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2025 Environmental Implementation Review
Country Report - CROATIA

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 regarding environmental legal implementation in Croatia. The purpose of this report is to provide information on the implementation performance and draw attention to the most effective ways to address the implementation gaps that impact human health and the environment and hamper the economic development and competitiveness of the country. The report relies on detailed sectoral implementation reports collected or issued by the Commission under specific environmental legislation.

The main challenges set out below have been selected from Part I of this report, 'Thematic areas', taking into 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 targets and financial implications.

Despite the efforts made since the last Environmental Implementation Review, reforms and investments in **waste management and the circular economy** are still needed to move away from reliance on waste disposal of municipal waste in landfills, which remains significant. Croatia missed by a wide margin the 2020 target to recycle 50 % of its municipal waste and requested to postpone the attainment of the 2025 target for preparing for reuse and recycling 55 % of municipal waste and the 65 % target recycling plastic and glass packaging waste. Furthermore, Croatia has several ongoing infringement cases in the waste sector that call for urgent action. Croatia's circular material use rate is low (6.2 %) and far from the EU average (11.8 %). Hence, there is scope for improvement in circular economy performance by extending circularity measures to all economic sectors and considering the whole life cycle of products from design to end of life. This would reduce both the environmental impact of products and reliance on imported primary raw materials.

Croatia is progressing on site-specific conservation objectives for its **Natura 2000 sites** that have been established for 143 out of 745 special areas of conservation and all 38 special protection areas. Yet more effort is needed to complete this work and to put in place conservation measures for all sites to mitigate pressures coming from agriculture, forestry, fisheries, energy and water management. Improvements are also needed for the use of the appropriate assessment provided by the Habitat Directive, which is subject to infringement proceedings.

Urban waste water collected in Croatia is not being properly treated as required by EU law. The level of compliance was extremely low in 2020 (7 %), and investments are being implemented with a slow pace. Croatia should continue investing in this sector as a matter of urgency while taking into account the additional targets set in the recast Urban Wastewater Treatment Directive.

The overall **environmental investment needs** to enable Croatia to meet its objectives in the areas of pollution prevention and control, circular economy and waste, water protection and management, and biodiversity and ecosystems are estimated to be EUR 2.9 billion per year. The current investment gap in Croatia stands at an estimated EUR 1.2 billion per year. Despite additional funds available (mainly through the national recovery and resilience plan), the Croatian environmental investment gap has not reduced much and is above the EU average.

On environmental governance, Croatia needs to improve the public's access to courts with regard to issues involving environmental planning (particularly for water, nature and air quality) and better inform the public about their access to justice rights. These issues were already raised in 2022 and there have been no visible improvements. Furthermore, spatial data should be made more widely accessible in the implementation of the Inspire Directive.

On the positive side, Croatia's bathing waters are among the cleanest in the EU. 96.7 % of them are of excellent quality. Croatia also has a good performance level when it comes to recycling construction and demolition waste,

([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, https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=COM%3A2016%3A316%3AFIN.

with 81.8% in 2022, above the EU average of 79,8% and increasing since the last measurement in 2020.

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.

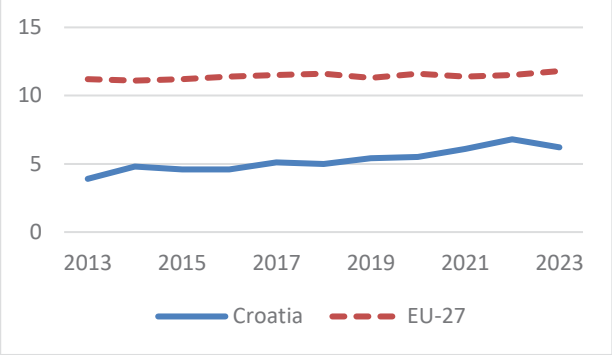
The 2020 CEAP launched the legislative process for a set of initiatives that will now have to be implemented by national governments across the EU. These initiatives were all introduced following a holistic life-cycle approach, with measures addressing the different stages of a product's life cycle,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

Croatia's circular use of material was 6.2 % in 2023, dropping down from 6.8 % in 2022 and following a slow but steady increase since 2015 (Figure 1). The gap between Croatia's rate and the EU average of 11.8 % in 2023 has been getting smaller, but current increase rates are still too slow to close the gap at the speed needed.

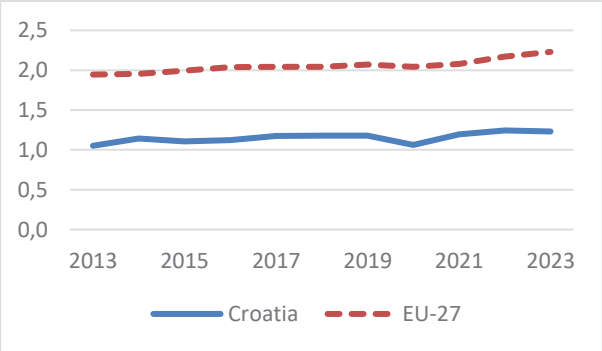
Figure 1: CMUR (%), 2013–2023



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, Croatia's resource productivity, with EUR 1.23 generated per kg of material consumed in 2023, is below the EU average of EUR 2.23 per kg.

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



NB: The unit of measurement used is EUR/kg chain-linked volume. Chain-linked volumes focus on changes on quantities and prices of commodities in previous years, taking account of inflation, and are indexed to the nearest appropriate year, in this case 2015.

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

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

Policies and measures

In parallel with European initiatives under the 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.

Croatia does not have a comprehensive circular economy policy framework. However, references to the need for circularity and some initiatives can be found in different policies. These include the latest waste management plan for 2023–2028 ([5]), the food waste prevention and reduction plan ([6]), the national development strategy to 2030 ([7]) and the low carbon development strategy to 2030 ([8]).

In 2022, the World Bank published the results of the project providing technical assistance on circular economy approaches in solid waste management co-funded by the EU's Cohesion Fund. The analysis and recommendations focused on the demolition and construction sector, which is important for the country's economy and has significant potential for increased circularity and decarbonisation. The guidelines for the circular use of construction waste from buildings with the status of a cultural good, which were adopted under the Croatian recover and resilience plan (RRP), constitute a first step to make this sector more circular. Furthermore, a management system for mineral materials resulting from the earthquakes (and reconstruction) in Sisak-Moslavina County and in Zagreb was set up to prevent excessive generation of construction and demolition waste.

Reforms related to the circular economy were included in the Croatian RRP ([9]) and reflected in sectoral legislation and/or plans for sustainable tourism, skills, space and building development, construction waste and biowaste.

Furthermore, Croatian cohesion policy programmes support the investments of small and medium-sized enterprises in innovative circular economy solutions, recycling yards and educational measures.

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.

In Croatia, uptake of green public procurement ([10]) is monitored annually through the official Electronic Public Procurement portal. According to the data gathered, in 2023 public purchase through public procurement represented about 20 % of Croatian GDP, and about 11 % of deriving public contracts included elements of green public procurement ([11]). Starting in January 2025, contracting authorities in Croatia are required to apply green public procurement criteria for the procurement of specific product groups ([12]).

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

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

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

([5]) Ministry of Economy and Sustainable Development, *Waste management plan of the Republic of Croatia for the period from 2023 to 2028 – Provisional translation*, Zagreb, 2023, https://mingo.gov.hr/UserDocsImages/UPRAVA-ZA-PROCJENU-UTJECAJA-NA-OKOLIS-ODRZIVO-GOSPODARENJE-OTPADOM/Sektor%20za%20održivo%20gospodarenje%20otpadom/PGO%20eng_web%2011_12_2023.pdf.

([6]) https://narodne-novine.nn.hr/clanci/sluzbeni/2022_12_156_2535.html.

([7]) https://hrvatska2030.hr/.

([8]) Ministry of Economy and Sustainable Development, *Low-carbon development strategy of the Republic of Croatia until 2030 with a view to 2050*, Zagreb, 2021, https://mingo.gov.hr/UserDocsImages/klimatske_aktivnosti/odrzivi_razvoj/NUS/lts_nus_eng.pdf.

([9]) https://commission.europa.eu/document/download/9898347f-8119-4a40-bff4-28c8a18ae0be_en?filename=recovery_and_resilience_plan_for_croatia_hr.pdf.

([10]) https://zelenanabava.hr/hrvatska-predvodnica-zelene-tranzicije-vlada-rh-donijela-odluku-o-provedbi-zelene-javne-nabave/.

([11]) https://www.javnanabava.hr/userdocsimages/userfiles/file/Statistička%20izvješća/Godišnja/Statisticko_izvjesce_JN_2023.pdf.

([12]) https://narodne-novine.nn.hr/clanci/sluzbeni/2024_11_137_2260.html.

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.

In September 2024, Croatia had 57 products and 26 licences registered in the EU Ecolabel scheme out of the total 98 977 products and 2 983 licences in the EU. Take-up of the EU Ecolabel in the country is therefore low, although it has increased compared with past reports ([13]). Moreover, three organisations from Croatia are currently registered in EMAS, the same as in October 2021 ([14])

Croatia's CMUR decreased by 0.6 percentage points in 2023. This represents a slight step back since the 2022 priority action to take measures to increase the rate.

Some progress has been made on the priority actions suggesting strengthening the policy framework, as measures aiming to transition to a circular economy have been introduced. However, a unified and comprehensive approach is needed.

2025 priority actions

- 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.
- Develop a unified circular economy strategy focusing on waste prevention and resource efficiency, especially for priority waste streams.
- Adopt measures to increase the CMUR.

Waste management

Turning waste into a resource is supported by:

(i) addressing the full life cycle of products, from conception to end of life, by setting requirements on the design of products to ensure that they are more sustainable;
(ii) fully implementing EU waste legislation, which includes the waste hierarchy, the obligation to ensure separate collection of waste, landfill diversion targets, etc.;
(iii) reducing waste generation per capita and in absolute terms;
(iv) increasing the recycling rates of waste containing critical raw materials (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.

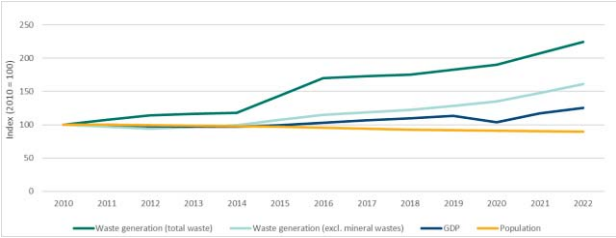
One of the main objectives of the EU Waste Law is to decouple economic growth from its environmental impacts.

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

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

The total amount of waste generated in Croatia has more than doubled in the last 12 years. This trend is primarily driven by significant mineral waste. When excluding major mineral waste categories, Croatia's waste generation follows a similar trend, largely driven by recyclable waste, which dominates as the largest waste fraction. Croatia's GDP increased throughout the time period examined, with a drop in 2020, most likely due to the COVID-19 outbreak. No decoupling between waste generation and economic growth is observed.

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



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,

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

([14]) As of October 2024. European Commission, 'EMAS Register', European Commission website, https://webgate.ec.europa.eu/emas2/public/registration/list.

https://ec.europa.eu/eurostat/databrowser/view/demo_gind/default/table?lang=en&category=demo.demo_ind.

Critical raw materials

Currently, Croatia's waste management plan lacks a CRM strategy. However, Croatia's reliance on imports for 36.3 % of its materials in 2022, well above the EU average of 22.4 %, highlights its vulnerability to supply chain disruptions. By increasing investments in circular economy initiatives, Croatia can not only reduce its environmental impact but also strengthen resilience and sustainability in the raw material supply, fostering long-term economic and ecological benefits.

Construction and demolition waste

Construction and demolition waste accounts for almost 40 % of all waste generated in the EU. A recent study ([15]) by the Joint Research Centre shows that preparing for reuse and recycling operations are preferred over incineration and landfilling from an environmental perspective for most of the different streams of construction and demolition waste. However, the economics are often unfavourable for preparing for reuse and recycling compared with incineration and landfilling. If available technology were to be applied, it is estimated that an increase in preparing for reuse and recycling of construction and demolition waste in Croatia would lead to additional 33 Mt of greenhouse gas (GHG) emission savings annually (more than the combined annual GHG emissions from Estonia, Latvia and Luxembourg).

Measures to further increase the preparing for reuse and recycling rate of construction and demolition waste include separate collection at source, for instance through digitalised pre-demolition audits ([16]) ('resource assessments'); extended producer responsibility (EPR) and other economic instruments; and upstream measures such as increasing the recycled content in construction products and the circular design ([17]) of construction works. The Croatian RRP includes investments in recycling yards for construction waste and a reform regarding the circular use of construction waste from buildings with the status of cultural goods. In 2022, 81.8 % of construction and demolition waste was recycled, excluding backfilling, above the EU average of 79,8%[18].

Boosting implementation – the 2023 *Waste Early Warning Report*

This section focuses on the management of municipal waste ([19]), for which EU law sets mandatory recycling targets. In June 2023, the Commission published the *Waste Early Warning Report* ([20]) identifying the general trends in waste management and the Member States at risk of missing 2025 waste targets (see Figure 4). Croatia is in the category of countries at risk of missing both the municipal waste and the packaging waste targets. Croatia is also at risk of not meeting the 2035 target of a maximum of 10 % of municipal waste being landfilled.

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

([16]) 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.

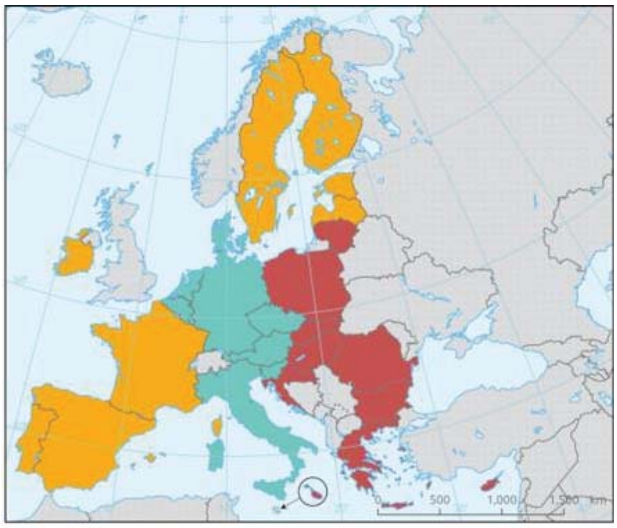
([17]) European Commission, *Circular Economy – Principles for buildings design*, Brussels, 2020, https://ec.europa.eu/docsroom/documents/39984.

([18]) Eurostat, Treatment of waste, by waste category, hazardousness and waste management operations, https://ec.europa.eu/eurostat/databrowser/view/env_wastrt__custom_10204995/bookmark/table?lang=en&bookmarkId=e974886c-5051-42f7-96ef-6b5a55343ff1

([19]) 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).

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

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



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 2025 targets, 11 Member States have used this prerogative, including Croatia.

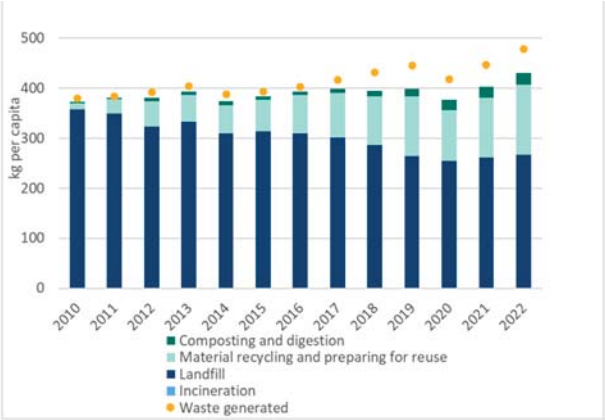
On 23 January 2023, Croatia notified the Commission of its intention to postpone the attainment of the preparing for reuse and recycling target for municipal waste for 2025 established by the Waste Framework Directive. Croatia did the same regarding the attainment of the recycling target for plastic and glass packaging waste for 2025 established by the Packaging and Packaging Waste Directive. Croatia submitted an implementation plan laying down the measures necessary to attain the targets within a postponed time frame (i.e. 2030 instead of 2025). According to the implementation plan, the main measures Croatia will put in place include the amendment of the legislative framework and increased capacity for the processing and separate collection of waste.

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

Municipal waste

Croatia's municipal waste generation has remained relatively stable over the past decade but has increased since 2019, reaching 478 kg per capita in 2022, below the EU-27 average of 513 kg per capita (Figure 5).

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,

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

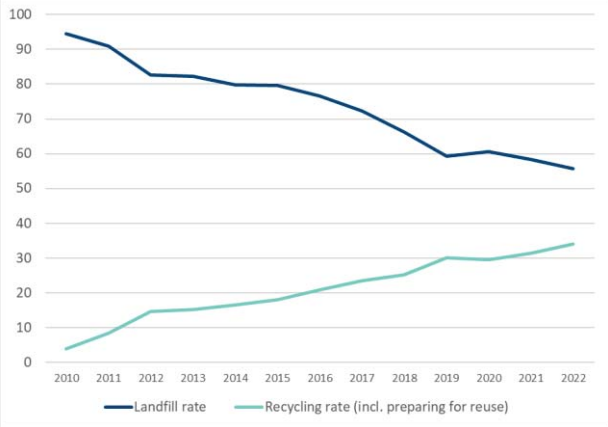
([22]) European Parliament and Council Directive 94/62/EC of 20 December 1994 on packaging and packaging waste (OJ L 365, 31/12/1994, p. 10–23), Directive - 94/62 - EN - EUR-Lex.

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

https://ec.europa.eu/eurostat/databrowser/view/ENV_WASMUN/default/table.

The preparing for reuse and recycling rate improved steadily from 2010, reaching 36 % in 2023, but remains well below the EU-27 average of 48 % and the 2025 target (Figure 6). Biowaste composting or digestion remains minimal, despite it constituting over one third of Croatia's residual municipal waste. The 2022 data on Croatia's compliance with the 55 % reuse and recycling target for 2025 awaits Eurostat validation. While landfill rates have significantly decreased, they remain high, sitting at 56 % in 2022. Croatia lacks municipal solid waste incineration facilities but plans to enable energy recovery projects in line with its 2030 energy development strategy. Enhanced efforts are needed to meet recycling and landfill reduction targets.

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



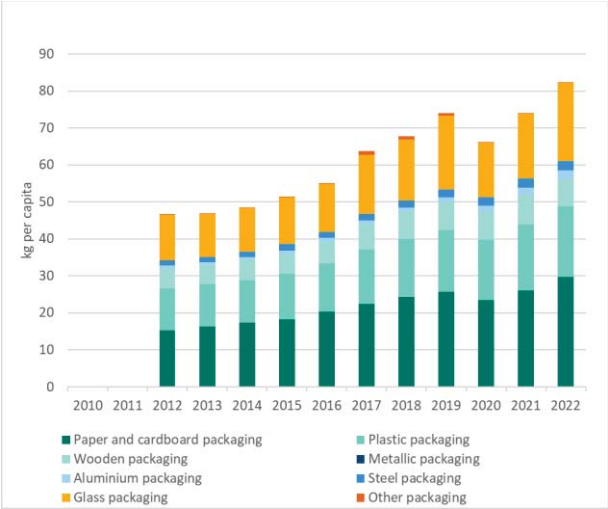
Source: Eurostat, 'Municipal waste by waste management operations', env_wasmun, accessed 22 October 2024, https://ec.europa.eu/eurostat/databrowser/view/ENV_WASMUN/default/table.

Packaging waste

Packaging waste generation in Croatia has significantly increased from 47 kg per capita in 2012 to 82 kg per capita in 2022. However, this is still significantly below the estimated European average of 186 kg per capita for the same year and the second lowest among the EU-27.

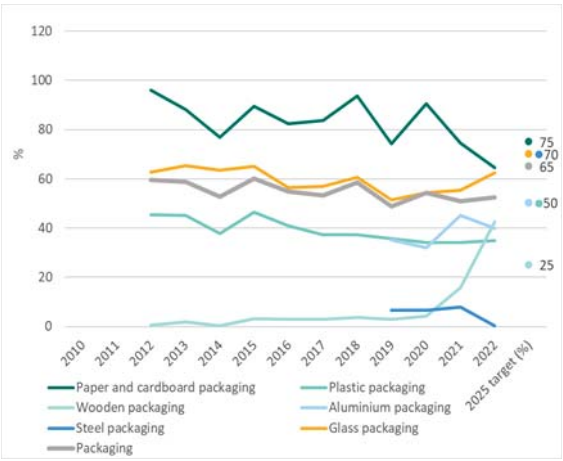
However, its packaging waste recycling rate was 52 % in 2022, significantly below the EU average of 65 %. Paper and cardboard dominate recycling efforts due to their large waste share and high recycling rate, though their rate is declining, as is that of plastics recycling. Wooden packaging recycling has improved through better EPR system organisation, while steel recycling was hindered by facility issues that delayed processing to 2023. Aluminium and steel recycling rates have remained below 2025 targets. Data quality issues, including the under-reporting of packaging on the market, likely contribute to an overestimation of effective recycling rates, affecting EPR and drawing attention to challenges in waste management.

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



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.

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).

Croatia's national waste prevention programme (NWPP) is integrated into the national waste management plan for 2023–2028, with goals extending to 2035. Despite the NWPP's provision for evaluation every six years, no review of the previous NWPP has been conducted. The national waste management plan allocates a budget for implementing planned waste prevention measures. Its overarching goal is to establish a waste management system focused on prevention, aiming to decouple waste generation from economic growth, protect natural resources and mitigate environmental and health impacts. The NWPP identifies priority waste streams, including municipal, organic, electronic, paper, plastic, construction, textile and marine litter waste, selected based on their share in total waste, potential benefits of prevention and ongoing activities. Notably, the current national waste management plan lacks a quantitative target to reduce municipal waste, unlike its predecessor. Croatia's food waste reduction and prevention efforts involve a detailed plan for 2023–2028, emphasising the entire food value chain.

Policies to encourage separate collection and recycling

In Croatia, residual waste is collected door to door, along with paper, cardboard, metals, plastics and glass, which are also collected via drop-off points. Textiles are collected exclusively through drop-off points, while biowaste collection is door to door but not in all municipalities. Civic amenity sites handle waste wood and other recyclable household waste. Businesses are required to separately collect recyclables, including packaging waste, and sorting packaging waste for separate collection is mandatory for both households and non-households. Croatia's pay-as-you-throw scheme, based on container volume and collection frequency, is widely implemented. EPR applies to all packaging types but lacks advanced fee modulation, with no packaging taxes in place. Mandatory deposit return systems cover most aluminium drink cans and polyethylene terephthalate and glass bottles but exclude plastic crates and wooden packaging. From January 2027, the system will expand to cover multi-layer packaging and beverage containers of less than 0.2 l, which will mean all drink packaging up to 3 l is covered. Despite these measures, challenges remain in optimising these systems.

Policies to discourage landfilling or incineration

A regulation introducing a landfill tax ([24]) has entered into force on 1 January 2025 in line with the waste management plan. The tax of 30 EUR/t will gradually increase to reach 50 EUR/t in 2029. The reform was included as a milestone of the Croatian RRP

Infringement cases against Croatia over waste management failures

On 2 May 2024, the European Commission started an infringement case against Croatia for failure to meet the targets laid down in the Waste Framework Directive, the Packaging and Packaging Waste Directive and the Directive on Waste Electrical and Electronic Equipment. In the absence of a satisfactory response and action by Croatia, the Commission may decide to take the infringement case further.

Since 2018, there has been an ongoing infringement case against Croatia for the unsatisfactory application of Directive 1999/31/EC on the landfill of waste and Directive 2008/98/EC on waste because of landfilling without prior treatment, and for failing to establish an integrated and adequate network of waste management installations for this purpose. In the absence of satisfactory measures by Croatian authorities, the Commission may decide to take the infringement case further.

Croatia has been referred to the Court of Justice for the second time after a condemnation in 2019 for the breach of the Waste Framework Directive regarding the illegal dump site in Biljane Donje, where approximately 140 000 t of production residue of the processing of ferromanganese and silicomanganese has been deposited since 2010 directly on the ground, less than 50 m from houses. As Croatia has not taken all necessary measures to close and rehabilitate the illegal landfill site, a Court judgment of 6 March 2025([25]) resulted in penalties.

In the 2022 Environmental Implementation Review (EIR), Croatia had five priority actions in the field of waste. Croatia has made some progress on improving separate waste collection, implementing support programmes for municipalities and optimising EPR systems. Substantial progress has been made with the introduction of the landfill tax in January 2025. The national waste management plan has been fulfilled and aligns with the revised Waste Framework Directive.

([24]) Ministry of Economy and Sustainable Development, *Waste management plan of the Republic of Croatia for the period from 2023 to 2028 – Provisional translation*, Zagreb, 2023, https://mingo.gov.hr/UserDocsImages/UPRAVA-ZA-PROCJENU-UTJECAJA-NA-OKOLIS-ODRZIVO-GOSPODARENJE-OTPADOM/Sektor%20za%20odr%C5%BEivo%20gospodarenje%20otpadom/PGO%20eng_web%2011_12_2023.pdf.

([25]) Judgment of 6 March 2025, European Commission v Republic of Croatia, C-315/23, EU:C:2025:154 https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex:62023CJ0315

2025 priority actions

- Increase reuse of products and scale up waste recycling infrastructure associated with the higher steps of the waste hierarchy. In particular, improve collection and increase treatment capacity for bio-waste.
- Improve municipal waste preparation for reuse and recycling.
- Increase the recycling rates of packaging waste.
- Increase the collection and recycling rate of waste electronic and electric equipment (WEEE).
- Develop EPR schemes for problematic waste.
- Implement, harmonise and gradually increase landfill taxes to phase out landfilling of recyclable and recoverable waste.
- Ensure the achievement of the 2025 waste targets, following the recommendations made by the Commission in the early warning reports where applicable.
- Invest in waste prevention measures to reduce the total amount of waste generated.

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 ([26]) and a dashboard of indicators ([27]) provide information on implementation progress.

The recently adopted EU Nature Restoration Regulation ([28]) 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.

Croatia's latest NBSAP is the national nature protection strategy and action plan for 2017–2025 ([29]). In August 2024, Croatia uploaded 30 new national targets to the Convention on Biological Diversity's online reporting tool ([30]).

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 additional details on biodiversity financing and investments for Croatia, see Chapter 5.

Nature protection and restoration – Natura 2000

Natura 2000 ([31]), the largest coordinated network of protected areas in the world, is key to the achievement of the objectives set out in the Birds and Habitats Directives. These objectives are to ensure the long-term protection, conservation and survival of Europe's most valuable and threatened species and habitats and the ecosystems they underpin. Key milestones towards meeting the objectives of the Birds and Habitats Directives are (i) the setting up of a complete and coherent Natura 2000 network; (ii) the designation of sites of community importance (SCIs) as special areas of conservation (SACs) ([32]); and (iii) effective management

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

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

([28]) 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).

([29]) Parliament of the Republic of Croatia, *The nature protection strategy and action plan of the Republic of Croatia for the period 2017–2025*, 2017, https://www.cbd.int/doc/world/hr/hr-nbsap-v3-en.pdf.

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

([31]) 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 7 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.

([32]) 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.

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.

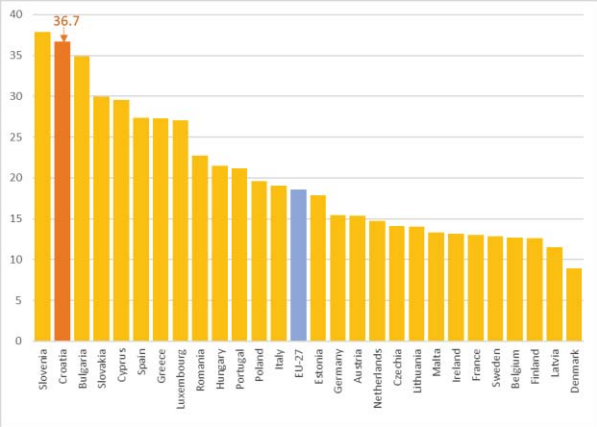
Meeting these commitments requires the full implementation of Article 3 of the Habitats Directive. The Natura 2000 network should represent a complete and coherent ecological network composed of sites hosting natural habitat types and species of community interest. The Natura 2000 network enables the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

Croatia hosts 76 habitat types and 244 species covered by the Habitats Directive. The country is also home to populations of 125 bird species listed in Annex I to the Birds Directive.

In 2023, 36.7 % of Croatia's land area was covered by Natura 2000 (EU average: 18.6 %). Special protection areas (SPAs) classified under the Birds Directive covered 30.2 % (EU average: 12.8 %) and SACs under the Habitats Directive covered 28.4 % (EU average: 14.3 %) of the country's territory. Although the terrestrial network can be considered largely complete, there are still gaps in the marine network, which requires the designation of additional SPAs and SCIs.

Taking into account both Natura 2000 sites and other nationally designated protected areas, Croatia legally protects 38.2 % of its terrestrial area (EU-27 average: 26 %) and 9.5 % of its marine area (EU-27 average: 12 %) ([33]).

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

In order to ensure that SCIs contribute to the objectives of the Habitats Directive, Member States must designate them as SACs, setting site-specific conservation objectives based on the ecological needs of the species and habitats present on the sites. 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. Article 6 of the Habitats Directive requires Member States to establish and implement conservation measures for the realisation of the objectives of the site.

There are 745 SACs and 38 SPAs in Croatia. During the programming period 2014-2020, several national projects, co-financed by EU funds, have supported:

- the establishment of the Natura 2000 management framework;
- the drawing up of management plans for the sites;
- the implementation of planned conservation measures;
- the development of monitoring and reporting systems; and
- the mapping of coastal and seabed habitats and biodiversity in waters under Croatian jurisdiction.

Site-specific conservation objectives are established for 143 out of 745 SACs and for all 38 SPAs. Management

([33]) Eurostat, 'Protected areas', env_bio4, last updated 2024, https://ec.europa.eu/eurostat/databrowser/view/env_bio4/default/table?lang=en. Data used are for the terrestrial protected area percentage in 2022 and the marine protected area percentage in 2021.

plans with conservation measures were adopted for 365 sites (corresponding to 65 % of the area of the network).

Therefore, more efforts are necessary to establish site-specific conservation objectives and to put in place practical conservation measures for all sites with regard to activities linked to the most important pressures, in particular agriculture, forestry, fisheries, energy and water management.

Some progress has been made by Croatia on the 2022 priority actions, but it is necessary to continue working on them to speed up and finalise their fulfilment. The 2025 priority actions therefore reiterate the needs identified in 2022, but reflect the improvements made.

2025 priority actions

- Complete the Natura 2000 site designation process
- 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.
- Ensure the effective implementation of Natura 2000 management plans and sufficient administrative capacity and financing both for Natura 2000 and the implementation of the Nature Restoration Regulation. Ensure implementation of Prioritised Actions Framework 2021-2027 (PAFs).
- Strengthen the collection of reliable data to assess the conservation status of protected habitats and species by ensuring that all are covered by a sound monitoring system.
- Strengthen the integration of biodiversity actions into other policies, e.g. energy, agriculture, fisheries, forestry, urban and infrastructure planning and sustainable tourism, and promote communication between stakeholders.

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 ([34]).

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.

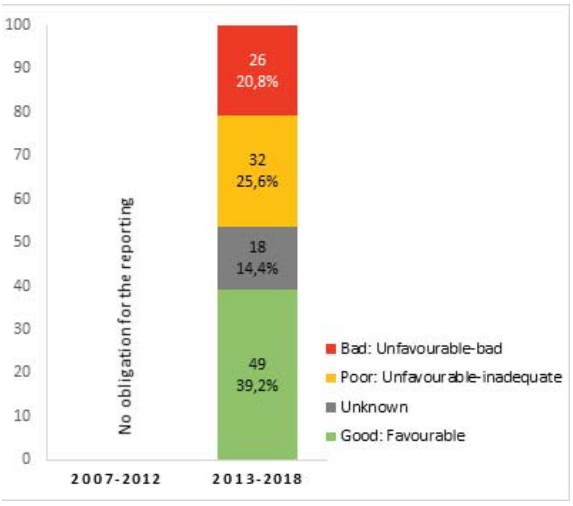
According to Croatia's report on the conservation status of habitats and species covered by the Article 17 of the Habitats Directive for 2013–2018 (the first such report it had ever submitted), 39.2 % of habitats assessed showed good conservation status. However, the share of protected species assessed showing good conservation status in 2018 was only 7.14 %. Many conservation statuses, particularly for species (46.67 %), were reported as unknown, which indicates a very large gap in the monitoring system. As far as birds are concerned, only 10 % of breeding species showed increases or stability in their short-term population trends (for key wintering species, this figure was 11 %). However, there is a very large knowledge gap (83 % for breeding species and 84 % for key wintering species).

The habitat groups faring poorly are, in particular, dunes, bogs, mires and fens, grasslands, freshwater habitats and coastal habitats. The species groups faring poorly are, in particular, mammals, fish, vascular plants and molluscs. However, it should be noted that there are large knowledge gaps on the conservation status of species.

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.

([34]) 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.

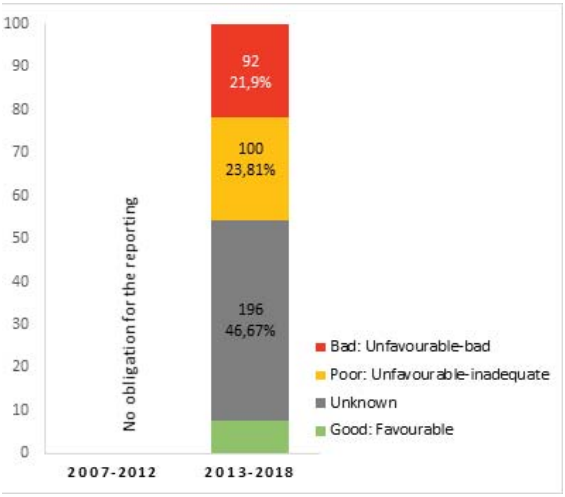
Figure 10: Assessments of conservation status of habitats for the 2007–2012 and 2013–2018 reporting periods



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.

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



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.

Progress on maintaining or restoring favourable conservation status of species and habitats is slow, in part due to a large knowledge gap and insufficient monitoring. The main human-induced pressures as reported under Article 17 of the Habitats Directive and Article 12 of the Birds Directive are from agriculture, forestry, urban development, changes in the water regime, climate change and alien species.

An infringement case is ongoing as Croatia has not correctly applied the Habitats Directive to ensure that changes to wind farm projects affecting Natura 2000 sites are assessed appropriately. The correct application of rules is crucial to ensure that biodiversity concerns are taken into account in decision-making.

On 12 February 2025, the Commission started an infringement case against Croatia for failing to implement the measures required under the Habitats Directive to monitor and prevent the incidental capture and killing of protected species by fishing vessels. If shortcomings are not properly addressed, the Commission may decide to take the infringement case further.

Recovery of ecosystems

Agricultural ecosystems

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

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

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

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

adequately targeted toward this objective([35].)

CAP and the national CAP strategic plans (SPs) 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 SPs in 2022 for the programming period 2023–2027. The CAP is the largest source of funding for the implementation of EU environment policy, particularly for biodiversity. SPs should continue playing a key role in the protection of soil, water, air quality and biodiversity.

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

The utilised agricultural area in Croatia increased from 1 330 970 ha in 2012 to 1 564 050 ha in 2016 and decreased to 1 486 050 ha in 2023 ([36]).

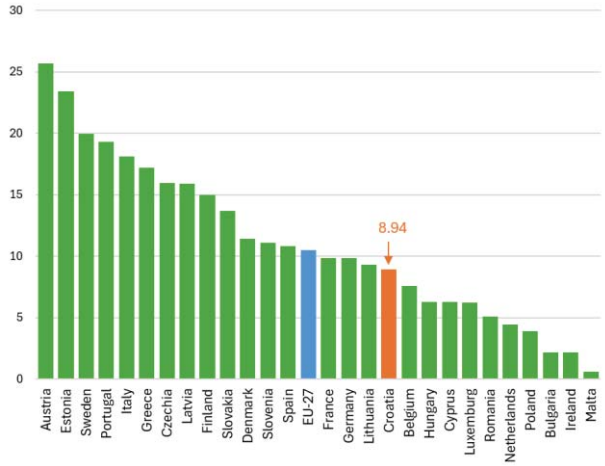
Landscape features are fragments of non-productive and typically – but not exclusively – semi-natural vegetation present in or adjacent to agricultural land. They provide ecosystem services and support for biodiversity. The indicator 'share of agricultural land covered with landscape features' is the ratio between the area covered by non-productive 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 Croatia is 6.9 %, above the EU average. At the EU level, landscape features cover 5.6 % of agricultural land.

In 2024, the CAP basic regulations were amended ([37]) to simplify certain rules, inter alia, the standards for good agricultural and environmental condition (GAEC) 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 arable land, but kept the obligation under GAEC 8 to maintain existing landscape features. The amended regulations set out an obligation for Member States to establish and provide support for eco-schemes covering practices for the maintenance of non-productive areas, such as land lying fallow, and for the establishment of new landscape features on arable land.

The recently adopted Nature Restoration Regulation ([38]) 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 ([39]). 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 the Figure 12, it is estimated that 8.94 % of Croatia's utilised agricultural land area is used for organic farming. This is lower than the EU average of 10.50 % ([40]). Croatia is currently contributing below the average to achieving the target of 25 % of the EU's agricultural land being used for organic farming by 2030.

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



Source: Eurostat, 'Area under organic farming', sdg_02_40, accessed

([35]) European Commission, Vision for Agriculture and Food, https://agriculture.ec.europa.eu/overview-vision-agriculture-food/vision-agriculture-and-food_en

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

([37]) 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.

([38]) 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.

([39]) 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'.

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

5 December 2024, https://ec.europa.eu/eurostat/databrowser/view/sdg_02_40/default/table?lang=en.

2025 priority action

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

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 ([41]) 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 Croatia ([42]).

The greatest contributor to Croatia's unhealthy soils is loss of soil organic carbon in mineral soils ([43]), which affects 7 % of the land area, representing 76 % of cropland and grassland area, particularly in the north-east. Other indicators for unhealthy soils are negligible for Croatia.

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 the report submitted by Croatia under Article 17 of the Habitats Directive for 2013–2018, the majority of assessments of the conservation status of grassland habitat types protected under the Habitats Directive are unfavourable and only 28 % are favourable. Agricultural practices and natural causes (e.g. abandonment) are the main pressures on protected grasslands in Croatia. It is therefore crucial to implement appropriate measures to address these and other pressures in order to improve their conservation status. Measures to maintain traditional agricultural practices favourable to grassland habitat types, as well measures to regulate damaging agricultural practices, are urgently needed, in particular in Natura 2000 sites designated for these habitats' protection.

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

([41]) 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.

([42]) 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.

([43]) 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.

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 the report submitted by Croatia under Article 17 of the Habitats Directive for 2013–2018, 78 % of assessments of the conservation status of peatland habitat types protected under the Habitats Directive are unfavourable, and the rest report unknown status. Natural processes and human-induced changes in the water regime are the main pressures on peatlands in Croatia.

With regard to coastal wetlands, the relevant habitat types protected under the Habitats Directive (e.g. habitat types 1140, 1150 and 1160) all have unknown conservation status in the report submitted by Croatia for 2013–2018. Therefore it is urgent to close this knowledge gap and act accordingly to address potential pressures on and threats to these important habitats.

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 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 ([44]) 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 of favourable conservation status ([45]). The share of forested areas in the EU with a bad conservation status increased from 27 % in 2015 to 31 % in 2018.

In 2020, forests cover 34.7% of Croatia's territory ([46]), and more than 25 % of the assessments of forest habitats show a favourable conservation status, which is well above the EU average ([47]). In 2020, Croatia had 7 000 ha of primary forests ([48]). On 14 June 2022 the Commission used the EU Pilot mechanism to address a breach in respect of illegal logging in Croatia. The Croatian response has been received, and it is under assessment.

([44]) 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

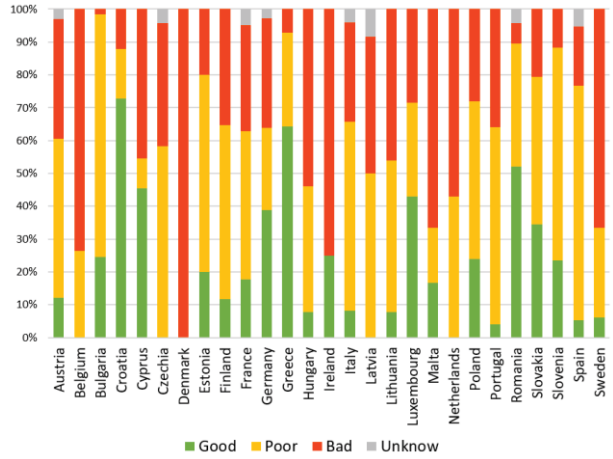
([45]) EEA, *State of Nature in the EU: Results from reporting under the Nature Directives 2013–2018*, Publications Office of the European Union, Luxembourg, 2020, https://www.eea.europa.eu/publications/state-of-nature-in-the-eu-2020.

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

([47]) 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.

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

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.

The EU Timber Regulation (EUTR) ([49]) prohibits the placing on the EU market of illegally harvested timber.

On 29 June 2023, the Regulation on Deforestation-free Products (EUDR) ([50]) entered into force ([51]). The regulation seeks to guarantee that products in the EU that are produced using any of a list of seven commodities have no links to deforestation. The EUDR repeals the EUTR.

Marine ecosystems

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

Since the 2022 EIR report, no additional data regarding Member States' set of GES characteristics for each descriptor in the MSFD have become available. Nevertheless, Member States have to report updates by October 2024, and these will be assessed by the Commission. In the context of this next round of reporting, in accordance with the MSFD and the Commission GES decision ([52]), 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 ([53]).

The Commission assessed the updated monitoring programme reported by Member States in 2020 ([54]). At that time their updates on the elements, features and parameters identified monitoring gaps. The Commission recommended that Member States should prioritise work to address those gaps at all levels of implementation of the MSFD.

Member States also reported their updated programmes of measures, which are required under Article 13 of the MSFD and which must be updated every six years. The Commission has assessed Member States' programmes of measures. However, Croatia reported its programme of measures too late to be included in the Commission's general assessment of the programmes of measures ([55]) of the Member States.

2025 priority action

- Report updates on the assessment of the state of Croatia's marine waters, its targets and its determinations of GES ([56]), which are expected to include any threshold values for the descriptors in the MSFD that may have been established in cooperation with other Member States at the EU or

([49]) 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.

([50]) 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.

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

([52]) 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), http://data.europa.eu/eli/dec/2017/848/oj.

([53]) Communication from the Commission – 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.

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

([55]) https://mzozt.gov.hr/UserDocsImages/Uprava_vodnoga_gospodarstva_i_zast_mora/Strategija_upravljanja_morem/Program%20mjera_2024.pdf.

([56]) In accordance with Article 17 of Directive 2008/56/EC.

regional level.

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 list'), which is regularly updated ([57]).

The third update of the Union list ([58]) entered into force on 2 August 2022. The fourth update is in preparation.

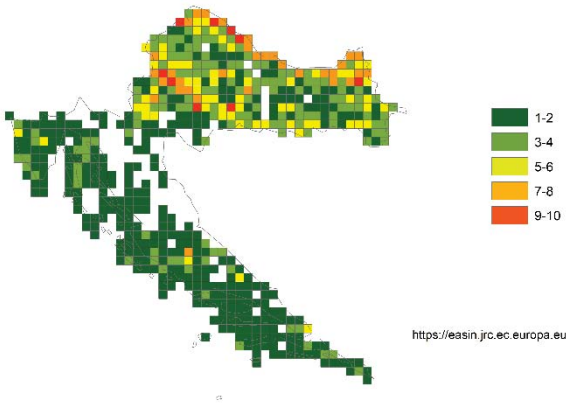
The IAS Regulation ([59]) currently lists 88 species subject to restrictions on keeping, importing, selling, breeding, growing and releasing into the environment. Member States are required to take measures to (i) prevent the introduction of IAS, (ii) ensure early detection and rapid eradication of IAS 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 ([60]). More recent studies have put this cost at USD 28 billion per year in the EU, increasing to USD 148.2 billion by 2040 ([61]), and at USD 423 billion annually at the global level ([62]).

The total number of IAS of Union concern in the country is 28. This includes 23 species recorded in the previous EIR (2021) and 5 new additions. Of these new additions, 1 was already on the Union concern list in 2021, and 4 were added later under Commission Implementing Regulation (EU) 2022/1203.

Figure 14: Number of IAS of EU concern, based on available georeferenced information for Croatia, 2024



Croatia made progress on its 2022 priority action by implementing the action plans to control the spread of IAS in accordance with the IAS Regulation.

2025 priority action

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

Ecosystem assessment and accounting

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

([57]) 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.

([58]) 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.

([59]) 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).

([60]) 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.

([61]) 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.

([62]) 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.

Similarly, target 14 of the GBF ([63]) 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 biodiversity observation and reporting on ecosystem condition in the EU ([64]).

The amended Regulation (EU) 691/2011 on European environmental economic accounts ([65]) 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 and communities of practice involve businesses in protecting biodiversity, including the EU Business & Biodiversity Platform ([66]). These platforms and communities are key tools for promoting and facilitating natural capital assessments among businesses and financial services providers.

Croatia was involved in two Eurostat pilot studies to test the feasibility of introducing ecosystem accounting in 2023 and 2024 (with regard to air filtration, crop pollination and the local climate).

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 is still no Croatian business and biodiversity network member of the EU Business & Biodiversity Platform.

2025 priority action

- Support the development of the national business and biodiversity network.

([63]) 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).

([64]) 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.

([65]) 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.

([66]) 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 ([67]). These set health-based EU air quality standards ([68]) and stipulate Member States' national emission reduction commitments ([69]) for several air pollutants.

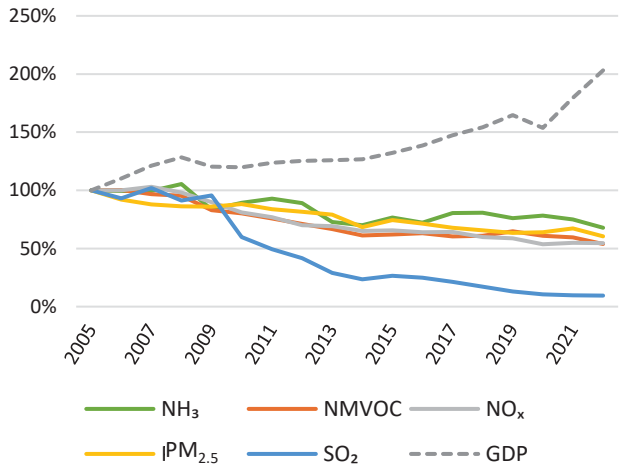
The air quality in Croatia is generally good, with some exceptions.

The latest available annual estimates (for 2022) by the EEA ([70]) for Croatia attribute 3 800 deaths each year (or 34 200 years of life lost (YLL)) to fine particulate matter ($PM_{2.5}$) ([71]); 450 deaths each year (or 4 100 YLL) to nitrogen dioxide (NO_2) ([72]); and 980 deaths each year (or 8 900 YLL) to ozone ([73]).

The emissions of several air pollutants have decreased significantly in Croatia since 2005, while GDP growth has continued (see Figure 15). According to the inventories submitted under Article 10(2) of the National Emission Reduction Commitments Directive (NECD) ([74]) in 2024, Croatia has met its emission reduction commitments for 2020–2029 for air pollutants NO_x, non-methane volatile organic compounds (NMVOC), sulphur dioxide (SO_2), ammonia (NH_3) and $PM_{2.5}$. According to the latest projections submitted under Article 10(2) of the NECD, Croatia is projected to meet its emission reduction commitments for 2030 onwards for NMVOC, SO_2, NH_3 and $PM_{2.5}$, but not for NO_x.

Croatia submitted its first national air pollution control programme (NAPCP) to the Commission on 11 October 2019 and plans to adopt an updated NAPCP in 2025 that includes updated policies and measures to reduce air emissions.

Figure 15: Emission trends for main pollutants / GDP in Croatia (%), 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.

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

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

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

([70]) 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.

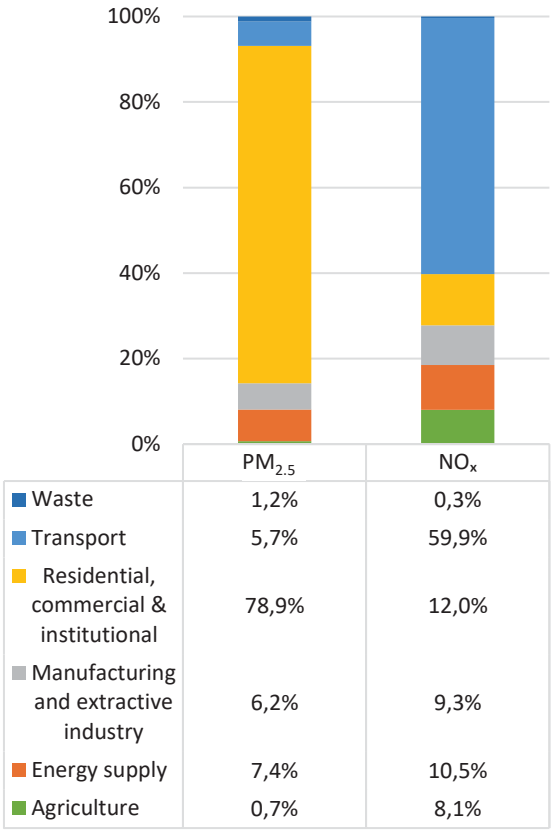
([71]) Particulate matter (PM) is a mixture of aerosol particles (solid and liquid) covering a wide range of sizes and chemical compositions. PM_{10} refers to particles with a diameter of 10 µm or less. $PM_{2.5}$ refers to particles with a diameter of 2.5 µm or less. PM is emitted from many human sources,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

([72]) 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.

([73]) 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.

([74]) 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 16: $PM_{2.5}$ and NO_x emissions by sector in Croatia (%), 2022



	$PM_{2.5}$	NO_x
Waste	1,2%	0,3%
Transport	5,7%	59,9%
Residential, commercial & institutional	78,9%	12,0%
Manufacturing and extractive industry	6,2%	9,3%
Energy supply	7,4%	10,5%
Agriculture	0,7%	8,1%

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) ([75]) were registered for PM_{10} in one air quality zone in Croatia. Furthermore, the target values for ozone concentrations have not been met in two air quality zones ([76]).

Persistent breaches of air quality requirements, which have severe negative effects on health and the environment, are being followed up by the European Commission through infringement procedures covering all Member States concerned, including Croatia for exceedances of PM_{10} and $PM_{2.5}$ limit values. The aim is that appropriate measures be put in place to bring all air quality zones into compliance.

In the 2022 EIR, Croatia received three priority actions. Croatia has made some progress on two of them relating to the further reduction of emissions in the context of the NAPCP. While the latest data show compliance with the 2020–2029 emission reduction commitments, Croatia is still projected not to reach the emission reduction commitment for NO_x for 2030 onwards. The third priority action was to ensure full compliance with EU air quality standards and maintain downward emission trends. Based on the latest data, Croatia has made some progress in this regard. Since 2019, downward emission trends have been reported for all main pollutants. However, exceedances above limit values and target values remain for PM_{10} and ozone, requiring further action.

2025 priority actions

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

Industrial emissions

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

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

The cornerstone of the policy is the Industrial Emissions Directive (IED), which was revised in 2024 ([77]). The revision improves the directive's contribution to the zero pollution objective. It has a strong focus on innovation, and builds solid links between depollution, decarbonisation and circularity, making it a key regulatory tool to accompany the green transformation of EU industry by 2050.

The overview of industrial activities regulated by the IED below is based on data reported to the EU Registry in 2022 ([78]) .

In Croatia, there were about 270 installations covered by the IED in 2022. The main sectors were waste management (33 %), intensive rearing of poultry or pigs

([75]) 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.

([76]) EEA, Eionet Central Data Repository (https://cdr.eionet.europa.eu/).

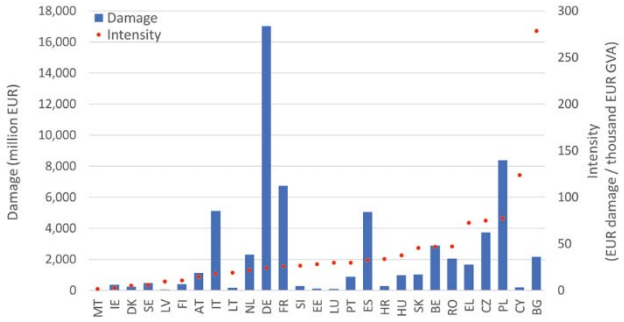
([77]) Directive 2010/75/EU of the European Parliament and of the Council of 24 November 2010 on industrial and livestock rearing emissions (integrated pollution prevention and control) (OJ L 334, 17.12.2010, p. 17), as amended by Directive (EU) 2024/1785 of the European Parliament and of the Council of 24 April 2024, https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A02010L0075-20240804&qid=1725983863299.

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

(25 %), the mineral sector (10 %) and the metal sector (8 %).

Figure 17 shows the damage to health and 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'. Croatia is in 19th place in terms of damage in the EU, but comes 10th for emissions intensity, above the EU average of EUR 27.5/EUR 1 000 GVA. The main industrial contributors to emissions to air ([79]) are the energy sector and the mineral industry for NO_X emissions, the energy sector for dust emissions, and the energy sector and mineral sector for SO_2 and heavy metals.

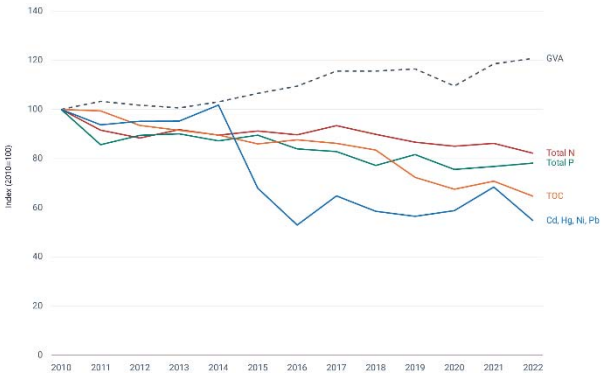
Figure 17: Industrial air pollution damage and intensity per Member State, 2021



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 18.

Figure 18: Industrial releases of pollutants to water and industrial activity in the EU-27

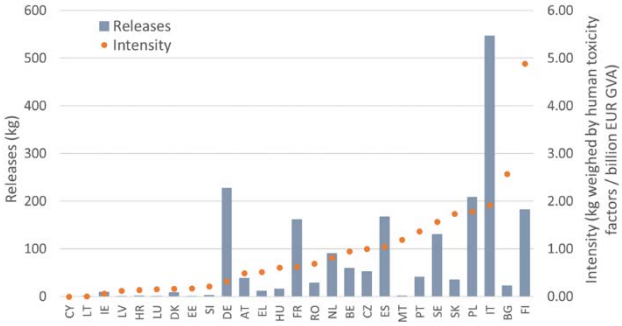


NB: Cd, cadmium; Hg, mercury; Ni, nickel; Pb, lead; total N, total nitrogen; total P, total phosphorous.

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.

Figure 19 shows the industrial emissions of heavy metals to water in Croatia, 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). Croatia has the 22nd highest amount of emissions of heavy metals to water but is the 23rd highest for emissions intensity (below the EU average intensity of 0.864 kg/EUR 1 billion GVA). As shown in Figure 20, the main industrial contributor to emissions to water in Croatia is the refining sector for heavy metals.

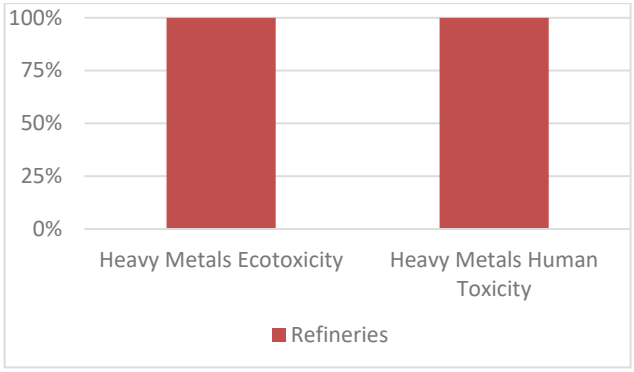
Figure 19: Industrial releases and intensity of heavy metals to water per Member State, 2022



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.

([79]) 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 20: Relative releases to water from industry in Croatia (%), 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.

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.

Croatia has still not transposed some articles of the IED correctly and is subject to an infringement procedure, opened in 2020. Among other things, the definitions of 'installation', 'BATs' and 'baseline condition' have been transposed incorrectly. In addition, national legislation lacks special requirements on the frequency of site visits and the timeliness of inspections and fails to lay down a clear obligation for the inspection report to describe the relevant findings.

2025 priority actions

- Complete the correct transposition of the IED 1.0.
- Reduce industrial air pollution damage and 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 ([80])).

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 ([81]) and the report by Croatia on the implementation of the Seveso III Directive for 2019–2022 ([82]).

In 2024, of Croatia's 71 Seveso establishments, 36 were categorised as lower-tier establishments and 35 as upper-tier establishments (UTEs) based on the quantity of

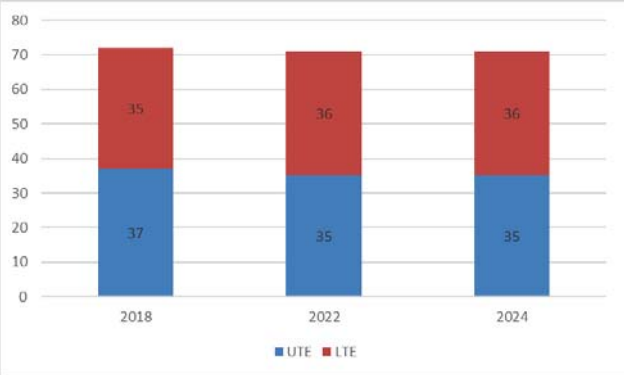
([80]) Directive 2012/18/EU of the European Parliament and of the Council of 4 July 2012 on the control of major-accident hazards involving dangerous substances, amending and subsequently repealing Council Directive 96/82/EC (OJ L 197, 24.7.2012, p. 1), https://eur-lex.europa.eu/eli/dir/2012/18/oj.

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

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

hazardous substances likely to be present. The UTEs are subject to more stringent requirements. Figure 21 presents the change in the number of Seveso establishments.

Figure 21: Number of Seveso establishments in Croatia, 2018, 2022 and 2024



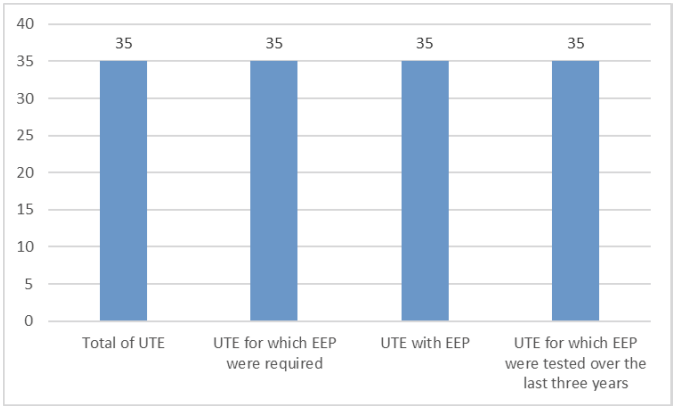
NB: LTE, lower-tier establishment.

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 actions necessary to protect the environment and the population should a major industrial accident occur.

In 2022, according to Croatia, an EEP was required for all 35 UTEs, and all of them had one that had been tested in the past three years. The summary is shown in Figure 22.

Figure 22: Situation regarding EEPs in Croatia, 2022

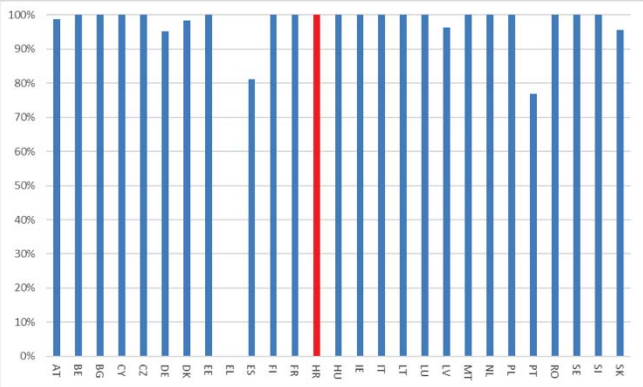


Sources: European Commission: Directorate-General for Environment, *Assessment and summary of Member States' implementation reports for Implementing Decision 2014/896/EU (implementing Directive 2012/18/EU on the control of major accident hazards involving dangerous substances)*, Publications Office of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

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

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 is presented in Figure 23. This provision on knowledge is an important provision of the Seveso III Directive, as awareness by the public of this information may ameliorate the consequences of a major industrial accident.

Figure 23: Share of UTEs for which information on safety measures and appropriate behaviours was actively made available to the public per Member State (%), 2022



NB: No data available for Greece.

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

Following an infringement procedure for the incorrect transposition of the Seveso III Directive, Croatia has amended its legislation and addressed the shortcomings identified.

2025 priority actions

- 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 towards citizens on risks and behaviour in case of accidents.

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).

In 2019, 43 % of the dental treatments were still using dental amalgam, which represented a challenge for Croatia to phase out its use by 1 January 2025. However, measures should have been put in place to ensure a socially and economically sound phase-out, including an adequate reimbursement of the alternatives to dental amalgam through the health insurance scheme. In addition, dental practitioners undergo regular training related to new technologies and material in Croatia. The Commission is monitoring whether the phase-out has taken place under the terms and conditions of the regulation.

Croatia 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 ([83]) 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

([83]) 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 ([84]).

In Croatia, environmental noise is estimated to cause at least around 240 cases of ischaemic heart disease annually ([85]) and some 30 000 people to suffer from disturbed sleep([86]).

Based on the latest set of information analysed, Croatia 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.

Croatia received no priority action in this area in the 2022 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 freshwaters (including surface waters and groundwaters) be significantly reduced. Achieving, maintaining or enhancing a good status of waterbodies as defined by the Water Framework Directive will ensure that EU citizens 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 ([87]) is the cornerstone of EU water policy ([88]). The Water Framework Directive and other water-related directives ([89]) 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 reported its findings to the European Parliament and to the Council on 4 February 2025([90]).

Croatia has 1 978 surface waterbodies and 51 groundwater bodies, divided into two river basin districts

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

([85]) 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 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.

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

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

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

([89]) 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).

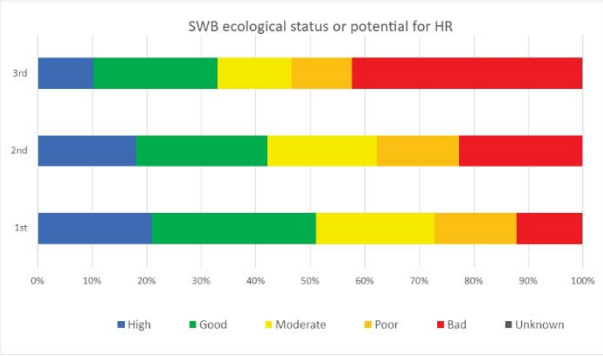
([90]) WFD and FD report (ENV - Library)

(Adriatic and Danube). Approximately 13 % of surface waters are designated as 'heavily modified' and about 11 % as 'artificial. Heavily modified and artificial waterbodies must reach good ecological potential rather than good ecological status, which means that all measures must be taken to mitigate the adverse impact of the sustainable human development activities causing the waterbody to be heavily modified / artificial, while not significantly affecting these activities.

Since the second cycle of RBMPs, the number of delineated surface waterbodies has increased by 26 % and the number of groundwater bodies has increased by 55 %. It follows from the assessment of the third RBMP that there has been a deterioration in the ecological status/potential and the chemical status of surface waterbodies compared with the status reported in the second RBMP (covering 2015–2021). There has been a slight improvement in the quantitative status of groundwater bodies, but no improvement in their chemical status.

Figures 24–27 show the change in the ecological status/potential and chemical status of surface waters, and the quantitative and chemical status of groundwater in 2010, 2015 and 2021.

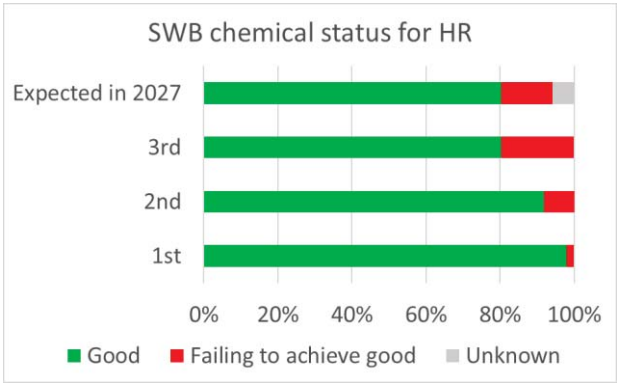
Figure 24: Ecological status/potential of surface waterbodies in each RBMP cycle (%)



The number of surface waterbodies with good or better ecological status/potential has been decreasing since the first RBMP, and it amounts to 33 % in the third RBMP. It is not entirely clear whether this continuous decrease is due to improved monitoring, an improved classification system (i.e. an intercalibration process), more pollution or all of the above. No improvements are expected until 2027.

The main pressures come from discharges, agriculture, transport and physical alterations. Water abstractions are also a problem.

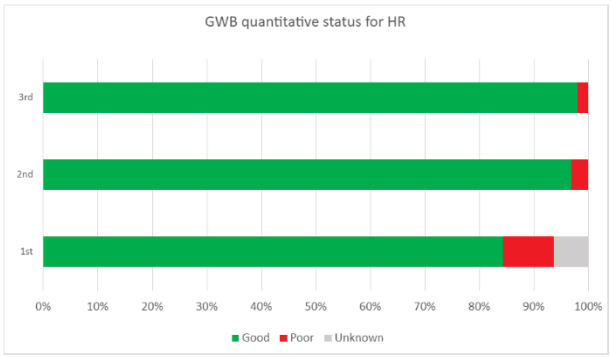
Figure 25: Chemical status of surface waterbodies in each RBMP cycle (%)



The percentage of surface waterbodies with good chemical status amounts to 80 % in the third RBMP, representing a decrease from the second one. It is not clear whether this decrease represents a genuine deterioration or is due to better monitoring and classification. All coastal and transitional waters fail to show good chemical status, and Croatia fails to identify the sources of anthropogenic pressures on these waterbodies. No improvements are expected until 2027.

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

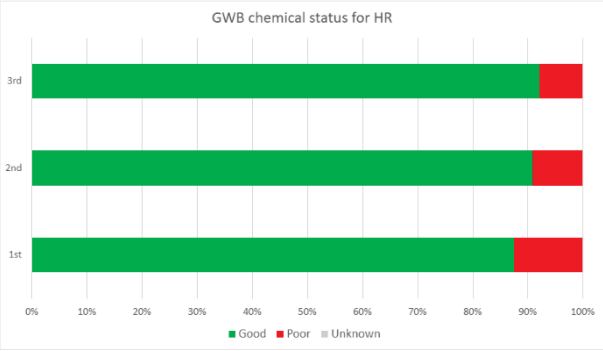
Figure 26: Quantitative status of groundwater bodies in each RBMP cycle (%)



There has been a slight increase in groundwater bodies with good quantitative status since the second RBMP, which seems due to the re-delineation that took place. Only one groundwater body is reported to have poor quantitative status, whereas five groundwater bodies are reported to be at risk of losing their good quantitative status by 2027.

Since 2016, water abstractions have increased, due potentially to the increase in electricity generation, while decreasing trends were observed in households and services and industry.

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



The percentage of groundwater bodies with good chemical status (92 %) did not change from the second to the third RBMP. No improvements are expected until 2027.

Failure to achieve good chemical status is due to the general water quality assessment and to regional saline or other intrusions resulting from anthropogenically induced sustained changes in flow direction. The main issues are nitrates pollution, saline intrusion and water temperature.

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

Some progress has been made on the 2022 priority actions regarding assessing new physical modifications to waterbodies and ensuring that hydrotechnical flood protection activities do not lead to additional serious hydromorphological deterioration. Croatia has reported operational measures to address the morphological pressures on surface waterbodies, mainly focused on research into the underlying issues and improved monitoring. The third RBMP includes climate change adaptation measures; when these measures imply hydromorphological changes to surface or groundwater bodies, Croatia considers them only after an environmental impact assessment (EIA).

A positive achievement is the improvements made to the programme of measures since the second RBMP. In the third RBMP, Croatia mapped measures in both river basin districts against all key types of measures, and basic and specific measures are listed in great detail. A notable exception is key type of measure 19 ('measures to prevent adverse impacts of recreation') to reduce pressures on the status of coastal and transitional waterbodies, which are affected by mass tourism. Another positive element is that Croatia is on the right track to tackle pressures on the chemical status of surface and groundwater bodies from sources other than agriculture.

2025 priority actions

- Improve river continuity and ecological flows, boosting efforts on nature-based solutions to reduce hydro-morphological pressures.
- Ensure periodic reviews of permits for discharges, abstractions and other water uses, including hydropower pressures
- Reduce pollution from nutrients, chemicals, metals and saline discharges
- Improve the classification of waterbodies 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 cost recovery and the 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 reported its findings to the European Parliament and to the Council on 4th February 2025, together with the assessment of the RBMPs.

Croatia's second FRMP contains the same objectives as the first one. It indicates that there has been progress towards the strategic objectives of the previous plan but does not provide details. The FRMP identifies 72 measures, providing information on the timetable for implementation, costs and progress since the previous plan. The FRMP considers nature-based solutions and includes measures to address nature conservation. Reference is made to adaptation to climate change. Croatia reported that coordination at the international and regional levels took place, as well as public consultation and stakeholder involvement.

Investments in floods protection measures are planned or under implementation with financial support from both cohesion policy operational programmes and the Recovery and Resilience Facility (RRF). The cohesion policy major project for floods prevention in Karlovac, which includes nature-based solutions, started implementation

in the 2014–2020 programming period and continues in the current 2021–2027 programming period.

2025 priority actions

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

Drinking Water Directive

The objectives of this directive are to protect human health by ensuring that drinking water is fit for human consumption and by improving access to drinking water. 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 ([91]), (ii) a methodology for measuring microplastics in drinking water ([92]) and (iii) an EU system for testing and approving materials that will be allowed to be in contact with drinking water ([93]). 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 Croatia does not give rise to concern ([94]).

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

Croatia is rich in water resources; however, it is increasingly exposed to climate change trends that have already led to drought events in 2024, particularly in Slavonia and along the coast, with severe impacts on crop yields. The drinking water infrastructure is old, and investments have been concentrated more on the extension of the network and less on the reconstruction of old pipes. Croatia therefore has a high connection rate but is one of the Member States with the highest water loss rates, with 49 % non-revenue water ([95]). In the framework of its national RRP, Croatia adopted a national loss reduction action plan in June 2024, which includes several measures to reduce water losses and will be followed by the adoption of individual water losses reduction plans at the level of water operators.

2025 priority action

- Swiftly implement the measures included in the national water loss reduction action plan.

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. Notices banning or advising against bathing should be rapidly and easily identifiable.

Figure 28 shows that in 2023, out of the 936 Croatian bathing waters, 905 (96.7 %) were of excellent quality, 22 (2.4 %) were of good quality and 5 (0.5 %) were of sufficient quality. No bathing waters were found to be of poor quality. Detailed information on Croatia's bathing waters is available from a national portal ([96]) and through an interactive map viewer provided by the EEA ([97]).

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

([92]) 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.

([93]) 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).

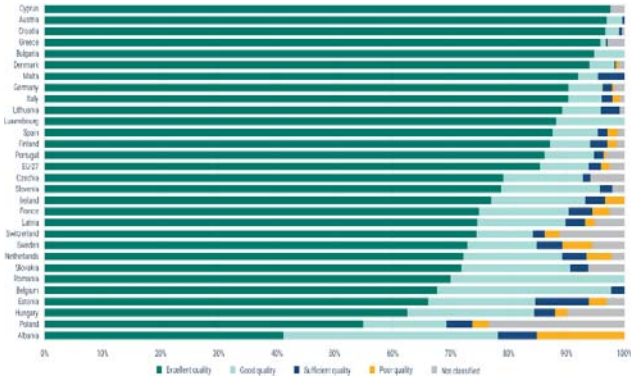
([94]) In summary, the compliance for all parameter groups in Croatia was at least 99.92 % in 2017, 99.11 % in 2018 and 99.28 % in 2019.

([95]) World Bank, *Technical assistance on support to reduce water loss within the reform of the water sector in Croatia – Output 6: Report on inputs for a final draft national loss reduction action plan*, Washington, DC, 2023, https://documents.worldbank.org/en/publication/documents-reports/documentdetail/099120123054036808/p178797 0dc65740290b0a308bbcd0b3379e. Non-revenue water is defined as the difference between the system input volume (water supplied) and the billed volume (revenue water).

([96]) https://vrtlac.izor.hr/kakvoca/.

([97]) EEA, 'State of bathing water', EEA website, 2024, State of bathing waters in 2023 | European Environment Agency's home page

Figure 28: 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 ([98]) 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, 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 Croatia's RBMPs has identified nutrients from agriculture as an important pressure on groundwater / surface water that is affecting these waters' good status and as one of the main factors leading to Croatia not meeting the Water Framework Directive's objectives.

2025 priority action

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

Urban Wastewater Treatment Directive

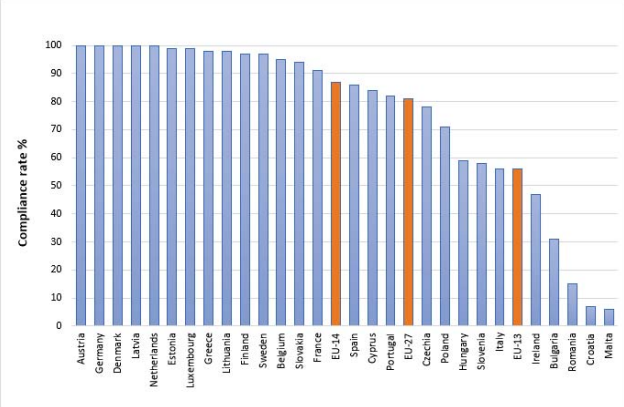
The Urban Wastewater Treatment Directive (UWWTD) aims to protect human health and the environment from the effects of untreated urban wastewater. It therefore requires Member States to collect and treat (secondary or biological treatment) waste water in all urban areas of more than 2 000 people, and to apply a more stringent treatment than secondary, with nitrogen and/or phosphorus removal, to the waste 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 Croatia, the compliance rate was 7 % in 2020. Sixty-eight agglomerations, generating 3 513 265 population equivalent of urban waste water, did not comply with the requirements of the directive. Meanwhile, 171 agglomerations, generating 893 890 population equivalent of urban waste water, were not subject to the requirements of the directive because in 2020 they were still under pending deadlines.

Pursuant to its Treaty of Accession, Croatia should have reached full compliance with the requirements of the directive by the end of 2023. This will be assessed by the Commission in the context of the next Member States' reporting exercise. However, it is already clear that Croatia will need to step up its efforts to comply with its obligations under EU law. Many investments are planned under the cohesion policy and the national RRP , but they are being implemented at a slow pace. Most of the investments planned in the 2014–2020 cohesion policy operational programme are either continuing implementation in the 2021–2027 programming period, have been reallocated for implementation with RRP financial support or will be completed with national funding.

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

Figure 29: Proportion of urban waste water that fully complies with the UWWTD (%), 2020



Source: 12th technical assessment of UWWTD implementation, 2024([99])

This is all the more important as the directive has been revised. The revised directive builds on the current *acquis*, strengthens existing treatment standards and establishes a new 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. Croatia has until 31 July 2027 to transpose the new directive into its national legal system.

Since 2017 Croatia has received priority actions concerning the necessity of implementing the UWWTD, but despite some progress made, compliance is far from being achieved.

2025 priority action

- Urgently take the necessary measures to ensure full implementation of the current UWWTD, taking into account the new requirements of the recast directive.

Chemicals

The EU seeks to ensure that chemicals are produced and used in a way that minimises any significant adverse effects on human health and the environment. In October 2020, the Commission published its chemicals strategy for sustainability towards a toxic-free environment ([100]), 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 ([101]) provides a baseline protection for human health and the environment. It also ensures stability and predictability for businesses operating in the internal market.

Since 2007, the Commission has gathered information on the enforcement of the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) Regulation and the Classification, Labelling and Packaging (CLP) Regulation. In December 2020, the Commission assessed the Member States' reports ([102]) on the implementation and enforcement of these regulations ([103]). 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

([99]) https://op.europa.eu/en/publication-detail/-/publication/4c97f846-44b2-11ef-865a-01aa75ed71a1/language-en.

([100]) 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.

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

([102]) 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.

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

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 ([104]) 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 ([105]).

In 2023, new hazard classes were added to the CLP Regulation, and the revision of the regulation was tabled (published on 20 November 2024) ([106]). 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 ([107]). 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.

The reporting exercise for Member States from Article 117 of the REACH Regulation and Article 46 of the CLP Regulation is conducted every five years. Results of the coming one are expected in 2025, hence the absence of new specific national data on enforcement since 2022.

Responsibility for checking compliance with the REACH Regulation in Croatia lies with the state inspectorate ([108]).

In 2022, Croatia had not devised or implemented any strategy for the enforcement of the REACH or CLP Regulations, but there are plans to devise one ([109]). No progress has been reported. Four inspectors were allocated to the enforcement of the REACH and CLP Regulations at the national level and 30 at the regional level ([110]). As a result, the number of REACH controls carried out in the previous reporting period (62) remained well below average.

Croatia participated in an EU-coordinated enforcement project on products sold online, called the REACH-EN-FORCE (REF)-8 project ([111]) in 2020, and on projects on REACH authorisation obligation (REF-9) ([112]) in 2021, on integrated control of chemicals in products (REF-10) ([113]) in 2022 and on the second harmonised enforcement project on biocidal products containing non-approved/approved active substances (BIOCIDES-EN-FORCE (BEF)-2) ([114]) in 2022.

([104]) 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/.

([105]) 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.

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

([107]) 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.

([108]) 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.

([109]) 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.

([110]) 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.

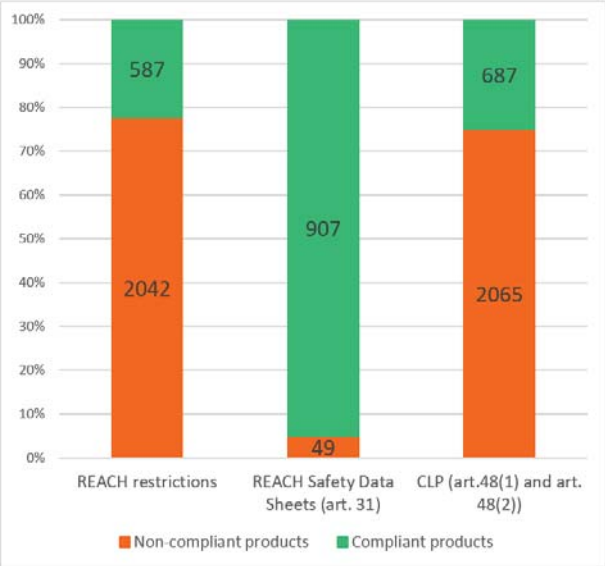
([111]) European Chemicals Agency, *REF-8 project report on enforcement of the CLP, REACH and BPR duties related to substances, mixtures and articles sold online*, Helsinki, 2021, p. 20, https://echa.europa.eu/documents/10162/17088/project_report_ref-8_en.pdf/ccf2c453-da0e-c185-908e-3a0343b25802?t=1638885422475.

([112]) European Chemicals Agency, *REF-9 project report on enforcement of compliance with REACH authorisation obligations*, Helsinki, 2023, https://echa.europa.eu/documents/10162/17088/project_report_ref-9_en.pdf/b2110033-262e-1075-b50c-11b20754bc80.

([113]) European Chemicals Agency, *REF-10 project report on integrated chemical compliance of products*, Helsinki, 2023, https://echa.europa.eu/documents/10162/17086/ref-10_project_report_en.pdf/83661988-378d-6268-3f28-182da198e8ac?t=1702375815496.

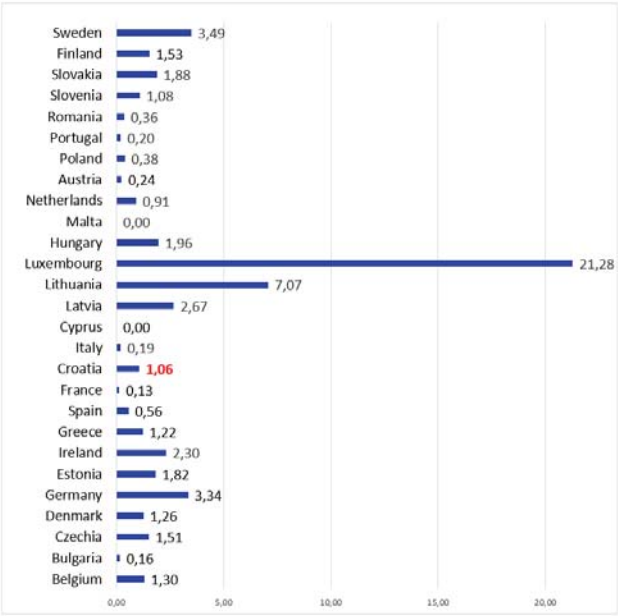
([114]) European Chemicals Agency, *Second harmonised enforcement project on biocidal products with approved/non-approved active substances*, Helsinki, 2023, https://echa.europa.eu/documents/10162/17086/bef_2_report_en.pdf/7432b55c-f4f8-8124-0525-47d24f96143f?t=1700567655546.

Figure 30: Compliance of imported products – results of the REF-8 project (%)



A risk approach was used for the targeting of controls to maximise the chances of identifying non-compliance. Therefore, 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 31: Number of REF-8 checks performed per 100 000 inhabitants (EU average = 1.24)



Croatia's participation to the coordinated enforcement project (REF-8) was below the EU average, which is rather low because of the lack of involvement of certain large Member States.

In 2022, Croatia received two priority actions related to upgrading administrative capacities in implementation and enforcement to move towards a policy of zero tolerance of non-compliance and devise and implement a REACH and CLP enforcement strategy. In the absence of formal reporting since 2022, no progress has been reported and these priority actions remain valid in 2025.

2025 priority actions

- Upgrade the administrative capacities in implementation and enforcement to move towards a policy of zero tolerance of non-compliance.
- Increase involvement in the activities of the Forum for Exchange of Information on Enforcement of the European Chemicals Agency, including in the coordinated enforcement projects, called REF projects.
- Increase customs checks and checks of products sold online with regard to compliance with chemicals legislation.

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.

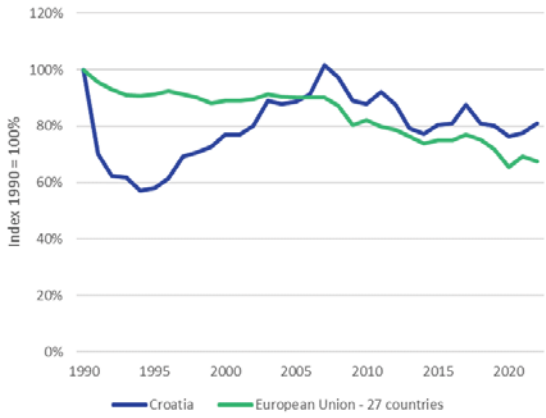
Over the last three decades, since 1990, the EU has achieved steady decreases in its emissions, reaching a running total in 2022 of – 32.5 % ([115]). However, the EU and its Member States need to step up their implementation efforts and accelerate emissions reduction to stay on track to reach their targets of a 55 % reduction in net GHG emissions by 2030 and climate neutrality by 2050. Between 1990 and 2022, net GHG emissions of Croatia decreased by 19%, making it one of the countries with below-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 ([116]). The package has been almost 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) ([117]). Croatia submitted the NECP in March 2025 after the deadline set by the Regulation on the Governance of the Energy Union and Climate Action.([118])

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

Figure 32: Total GHG emissions (excluding international aviation) (%), 1990–2022



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

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

([116]) 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.

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

([118]) Article 14 of Regulation 2018/1999 on the Governance of the Energy Union and Climate Action

industry, aviation within Europe ([119]) 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 45% from 2005 to 2023.

In 2023, about 47 % of the greenhouse gases emitted by Croatia's ETS installations came from power generation, less than the EU average (57 %). Of the total emissions from all industry sectors, slightly more than half came from cement and lime production, about one fifth from refineries, 10 % from the chemical industry, only 1 % from the metals industry, and 16 % from other industries. Between 2013 and 2019, the power sector achieved reductions of 24 %, whereas emissions in the industry sectors only declined by 8 %. Between 2019 and 2023, greenhouse gas emissions from the power sector have increased by 14 % in the industry sectors, they have declined by 28 %. From 2013 to 2023, greenhouse gas emissions declined by 14 % in power generation and by 33 % in the industry sectors. This resulted in a 25 % greenhouse gas emissions reduction in the ETS sectors in this period.

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 ([120]). 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. Croatia did not communicate full transposition into national law by this deadline. The Commission therefore started an infringement procedure against Croatia on 25 July 2024, for failing to fully transpose the provisions into national law. In the absence of complete transposition, the Commission may decide to take the infringement case further.

On 25 January 2024 the Commission started an infringement case against Croatia for its failure to fully transpose previous revisions of the ETS directive ([121]) into national law. In the absence of a complete transposition, the Commission may decide to take the infringement case further.

Effort sharing

The Effort Sharing Regulation (ESR) ([122]) 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. Croatia's target is –16.7%.

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 Croatia is on track to achieve its 2030 ESR target. Projected emissions are 0.4 percentage points above its 2030 target.

The largest contributor is the domestic transport sector, which accounted for 35 % of all effort sharing emissions in 2022. Sustainable transport has yet to take off in Croatia. Road transport is the dominant passenger transport mode in Croatia, trains provide only 2 % of passenger transport which is way below EU average of 6 %. Share of trains in freight transport is 21 %, five percentage point above EU average. However, only 38 % of the rail network is electrified.

Only 0.2 % of car fleet were battery electric vehicles in 2023 (EU average is 1.2 %). On the other hand, Croatia has about 1 280 publicly accessible charging points, or one for every four e-vehicles (above the EU average of 1:10).

The buildings sector is a significant concern for Croatia as well. Croatia needs to step up its efforts in the residential sector to achieve its 2030 energy consumption target for buildings. Final energy consumption in the residential sector increased by around 5 % between 2017 and 2022 whereas emissions from the building sector decreased by 4 %

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

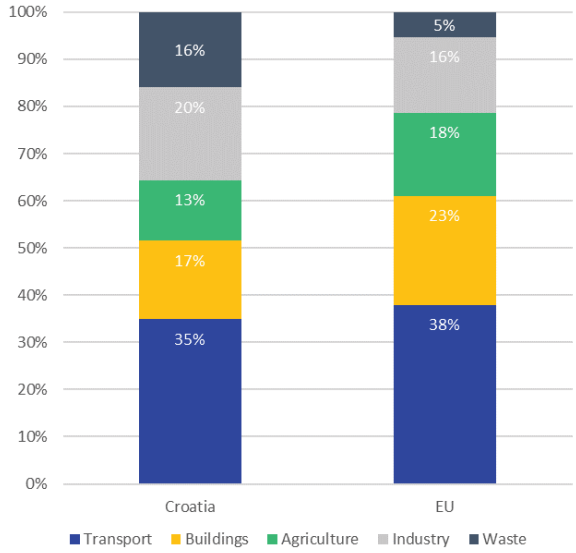
([120]) Directive (EU) 2023/959 (https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv:OJ.L_.2023.130.01.0134.01.ENG)

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

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

in the same period. Share of renewables in heating and cooling is 37 % and is growing very slowly.

Figure 33: 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.

In Croatia, net carbon removals in the LULUCF sector have declined by almost 1 Mt in 2022.

Croatia's target in 2030 is to enhance land removals by an additional –0.6 Mt of CO_2 equivalent compared to the yearly average of the period 2016–2018. The latest available projections show a gap to the 2030 target of 2.0 Mt of CO_2 equivalent. Therefore, Croatia 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.

Croatia is in two out of three regions identified as a hotspots of climate risks most affected by climate change – Southern Europe and low-lying coastal regions. ([123])

Croatia is vulnerable to floods, drought, sea-level rise and heatwaves. Agriculture and water management are the sectors affected most but hydro and thermal power production also face risks. Floods are a risk both in terms of expected annual damage and in the population exposed. Over the past decades, only 5 % of losses caused by climate-related events were insured. Given the increasing frequency of floods, action taken so far is insufficient to limit the damage and safeguard the free flow of rivers and aquatic ecosystems. . During 2024, it was noted that drought caused damage in all sectors of agricultural production. In 2024 drought events caused damage in all sectors of agricultural production. Green infrastructure and nature-based solutions are key to mitigating these climate-related events. Croatia has a wide protection gap for floods and the gap for wildfires requires close monitoring. Putting in place the right institutional settings is crucial to climate adaptation. On this front, Croatia lacks a governance structure and systems to support systematic and regular planning, monitoring and evaluation of policies, including appropriate coordination between sectors of government.

Croatia adopted its national adaptation law in 2019 and has its national adaptation strategy. There are no sectoral or regional adaptation plans.

Croatia received two priority actions in the 2022 edition of the review.

There is still little progress in decarbonisation of transport sector.

Final energy consumption of building remains above EU average and Croatia needs to step up its efforts in the residential sector. On the other hand, emissions from building sector are decreasing and Croatia is projected to reach its 2030 effort sharing target, provided it adopts and implements the planned additional measures.

2025 priority action

- Implement all polices and measures that are needed to achieve targets laid down in the Effort Sharing Regulation (ESR) and the Land Use and Land-Use Change and Forestry (LULUCF) Regulation. More detailed priority actions are set out in the assessment of the final National Energy and Climate Plan (NECP)([124]).

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

([124]) National energy and climate plans.

Part II: Enabling framework – implementation tools

5. Financing

The EU budget supports climate investment in Croatia with significant amounts in 2021–2027, with revenues from the ETS also feeding into the national budget. During 2020–2022, Croatia's revenues from auctioning reached EUR 328 million in total, with 76 % of it spent on climate and energy, corresponding to EUR 250 million.

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 2.9 billion per year in Croatia.

These four environmental areas currently receive total funding of around EUR 1.7 billion per year; thus, there is a gap of EUR 1.2 billion per year.

Of the environmental investment gap, EUR 592 million concerns biodiversity and ecosystems, EUR 272 million the water objective, EUR 226 million pollution prevention and control and EUR 118 million circular economy.

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 RRF EUR 275.7 billion and EUR CAP 145.9 billion ([125]).

In Croatia, the EU cohesion policy (considering the EU contribution amount) provides EUR 2.5 billion for climate action in 2021–2027 (with around two thirds of this via the ERDF), with a further EUR 128 million from the EMFAF ([126]).

The RFF contributes to climate finance in Croatia with EUR 3.9 billion up to 2026, representing 39 % of the RRP ([127]).

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 493 million was assigned to Croatia in the reference period ([128]).

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 72 million in 2020, EUR 112 million in 2021 and EUR 143 million in 2022 in Croatia, totalling EUR 328 million in the three-year period. In Croatia, according to the law, 100 % of the auctioning revenues are spent on climate and energy purposes ([129]).

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

It should be noted that investment in climate action also supports the environment and, therefore, the environmental investments described in the following sections cannot be regarded as entirely additional to climate investment ([130]).

Environmental financing and investments

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

([125]) 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.

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

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

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

([129]) 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.

([130]) 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 ([131]).

The environment overall

Investment needs

The overall environmental investment needs to be sufficient to enable Croatia 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 2.9 billion per year (in 2022 prices).

A significant part of the estimated requirement, around EUR 0.9 billion per year, concerns biodiversity and ecosystems, with around EUR 0.6–0.7 billion needed for the circular economy, water and tackling pollution (in 2022 prices).

Current investments

To implement the environmental investments needed, the available financing is estimated to currently reach an annual EUR 1.7 billion in Croatia from EU and national sources combined (in 2022 prices).

Total environmental funding from the multiannual financial framework (MFF) is estimated to reach around EUR 3.4 billion for Croatia in total, during 2021–2027 (or EUR 486.9 million per year).

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

Instrument	Allocations
Cohesion policy	**2 265.5** ([a])
ERDF	1 383.0
Cohesion Fund	871.2
Just Transition Fund	11.3
CAP	**814.9** ([b])
European Agricultural Guarantee Fund	450.0
European Agricultural Fund for Rural Development	364.9
EMFAF	**62.3**
Other MFF sources	265.5 ([c])
RRF ([d]) (2021–2026)	**2 239**

([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. Source and further information: https://cohesiondata.ec.europa.eu/2021-2027-Categorisation/2021-2027-Planned-finances-detailed-categorisation/hgyj-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, prior to 2025 revisions. Data source: European Commission.

Croatia, 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 (EUR 5.4 billion) ([132]), Horizon Europe (EUR 95.5 billion) ([133]), the Connecting Europe Facility (EUR 33.7 billion) ([134]) and funds that can be mobilised through the InvestEU programme ([135]).

Croatia's RRP supports climate objectives through funding of EUR 3.9 billion (39 % of total), with an additional EUR 1.35 billion (13.5 % of total) directly for the environment.

The EIB provided around EUR 197.4 million in environment-related financial contributions to Croatia from 2021 to mid 2024, all of which was in the area of sustainable energy, transport and industrial projects, which provides significant co-benefits to reducing air pollution, environmental noise and other pollution.

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

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

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

([134]) 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.

([135]) 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 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 Croatia, the total national environmental protection expenditure was EUR 1.1 billion in 2020 and EUR 1.2 billion in 2021, representing around 2 % 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 Croatia, the national environmental protection investment reached EUR 354 million in 2020, rising to EUR 368 million in 2021, representing around 0.6–0.7 % of GDP.

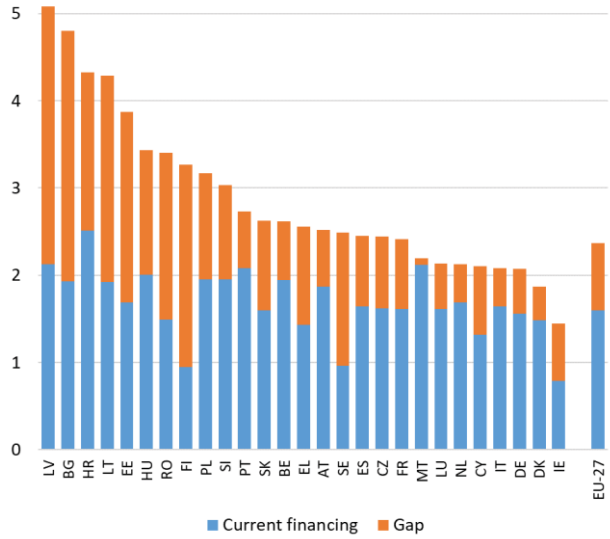
Splitting by institutional sector, 36 % of Croatia's national environmental protection investment (capital expenditure) comes from the general government budget, with 16 % coming from specialist private-sector producers (of environmental protection services, such as waste and water companies) and 48 % 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 ([136]).

Croatia's total financing for environmental investment reaches an estimated EUR 1.7 billion per year (in 2022 prices), including EU funding and national public and national private expenditure. Of the total, the share of EU fund (including EIB funds) reaches 46 %, with around 54 % national financing. The total public financing (EU plus national public) represents 66 % 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 1.2 billion per year in Croatia, representing around 1.81 % of the national GDP, which is higher than the EU-average (0.77 %).

Figure 34: Environmental financing, needs and gaps per Member State (% of GDP)



Source: Directorate-General for Environment analysis.

Table 2 provides the distributions of Croatia's environmental investment gap (expressed in various forms) by environmental objective.

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

Environmental objective	Investment gap, per year		
	Million EUR (2022 prices)	% of total	% of GDP
Pollution prevention and control	226	18.8	0.34
Circular economy and waste	118	9.8	0.18
Water management and water industries	272	22.5	0.41
Biodiversity and ecosystems	592	49.0	0.88
Total	**1 208**	**100.0**	**1.81**

Source: Directorate-General for Environment analysis.

Pollution prevention and control

Investment needs

In pollution prevention and control, Croatia's investment needs are estimated to reach EUR 0.6 billion per year (including baseline investments) in 2021–2027. Most of this, EUR 0.5 billion, relates to air pollution control, to

([136]) Eurostat, 'Environmental protection expenditure accounts', env_ac_epea, 2024.

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 0.1 billion per year, most of which is delivered by the (same) sustainable energy and transport investments that also benefit clean air ([137]). Industrial site remediation requires an estimated EUR 12 million per year. Microplastics pollution and the chemicals strategy require around EUR 7–10 million per year (each) ([138]).

Current investments

The current investment levels supporting pollution prevention and control reach an estimated EUR 351 million per year in Croatia in 2021–2027. Most of the financing concerns clean air (EUR 310 million per year). Protection from environmental noise receives around EUR 116 million per year, with a further EUR 33 million for site remediation([139]).

In Croatia, the EU MFF provides an estimated 33.1 % of the clean air financing (mostly via cohesion policy), with a further 52.5 % from the RRF, adding up to 85.6 % of the total. EIB financing contributes 7.5 % and national sources reach 6.9 % .

The gap

To meet its environmental objectives concerning pollution prevention and control (towards zero pollution), Croatia needs to provide an additional EUR 226 million per year (0.34 % of GDP), mostly related to clean air and noise. The adequate implementation of the NECP with the investments included for sustainable energy and transport would largely deliver this, while in many Member States additional measures and investments may be required to comply with the ammonia reduction requirements.

The latest (2023) NAPCP review report ([140]) did not cover Croatia in terms of compliance with requirements in 2020 and 2021 and concerning the NECD's 2030 emission reduction commitments. Its future updated NAPCPs will need to report on its policies and measures and how climate, energy and CAP plans and financing baselines are taken into account.

Circular economy and waste

Investment needs

Croatia's investment needs in circular economy and waste reach an EUR 0.7 billion per year (including baseline investments). Most of this, around EUR 580 million per year, relates to circular economy measures in the mobility, food and built environment systems, with a further EUR 150 million necessary for waste management (municipal and packaging waste), covering waste collection, biowaste treatment, recycling reprocessors, waste-sorting facilities, and digitalisation of the waste registry. The amount for waste excludes the investments needed for the uptake of circularity and waste prevention across the economy ([141]).

Current investments

Circular economy investments across the economy reach around EUR 476 billion per year in Croatia in 2021-2027, with a further EUR 131 million provided for waste management that does not constitute circular economy.

Around 2.8 % of this combined financing for circularity and waste comes from the EU MFF, with a further 8.2 % from the RRF, adding up to 11 % of the total. EIB loans did not support circularity and waste during 2021–2024. The share of national sources is absolutely overwhelming, reaching 89 % of the total financing ([142]).

The gap

To meet its environmental objectives concerning the circular economy and waste, Croatia needs to increase circular economy investments by an estimated EUR 100 million per year, with an additional EUR 18 million concerning waste management action, not

([137]) 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.

([138]) 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).

([139]) 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

([140]) 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.

([141]) 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.

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

belonging to circular economy. Combined, this amounts to EUR 118 million per year, representing 0.18 % of Croatia's GDP.

Of the circular economy gap, EUR 26 million relates to recent initiatives, such as the eco-design for sustainable products, packaging and packaging waste, labelling and digital tools, CRM recycling, and measures proposed under the amendment of the Waste Framework Directive, and EUR 74 million constitutes further investment need to unlock Croatia's circular economy potential.

Water protection and management

Investment needs

The annual water investment needs reach an estimated EUR 680 million (in 2022 prices) in Croatia. This comprises investment needs both for the water industry and for the protection and the management of water. Of the total annual need, EUR 286 million relates to the management of waste water (also including additional costs associated with the revised UWWTD). A further EUR 53 million is necessary for drinking-water-related investments and around EUR 338 million for the protection and management of water ([143]).

Current investments

Water investments in Croatia are estimated to be around EUR 408 million per year (in 2022 prices) in 2021–2027. Of this, EUR 275 million supports wastewater management, EUR 68 million drinking water and around EUR 63 million the other aspects of the Water Framework Directive (water management and protection).

Of the total water financing, 27.7 % is provided by the EU MFF (mostly through cohesion policy), with a further 13.3 % from the RRF, reaching 41 % combined. Most of the financing comes from national sources (59 %) ([144]).

The gap

To meet the various environmental targets under the Water Framework Directive and the Floods Directive, Croatia's water investment gap reaches EUR 272 million per year (0.41 % of GDP), with most of it assigned to the Water Framework Directive requirements in general and small amounts allocated to wastewater measures (EUR 11 million per year).

Biodiversity and ecosystems

Investment needs

The investment needs for biodiversity and ecosystems are estimated to be EUR 0.9 billion per year (in 2022 prices) in Croatia in 2021–2027. This includes the following financing needs:

- Croatia's prioritised action framework ([145]) concerning the Natura 2000 areas: EUR 227 million per year, mostly running costs;
- additional BDS costs ([146]): EUR 454 million per year on top of the framework;
- sustainable soil management costs ([147]): EUR 233 million per year.

Current investments

The current level of biodiversity financing is estimated to be EUR 323 million per year (in 2022 prices) in 2021–2027. 72.1 % of the is considered direct financing to biodiversity and ecosystems, with a 100 % coefficient in the tracking schemes.

19.5 % of the total financing is estimated to come from EU cohesion policy, 34 % from the CAP, 6.1 % from Horizon Europe, around 2.4 % from LIFE and 2.3 % from the EMFAF. The EU MFF altogether accounts for 64.8 % of the financing and the RRF for 3.4 %, adding up to a total of 68 % from the EU budget. The rest, 32 %, comes from national sources ([148]).

Croatia is the Member State with the highest share of biodiversity financing programmed under the cohesion policy EU contribution amount: 10.7 % (disregarding ESF+). However, only 0.8 % of RRF funds and 17.9 % of CAP funds have been programmed for investments in

([143]) 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.

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

([145]) 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.

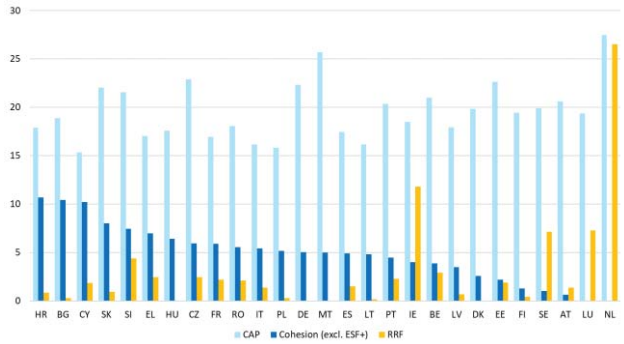
([146]) See European Commission: Directorate-General for Environment, *Biodiversity Financing and Tracking – Final report*, Publications Office of the European Union, Luxembourg, 2022, https://op.europa.eu/en/publication-detail/-/publication/793eb6ec-dbd6-11ec-a534-01aa75ed71a1/language-en.

([147]) 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.

([148]) 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.

biodiversity in Croatia in 2021–2027, which is below the EU average (see Figure 35).

Figure 35: 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, Croatia's investment gap is estimated to be around EUR 0.6 billion per year, corresponding to 0.88 % 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 ([149]). 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 ([150]).

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 ([151]). Croatia participated and has also been selected for the next round of TSI projects on green budgeting, starting in 2025, where the country will expand peer-to-peer learning through civil servants' exchanges.

Beyond Climate-proofing, to improve policy outcomes, Commission has also drawn up climate-proofing and sustainability-proofing guidance ([152]) as tools to assess project eligibility and compliance with environmental legislation and criteria.

Green taxation and tax reform

Total environmental taxes amounted to EUR 2.3 billion in Croatia in 2022, representing 3.3 % of its GDP (EU average: 2.0 %). Energy taxes formed the largest component of environmental taxes, accounting for 2 % of GDP, which is higher than the EU average of 1.6 %. Transport taxes, at 0.6 % of GDP, were above the EU average (0.4 %), as were taxes on pollution and resources, at 0.7 % (EU average: 0.08 %). In 2022, environmental taxes in Croatia accounted for 9 % of total revenues from taxes and social

([149]) 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

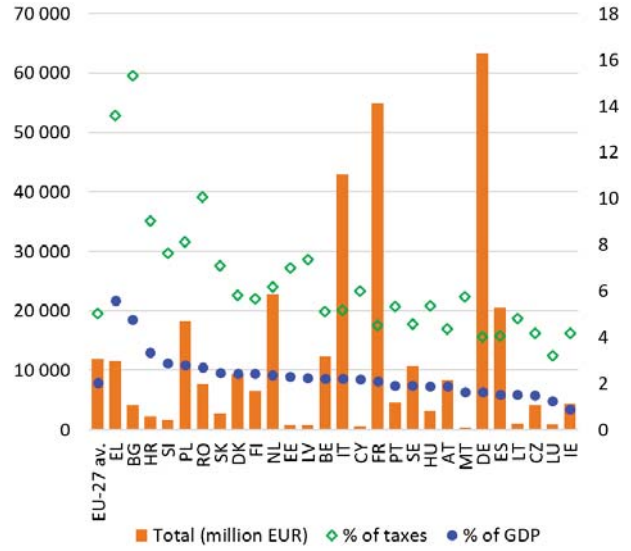
([150]) European Commission, 'European Union green budgeting reference framework', 2022, https://economy-finance.ec.europa.eu/economic-and-fiscal-governance/green-budgeting-eu_en.

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

([152]) 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.

security contributions (above the EU average of 5.0 %) ([153]).

Figure 36: 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 ([154]), Croatia applies environmental taxes used to discourage environmentally harmful behaviour in the fields of air, waste, water, use of natural resources, logging and mineral extraction. A reform introducing a new landfill tax included in the Croatian RPP has been adopted on 1 January 2025. The reform will be beneficial to reducing the high landfilling rates.

Green bonds and sustainable bonds

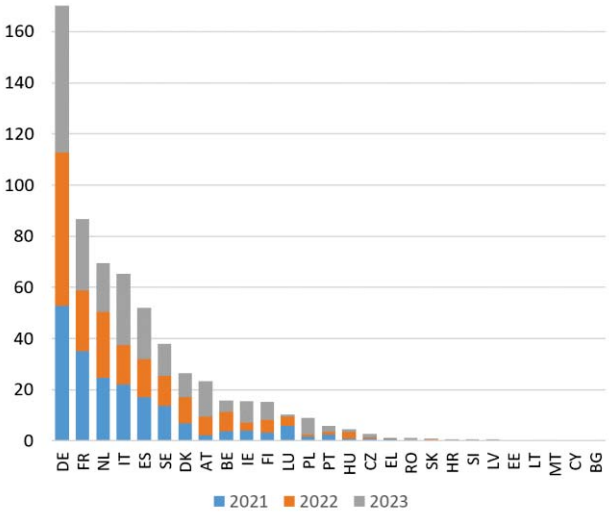
In 2023, the total value of green bonds issued by Member States was USD 245 billion (EUR 227 billion), up from USD 234 billion (EUR 198 billion) in 2021 ([155]).

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.

Additionally, to (not included in) the above, Croatia had four green and/or sustainability bonds issuances in 2022–2024 worth about 905 million in EUR plus 300 million in Croatian Kuna (in 2022). Of this, around EUR 544.8 million took place during 2022-2023[156], and EUR 400 million in 2024.

Figure 37: 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).

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

([154]) European Commission: Directorate-General for Environment, *Candidates for Taxing Environmental Bads at National Level*, Publications Office of the European Union, Luxembourg, 2024, Annex 2, https://op.europa.eu/en/publication-detail/-/publication/35c1bbdf-2931-11ef-9290-01aa75ed71a1/language-en.

([155]) Climate Bonds Initiative (https://www.climatebonds.net/). N.B. This data source did not contain issuances for Croatia and Bulgaria in the examined period (up to 2023), and a slightly higher amount for Slovenia (+0.27 billion) during 2021-2023 in total.

([156]) Kuna/EUR conversion rate applied for the conversion: 7.53450 as fixed mid-2022 at the time of Croatia's eurozone accession.

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 conditions ([157]). 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.

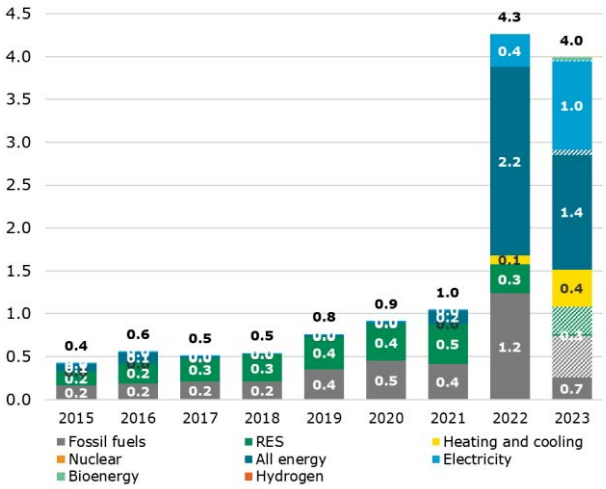
As a direct consequence, annual FFS in the EU have increased to EUR 109 billion in 2023 from EUR 57 billion in 2020. From 2021 to 2023, there was a marked increase in annual FFS of 72 % in the EU ([158]).

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 ([159]). 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 Croatia, energy subsidies showed moderate increases between 2015 and 2021, with FFS growing from EUR 0.2 billion (in 2015) to EUR 0.4 billion (in 2021). In 2022, energy subsidies quadrupled overall, with FFS growing to EUR 1.2 billion. In 2023, energy subsidies remained high overall, while FFS showed a decrease, lowering to EUR 0.7 billion.

As a share of GDP, FFS in 2022 ranged from 1.8 % in Croatia to less than 0.1 % in Denmark and Sweden (the EU average was 0.8 %) ([160]).

Figure 38: Energy subsidies by energy carrier (billion EUR), 2015–2023



NB: RES, renewable energy source.

Source: analysis of Directorate-General Energy

For Croatia, the 2022 EIR drew attention to the following points for improvement.

- The investment gap remains significant as Croatia is still substantially below the EU average for municipal and packaging waste recycling, sewage systems are underdeveloped and water supply networks face high leakage rates.
- In terms of prioritisation of environmental investments in Croatia, waste management and the circular economy are considered the foremost priorities, followed by water. Croatia could facilitate the increase of the share of private financing for the environment (which is around one third overall in Croatia).
- Technical assistance could support capacity building for the management bodies of the Natura sites, in line with the 2019 EIR priority action.

Croatia's overall environmental investment gap is close to what it was at the time of the 2022 EIR (around 1.8 % of GDP, above the EU average), largely in the areas of biodiversity and ecosystems and water, which require focused action.

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

([158]) European Commission, 2024 Report on Energy Subsidies in the 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

([159]) 16 Member States: BE, EE, IE, EL, ES, FR, HR, IT, CY, LT, HU, NL, AT, PT, RO and SE.

([160]) 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

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.

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 ([161]). 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 ([162]). It includes the right to bring legal challenges ('legal standing') ([163]).

Environmental information

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

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

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

Legend

■ Implementation of this provision is well advanced or (nearly) complete. 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, 'Croatia', Inspire Knowledge Base, https://knowledge-base.inspire.ec.europa.eu/croatia_en.

Croatia's progress in implementing the Inspire Directive has been reviewed based on its 2023 country fiche ([164]) (see Table 3). In 2022, Croatia received a priority action on the need to make spatial data more widely accessible and to prioritise environmental datasets. Croatia has made some progress on the accessibility of spatial data but more

([161]) 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.

([162]) 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).

([163]) 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.

([164]) European Commission, 'Croatia', Inspire Knowledge Base, https://knowledge-base.inspire.ec.europa.eu/croatia_en.

efforts are needed. Therefore the 2022 priority action is repeated for 2025.

Public participation

Public involvement at both the planning and the project phases 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 EIA Directive ([165]) and the Strategic Environmental Assessment (SEA) Directive ([166]).

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 ([167]) Croatia has not yet 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. However, Croatia has taken measures to alleviate barriers and administrative procedures for the establishment of self-consumption and renewable energy communities.

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 ([168]). The duration of each step in an EIA process (screening, scoping, EIA report, public consultation, reasoned conclusion, development consent) varies considerably across Member States and projects. The available data show that the average duration of EIA process for Croatia is slower than the EU average. 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 ([169]).

Extensive and useable information is available to the public on EIA and SEA cases, at both the national and regional levels ([170]). This includes links to relevant documentation and details of how members of the public can participate in the process. However, there are no centrally collected statistics on public participation in practice and it is not possible to identify whether participation is increasing or decreasing or assess how participation is contributing to improved decision-making.

The non-conformity case ([171]) that opened on 19 January 2019 concerning obligations arising from the EIA Directive 2011/92/EU as amended by Directive 2014/52/EU is still ongoing.

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

([165]) 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.

([166]) 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.

([167]) 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).

([168]) 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/.

([169]) 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

([170]) https://mingor.gov.hr/o-ministarstvu-1065/djelokrug/uprava-za-procjenu-utjecaja-na-okolis-i-odrzivo-gospodarenje-otpadom-1271/procjena-utjecaja-na-okolis-puo-spuo/7370 (in Croatian only).

([171]) INFR(2019)2022.

matters. Access to justice is essential to enable judicial review of the decisions of public authorities and to allow the correction of any wrongdoing committed by these authorities.

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

As mentioned in the 2022 EIR, Croatia allows both individuals and environmental NGOs to challenge administrative acts of individual scope under Article 168 of its Environmental Protection Act ([172]).

However, plans and programmes for which SEAs are conducted are considered general acts. Their legality can only be reviewed by the High Administrative Court using a *sui generis* review procedure. Although anyone has the right to bring a case for the review of the legality of general acts, this right is limited by the condition that a review can only be initiated based on the individual act that was passed on the basis of the general act, such as a location permit issued based on the spatial plan in question.

Under the general rules of judicial review, when a person claims that a public body has failed to enact certain decisions, that person may initiate a judicial review in respect of this failure if they have legal standing – for instance, if they feel their right to a healthy life has been violated. However, an action for judicial review can only be brought before the Administrative Court if the decision at issue was an individualised decision. A judicial review therefore cannot be initiated in respect of the public authorities' failure to enact an act of general application. The rules on standing for individuals and NGOs wishing to obtain an administrative review and bring a legal challenge before the national court are limited in such cases.

In 2022, priority actions were addressed to Croatia regarding access to justice, inviting authorities to (i) improve access to courts by the public concerned in relation to environmental planning, and (ii) better inform the public about their rights. It can be concluded that there has been no progress on either aspect. In fact, no new measures to improve access to courts with regard to environmental planning have been taken by Croatia since the last recommendation in 2022, and the information available online does not give a sufficient and clear picture of access to justice in environmental matters but is rather focused on cost exposure.

2025 priority actions

- Make spatial data more widely accessible and prioritise environmental datasets in the implementation of the Inspire Directive, especially those identified as high-value spatial datasets for implementing environmental legislation ([173]).
- Ensure the correct transposition of the revised EIA Directive.
- Ratify the amendment to the United Nations Economic Commission for Europe Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters.
- Improve access to courts in national environmental cases by the public concerned and eliminate practical barriers, such as length of proceedings and excessive costs in some Member States.

Compliance assurance

Environmental compliance assurance covers all work undertaken by public authorities to ensure that industries, farmers and others fulfil their obligations to protect water, air and nature, to manage waste ([174]) 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.

In November 2023, within the framework of the strategic partnership upon a proposal by Croatia and France a

([172]) Croatian *Official Gazette* Nos 80/13, 153/13, 78/15, 12/18 and 118/18.

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

([174]) 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).

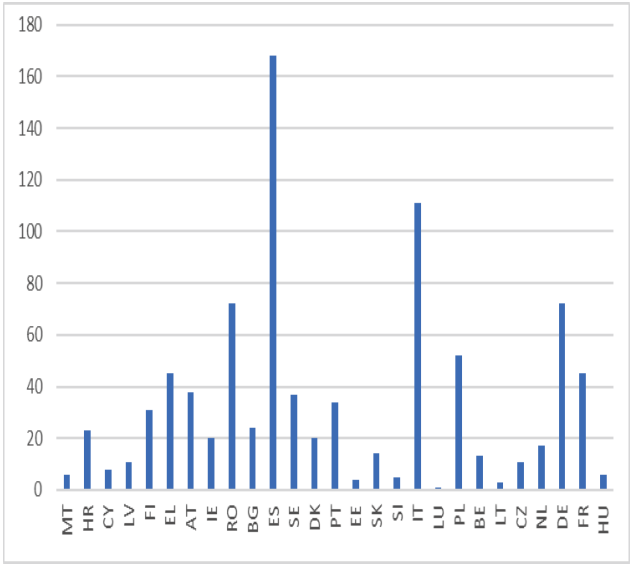
regional conference dedicated to strengthening the fight against crime affecting the environment was held, which representatives from Albania, Bosnia and Herzegovina, Bulgaria, Croatia, France, Greece, Kosovo, Montenegro, North Macedonia, Serbia, Slovakia, Slovenia, Poland and Romania attended ([175]).

However, as mentioned in the 2022 EIR, there appear to be no centralised databases or statistics in Croatia on environmental crimes and their outcomes. General publications on crimes, issued by the National Statistical Institute, the Prosecutor's Office and the Ministry of the Interior, provide some data. For instance, the annual report on police activity published by the Ministry of the Interior includes a summary of statistical data on the chapter of the Criminal Code relating to environmental crimes. However, none of the data available provides a clear picture of the outcomes relating to the prosecution of environmental crimes (convictions, penalties, etc.).

It appears that the environmental compliance assurance system in Croatia would benefit from allocating more human and financial resources to inspections and enforcement authorities and from more active participation in the work of the Network for the Implementation and Enforcement of Environmental Law. A more detailed assessment of compliance assurance activities will be planned for the next EIR.

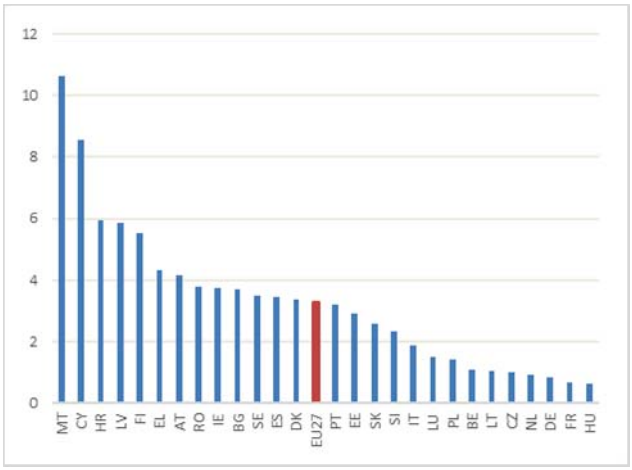
Between 15 May 2022 and 31 December 2024, the Commission received 23 complaints relating to the environment in Croatia. In terms of complaints per million inhabitants, that is 5.95, the third-highest number among all Member States (figures 40 and 41). More than half of those complaints concerned alleged breaches of nature (6) and waste (8) legislation.

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.

([175]) Southeast European Law Enforcement Center (https://www.selec.org/strengthening-the-fight-against-crimes-that-affect-the-environment-in-southeast-europe/)

Concerning compliance promotion, monitoring, and criminal and administrative enforcement, the 2022 priority actions are not assessed here due to a lack of systematic information. Similarly, the Commission is not aware of whether information is easily available online at the national level for farmers regarding compliance with the Nitrates and Nature Directives, and hence the related 2022 priority action is not assessed.

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) (2024/1203/EU)([176]) and new sectorial 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. Practical provisions on the types and levels of penalties for natural and legal persons who commit an offence were also introduced. Other provisions will help considerably to improve the effectiveness in combating environmental crime of all actors along the enforcement chain. These include obligations to ensure adequate resources and investigative tools, specialised regular training and the establishment of cooperation mechanisms within and between Member States as well as national strategies on combating environmental crime.

Member States are required to transpose the new ECD into national law by 21 May 2026 and to take additional measures to more effectively combat environmental crime, in particular through training, coordination, cooperation and strategic approaches. The Commission will provide support, including by facilitating the identification and sharing of good practices. Member States are expected to ensure the necessary resources and specialised skills required and they are invited to encourage their authorities to support and cooperate with the recognised EU-level networks of environmental enforcement practitioners, such as the EU Network for the Implementation and Enforcement of Environmental Law ([177]), EnviCrimeNet ([178]), the European Network of Prosecutors for the Environment ([179]) and the EU Forum of Judges for the Environment ([180]). 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)([181]) 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 ([182]), which will be finalised in 2025, and which was supported by an external study ([183]), containing, among other things, evidence, views, reports and other relevant information gathered from different stakeholder groups, including Member States.

([176]) Directive 2024/1203/EU on the protection of the environment through criminal law (https://eur-lex.europa.eu/eli/dir/2024/1203/oj/eng),
([177]) https://www.impel.eu/en.
([178]) 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).
([179]) https://www.environmentalprosecutors.eu.
([180]) https://www.eufje.org/index.php?lang=en.
([181]) 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.
([182]) Commission staff working document - Evaluation of the Environmental Liability Directive, forthcoming 2025.
([183]) 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.

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

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

From 1 May 2013 to 30 April 2022, Croatia did not identify any occurrence of environmental damage under the ELD. The reporting requirement of the previous period was not applicable to Croatia, as it joined the EU in 2013.

Croatia has proposed legislation to establish mandatory financial security for ELD liabilities for operators carrying out certain hazardous activities (adoption pending). Currently environmental insurance policies are not available in Croatia. Environmental extensions to general liability policies are available, but most provide cover only for remediating off-site land/soil pollution from a sudden and accidental incident on an insured site. They do not provide cover for the other possible ELD liabilities, notably for environmental damage other than pollution, or for gradual pollution. Demand for the extensions is low.

The 2022 EIR recommended that Croatia further develop the information system on ELD cases or instances of environmental damage and encourage better availability of insurance products to ensure that operators can meet the costs of any environmental damage for which they are liable. Croatia has made some progress on the 2022 priority actions by aiming to ensure better availability of insurance products. Therefore, the efforts to implement 2022 priority actions in relation to the ELD 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 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 ([184]) 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 TSI ([185]) and the TAIEX-EIR PEER 2 PEER tool ([186]). 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 TSI had annual calls in 2021, 2022, 2023, 2024 and 2025. The following environment-related projects have been selected for Croatia:

- Support to reduce water loss within the water sector reform in Croatia, Ministry of Economy and Sustainable Development (MESD), Croatian Waters (CW) (2022)
- Bridging the climate financing gap with public policy instruments, Financial Services Supervisory Agency (2022)
- ESG risk management framework for the financial sector, Financial Services Supervisory Agency (2023)
- Support for the Preparation of Social Climate Plans, Ministry of Economy and Sustainable Development (2024)
- Multi-country support to the revised EU Emissions Trading System, Ministry of Economy and Sustainable Development (2024)

([184]) 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).

([185]) 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).

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

- Support to reduce water loss within the water sector reform in Croatia – Phase 2, Ministry of Economy and Sustainable Development (2024)
- Support to the development of the National Restoration Plans of Croatia, the Netherlands and Poland, Ministry of Environmental Protection and Green Transition (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 European Commission to present new and upcoming environmental legislation and policy in all Member States ([187]).

Workshops involving Croatia are as follows:

- New aspects in the cross-border cooperation against environmental crime (19–20 November 2024);
- Online platform: EU batteries, packaging and packaging waste regulation (28–29 October 2024);
- Reducing air pollution in transport and residential energy (11–13 June 2024);
- Decentralised biowaste recycling in Austria (09–11 October 2023);
- Future challenges in the air protection in Europe (24 November 2022);
- Climate adaptation and blue infrastructures: Examples across European regions (30 May–01 June 2022);

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.

([187]) 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 NECD to further mainstream air and broader pollution reduction in agricultural policy (25 September 2024); Industrial emissions transposition and implementation of the revised directive (12 September 2024); Noise progress towards meeting Member States' noise limit values and EU reduction targets (5 June 2024); Best practice use of environmental footprint methods on the EU market (30 May 2024); Sustainable finance (9 November 2023); Textile waste separate collection, treatment and markets (3 October 2023); EU environmental funding and support (13 June 2023); Advisory service for businesses to go circular (24 April 2023); Digital product passport implementation (6 December 2022); Public involvement in planning and approval of renewable energy projects (17 November 2022); Environmental compliance and governance (14 November 2022); Biowaste management (19-20 September 2022); 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
- Develop a unified circular economy strategy focusing on waste prevention and resource efficiency, especially for priority waste streams.
- Adopt measures to increase the CMUR.

Waste management

- Increase reuse of products and scale up waste recycling infrastructure associated with the higher steps of the waste hierarchy. In particular, improve collection and increase treatment capacity for bio-waste.
- Improve municipal waste preparation for reuse and recycling.
- Increase the recycling rates of packaging waste.
- Increase the collection and recycling rate of waste electronic and electric equipment (WEEE).
- Develop EPR schemes for problematic waste .
- Implement, harmonise and gradually increase landfill taxes to phase out landfilling of recyclable and recoverable waste.
- Ensure the achievement of the 2025 waste targets, following the recommendations made by the Commission in the early warning reports where applicable.
- Invest in waste prevention measures to reduce the total amount of waste generated.

Biodiversity and natural capital

Nature protection and restoration – Natura 2000

- Complete the Natura 2000 site designation process
- 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.
- Ensure the effective implementation of Natura 2000 management plans and sufficient administrative capacity and financing both for Natura 2000 and the implementation of the Nature Restoration Regulation. Ensure implementation of Prioritised Actions Framework 2021-2027 (PAFs).
- Strengthen the collection of reliable data to assess the conservation status of protected habitats and species by ensuring that all are covered by a sound monitoring system.
- PA4: Strengthen the integration of biodiversity actions into other policies, e.g. energy, agriculture, fisheries, forestry, urban and infrastructure planning and sustainable tourism, and promote communication between stakeholders.

Recovery of ecosystems

Agricultural ecosystems

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

Marine ecosystems

- Report updates on the assessment of the state of Croatia's marine waters, its targets and its determinations of GES, which are expected to include 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.

Prevention and management of invasive alien species

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

Ecosystem assessment and accounting

- Support development of the national business and biodiversity network.

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
- 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 towards citizens on risks and behaviour in case of accidents

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.
- Improve the classification of waterbodies 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 cost recovery and the polluter-pays principle.

Floods Directive

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

Drinking Water Directive

- Swiftly implement the measures included in the national water loss reduction action plan.

Nitrates Directive

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

Urban Wastewater Treatment Directive

- Urgently take the necessary measures to ensure full implementation of the current UWWTD, taking into account the new requirements of the recast directive.

Chemicals

- Upgrade the administrative capacities in implementation and enforcement to move towards a policy of zero of for non-compliance.
- Increase involvement in the activities of the Forum for Exchange of Information on Enforcement of the European Chemicals Agency, including in the coordinated enforcement projects, called REF projects.
- Increase customs checks and checks of products sold online with regard to compliance with chemicals legislation.

Climate action

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

Financing

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

Environmental governance

Information, public participation and access to justice

- Make spatial data more widely accessible and prioritise environmental datasets in the implementation of the Inspire Directive, especially those identified as high-value spatial datasets for implementing environmental legislation.
- Ensure the correct transposition of the revised EIA Directive.
- Ratify the amendment to the United Nations Economic Commission for Europe Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters.
- 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.