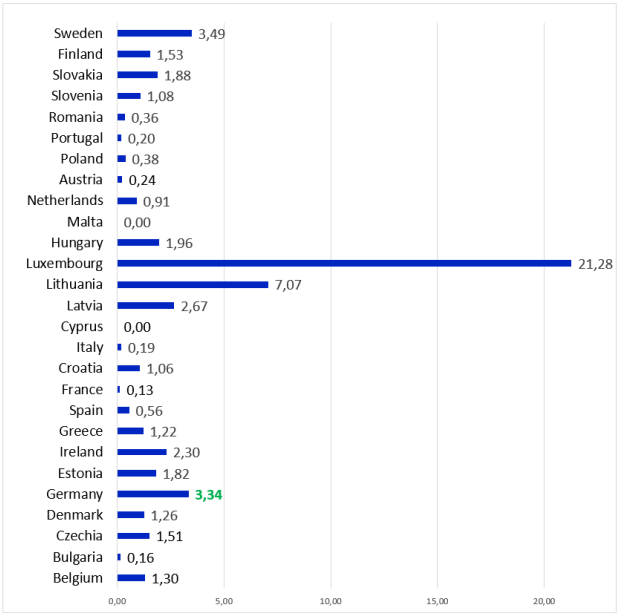
REACH-EN-FORCE (REF)-8 project ([132]). The project report was not released until November 2021, so it could not be taken into account in the previous EIR.

Figure 31: Compliance 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-compliance. Therefore, the non-compliance rates presented above cannot be considered the average non-compliance rates of products in the EU. However, the 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)



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

Based on this project and others conducted with the help of the European Chemicals Agency in the past few years, online sales have been proven to correspond consistently to higher non-compliance rates in checks performed across the EU, in particular when related to imported products.

In 2022, Germany received a priority action related to upgrading administrative capacities in implementation and enforcement to move towards a policy of zero tolerance of non-compliance. In the absence of reporting since 2022, no progress has been shown 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 legislation.

([132]) 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.

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 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 % ([133]). 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 Germany decreased by 41%, making it one of the countries with an above-average decrease.

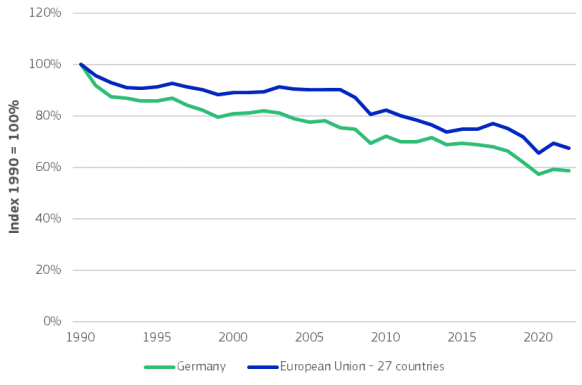
The 'Fit for 55' legislative package reflects the need to speed up the green transition. It includes (i) strengthening and expanding the EU emissions trading system (ETS), with the creation of a new, second, ETS for transport and buildings together with a dedicated Social Climate Fund to help citizens during the transition; (ii) increasing targets under the effort sharing regulation; and (iii) a revised regulation for Land Use, Land Use Change and Forestry ([134]). The package has been fully adopted, and the Member States have been implementing the legislation.

The key strategic document at country level is the National Energy and Climate Plan (NECP) ([135]). Germany submitted its final plan in August 2024 after the deadline set by the regulation on the Governance of the Energy Union and Climate Action([136]). The European Commission assessed the final plan and the extent to which Germany has followed the recommendations for the draft version. The findings from the assessment are:

- Emissions under the Effort Sharing Regulation will decrease by 41% in 2030 compared to 2005 which is way below the of 50%.
- The latest projections show a gap to the Land Use, Land-use change and Forestry (LULUCF) target, meaning that current levels of removals have been insufficient.
- Germany is in line with its target for the share of renewable energy and targets for energy efficiency.

To minimise the impacts of climate policies on vulnerable people and sectors, Germany 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



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

([134]) 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.

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

([136]) 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 ([137]) and, from 2024, maritime transport also.

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 eq (carbon dioxide 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.

The emissions under the ETS decreased by 42% from 2005 to 2023.

In 2023, 63 % of the greenhouse gases emitted by Germany's ETS installations came from power generation, significantly more than the EU average (57 %). Of the total emissions from all industry sectors, about 31 % came from the metals industry, 22 % from cement and lime production, 18 % from refineries, and 22 % from the chemical industry. Another 17 % came from other industries. Since 2019, the power sector has registered a higher reduction (24 %) than the industry sectors (14 %). Since 2013, greenhouse gas emissions have declined by 48 % in power generation and by 16 % in the industry sectors. Nearly all of this decline in the industry sectors has occurred since 2019.

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 ([138]). Member States should have notified full transposition the provisions of the revised EU ETS directive related to the new ETS2 into national law by 30 June 2024.

Germany did not communicate full transposition into national law by this deadline. The Commission therefore opened an infringement procedure against Germany on 25 July 2024, for failing to fully transpose the provisions into national law.

Germany 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 an infringement procedure against Germany on 25 January 2024, for failing to fully transpose previous revisions of the ETS directives ([139]) into national law. Germany has since notified full transpositions of the abovementioned directives to the Commission.

Effort sharing

The Effort Sharing Regulation (ESR) ([140]) 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. Germany'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 Germany will need to implement new measures and/or use available flexibilities to achieve its 2030 ESR target.

Projected gap is 9.2 percentage points to the 2030 target.

The largest contributor is the domestic transport sector, which accounted for 37 % of all effort sharing emissions in 2022. Transport emissions have decreased by just 5 % since 2005.

Continued effort is crucial to achieve the shift to zero-emission transport in Germany. Cars are used for over 89 % of the distances travelled (above the EU average of 85 %). In 2022, battery electric vehicles made up 2 % of Germany's car passenger fleet, a significantly higher share than the EU average (1.2 %), but the continued increase in this share is challenged by the cuts to financial incentives. In 2023, Germany had about 125 000 publicly accessible charging points, one for every 15 e-vehicles (against the EU average of 1:10). Freight transport by road is slightly below the EU average (72 %, EU: 75 %), with a higher share of inland waterways and rail. 53 % of the railway network is electrified (EU average: 56 %).

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

([138]) Directive (EU) 2023/959.

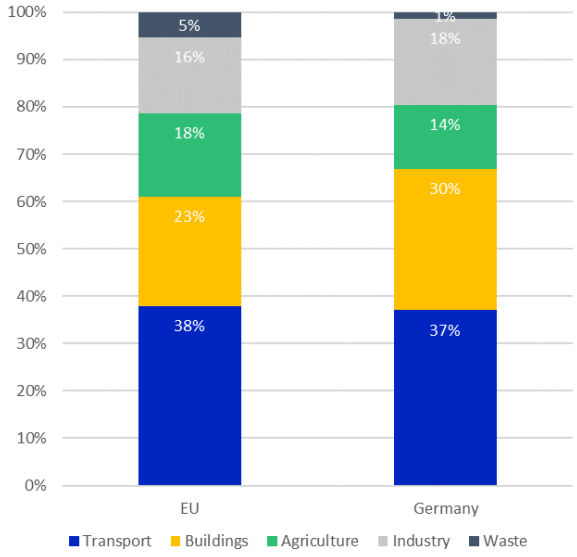
([139]) Directive - 2023/959 - EN - EUR-Lex and Directive - 2023/958 - EN - EUR-Lex

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

Improving the quality and service of rail operations would help stimulate demand for public transport and ease road congestion.

Buildings accounted for 30 % of effort sharing emissions and have decreased by 28 % since 2005. Nevertheless, Germany needs to step up its efforts in the residential sector to achieve a meaningful contribution to its 2030 reduction target for energy consumption in buildings. Residential final energy consumption increased by 4.12 % between 2018 and 2022, while the national long term renovation strategy aims to reduce primary energy consumption in buildings by 39 % between 2018 and 2030. The share of renewables in heating and cooling (17.5 %) is relatively low compared to the EU average (25 %).

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.

That is not the case for Germany anymore. Germany's LULUCF sector has had increasing emissions since 2020, a worrying trend. The rewetting of peatlands gives a prospect of reversing the trend of falling net carbon removals.

Germany's target for 2030 is to enhance land removals by additional – 3.8 Mt of CO_2 equivalent compared to the yearly average of the period 2016–2018. The latest available projections show a gap to target of 6.6 Mt of CO_2 equivalent in 2030. Therefore, Germany needs to apply additional measures to reach its 2030 target.

Adaptation to climate change

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

Germany has one out of three regions identified as a hotspots of climate risks most affected by climate change – low-lying coastal regions. ([141])

Germany's climate change risks include a particularly high risk of flooding (including coastal floods), of heat waves and droughts, all with potentially high economic impacts. Germany has made significant progress on climate adaptation, particularly on assessing and monitoring risks and impacts. Germany has a share of 55% insurance coverage of private properties against natural disaster risks.

Germany adopted its national adaptation strategy in 2008 and adaptation plan in 2011. It revised both documents recently in 2024. The new strategy requires the federal state and municipal governments to implement climate adaptation strategies.

European Commission identified five priority actions under the heading Climate Action in the 2022 edition ([142]) of the review.

There is some progress in accelerating grid expansion. National legislation was amended in 2023 to enable the accelerated expansion of the electricity networks. Nevertheless, Germany requires further grid expansion and reinforcements, both at transmission and distribution level to enable the integration of additional renewable energy capacity and to reduce the curtailment of renewable energy.

Germany managed to strongly increase both the amount of wind capacity installed in 2023 and (even more) the number of projects receiving permits. Germany wants to achieve 30 GW in total offshore wind. Total capacity of offshore wind was 8 GW in 2022.

Germany ranks fifth in the world in the patenting of high-value inventions in solar PV. In connection to this, the EU having the highest share of the global market for clean energy technologies is notably driven by Germany.

There is some progress in sustainable transport infrastructure, but the number of publicly accessible

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

([142]) EUR-Lex - 52022SC0265 - EN - EUR-Lex

charging points and the share of electrified railways remain under the EU average.

The German PV sector still occupies a strong position in some segments of the value chain. Germany hosts the only solar-grade polysilicon supplier in Europe. Germany is currently the country with the highest installed manufacturing electrolysis capacity, in polymer electrolyte membrane and alkaline in Europe.

2025 ority actions

- Implement all polices and measures that are needed to achieve targets laid down in the Effort Sharing Regulation (ESR) and the Land use, 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)([143]).

([143]) National energy and climate plans

Part II: Enabling framework – implementation tools

5. Financing

The EU budget supports climate investment in Germany with significant amounts in 2021–2027, with revenues from the ETS also feeding into the national budget. During 2020–2022, Germany's revenues from auctioning reached EUR 14.8 billion in total, with 100 % of it 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 80.2 billion per year in Germany.

These four environmental areas currently receive total funding of around EUR 60.2 billion per year; thus, there is a gap of EUR 20 billion per year.

Most of the environmental investment gap is linked to tackling pollution (EUR 9.4 billion per year), followed by circular economy (EUR 6.2 billion per year) and the water objective (EUR 3.7 billion per year).

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 the CAP EUR 145.9 billion ([144]).

In Germany, the EU cohesion policy (considering the EU contribution amount) provides EUR 6.1 billion for climate action in 2021–2027 (with 54 % of this via the ERDF), with a further EUR 130 million from European Maritime, Fisheries and Aquaculture Fund ([145]).

The RRF contributes to climate finance in Germany with EUR 13.2 billion up to 2026, representing 47 % of its national RRP ([146]).

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 14.1 billion was assigned to Germany in the reference period ([147]).

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 2.7 billion in 2020, EUR 5.3 billion in 2021 and EUR 6.8 billion in 2022 in Germany, totalling EUR 14.8 billion in the three-year period, with 100 % of these revenues spent on climate action projects. All revenues go to a fund for climate and energy projects, which is additionally co-funded from the general budget ([148]).

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 ([149]).

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 ([150]).

Environmental financing and investments

This section describes Germany's investment needs, current financing and gaps as they relate to the four

([144]) 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.

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

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

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

([148]) 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.

([149]) 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.

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

environmental objectives beyond climate objectives, namely tackling pollution, the circular economy and waste, water protection and management, and biodiversity and ecosystems ([151]).

The environment overall

Investment needs

The overall environmental investment needs to be sufficient to enable Germany 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 80.2 billion per year (in 2022 prices).

Almost half of this, EUR 42 billion, constitutes a circular economy investment potential for Germany that can be utilised in the key systems related to the circular economy (e.g. mobility, food and the built environment). Investment needs for the water objective are estimated to be EUR 19.4 billion per year, followed by pollution prevention and control (EUR 13.4 billion per year) and biodiversity and ecosystems (EUR 5.7 billion per year).

Current investment

To implement the environmental investments needed, the available financing is estimated to currently reach an annual EUR 60.2 billion in Germany from EU and national sources combined (in 2022 prices).

Total environmental funding from the multiannual financial framework (MFF) is estimated to reach around EUR 14.8 billion for Germany in total, during 2021–2027 (or EUR 2.1 billion per year).

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

Instrument	Allocations
Cohesion policy	**2 887.1** ([a])
ERDF	2 415.5
Cohesion Fund	0.0
Just Transition Fund	471.6
CAP	**9 184.4** ([b])
European Agricultural Guarantee Fund	5 751.2
European Agricultural Fund for Rural Development	3 433.3
European Maritime Fisheries and Aquaculture Fund	**105**
Other MFF sources	2 642.4 ([c])
RRF ([d]) (2021–2026)	**4 899.5**

([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 Germany 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, financial instrument for the environment 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. Data source: European Commission.

Germany, 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 financial instrument for the environment (LIFE) programme ([152]) (EUR 5.4 billion), Horizon Europe (EUR 95.5 billion) ([153]), the Connecting Europe Facility (EUR 33.7 billion) ([154]) and funds that can be mobilised through the InvestEU programme ([155]).

Germany's RRP provides EUR 13.17 billion for climate action (47 % of the total), with an additional EUR 0.02 billion (0.1 % of the total) contribution to the environmental objectives.

([151]) Research, development and innovation is accounted for under each environmental objective. The financing needs, baselines and gaps 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.

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

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

([154]) The Connecting Europe Facility (Transport) 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.

([155]) 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.

The EIB provided around EUR 5 billion in environment-related financial contributions to Germany from 2021 to mid 2024, most of which (EUR 3.7 billion) was linked to sustainable energy, transport and industrial projects, which provides significant co-benefits to reducing air pollution, environmental noise and other pollution. Around another EUR 1 billion concerned water projects.

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 Germany, the total national environmental protection expenditure was EUR 79.9 billion in 2020 and EUR 83.1 billion in 2021, representing 2.3 % 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 Germany, the national environmental protection investment reached EUR 14.5 billion in 2020 and EUR 14.4 billion in 2021, representing around 0.4 % of GDP.

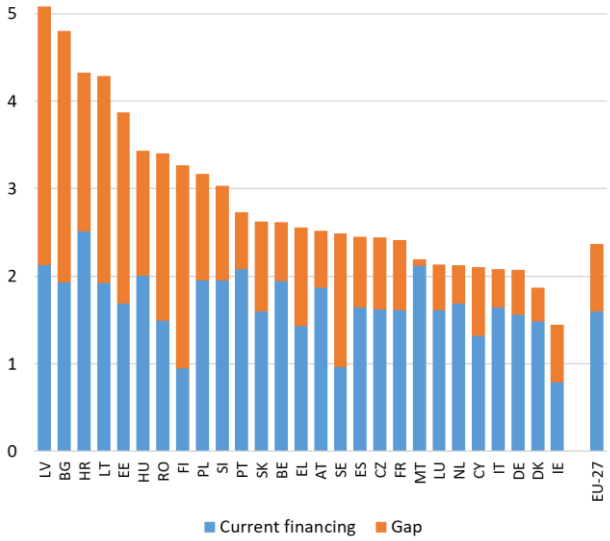
Splitting by institutional sector, 16.6 % of Germany's national environmental protection investment (capital expenditure) comes from the general government budget, with 63.4 % coming from specialist private-sector producers (of environmental protection services, such as waste and water companies) and 20 % from the general 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 ([156]).

Germany's total financing for environmental investment reaches an estimated EUR 60.2 billion per year (in 2022 prices), including EU funding and national public and national private expenditure. Of the total, the share of EU funds (including EIB funds) reaches 5.5 %, with around 94 % national financing. The total public financing (EU plus national public) represents 21 % of the total.

The gap

To meet its four environmental objectives beyond climate change, the additional investment need over the current levels (i.e. the gap) reaches an estimated EUR 20 billion per year in Germany, representing around 0.52 % of the national GDP, being lower than the EU average (0.77 %).

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



Source: Analyis of Directorate-General for Environment.

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

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

Environmental objective	Investment gap per year		
	Million EUR (2022 prices)	% of total	% of GDP
Pollution prevention and control	9 444	47.2	0.24
Circular economy and waste	6 177	30.9	0.16
Water management and water industries	3 746	18.7	0.10
Biodiversity and ecosystems	638	3.2	0.02
Total	**20 004**	**100.0**	**0.52**

Source: Directorate-General for Environment analysis.

Pollution prevention and control

Investment needs

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

In pollution prevention and control, Germany's investment needs are estimated to reach EUR 13.4 billion per year (including baseline investments) in 2021–2027. Most of this, EUR 10.2.7 billion, relates to air pollution control, to comply with the clean air requirements for the five main air pollutants under the NECD by 2030. The estimated needs to reduce environmental noise reach EUR 5.9 million per year, most of which is delivered by the (same) sustainable energy and transport investments that also benefit clean air ([157]). Industrial site remediation requires an estimated EUR 700 million per year. Protection from radiation (nuclear site decommissioning, nuclear waste) costs around EUR 1.5 billion per year. Microplastics pollution and the chemicals strategy require around EUR 400–500 million per year (each) ([158]).

Current investments

The current investment levels supporting pollution prevention and control reach an estimated EUR 4 billion per year in Germany in 2021–2027. Most of the financing concerns clean air (EUR 3 billion per year). Protection from environmental noise receives around EUR 871 million (each) per year, with a further EUR 245 million a year for the chemicals strategy, EUR 212 million for radiation protection and EUR 212 million for industrial site remediation ([159]).

In Germany, the EU MFF provides an estimated 11.2 % of the clean air financing (mostly via cohesion policy), with a further 16.8 % from the RRF, adding up to 28 % of the total. EIB financing contributes 12.6 % and national sources reach 59.4 %.

The gap

To meet its environmental objectives concerning pollution prevention and control (towards zero pollution), Germany needs to provide an additional EUR 9.4 billion per year (0.24 % of GDP), mostly related to clean air. 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 ([160]), Germany complied with ammonia reduction requirements in 2020 and 2021, and 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 take into account climate, energy and CAP plans and financing baselines.

Circular economy and waste

Investment needs

Germany's investment needs in circular economy and waste reach EUR 41.7 billion per year (including baseline investments). Most of this, around EUR 38.2 billion per year, relates to circular economy measures in the mobility, food and built environment systems, with a further EUR 3.6 billion 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 ([161]).

Current investments

Circular economy investments across the economy reach around EUR 32.4 billion per year in Germany in 2021-2027, with a further EUR 3.2 billion provided for waste management that does not constitute circular economy.

Around 0.2 % of the combined financing for circularity and waste comes from the EU MFF, with no additional contribution from the RRF. EIB loans identified in support of circularity and waste represent 0.1 % of the total. The

([157]) 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).

([158]) 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).

([159]) Through the tracking of EU funds, EIB projects and national expenditure (environmental protection expenditure 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

([160]) 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.

([161]) 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.

share of national sources is absolutely overwhelming, reaching 99.7 % of the total financing ([162]).

The gap

To meet its environmental objectives concerning the circular economy and waste, Germany needs to increase circular economy investments by an estimated EUR 5.8 billion per year, with an additional EUR 415 million concerning waste management action, not belonging to circular economy. Combined, this amounts to EUR 6.2 billion per year, representing 0.16 % of Germany's GDP.

Of the circular economy gap, EUR 1.5 billion 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 4.3 billion constitutes further investment need to unlock Germany's circular economy potential.

Water protection and management

Investment needs

The annual water investment needs reach an estimated EUR 19.4 billion (in 2022 prices) in Germany. This comprises investment needs both for the water industry and for the protection and the management of water. The largest part of the total annual need, EUR 11.3 billion, relates to the management of waste water (also including additional costs associated with the revised UWWTD). A further EUR 7.3 billion is necessary for drinking-water-related investments and around EUR 693 million for the protection and management of water ([163]).

Current investments

Water investments in Germany are estimated to be around EUR 15.6 billion per year (in 2022 prices) in 2021–2027. Of this, EUR 8.6 billion support wastewater management, EUR 6.3 billion drinking water and around EUR 0.7 billion the other aspects of the Water Framework Directive (water management and protection).

Of the total financing, a very small part, only 0.4 %, is provided by the EU MFF (mostly through cohesion policy). EIB financing constitutes similarly small share (0.9 %). 98.8 % of the water financing coming from national sources ([164]).

The gap

To meet the various environmental targets under the Water Framework Directive and the Floods Directive, Germany's water investment gap reaches EUR 3.7 billion per year (0.1 % of GDP), with over half related to waste water (EUR 2.7 billion per year). Drinking water measures require an additional EUR 1.1 billion per year.

Biodiversity and ecosystems

Investment needs

The investment needs for biodiversity and ecosystems in Germany are estimated to be EUR 5.7 billion per year (in 2022 prices) in 2021–2027. This includes the following financing needs:

- Germany's prioritised action framework ([165]), concerning the Natura 2000 areas: EUR 1.5 billion per year, mostly running costs;
- additional BDS costs ([166]): EUR 2.7 billion per year on top of the framework;
- sustainable soil management costs ([167]): EUR 1.5 billion per year.

Current investments

The current level of biodiversity financing is estimated to be EUR 5 billion per year (in 2022 prices) in 2021–2027. 93 % of this is considered direct financing to biodiversity and ecosystems, with a 100 % coefficient in the tracking schemes.

1.5 % of the total financing is estimated to come from EU cohesion policy and 24.3 % from CAP. The EU budget

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

([163]) 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.

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

([165]) 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.

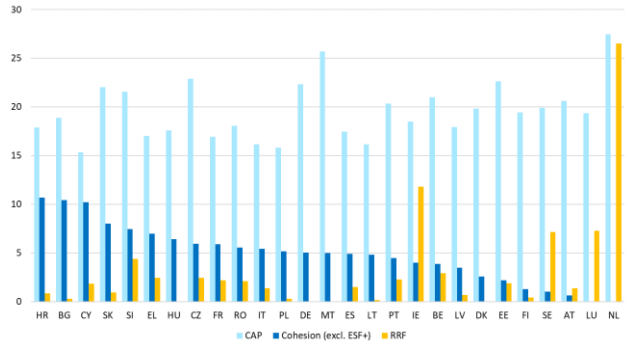
([166]) See European Commission: Directorate-General for Environment, *Biodiversity Financing and Tracking – Final report*, Publications Office of the European Union, Luxembourg, 2022, https://op.europa.eu/en/publication-detail/-/publication/793eb6ec-dbd6-11ec-a534-01aa75ed71a1/language-en.

([167]) 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.

accounts for 28 % of the financing. The rest, 72.1 %, comes from national sources ([168]).

In Germany, 22.3 % of the entire CAP budget for 2021–2027 is estimated to contribute to biodiversity, a share significantly higher than the EU average. However, only 5 % of cohesion policy funds (considering the EU contribution amount) in 2021–2027 are envisaged to support biodiversity (disregarding ESF+), and no RRF funds have been programmed for investments in biodiversity (see Figure 36).

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, Germany's investment gap is estimated to be EUR 0.6 billion per year, corresponding to 0.02 % 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 already use green budgeting tools for identifying and tracking green expenditures and/or revenues ([169]). 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 ([170]).

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 ([171]). Germany did not participate in the TSI project.

Nevertheless, as part of other 2024 TSI projects, Germany contributed to the following regional and local initiatives:

- Baden-Württemberg has been receiving support for developing a transparent and easily applicable method of climate tagging and integrating it into the budget cycle ([172]).
- The City of Hamburg, jointly with other European cities, has been developing methodologies to align local budgeting processes with sustainable development goals ([173]).

Other regional governments such as Lower Saxony have also been piloting green budgeting practices ([174]). Beyond green budgeting, to improve policy outcomes the Commission has also drawn up climate-proofing and sustainability-proofing guidance ([175]), as tools to assess project eligibility and compliance with environmental legislation and criteria.

Green taxation and tax reform

Total environmental taxes amounted to EUR 63.3 billion in Germany in 2022, representing 1.6 % of its GDP (EU average: 2.0 %). Energy taxes formed the largest component of environmental taxes, accounting for 1.36 % of GDP, which is lower than the EU average of 1.6 %. Transport taxes, at 0.28 % of GDP, were under the EU average (0.4 %), while data on taxes on pollution and resources were not available from Germany (EU average:

([168]) 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.

([169]) 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.

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

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

([172]) Technical support received under the TSI project 24DE26.

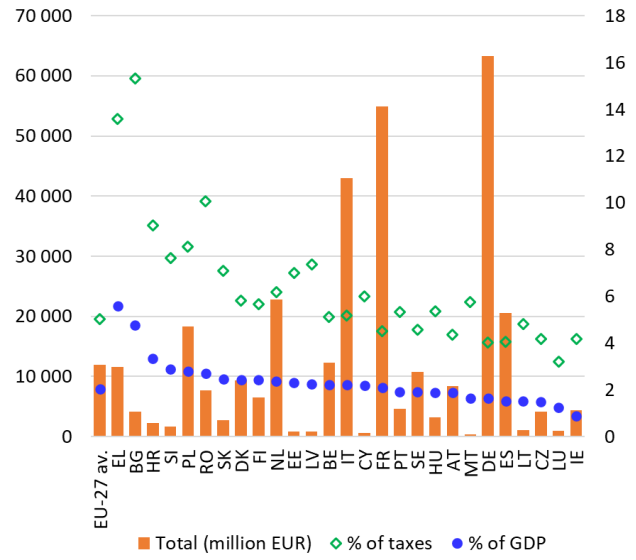
([173]) Technical support received under the TSI project 24DE01.

([174]) Haushaltsplan 2025 ist der Startschuss für Klimacheck im Landeshaushalt | Nds. Ministerium für Umwelt, Energie und Klimaschutz

([175]) 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.

0.08 %). In 2022, environmental taxes in Germany accounted for 4 % of total revenues from taxes and social security contributions (under the EU average of 5.0 %) ([176]).

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 ([177]), Germany applies charges on air emissions, solid waste disposal (landfill fee), green vehicle tax differentiation, levies on plastics and aluminium sheets and strips, and volumetric charges on water abstraction and disposal.

Green bonds and sustainable bonds

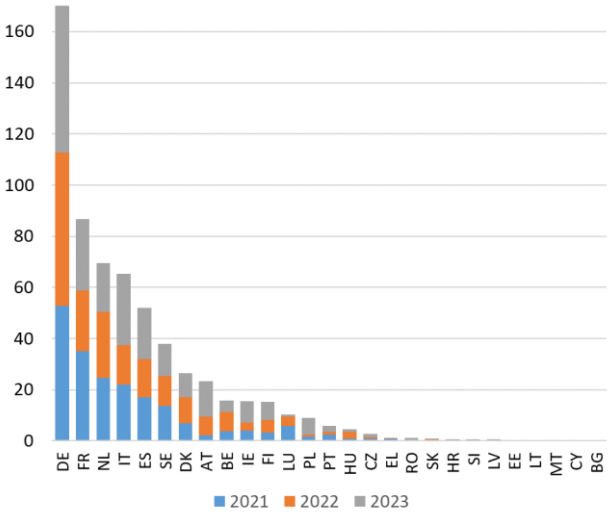
In 2023, the total value of green bonds issued by Member States was USD 245 billion (EUR 227 billion), up from USD 234 billion (EUR 198 billion) in 2021 ([178]).

During 2021–2023 combined, Germany issued green bonds worth USD 193.2 billion (EUR 163.3 billion). Of this, the issuance in 2023 amounted to USD 62.4 billion (EUR 13.9 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 those issued by supranational entities) 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 developments 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 programme objectives and the enabling

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

([177]) 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.

([178]) 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.

conditions ([179]). 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.

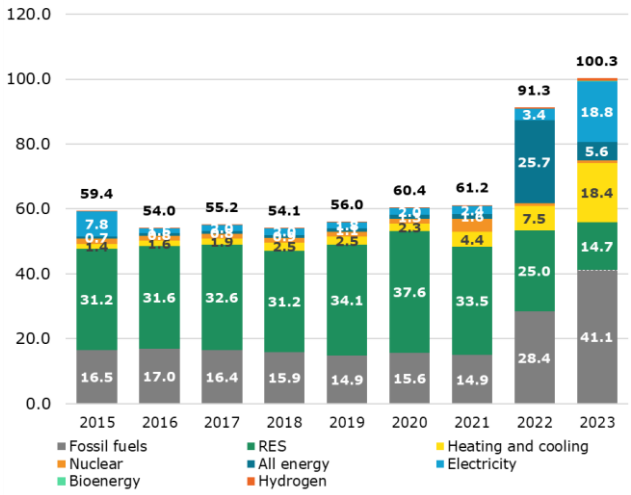
As a direct consequence, annual FFS in the EU have increased to EUR 109 billion in 2023 from EUR 57 billion in 2020. From 2021 to 2023, there was a marked increase in annual FFS of 72 % in the EU ([180]).

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 ([181]). 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 Germany, the energy subsidies were stable in 2015–2021, with FFS ranging between EUR 15 billion and EUR 17 billion per year. In 2022 and 2023, energy subsidies increased overall, and so did FFS, reaching EUR 41.1 billion in 2023.

As a share of GDP, FFS in 2022 ranged from 1.8 % in Croatia to less than 0.1 % in Denmark and Sweden. Germany's value reached 0.7 %, slightly under the EU average (0.8 %) ([182]).

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



NB: RES, renewable energy source.

Source : analysis of Directorate-General Energy

For Germany, the 2022 priority actions included the following.

- Ensure an increased level of financing for the environment to cover the investment needs expected and to close the investment gap.

While the level of the environmental investment gap is lower than average, it still reaches an estimated 0.5 % of GDP, and most of it is related to pollution prevention and control.

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.

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

([180]) 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

([181]) 16 Member States: BE, EE, IE, EL, ES, FR, HR, IT, CY, LT, HU, NL, AT, PT, RO and SE.

([182]) 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 ([183]). 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 ([184]). It includes the right to bring legal challenges ('legal standing') ([185]).

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.

Germany's performance in implementing the Inspire Directive is substantial and has been reviewed based on its 2023 country fiche ([186]) (see Table 3).

Table 3: Germany dashboard on the 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, 'Germany', Inspire Knowledge Base, https://knowledge-base.inspire.ec.europa.eu/germany_en.

In 2022, Germany received a priority action on the need to make spatial data more widely accessible and to prioritise the environmental datasets. Germany has made progress on accessibility of spatial data, including on accessibility of high-value spatial datasets for implementing environmental legislation ([187]).

([183]) 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.

([184]) 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).

([185]) 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.

([186]) European Commission, 'Germany', Inspire Knowledge Base, https://knowledge-base.inspire.ec.europa.eu/germany_en.

([187]) https://github.com/INSPIRE-MIF/need-driven-data-prioritisation/blob/main/documents/eReporting_PriorityDataList_V2.1_final_20201008.xlsx.

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 ([188]) and the Strategic Environmental Assessment (SEA) Directive ([189]).

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 ([190]). Germany has already taken steps aiming to accelerate permit-issuing procedures taking advantage 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 ([191]). 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. Germany was able to provide information on the duration of only some stages of the EIA process. The fragmented nature of the data available therefore limits the ability to draw general conclusions. A priority action is included for 2025 to provide more detailed information on the different stages of the EIA process. 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 ([192]).

With regard to public participation, Germany received one priority action related to EIA and SEA in 2022: provide publicly available information and statistics on public participation and contributions to EIAs/SEAs at the federal and *Länder* levels. Germany makes EIA portals available at the federal and *Länder* levels ([193]). The portals provide information on projects, including short summaries and details on public participation, progress made on the authorisation procedure, and the final decision on the approval of the project (including an explanation of how the reasoned assessment, in particular input from the public, was taken into account in the decision). Germany has therefore fulfilled this priority action. However, Germany was not able to provide information on the average duration of all stages of the EIA process, and hence a priority action is proposed for 2025.

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

([188]) 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.

([189]) 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.

([190]) 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).

([191]) 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/.

([192]) 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

([193]) https://www.uvp-verbund.de/startseite; https://www.uvp-portal.de/de.

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, recognised environmental organisations are granted legal standing in all cases explicitly specified in the Environmental Appeals Act (Umweltrechtsbehelfsgesetz). The Federal Nature Conservation Act (Bundesnaturschutzgesetz) and a number of *Länder* nature conservation acts grant legal standing to recognised nature conservation organisations in specified areas of nature conservation ([194]), providing further standing to challenge acts not mentioned in the Environmental Appeals Act.

However, there remain some difficulties in challenging plans or programmes. Environmental organisations have limited standing for cases in this category, as they have access to justice exclusively with regard to the subject matter listed in section 1, paragraph 1 of the Environmental Appeals Act. If plans or programmes do not fall within the scope of section 1, paragraph 1, no 4 of the Environmental Appeals Act, there is limited direct access to justice in the cases of this category. In principle, neither individuals nor NGOs have standing to challenge national regulatory acts, except when requesting a 'preventive declaratory judgment' to stop an upcoming criminal sanction or where an 'incident review' might offer the possibility to challenge the validity of the underlying regulatory act, which is not an option if the regulatory act does not require further implementing acts. There have so far not been enough court judgments to set a precedent and there is no clear legal framework. It is therefore not sufficiently clear if there is effective access to justice with regard to, for example, the designation of conservation areas by legislative decrees and not requiring a SEA.

In 2022 Germany received priority actions on access to justice, in particular to (i) better inform the public about their access to justice rights and (ii) improve legal clarity on access to courts by the public when it comes to challenging administrative or regulatory decisions and omissions in the planning context. Information on access to justice in environmental matters is available on the websites of the Federal Ministry for the Environment, Nature Conservation, Nuclear Safety and Consumer Protection (referring also to the European e-Justice Portal ([195])) and the Federal Environment Agency (Umweltbundesamt). Germany has therefore fulfilled the first priority action. On the latter there has been no progress.

2025 priority actions

- 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.
- Provide information on the average duration of all steps in the EIA process.

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 ([196]) 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.

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

A publication from the Federal Environment Agency in December 2021 provides an update on the status and development of environmental crimes in Germany based on police and court statistics ([197]).

([194]) See section 64 of the Federal Nature Conservation Act.

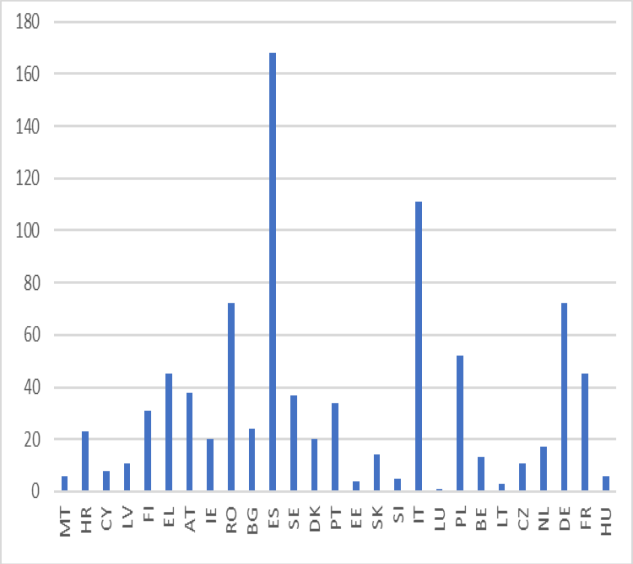
([195]) https://e-justice.europa.eu/content_access_to_justice_in_environmental_matters-300-en.do.

([196]) 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).

([197]) https://www.umweltbundesamt.de/sites/default/files/medien/11850/publikationen/98_2023_texte_umweltdelikte_2021.pdf.

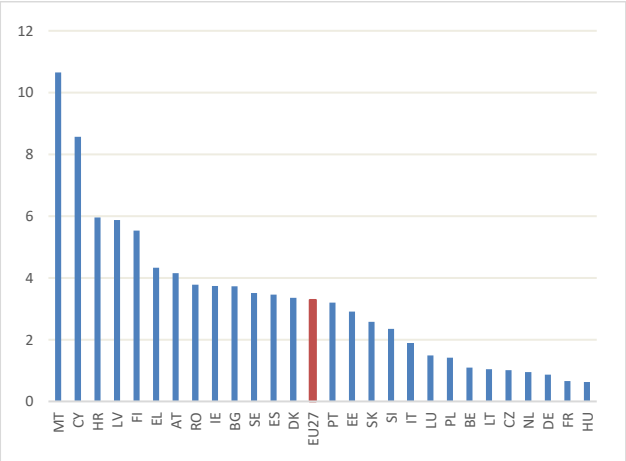
Between 15 May 2022 and 31 December 2024, the Commission received 72 complaints relating to the environment in Germany, the joint third highest in the EU, although in terms of complaints per million inhabitants the amount is 0.86 well below the EU average of 3.2 (figures 40 and 41). Forty of these concerned alleged breaches of the Nature Directives, with a focus on appropriate assessments in Natura 2000 sites, while the others concerned water, waste, air quality, EIA issues and noise.

Figure 40: EU complaints 15 May 2022-31 December 2024



Source: DG Environment complaints data.

Figure 41: EU complaints per million inhabitants 15 May 2022-31 December 2024



Source: Eurostat, 'Population' tps00001, accessed 22 January 2025, https://ec.europa.eu/eurostat/databrowser/view/tps00001/default/table?lang=en, and DG Environment complaints data.

The 2022 EIR recommended that Germany provides information to the public about compliance monitoring and enforcement in environmental matters as well as on the outcome of administrative and criminal enforcement actions and the follow-up to detected breaches of cross-compliance. Concerning compliance promotion, monitoring and criminal and administrative enforcement, the 2022 priority actions are not assessed here due to lack of systematic information[198].

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)([199]) 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

198 The next publication from the Federal Environment Agency (UBA) will provide further updates on the status and development of environmental crimes in Germany; a publication date has not been announced yet.

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

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 ([200]), EnviCrimeNet ([201]), the European Network of Prosecutors for the Environment ([202]) and the EU Forum of Judges for the Environment ([203]). 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)([204]) 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 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 ([205]), which will be finalised in 2025, and which was supported by an external study ([206]), 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.

The German Insurance Association recorded 3 265 environmental damage claims for 2010 to 2020 under its model ELD environmental extension to general liability policies. In contrast, Germany reported 60 ELD occurrences to the Commission for the first reporting period and 147 ELD occurrences for the second one, of which 12 were handled under federal legislation implementing the ELD. The remaining 135 were resolved under other national legislation (relevant sectoral legislation). Germany is among the Member States with the largest decreases between the two reporting periods (from 60 to 12 occurrences); however, it should be noted that in its second report, Germany covered only a three-year period from 26 June 2019 to 31 December 2021. In line with Article 18 (1) ELD, Germany will now publish reports on ELD occurrences every 5 years, the next one in 2027.

Germany has not imposed mandatory financial security for ELD liabilities. Environmental insurance policies that provide cover for all ELD liabilities are available but are rarely purchased due to the prevalence of the German Insurance Association's model extension for ELD liabilities in general liability policies. The model environmental extension to general liability policies specifically provides cover for ELD liabilities with the caveat that it does not provide cover for environmental damage that occurs on an insured site.

The EIR 2022 recommended that Germany publish information on environmental damages detected

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

([201]) 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).

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

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

([204]) 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

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

([206]) 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.

(possibly via a registry or database on ELD incidents), promote reporting by citizens and NGOs to increase compliance, and improve the complaint-handling architecture. This could consist of a centralised federal webpage and/or the creation of a federal-level complaint-handling platform to report environmental damage. Germany has made some progress in improving the reporting on ELD occurrences. However, there is no information available about the progress on other 2022 priority actions in relation to the ELD. Therefore, efforts to implement 2022 priority actions should continue along with the 2025 priority action.

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 the expertise of the competent authorities and raise awareness among all stakeholder groups.

EU-supported environmental capacity building

The Commission's 2023 Compact ([207]) 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 European Commission are the technical support instrument (TSI) ([208]) and the TAIEX-EIR PEER 2 PEER tool ([209]). 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.

The Commission's TSI had annual calls in 2021, 2022, 2023, 2024 and 2025. The following environment-related projects have been selected for Germany:

- Digitalising monitoring of East Atlantic flyway, multi-country project with Denmark and the Netherlands, Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU), National Park in Lower Saxony (2022);
- Climate adaptation: Wildfire prevention, response and climate-related risk assessment, Saxon State Ministry of the Interior (2023);
- Green budgeting, developing a transparent and easily applicable method of climate tagging and integrating it into the budget cycle, Ministry of Finance, Baden-Württemberg (2024);
- Tackling greenwashing risk in the German and Dutch sustainable investment fund market, BaFiN (2024);
- PACE – Natural hazard insurance in France (Germany), Ministry of Justice, North Rhine – Westphalia (2024);
- Sustainability in local public finances, Hamburg Ministry of Finance (2024);
- Multi-stakeholder advocacy on sustainable finance and sustainable transition – Stay at the Danish Climate Partnership (2024).
- Integrated environmental monitoring informs adaptive management of coastal wetlands, Federal Ministry for the Environment, Nature Conservation, Nuclear Safety and Consumer Protection (BMUV) (2025).

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 Commission to present new and upcoming environmental legislation and policy in all Member States ([210]).

([207]) 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).

([208]) See the European Commission web page on the TSI (https://commission.europa.eu/funding-tenders/find-funding/eu-funding-programmes/technical-support-instrument/technical-support-instrument-tsi_en).

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

([210]) 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

Workshops involving Germany are as follows:

- Climate adaptation and blue infrastructure (31 May–1 June 2022);
- Circular economy (in the Irish Midlands) (4–6 October 2022);
- Future challenges for air protection (24 November 2022) with the EU Czech Presidency;
- Making space for biodiversity: Regional action to mainstream biodiversity and empower stakeholders (21–23 March 2023);
- Biodiversity, nature conservation and large predators: Examples across European regions (4–6 June 2024);
- Online platforms: EU batteries, packaging and packaging waste regulation (28–29 October 2024);
- New aspects in the cross-border cooperation against environmental crime (19–20 November 2024).

Germany was involved in two expert missions: one on best practices in applying Article 6(3) of the Habitats Directive in Estonia (26–27 April 2023) and the other on-air emissions inventory and assessment of the impact of policies and measures on emissions in Lithuania (15–17 May 2023).

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.

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

- Speed up the transition to a circular economy by implementing an updated national strategy and the EU framework and recommendations, in particular to complement it with upstream circularity measures.

Waste management

- Further shift reusable and recyclable waste away from incineration, including through economic instruments.
- Increase the collection and recycling rate of waste electrical and electronic equipment (WEEE).
- 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

- Finalise the establishment of site-specific conservation objectives and measures for all Natura 2000 sites (including by adopting their management plans) and ensure their effective implementation.

Recovery of species

- 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

- Implement eco-schemes and agri-environmental measures and practices to address the environmental needs of Germany.
- Implement and scale up the uptake of organic farming practices.

Wetlands/peatlands

- 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

- Complete the correct transposition of the IED 1.0.
- 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.
- Ensure access to transparent and clear information for citizens on risks and behaviour in the event of an accident.
- Ensure full and correct transposition of the Seveso III Directive.

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.
- Consider future climate scenarios in FRMPs.
- Better explain the choice and implementation of flood prevention and protection measures (prioritisation, monitoring, costs of measures).

Nitrates Directive

- Tackle nutrient pollution, especially nitrates from agriculture, through the implementation of the Nitrates 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, 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 (including 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
• Provide information on the average duration of all steps in the EIA process. • 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) 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.