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Country Report - FINLAND

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Environmental Implementation Review 2022: *Turning the tide through environmental compliance*

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Executive summary

In previous Environmental Implementation Reviews (EIRs), the main challenges identified for Finland for the implementation of EU environmental policy and law were to:

- complete the Natura 2000 site designation process and better integrate biodiversity concerns into other policies;
- address air and/or water pollution linked to emissions from installations in one or more of the following sectors: power, intensive rearing of poultry and pigs, waste treatment activities, and iron and steel plants; and
- improve the monitoring and assessment of all relevant quality elements in all water categories in accordance with the Water Framework Directive, and ensure that water pollution from agriculture, among other sectors, is effectively addressed under the Nitrates and/or Water Framework Directives.

Despite Finland's comprehensive **biodiversity** strategy for 2014-2020, the loss in biodiversity continues and it is currently unclear whether the measures set out in the strategy are sufficient to offset the agricultural intensification and resulting eutrophication occurring in the wider countryside. The conservation status of many grassland habitats and many of their associated species is still unfavourable. Forestry is the most reported pressure on Natura 2000 sites. In April 2020, the EU Court of Justice[1] condemned Finland for failing to fulfil its legal obligations under EU law on the conservation of wild birds, and for recurrently granting authorisations for spring hunting of male common eiders in the province of Åland since 2011. Another case is ongoing on the summer hunting of male common eiders in mainland Finland.

Emissions of numerous **air pollutants** have decreased significantly in Finland since 2014, continuing the previous downward trend. Nevertheless, air pollution is responsible for about 1 500 premature deaths a year in Finland, and emissions in certain urban hotspots may exceed maximum limits. The latest inventory data submitted by Finland, but not yet reviewed by the Commission, indicate that Finland is in compliance with the emission reduction commitments for all pollutants in 2020.

On **water quality**, some progress has been made on reducing pollution and on measures for forestry, rehabilitation of watercourses, managing hydromorphological pressures and protecting groundwater. However, more effective measures are needed to reduce chemical and nutrient pollution on surface water. For example, Finland is advised to better integrate water objectives into other policy areas such as agriculture, transport and energy. Finland also falls short on the full implementation of the Marine Strategy Framework Directive, where further efforts are needed if it is to achieve good environmental status by 2020.

In 2019, Finland benefited from an exchange of experts on public procurement under the TAIEX EIR peer-to-peer (EIR P2P) mutual learning programme launched in 2017.

EU financing continues to provide substantial support for environmental objectives. From the European Structural and Investment Funds (ESIFs), Finland received EUR 146.1 million to cover direct environmental investments in 2014-2020. So far, Finland has spent EUR 21.7 million on biodiversity and nature; EUR 6.1 million on climate mitigation and adaptation, and risk management; and EUR 300 000 on waste management. With other EU funding and European Investment Bank (EIB) loans, total EU financing reached around EUR 679 million in 2014-2020.

Finland is due to receive over EUR 2.1 billion from its recovery and resilience plan (RRP) (2021-2026) and EUR 1.49 billion from the cohesion policy (ERDF and ESF) (2021-2027). Investment priorities in Finland are clearly shifting towards climate, energy and transport policies set out in the national RRP.

Through these sources, it is important to maintain and increase the level of financing for environmental investments (around 0.42% of GDP in 2014-2020) to cover the investment needs in 2021-2027 (over 0.96% of GDP, indicating a financing gap of 0.54% of GDP assuming financing levels remain unchanged).

[1] CURIA - Documents (europa.eu)

Part I: Thematic Areas

1. Circular Economy and waste management

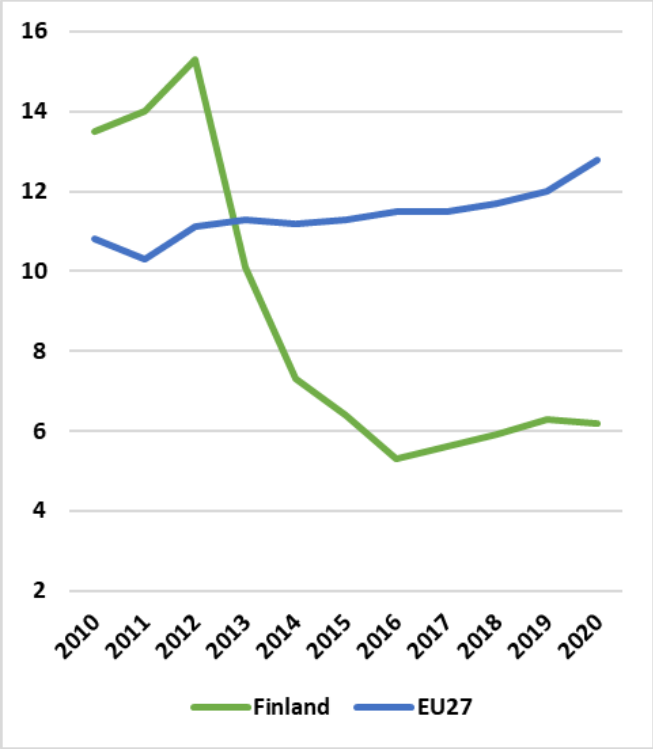
Measures towards a circular economy

The new Circular Economy Action Plan adopted in March 2020 is one of the main building blocks of the European Green Deal. The EU's transition to a circular economy will reduce pressure on natural resources and will create sustainable growth and jobs. It is also a prerequisite to achieve the EU's 2050 climate neutrality target and to halt biodiversity loss. The Action Plan announces initiatives along the entire life cycle of products, aiming to reduce the EU's consumption footprint and to double the EU's circular material use rate by 2030. It targets how products are designed, promotes circular economy processes, encourages sustainable consumption, and aims to ensure that waste is prevented and the resources used are kept in the EU economy for as long as possible.

The circular material use rate is a good indicator of an economy's circularity, as it includes all the materials that are fed back into our economy. Large differences in the circularity rate exist between countries. To help achieve the goal in the EU circular economy action plan of doubling the EU's circular material use rate by 2030, ambitious measures targeting the whole product life cycle are needed at Member State level. Such measures range from sustainable product design that makes it possible to increase the durability, reparability, upgradability and recyclability of products, to other measures, like: (i) 'remanufacturing'; (ii) increasing circularity in production processes; (iii) recycling; (iv) boosting eco-innovation; and (v) increasing the uptake of green public procurement

In 2020, the circular (secondary) use of material in Finland was 6.2 %. This percentage compared to the EU average of 12.8% shows that there was very limited progress over the last few years.

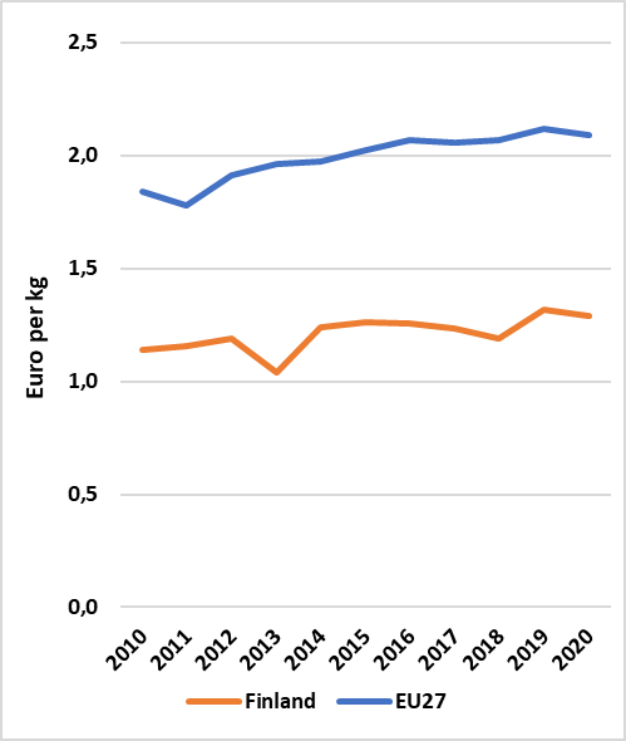
Figure 1 – Circular material use rate (%), 2010-2020[2]



Resource productivity expresses how efficiently the economy uses material resources to produce wealth. Improving resource productivity can help to minimise negative impacts on the environment and reduce dependency on volatile raw material markets. As shown in Figure 2, with EUR 1.29 generated per kg of material consumed in 2020, resource productivity in Finland is well below the EU average of EUR 2.09 per kg.

[2] Eurostat, Circular Economy Monitoring Framework.

Figure 2: Resource productivity 2010-2020[3]



Circular economy strategies

The Commission encourages Member States to adopt and implement national/regional circular economy strategies covering the whole life cycle of products. This is because such strategies are one of the most effective ways to progress towards a more circular economy. Since the launch of the online Circular Economy Platform in 2017[4], national, regional or local authorities have used the platform to share their strategies and roadmaps.

In 2019, The Finnish government updated its roadmap on the circular economy, introducing 30 new actions, and in April 2021 it went on to adopt the resolution on promoting a circular economy. The government has prepared a strategic programme to promote a circular economy and to transform the economy based on circular economy principles by 2035. This will set a national framework programme and concrete targets for the consumption of non-renewable natural resources, resource productivity and circular material use rate, all complemented by the promotion of voluntary sectoral agreements between municipalities, business and other stakeholders as well as by creating a sustainable circular economy market through legislation, economic instruments and digitalisation. The transition to a circular economy is also a step towards achieving the government's carbon neutrality target by 2035.

The vision will be guided by the following steps and objectives: the consumption of non-renewable natural resources will decrease, and the sustainable use of renewable natural resources may increase to the extent that the total consumption of primary raw materials in Finland in 2035 will not exceed that of 2015. The productivity of resources will double by 2035 from what it was in 2015 and the circular material use rate will double by 2035.

Finland does not have a sectoral strategy on plastics; however, the Plastics Roadmap for Finland, published in September 2018 is the first step towards a new, sustainable plastics economy. Of the more than 100 proposals made, the roadmap now presents a set of key actions to find solutions to challenges caused by plastics.

Similarly, Finland has not adopted sectoral strategies on the textiles and construction sectors; however, the resolution on promoting a circular economy has the potential to impact these two sectors.

Eco-innovation

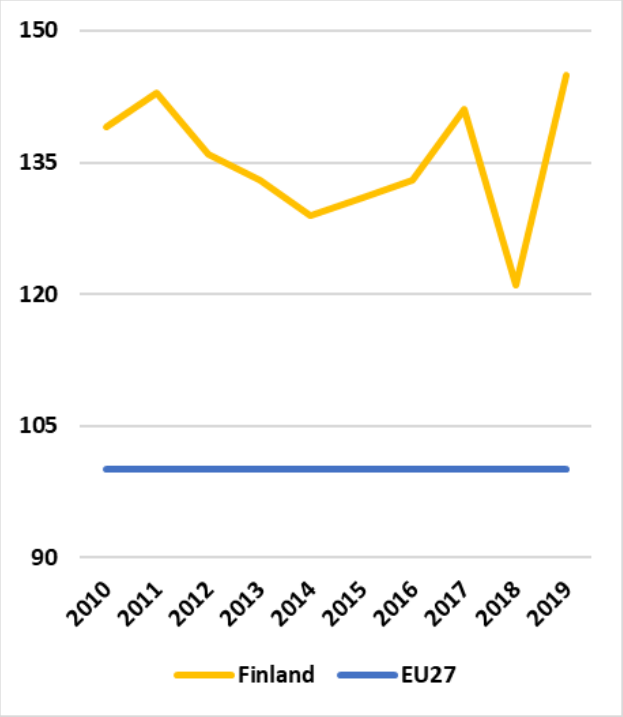
A successful transition to a circular economy requires social and technological innovation. This is because the full potential of the circular economy can only be reached when it is implemented across all value chains. Eco-innovation is an important enabling factor for the circular economy. New approaches to product design and new business models can help to produce circularity innovations, creating new business opportunities.

Finland ranked 2nd on the 2021 Eco-Innovation Scoreboard, with a total score of 157, classifying it as an 'eco-innovation leader'. In three out of five components of the 2021 Eco-Innovation Index Finland performs above the EU average, namely on eco-innovation inputs, eco-innovation outputs and socioeconomic outputs.

[3]Eurostat, Resource productivity.

[4] Circular Economy Stakeholder Platform.

Figure 3 – Eco-innovation performance 2010-2019[5]



Green public procurement (GPP)

Public procurement accounts for a large proportion of European consumption, with public authorities' purchasing power representing around 14% of EU GDP. Public procurement can help drive the demand for sustainable products that meet reparability and recyclability standards. To date, reporting to monitor the uptake of green public procurement (GPP) is voluntary.

The first public procurement strategy in Finland was put forward in 2020, with 27 objectives, such as innovative, social, ecological and financial objectives.

The main approaches of the strategy are: (i) developing legislative proposals to account for the environmental impact of procurement; (ii) encouraging environmentally-responsible procurement and voluntary commitments to advance sustainable development principles in public procurement; (iii) updating guides on the responsible procurement of foodstuff (in line with the farm to fork strategy); and (iv) launching a low carbon public procurement development programme with pioneer organisations. The strategy does not establish product-specific rules, but it has developed criteria for example on food and catering as well as on green deals[6] To ensure successful implementation and the achievement of the strategy's objectives, public procurement units will be supported by members of the KEINO Competence Centre for Sustainable and Innovative Public Procurement.

EU ecolabel and the eco management and auditing scheme (EMAS)

The number of EU ecolabel products and EMAS-licensed[7] organisations in a given country provides some indication of the extent to which the private sector and national stakeholders in that country are actively engaged in the transition to a circular economy. It also shows how committed public authorities are to supporting instruments designed to promote the circular economy.

As of September 2021, Finland had 1 744 products out of 83 590 and 14 licences out of 2 057 registered in the EU ecolabel scheme, showing a significant take-up of products but a low take-up of licences[8]. Since the last report in 2019, there have been 869 fewer products and 4 fewer licences registered under the EU ecolabel. However, in Finland there are around 10 000 Swan-labelled products (out of 40 000) and 150 licences out of 2500 in the Nordic countries. Moreover, 4 organisations spread over 18 sites in Finland are currently registered in EMAS[9].

As Finland's circular material use rate is far below the EU average, a priority action is proposed.

2022 priority actions

- Introduce measures to increase the circular material use rate.

Waste management

Turning waste into a resource is supported by:
(i) fully implementing EU waste legislation, which includes the waste hierarchy, the need to ensure separate collection of waste, the landfill diversion targets, etc.;
(ii) reducing waste generation and waste generation per capita in absolute terms;
(iii) limiting energy recovery to non-recyclable materials and phasing out the landfilling of recyclable or recoverable waste.

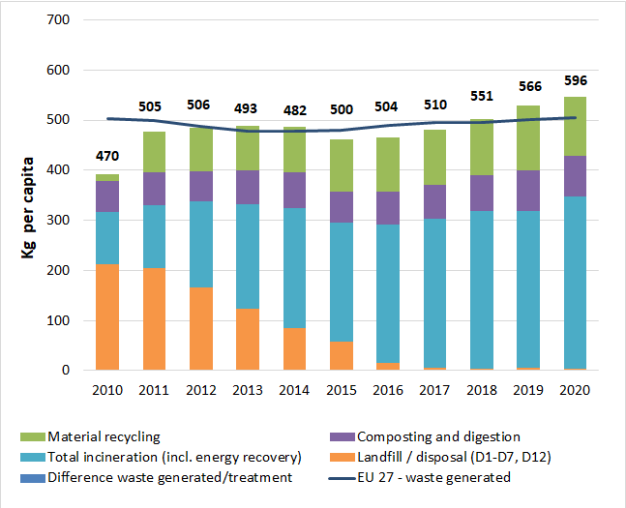
This section focuses on the management of municipal waste[10] for which EU law sets mandatory recycling targets.

[5] European Commission - Directorate-General for Environment (DG ENV), Eco-innovation Observatory, Eco-innovation index.
[6] https://ym.fi/green-deal-sopimukset
[7] EMAS is the European Commission's eco-management and audit scheme, a programme to encourage organisations to behave in a more environmentally sustainable way.
[8] European Commission, Ecolabel Facts and Figures.
[9] As of May 2018. European Commission, Eco-Management and Audit Scheme.
[10] Municipal waste consists of (a) mixed waste and separately collected waste from households, including paper and cardboard, glass, metals,

Preventing products and materials from becoming waste for as long as possible is the most efficient way to improve resource efficiency and to reduce the environmental impact of waste. Waste prevention and reuse are the most preferred options, and are therefore at the top of the waste hierarchy. The amount of municipal waste generated is a good indicator of the effectiveness of waste-prevention measures.

After a downward trend, municipal waste generation in Finland has started to increase in recent years reaching 566 kg/year/inhabitant in 2019 in contrast with the EU average (502 kg/year/inhabitant), as shown in Figure 4. This indicates that Finland's generation of municipal waste is not yet decoupled from its economic growth.

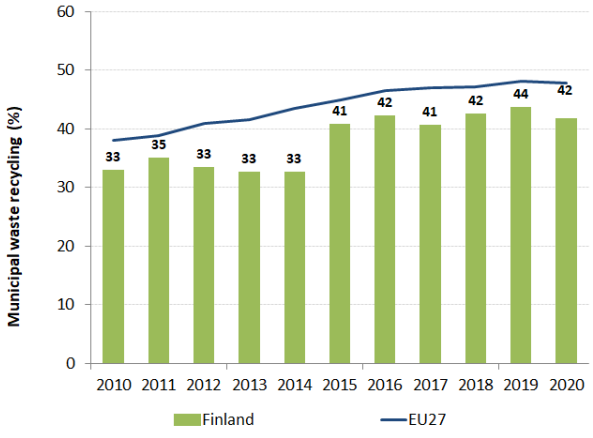
Figure 4: Municipal waste by treatment in Finland, 2010-2020[11]



Finland has made considerable progress in curbing its landfill rate over recent years due to a significant increase in the incineration rate. The recycling rate for municipal waste in 2019 was 43.4% (29.3% of which was material recycled, while 14.1% was composted or anaerobically digested), slightly below the EU average of 47.7% for the same year.

Figure 5 shows that Finland needs to continue investing in recycling to meet the EU's recycling targets for 2020 and 2025.

Figure 5: Recycling rate of municipal waste, 2010-20209[12]



The Commission's early warning report[13] listed Finland as one of the countries at risk of missing the EU 2020 target of recycling 50% of municipal waste. The report listed key priority measures which Finland should take to close the implementation gap. The Commission is currently finalising its analysis of progress made on the recommendations set out in the 2018 early warning reports and an analysis of progress towards achieving the 2025 waste recycling targets. This report will be presented at the end of 2022.

Implementation of the 2018 waste legislative package[14]

By 5 July 2020, Member States had to bring their national laws in line with modifications included in the revised Waste Framework Directive, the Packaging and Packaging Waste Directive and the Landfill Directive. Finland recently notified the Commission about national transposition measures, and the Commission is now carrying out a conformity assessment.

Waste management plans and waste prevention programmes are instrumental for a sound implementation of the EU waste legislation. They set out key provisions and investments to ensure compliance with existing and new legal requirements (e.g. waste prevention, separate collection for a number of specific waste streams, recycling and landfill targets). Revised plans and programmes were due on 5 July 2020.

In March 2022, Finland adopted a revised national waste management plan[15] that runs until 2027. This plan applies

plastics, bio-waste, wood, textiles, packaging, waste electrical and electronic equipment, waste batteries and accumulators, and bulky waste, including mattresses and furniture; (b) 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, Art. 3 2b).

[11] Eurostat, Municipal waste by waste operation, april 2022.

[12] Eurostat, Recycling rate of municipal rate, april 2022.

[13] European Commission, Report on the implementation of waste legislation, including the early warning report for Member States at risk of missing the 2020 preparation for re-use/recycling target on municipal waste.

[14] Directive (EU) 2018/851, Directive (EU) 2018/852, Directive (EU) 2018/850 and Directive (EU) 2018/849 amend the previous waste legislation and set more ambitious recycling targets for the period up to 2035.e, SWD(2018)422 accompanying COM(2018)656

[15] https://julkaisut.valtioneuvosto.fi/bitstream/handle/10024/163978/YM_2022_13.pdf?sequence=1&isAllowed=y

to the mainland only and does not cover the Åland islands, which is regarded as a major shortcoming in legal compliance. The Commission will carry out a compliance check to ensure that the plan aligns with EU waste legislation.

In the 2019 EIR, Finland receive priority actions to apply economic instruments to waste management; to promote prevention, make reuse and recycling more economically attractive; to improve the functioning of extended producer responsibility; to shift reusable and recyclable waste away from incineration; to set mandatory recycling targets for municipalities and shift responsibilities back to the municipalities, with measures in case of non-compliance; and to introduce mandatory minimum service standards on separate collection.

Given the limited progress and in light of the upcoming early warning report for 2022, similar priority actions as the ones set out in the 2019 EIR are proposed below.

2022 priority actions

- Introduce progressive and effective economic instruments to curb the rate of landfilling of waste streams other than municipal waste. Channel those revenues towards measures to improve waste management in line with the waste hierarchy.
- Introduce new policies in line with the waste hierarchy, i.e. promote prevention, and make product reuse and waste recycling more economically attractive.
- Ensure that the adopted national waste management plan covers the whole territory, the Åland Islands islands.

2. Biodiversity and natural capital

The 2030 EU biodiversity strategy adopted in May 2020 aims to put the EU's biodiversity on a path to recovery and sets out new targets and governance mechanisms to achieve healthy and resilient ecosystems. In particular, the strategy sets out ambitious targets to:

(i) protect a minimum of 30% of the EU's land area and 30% of its sea area and integrate ecological corridors, as part of a true trans-European nature network;

(ii) strictly protect at least a third of the EU's protected areas, including all remaining EU primary and old-growth forests; and

(iii) effectively manage all protected areas, defining clear conservation objectives and measures, and monitoring them appropriately.

The strategy also sets out an EU nature restoration plan – a series of concrete commitments and actions to restore degraded ecosystems across the EU by 2030, and manage them sustainably, addressing the key drivers of biodiversity loss.

The EU's Habitats and Birds Directives are key legislative tools to deliver on the targets in the EU's biodiversity strategy for 2030, and are the cornerstone of European legislation aimed at conserving the EU's wildlife[16].

To follow up on its national action plan for the conservation and sustainable use of biodiversity for 2013-2020, Finland plans to adopt its new national biodiversity strategy to 2030 and a related action plan in early 2022[17].

Nature protection and restoration

Natura 2000[18], the largest coordinated network of protected areas in the world, is the key instrument to achieve the objectives in the Birds and Habitats Directives. These objectives are: (i) to ensure the long-term protection, conservation and survival of Europe's most valuable and threatened species and habitats; and (ii) to maintain or restore the favourable conservation status of these species and habitats. Key milestones towards meeting the objectives of the Birds and Habitats Directives are: (i) the setting up of a coherent Natura 2000 network; (ii) the designation of sites of Community importance (SCIs) as SACs[19]; and (iii) the setting of conservation objectives and measures for the Natura 2000 sites.

Setting up a coherent network of Natura 2000 sites

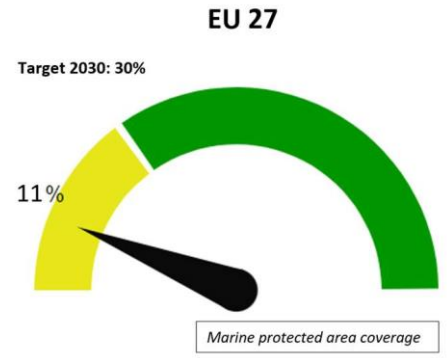
Finland hosts 68 habitat types[20] and 128 species[21] covered by the Habitats Directive. The country also hosts populations of 81 bird taxa listed in Annex I to the Birds Directive[22].

By 2021[23], 12.6% of the territory of Finland was covered by Natura 2000 (EU average 18.5%), with special protection areas (SPAs) classified under the Birds Directive covering 7.3% (EU average 12.8%) and SCIs under the Habitats Directive covering 12.5% (EU average 14.2%) of the Finnish territory.

Considering both Natura 2000 and other nationally-designated protected areas, Finland legally protects 13.2% of its terrestrial areas (EU-27 average 26.4%) and 11% of its marine areas (EU-27 average 10.7%)[24].

[16] These should be reinforced by the Nature Restoration Law, according to the new EU biodiversity strategy.
[17] National Biodiversity Policy - Ministry of the Environment (ym.fi).
[18] Natura 2000 comprises sites of Community importance (SCIs) designated under the Habitats Directive as well as special protection areas (SPAs) classified under the Birds Directive. Coverage figures do not add up as some SCIs and SPAs overlap. Special areas of conservation (SACs) are SCIs designated by Member States.
[19] Sites of Community importance (SCIs) are designated under to the Habitats Directive whereas Special Protection Areas (SPAs) are designated under to the Birds Directive; figures of coverage do not add up since some SCIs and SPAs overlap. Special Areas of Conservation (SACs) are SCIs designated by the Member States.
[20] EEA, Article 17 dashboard, Annex I total, 2019
[21] Number of habitats and species per Member State — European Environment Agency (europa.eu)
[22] EEA, Article 12 dashboard, Annex I, 2020. This counting only takes into account birds taxa for which information was requested.
[23] Workbook: Barometer (europa.eu)
[24] European Environment Agency, Protected Areas, terrestrial protected area percentage (2021) and marine protected area percentage (2019), March 2022.

Figure 6: Marine & terrestrial protected area coverage, 2021[25]



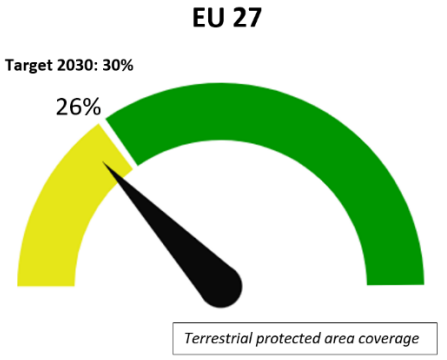
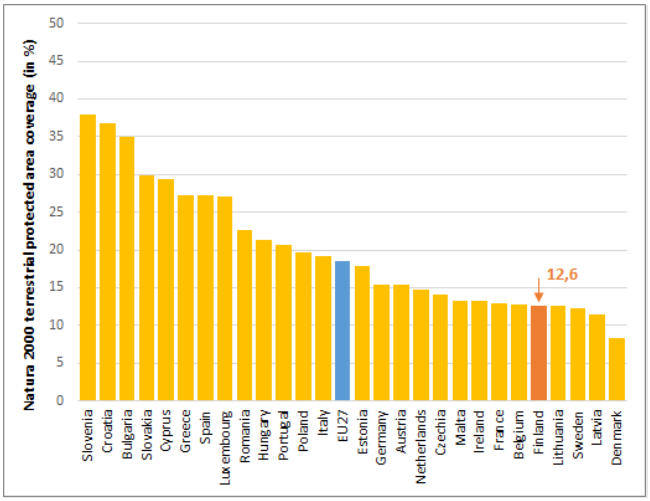


Figure 7: Natura 2000 terrestrial protected area coverage, 2021[26]



Designating special areas of conservation (SACs) and setting conservation objectives and measures

In the 2019 EIR, Finland received priority actions to complete the Natura 2000 network, especially for marine sites. Finland took decisive steps in this respect, however it still needs to speed up the necessary conservation measures, as they are yet to be defined for some sites, including the Åland Islands.

Progress in maintaining or restoring favourable conservation status of species and habitats

To measure the performance of Member States, Article 17 of the Habitats Directive and Article 12 of the Birds Directive require reporting on the progress made towards maintaining or restoring the favourable conservation status of species and habitats.

According to Finland's report for 2013-2018 on the conservation status of habitats and species required under Article 17 of the Habitats Directive, 31.87% of habitats were assessed as being in good conservation status in 2018, slightly lower than the 33.70% reported in the previous reporting period (2007-2012). As for protected species, 45.28% were assessed as being in good conservation status in 2018, marginally lower than the 46.00% reported in 2007-2012. Only 11.76% of the forest habitats of Community interest in Finland show a favourable conservation status[27]. Regarding birds , 26% of the breeding species showed short-term increasing or stable population trends. Together with Austria, Finland has the highest trend in reported increasing wintering populations in the short term (50%).

Between the same reporting periods, the share of habitats in bad conservation status increased from 26.09% to 31.87% and the share of assessments for species in bad conservation status also increased from 11.33% to 13.21%. The main pressures identified for habitats are forestry, mixed source pollution, agriculture, and development and construction. Unknown pressures including pressures from outside Finland also rank high for habitats, and are the main pressure for species, which are also strongly affected by forestry and natural processes.

[25] EU Biodiversity Strategy Dashboard, indicators A1.1.1 and A1.2.1, February 2022.

[26] European Environment Agency, Natura 2000 Barometer, February 2022.

[27] State of Nature Report. EEA 2021.

Figure 8: Assessments on conservation status for habitats for 2007-2012 and 2013-2018 reporting periods[28]

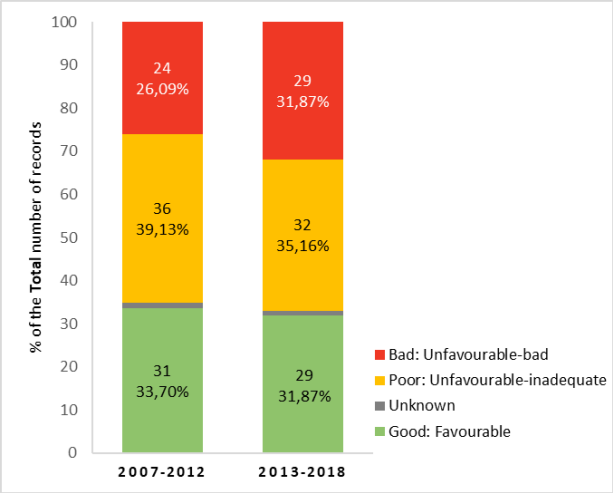
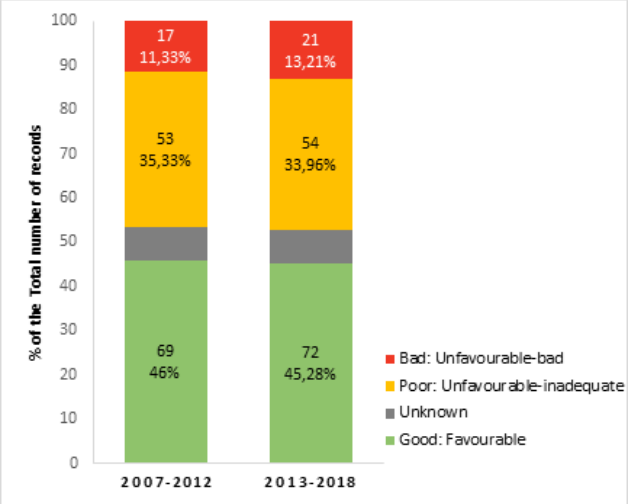


Figure 9: Assessments on conservation status for species for 2007-2012 and 2013-2018 reporting periods[29]



Finland needs to ensure that species and habitats of Community interest are maintained at or restored to favourable conservation status across their natural range. Finland has ambitious nature protection and restoration programmes, namely the METSO programme for financing forest biodiversity measures and the HELMI programme focusing mainly on mires, wetlands, coastal habitats and semi-natural grasslands. The SOTKA project is also important to improve the status of waterfowl. Considering the increasing numbers of negative trends in the conservation status of habitats and species, it is important that Finland pursues such actions with similar ambition over the years.

In April 2020, the EU Court of Justice[30] condemned Finland for failing to fulfil its obligations under Article 7(4) and Article 9(1)(c) of Directive 2009/147/EC on the conservation of wild birds and for recurrently granting authorisations for spring hunting of male common eiders in the province of Åland since 2011. Another case is ongoing on the summer hunting of male common eiders in mainland Finland.

In its judgment of October 2019, following a question for a preliminary ruling from Finland, the EU Court of Justice set out the strict conditions under which a derogation from the prohibition on the deliberate killing of a species protected under the Habitats Directive, such as wolves, may be granted in the context of hunting for population-management purposes. Finland is promoting coexistence through various strands of action and has to fully take account of this ruling in its legal framework.

In the 2019 EIR, Finland received priority actions to better integrate biodiversity concerns into other policies and promote better communication between actors; and to develop a strategy with the forest sector in order to ensure the forestry sector better integrates biodiversity goals, including outside Natura 2000. Limited progress is noted on these actions.

Bringing nature back to agricultural land and restoring soil ecosystems

Agricultural land

The biodiversity strategy works alongside the new farm to fork strategy and the new common agricultural policy (CAP) to support and achieve the transition to fully sustainable agriculture.
The biodiversity and farm to fork strategies have set four important targets for 2030:
- a 50% reduction in the overall use of – and risk from – chemical pesticides;
- a 50% reduction in the use of more hazardous pesticides;
- a 50% reduction in losses of nutrients from fertilisers while ensuring there is no deterioration of soil fertility (which will result in a 20% reduction in the use of fertilisers);
- bring back at least 10% of agricultural area under high-diversity landscape features and increase areas under

[28]. European Environment Agency, Conservation status and trends of habitats and species, December 2021. Please note when comparing the figures shown for 2007-2012 and 2013-2018 these may also be affected by changes of methods or due to better data availability.

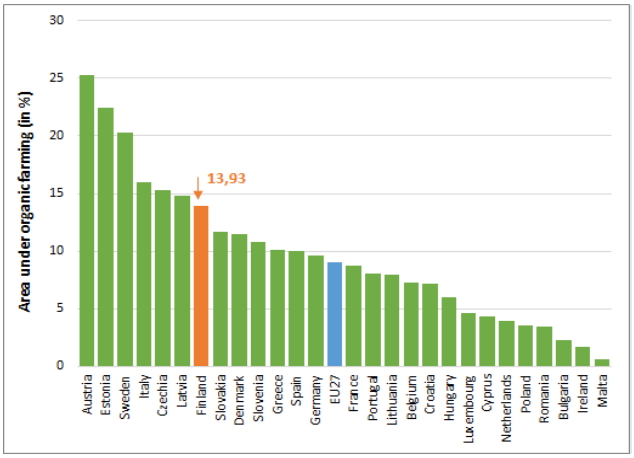
[29] idem

[30] CURIA - Documents (europa.eu)

organic farming to at least 25%.

Finland, with estimated 13.93% of area under organic farming, is above the EU average of 9.07% (2020 data, Eurostat), making it a key contributor to the 2030 target of having 25% of the EU's agricultural land under organic farming.

Figure 10: Share of total utilised agricultural area occupied by organic farming per Member State, 2020[31]



According to the Commission's recommendations for Finland's common agricultural policy (CAP) strategic plan[32], Finland should step up efforts on ammonia emissions, biodiversity and water quality. In particular, Finland is at high risk of not reaching its ammonia emission reduction commitments for 2020-2029. The Farmland Bird Index shows a decrease in farmland birds, and bird species associated with agricultural habitats are also decreasing. Further investments are needed to protect wetlands, peatlands and grassland, and for manure management (particularly to reduce ammonia emissions).

Soil ecosystem

Soil is a finite and extremely fragile resource. It is increasingly degrading in the EU.
The new EU soil strategy, adopted on 17 November 2021, stresses the importance of soil protection, of sustainable soil management and of restoring degraded soils to achieve the Green Deal objectives as well as land-degradation neutrality by 2030. This entails:

(i) preventing further soil degradation;
(ii) making sustainable soil management the new normal;
(iii) taking action for ecosystem restoration.

One factor in the degradation of soil ecosystems is the area of soil that is sealed or artificialised[33]. The net land taken (land 'taken' means land that is sealed or artificialised) per year in 2012-2018 can be seen as a measure of one significant pressure on nature and biodiversity – land use change. At the same time, land use change constitutes an environmental pressure on people living in urbanised areas.

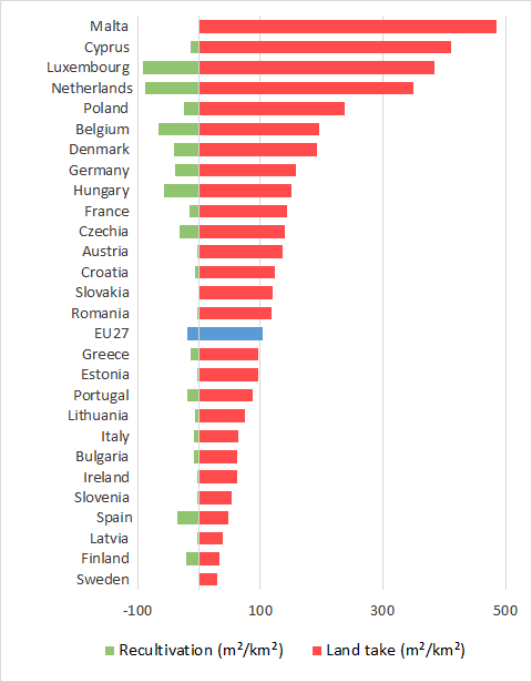
Despite a reduction in the last decade (land take was over 1 000 km^2/year in the EU-28 between 2000 and 2006), land take in the EU-28 still amounted to 539km^2/year in 2012-2018[34]. The concept of 'net land take' combines land take with the return of land to non-artificial land categories (re-cultivation). While some land was re-cultivated in the EU-28 in 2000-2018, 11 times more land was taken than returned.

Finland ranks well below[35] the EU average with net land take of 11.5 m²/Km² (EU-27 average: 83.8 m2/km²).

In 2018, Finland updated its reporting on land degradation according to the next PRAIS3 reporting platform[36] with actions intended to combat the degradation identified.

[31] https://ec.europa.eu/eurostat/databrowser/view/sdg_02_40/default/table?lang=en (Eurostat, Area under organic farming, February 2022).
[32] EUR-Lex - 52020SC0376 - EN - EUR-Lex (europa.eu)
[33] Artificial land cover is defined as the total of: roofed built-up areas (including buildings and greenhouses), artificial non-built-up areas (including sealed area features, such as yards, farmyards, cemeteries, car parking areas etc. and linear features, such as streets, roads, railways, runways, bridges) and other artificial areas (including bridges and viaducts, mobile homes, solar panels, power plants, electrical substations, pipelines, water sewage plants, and open dump sites).
[34] Land take in Europe — European Environment Agency (europa.eu) Fig 6.
[35] Land take in Europe – European Environment Agency (europa.eu) Fig 6.
[36] All Reports | Prais3 (unccd.int).

Figure 11: Land take and re-cultivation in EU27 (m2/km2), 2012-2018[37]



Sustainable Development Goal (SDG) target 15.3 states: 'By 2030, combat desertification, restore degraded land and soil, including land affected by desertification, drought and floods, and strive to achieve a land degradation-neutral world.'

In 2015, a breakthrough agreement was reached under the United Nations Convention to Combat Desertification (UNCCD)[38] to endorse the vision of land degradation neutrality (LDN) and link the implementation of the Convention to the SDGs in general, and target 15.3 in particular.

To date, Finland has not yet committed to set LDN targets under the UNCCD agreement.

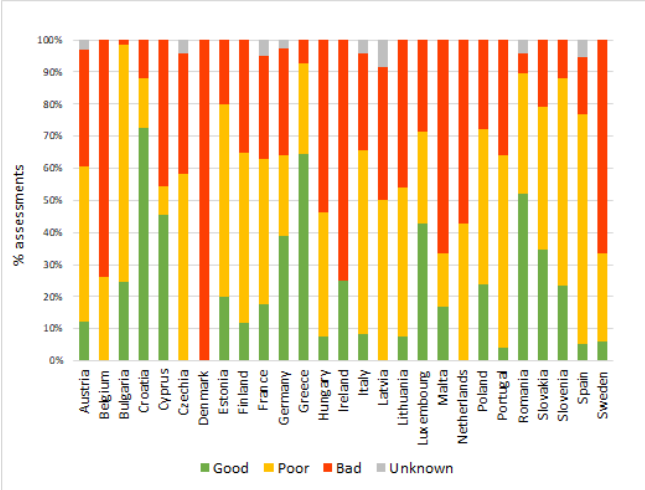
Forests and timber

The EU forest strategy for 2030, adopted in July 2021, is part of the 'Fit for 55' package. The strategy promotes the many services that forests provide. Its key objective is to ensure healthy, diverse and resilient EU forests that contribute significantly to the strengthened biodiversity and climate ambitions.
Forests are important carbon sinks and conserving them is vital if the EU is to achieve climate neutrality by 2050

Out of the 27% of EU forest area protected under the Habitats Directive, less than 15% of assessments show a favorable conservation status[39]. The share of forest area in the EU in a bad conservation status increased from 27% in 2015 to 31%.

Forests cover 79.6% of Finland's territory[40] and more than 75% of the assessments reveal a bad to poor status[41]. 203 000 ha in Finland is covered by primary forests[42].

Figure 12: Conservation status of forests protected under the Habitats Directive in EU Member States, 2013-2018 (% assessments)[43]



The European Union Timber Regulation (EUTR)[44] prohibits the placing on the EU market of illegally harvested timber. In accordance with the EUTR, EU Member States' competent authorities must conduct regular checks on operators and traders, and apply penalties for non-compliance. With the amendment of Article 20 of the EUTR, reporting every 2 years has been changed to annual reporting, and covers the calendar year as of 2019.

Between March 2017 and February 2019[45], Finland carried out 60 checks on operators importing timber-based products. It is estimated that Finland had 2 000 operators placing imported timber-based products onto the internal market over the reporting period. In total, there are approximately 350 000 domestic operators in Finland, of which about 100 000 actively place timber onto the market every year. A proposal for the

[37] European Environment Agency, Land take in Europe, December 2021.
[38] The LDN Target Setting Programme | UNCCD.
[39] EEA, State of Nature in the EU
[40] EEA, Forest information system for Europe.
[41] COM SWD (2021) 652
[42] JCR, Mapping and assessment of primary and old-growth forests in Europe, p. 13.
[43] European Environment Agency, Conservation status and trend in conservation status by habitat group - forests, January 2022.
[44] Regulation (EU) No 995/2010 of the European Parliament and of the Council of 20 October 2010.
[45] COM/2020/629 final

Regulation on the making available on the EU market and export of products associated with deforestation and forest degradation (Deforestation Regulation) was adopted on 17 November 2021 following a request from the Council in 2019 to table a legislative proposal to address the problem and a European Parliament resolution recommending the Commission to come forward with an EU legal framework to halt and reverse EU-driven global deforestation. This Regulation will repeal and replace the EU Timber Regulation, as the new Deforestation Regulation will essentially integrate and improve the existing system to control the legality of timber.

Invasive alien species (IAS)

IAS are a key cause of biodiversity loss in the EU (alongside changes in land and sea use, overexploitation, climate change and pollution).
Besides inflicting major damage on nature and the economy, many IAS also facilitate the outbreak and spread of infectious diseases, posing a threat to humans and wildlife.
The implementation of the EU Invasive Alien Species Regulation and other relevant legislation must be stepped up.
The biodiversity strategy for 2030 aims to manage recognised invasive alien species and decrease the number of 'red list' species they threaten by 50%.

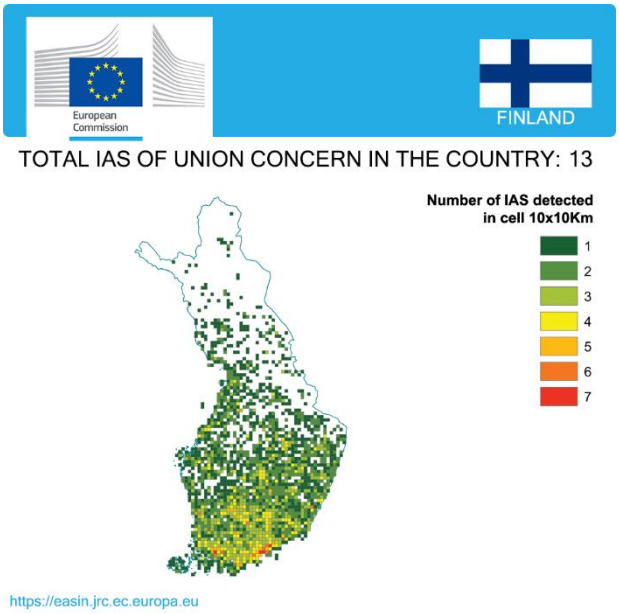
The core of Regulation (EU) 1143/2014 on IAS ('the IAS Regulation'[46]) is the list of IAS of Union concern.

The total number of IAS of Union concern is currently 66, of which: 30 are animal species; 36 are plant species; 41 are primarily terrestrial species; 23 are primarily freshwater species; 1 is a brackish-water species; and 1 is a marine species.

According to a 2021 report[47] on the implementation of the IAS Regulation, progress was being made towards certain objectives, such as creating a coherent framework for addressing IAS at EU level and increasing awareness of the problem of invasive alien species. The report also identified some challenges and areas for improvement. However, given that implementation deadlines for the IAS Regulation were staggered from July 2016 to July 2019, it is still too early to draw conclusions on several aspects of implementation.

A 2021 report[48] on the baseline distribution shows that of the 66 species on the EU list, 13 have been observed in the environment in Finland. The spread can be checked in Figure 13.

Figure 13: Number of invasive alien species of EU concern, based on available georeferenced information for Finland, 2021



2022 priority actions

- Pursue and step up efforts to finalise site specific conservation objectives and measures for all Natura 2000 sites and to protect or restore species and habitats of Community interest to a favourable conservation status across their natural range.
- Fully integrate biodiversity concerns into the implementation of other policies, including outside the Natura 2000 network, in particular in the forestry sector.
- Ensure the regulatory framework applying in Finland to the taking of protected species is fully in line with the requirements of the Nature Directives.
- Pursue and scale up efforts to ensure that forestry practices take full account of the need to protect and restore the conservation status of forest habitats and species.

[46] 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.
[47] Report from the Commission to the European Parliament and the Council on the review of the application of Regulation (EU) No 1143/2014 on the prevention and management of the introduction and spread of invasive alien species, COM(2021) 628 final, 13.10.2021.
[48] Cardoso A.C., Tsiamis K., Deriu I., D' Amico F., Gervasini E., EU Regulation 1143/2014: assessment of invasive alien species of Union concern distribution, Member States reports vs JRC baselines, EUR 30 689 EN, Publications Office of the European Union, Luxembourg, 2021, ISBN 978-92-76-37420-6, doi:10.2760/11150, JRC123170.

- Step up action on implementing the recommendations set out in Finland's CAP strategic plan, especially on improving rural areas.
- Step up the implementation action of the EU Invasive Alien Species Regulation.

Marine ecosystems

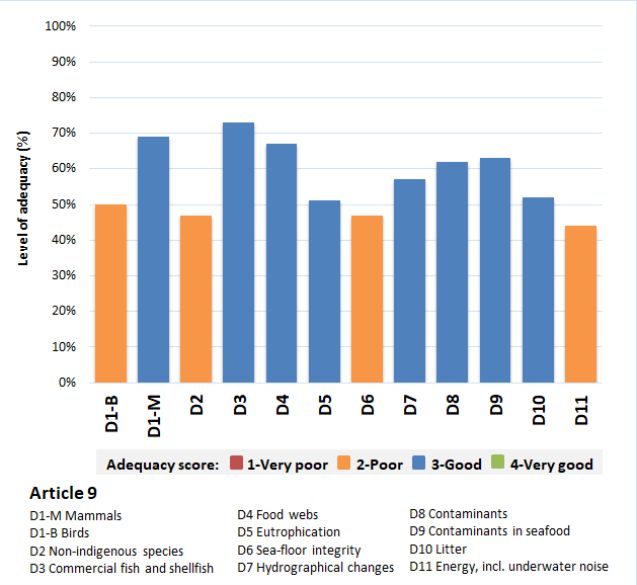
The EU Biodiversity Strategy for 2030 aims to substantially reduce the negative impacts on sensitive species and habitats in marine ecosystems and to achieve good environmental status as well as eliminate or reduce the incidental catches of protected, endangered, threatened and sensitive species to a level that allows species recovery and conservation[1].

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 Member States sharing the same marine region or sub-region. These marine strategies comprise different steps to be developed and implemented over six-year cycles.

The MSFD also requires Member States by 15 October 2018 to draw up a set of GES characteristics for each descriptor (Article 9), and to provide an initial assessment of their marine waters (Article 8). The Commission then assesses whether this constitutes an appropriate framework to meet the requirements of the Directive.

The Commission assessed Finland's 2018 determinations of GES for each of the MSFD's 11 descriptors[49] and determined their level of adequacy in relation to the Commission's GES Decision[50]. A good or very good score indicates that the national determinations of GES are well aligned with requirements of the Commission GES Decision, providing qualitative and quantitative national environmental objectives to be achieved for their marine waters.

Figure 14: Level of adequacy of GES determination by Finland (BAL region) with criteria set under the Commission GES Decision – Article 9 (2018 reporting exercise)[51]



Finland has one marine sub-region, BAL-Baltic Sea. In this marine sub-region, 8 of of 11 determinations of GES were assessed as good or very good. The national determination of GES by Finland is coherent for 8 out of 11 descriptors.

The MSFD also requires that Member States make an assessment of the current environmental status of their marine waters in relation to the determination of GES. A good or very good score indicates that a Member State has good capabilities to assess their marine environment in accordance with the requirements set out in the Commission GES Decision.

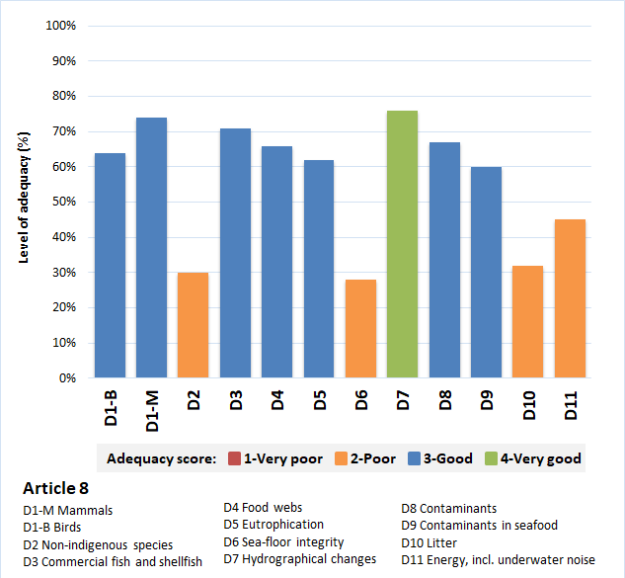
[1] The EU Common Fisheries Policy (CFP) aims to contribute to the achievement of the objectives of the environmental legislation for marine ecosystems.

[49] Annex I of Directive 2008/56/EC.

[50] Commission Decision (EU) 2017/848 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.

[51] Assessment carried out by the European Commission of the data reported by the Member States, January 2022. Please note that only two sub-sections of descriptor D1 are displayed (D1-M Mammals and D1-B Birds). For the analysis, these two sub-sections were considered as a whole after averaging them.

Figure 15: Level of adequacy of initial assessment of Finland's marine environment (BAL region) with criteria set under the Commission GES Decision – Article 8 (2018 reporting exercise)[52]



In this marine sub-region, BAL-Baltic Sea, 7 descriptors out of 11 were scored as good or very good. Finland's assessment of its marine environment is coherent with requirements set under the Commission GES Decision for 7 out of 11 descriptors.

As highlighted in the Commission's report on the implementation of the MSFD[53], while regional cooperation has improved since the adoption of the MSFD, more cooperation is needed to attain full regional coherence of the marine strategies, as required by the Directive.

In the 2019 EIR Finland received priority actions to determine the timelines for achieving good environmental status when these have not been reported and to ensure regional cooperation with Denmark, Estonia, Germany, Latvia, Lithuania, Poland and Sweden in the Baltic Sea region to address the predominant pressures. Finland made some progress on the above actions. However, the levels measured above call for further actions to achieve GES in the descriptors ranked as poor in Figure 15 above.

Furthermore, in March 2022, the European Commission published a Communication with recommendations for Member States. According to the Commission's assessment, Member States need to step up their efforts to determine the good environmental status and the use of the criteria and methodological standards according to the Commission GES Decision. The above considerations form the basis for the 2022 priority actions.

2022 priority actions

- Implement the recommendations made by the Commission in the staff working document[54] accompanying the Communication[55] on recommendations per Member States and region on the 2018 updated reports for Articles 8, 9 and 10 of the MSFD.
- Continue to ensure regional cooperation with Denmark, Estonia, Germany, Latvia, Lithuania, Poland and Sweden in the Baltic Sea region to address predominant the main pressures.

Ecosystem assessment and accounting

The EU biodiversity strategy for 2030 calls on Member States to better integrate biodiversity considerations into public and business decision making at all levels and to develop natural capital accounting. The EU needs a better-performing biodiversity-observation network and more consistent reporting on the condition of ecosystems.

Ecosystem assessment is an analysis of the pressures and the condition of terrestrial, fresh water and marine ecosystems and their services. It uses spatially-explicit data and comparable methodology based on European data about the functions of ecosystem assets and the ecosystem services they produce, relative to the baseline year 2010.

Ecosystem accounting is built on five core accounts (ecosystem extent, ecosystem condition, physical ecosystem services, monetary ecosystem services and monetary ecosystem asset). These accounts are compiled using indicators of ecosystem assets and the ecosystem services they produce.

Finland has actively participated in the Esmeralda project which continues the previous ecosystem service assessment works such as TEEB for Finland study (Towards Sustainable and Genuinely Green Economy - The value and social significance of ecosystem services in Finland), and development of the Finnish Ecosystem Services Indicators – a national framework that

[52] Assessment carried out by the European Commission of the data reported by the Member States, January 2022. Please note that only two sub-sections of descriptor D1 are displayed (D1-M Mammals and D1-B Birds). For the analysis, these two sub-sections were considered as a whole after averaging them.

[53] COM(2020)259

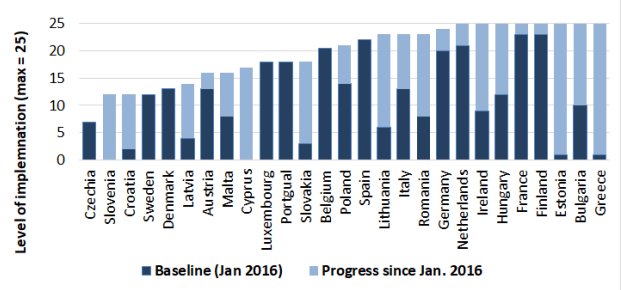
[54] SWD(2022)1392.

[55] COM(2022)550.

integrates CICES classification and Cascade model. This internet portal aims at synthesising the knowledge on the status of biodiversity, ecosystem services, and for instance, to serve as the national webpage of the Nagoya Protocol on genetic resources and the Cartagena Protocol on biosafety.

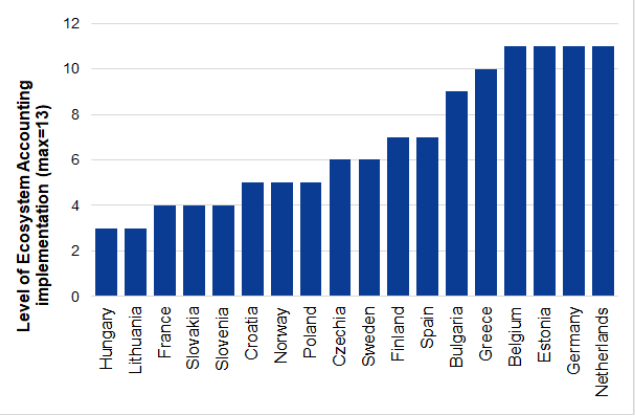
MAES-related developments in Finland fall under four categories: (i) networking and information sharing; (ii) supporting land use planning; (iii) integrated natural capital accounting; and (iv) preparing for ecosystem condition assessment. Finland has provided updated information and progress has been recorded since January 2016 (Figure 16). This assessment is based on 27 implementation questions and updated every 6 months.

Figure 16: ESMERALDA MAES Barometer (January 2016 - March 2021)[56]



Progress on ecosystem accounting implementation is assessed at national scale based on 13 questions (see Figure 17).

Figure 17: Ecosystem accounting Barometer, September 2021[57]



Currently there is no official mandate for ecosystem accounting in Finland. Methodological development for piloting ecosystem and water accounting has been a bottom up process. The Eurostat initiative to update Regulation (EU) 691/2011 and the SEEA-EA are expected to increase demand for natural ecosystem accounting from the policy side in Finland. Finland has developed multiple frameworks and has done multiple academic exercises in natural capital accounting but there are no official accounts published so far.

The lack of a mandate is possibly the main barrier to the development and implementation of ecosystem accounts in Finland. Moreover, finding common language between natural scientists, economists and statisticians takes time. Data-based quantification of fresh water assets is currently not possible as data are fully or partly missing. The marine condition account needs refining. Some problems are linked to contradictory or non-feasible guidelines. For instance, the concepts of 'green water footprint' or 'soil water consumption' are found to be very theoretical and hard to apply in the Finish national context.

2022 priority actions

- Develop harmonised, IUCN GET-compliant hierarchical ecosystem classification.
- Decide whether to provide ecosystem accounts, which would ensure: (i) human resources for Statistics Finland, SYKE and Luke to incorporate the SEEA-EA in their daily activities; (ii) the automatisation of the workflow; and (iii) closer collaboration with expert networks.

[56] European Commission, Joint Research Centre, Publication Office, EU Ecosystem assessment: summary for policymakers, page 80, May 2021.

[57] MAIA Portal, Mapping and assessment for Integrated Ecosystem Accounting (EU Horizon 2020 project), 2022. MAIA uses the System of Environmental Economic Accounting – Experimental Ecosystem Accounting (SEEA-EEA) as the methodological basis for the ecosystem accounting. The SEEA EA is an integrated and comprehensive statistical framework that is based on five core accounts: ecosystem extent, condition, services and monetary ecosystem asset.

3. Zero pollution

Clean air

EU clean-air policies and legislation need to significantly improve air quality in the EU, moving the EU closer to the quality recommended by the WHO and curbing emissions of key air pollutants.
Air pollution and its impacts on ecosystems and biodiversity should be further reduced with the long-term aim of not exceeding critical loads and levels. This requires strengthening efforts to reach full compliance with EU clean-air legislation and defining strategic targets and actions for 2030 and beyond.
The 2030 zero-pollution action-plan targets are to reduce the health impacts of air pollution by 55% and to reduce the EU ecosystems threatened by air pollution by 25%, compared to 2005.

The EU has developed a comprehensive suite of clean air legislation, which sets health-based air quality standards[58] and emissions-reduction commitments[59] by Member State for a number of air pollutants.

Air quality in Finland is generally good, with a exceptions. The latest available annual estimates (for 2019) by the European Environment Agency[60] point to about 1 500 premature deaths (or 15 900 years of life lost (YLL)) attributable to fine particulate matter concentrations[61], and 90 (1 000 YLL) to ozone concentrations[62] [63].

The emissions of several air pollutants have decreased significantly in Finland over the last years, while GDP growth continued (see graph). According to the latest projections as submitted under Article 10(2) of the National Emission Reduction Commitments Directive (NECD), Finland projects to reach emission reduction commitments for all air pollutants covered by the Directive for 2020-2029 and from 2030 onwards. According to the latest inventory data submitted by Finland, which is still to be reviewed by the Commission, Finland is in compliance with the emission reduction commitments for all pollutants in 2020.

Finland submitted its national air pollution control programme (NAPCP) on 29 March 2019.

Figure 18: Emission trends of main pollutants/ GDP in Finland, 2005-2019[64]

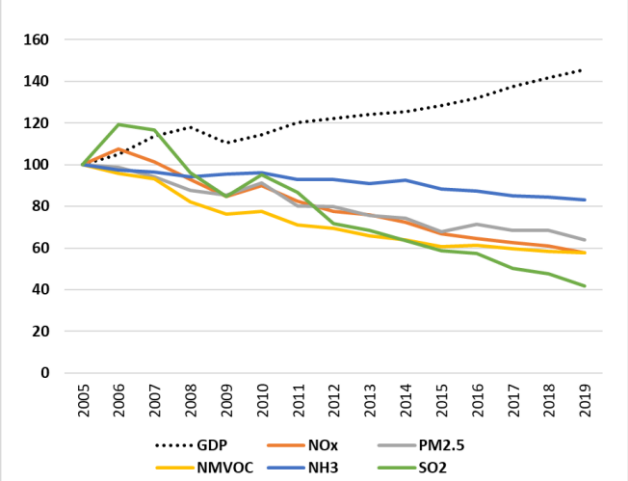
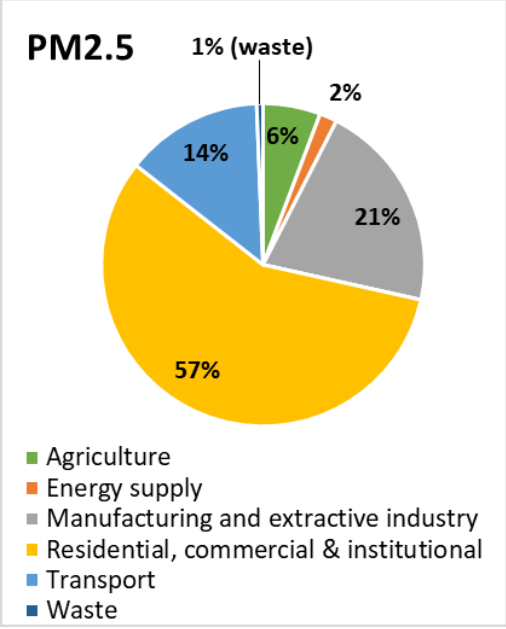
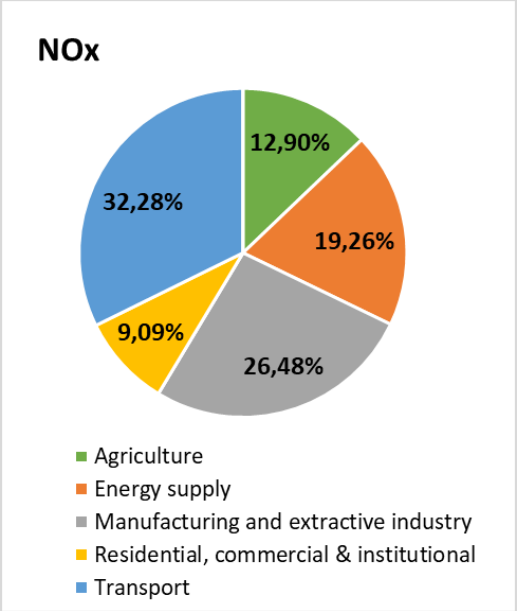


Figure 19: PM2.5 and NOx emissions by sector in Finland (2019)[65]



[58] European Commission, 2016. Air Quality Standards.
[59] European Commission, Reduction of National Emissions.
[60] European Environment Agency, Air Quality in Europe –2021 Rapport. Please see details in this report as regards the underpinning methodology, p.106
[61] Particulate matter (PM) is a mixture of aerosol particles (solid and liquid) covering a wide range of sizes and chemical compositions. PM10 (PM2.5) refers to particles with a diameter of 10 (2.5) micrometres or less. PM is emitted from many human sources, including combustion.
[62] Low-level ozone is produced by photochemical action on pollution.
[63] Please note that these figures refer to the impacts of individual pollutants, and to avoid double-counting cannot be added up to derive a sum.
[64] European Environment Agency.
[65] European Environment Agency.



Air quality in Finland is generally good with exceptions. For the year 2020, no exceedances above the limit values established by the Ambient Air Quality Directive (AAQD) were registered. However, for one air quality zone the target values on ozone concentration have not been met[66].

In the 2019 EIR, Finland was advised to take, as part of its NAPCP, actions towards reducing the main emission sources and to meet all air quality standards. Some progress has been achieved, with the exception of ozone concentration.

2022 priority actions

- Take, in the context of the National Air Pollution Control Programme (NAPCP), actions towards reducing emissions from the main sources mentioned above.
- Ensure full compliance with EU air quality standards and maintain downward emissions trends for air pollutants, to reduce adverse air pollution impacts on health and the economy with a view to reaching WHO guideline values in the future.

Industrial emissions

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

(i) protect air, water and soil;

(ii) prevent and manage waste;

(iii) improve energy and resource efficiency;

(iv) clean up contaminated sites.

To achieve this, the EU takes an integrated approach to the prevention and control of routine and accidental industrial emissions. The cornerstone of the policy is the Industrial Emissions Directive67 (IED). The Commission tabled a proposal in April 202268. The revision seeks to improve the Directive's contribution to the zero-pollution objective, as well as its consistency with climate, energy and circular-economy policies

The overview of industrial activities regulated by the IED set out below is based on data reported to the EU Registry (2018)[69].

In Finland, around 1 250 industrial installations are required to have a permit based on the IED. This represents an increase of almost 600 installations since 2015, mainly combustion plants but also installations in the waste management sector The distribution of installations is shown in the figure below.

The industrial sectors in Finland with most IED installations in 2018 were the energy sector (25%), followed by the waste management sector, including landfills (24%), intensive rearing of poultry and pigs (20%) and the production and processing of metals (10%).

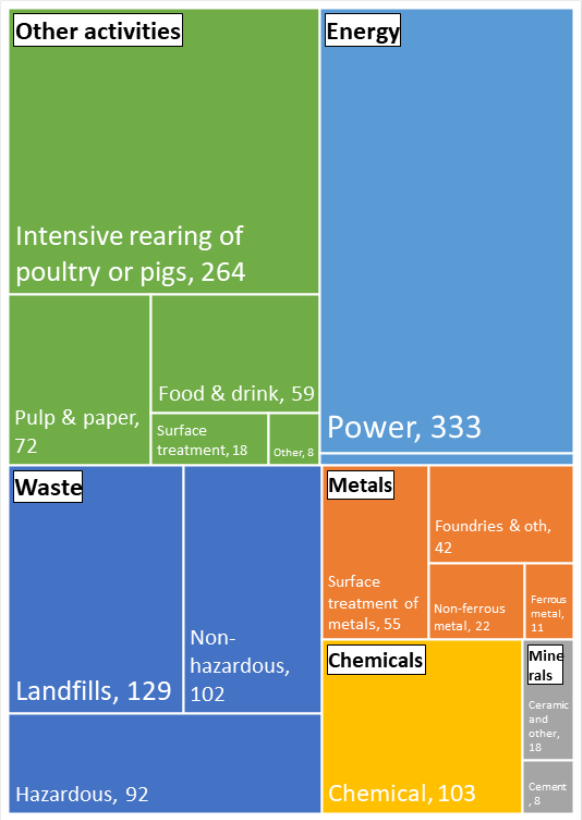
[66] European Environment Agency, Eionet Central Data Repository.

[67] Directive 2010/75/EU covers industrial activities carried out above certain thresholds. It covers the energy industry, metal production, the mineral and chemical industry, waste management, and a wide range of industrial and agricultural sectors (e.g. intensive rearing of pigs and poultry, pulp and paper production, painting and cleaning).

[68] European Commission, proposal for a revision of the Industrial Emissions Directive, 4 April 2022. The revision of the IED is performed in parallel to the revision of Regulation (EC) No 166/2006 on the European Pollutant Release and Transfer Register (E-PRTR).

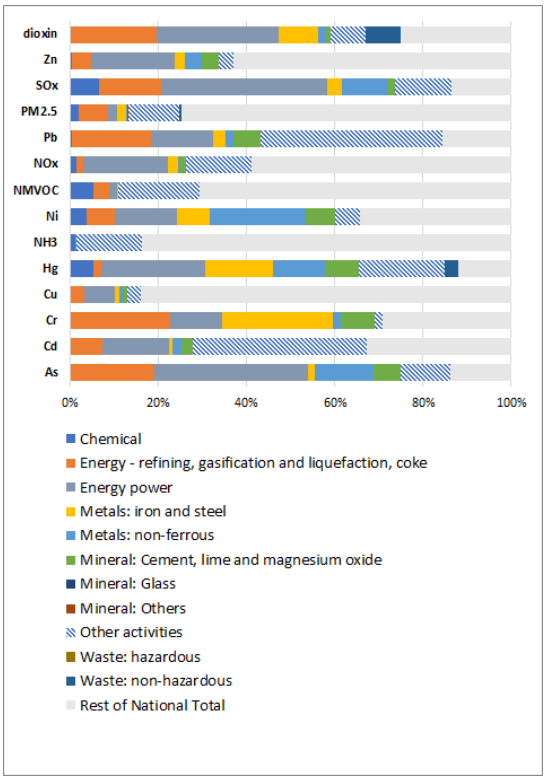
[69] European Environment Agency, European Industrial Emissions Portal.

Figure 20: Number of IED industrial installations per sector in Finland, 2018[70]



The industrial sectors identified as contributing the largest burden to the environment for emissions to air were the energy sector for sulfur oxides (SO_x), nitrogen oxides (NO_x), arsenic (As), copper (Cu), mercury (Hg), zinc (Zn) and dioxins; the production and processing of metals (in particular iron and steel) for chromium (Cr) and nickel (Ni); intensive rearing of poultry or pigs for ammonia (NH_3) and particulate matter ($PM_{2.5}$). The breakdown is shown in the following graph.

Figure 21: Emissions to air from IED sectors and rest of national total air emissions in Finland, 2018[71]

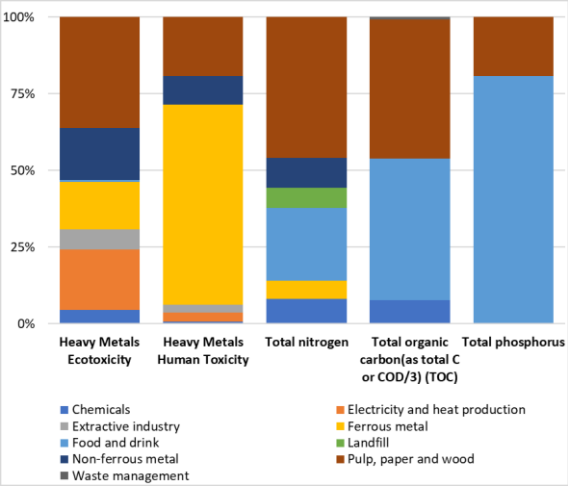


The environmental burdens for industrial emissions to water mainly result from the food and drink sector for total phosphorous and total organic carbon (TOC), from the production of pulp and paper for total nitrogen as well as for heavy metals (together with metal production and processing sector for the latter). The breakdown, based on E-PRTR data, is presented in the figure below.

[70] European Environment Agency, EU Registry, European Industrial Emissions Portal (data retrieved on 3 November 2021).

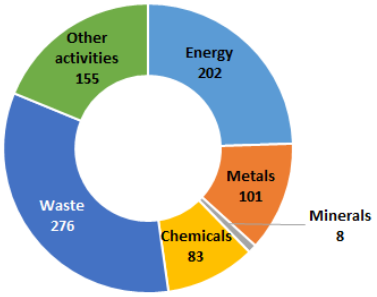
[71] European Environment Agency, LRTAP, Air pollutant emissions data viewer (Gothenburg Protocol, LRTAP Convention) 1990-2019 (data retrieved on 3 November 2021).

Figure 22: Relative releases to water from industry in Finland, 2018[72]



The EU approach to enforcement under the IED creates strong rights for the public to have access to relevant information and to participate in the permitting process for potentially polluting installations. This empowers the public and NGOs to ensure that permits are appropriately granted and that the conditions of these permits are complied with. As part of environmental inspection, competent authorities undertake site visits at IED installations to take samples and to gather necessary information. According to Article 23(4) of the IED, site visits must be carried out between once a year and once every 3 years, depending on the environmental risks posed by the installations. In 2018, Finland carried out 825 IED site visits, mostly to the waste management sector, including landfills (34%), followed by the energy sector (25%), the production and processing of metals (12%) and the chemical sector (10%).

Figure 23: Number of inspections in IED installations in Finland in 2018 [73]



The development of best-available-technique (BAT) reference documents (BREFs) and BAT conclusions ensures good collaboration between stakeholders and enables better implementation of the IED[74]. Since the last EIR report, the Commission adopted BAT conclusions for Belgium for: (i) waste incineration; (ii) the food, drink and milk industries; and (iii) surface treatment using organic solvents including the preservation of wood and wood-products with chemicals.

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.

In the 2019 EIR, the Commission suggested as priority actions to review permits to comply with new adopted BAT conclusions, to strengthen monitoring and enforcement to ensure compliance with BAT conclusions and to address challenges to comply with the recentdopted BAT conclusions for large combustion plants for existing boilers using biomass and peat by August 2021. These actions have been followed up by the Commission through the reporting by Finland to the EU Registry. No non-compliant permits have been reported in 2018.

[72] European Environment Agency, E-PRTR, European Industrial Emissions Portal. The heavy metals are presented both as a weighted sum of eco toxicity and human toxicity factors to illustrate both the ecological and human impact (based on USEtox) (data retrieved on 3 November 2021).

[73] European Environment Agency, EU Registry, European Industrial Emissions Portal (data retrieved on 3 November 2021).

[74] European Commission BAT reference documents.

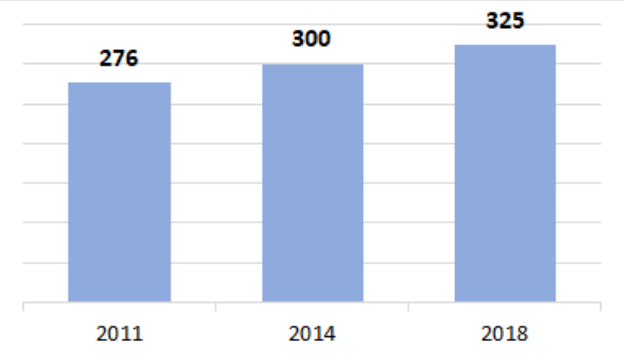
Major industrial accidents prevention – SEVESO

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 prevention, preparedness and response to major accidents.
The cornerstone of the policy is Directive 2012/18/EU (the Seveso-III Directive)[75].

The below overview of industrial plants regulated by the Seveso-III Directive ('Seveso establishments') is based on data reported to the eSPIRS database (2018)[76] and the Finland report on the implementation of the Seveso-III Directive for the period 2015-2018[77].

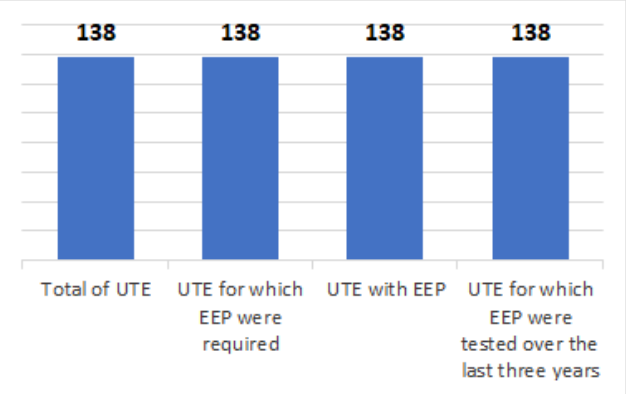
In Finland, among the 325 Seveso establishments, 187 are categorised as lower-tier establishments (LTEs) and 138 as upper-tier establishments (UTEs) – based on the quantity of hazardous substances likely to be present. The UTE are subject to more stringent requirements. The evolution of the number of Seveso establishments is presented in Figure 1.

Figure 24: Number of Seveso establishments in Finland, 2011, 2014 and 2018[78]



According to Finland, an external emergency plan (EEP) is required for 138 UTEs. In 2018, 138 UTEs had an EEP and 138 of these EEPs had been tested over the last 3 years. The summary is shown in Figure 2. Drawing up EEPs is essential to enable the proper preparation and effective implementation of the necessary actions to protect the environment and the population in the event of a major industrial accident.

Figure 25: Situation regarding EEPs in Finland, 2018[79]

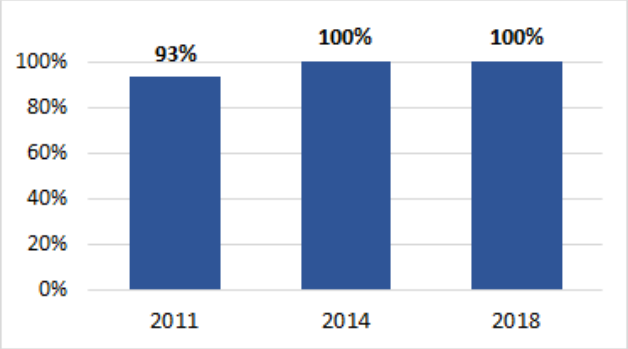


The information to the public referred to in Annex V to the Seveso-III Directive – especially about how the public concerned will be warned in case of a major accident; the appropriate behaviour in the event of a major accident; and the date of the last site visit – are permanently available for 100% of the Seveso establishments in Finland.

The share of UTEs for which information on safety measures and requisite behaviours were actively made available to the public over the last years are presented in Figure 3.

Figure 26: Share of UTEs for which information on safety measures and requisite behaviours were actively made available to the public in Finland, 2011, 2014 and 2018[80]

[75] Directive 2012/18/EU on the control of major-accident hazards involving dangerous substances.
[76] European Commission, Seveso Plants Information Retrieval System.
[77] As provided for by Article 21(2) of the Seveso-III Directive
[78] European Commission, 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), 2022.
[79] Idem.
[80] Idem.



A letter of formal notice was issued to Finland in July 2020 for not having correctly transposed the Directive's requirements on: (i) the establishment's safety report; (ii) granting non-governmental organisations the right to get information on the establishments in question and the dangerous substances used; and (iii) the information underpinning the inspections in the establishments. Finland has notified the national transposition measures that should remedy the breaches identified. The Commission is currently assessing the Finnish notification.

Noise

The Environmental Noise Directive provides for a common approach to avoid, prevent and reduce the harmful effects of exposure to environmental noise, although it does not set noise limits as such. The main instruments it uses in this respect are strategic noise mapping and planning. A key target under the 2030 zero pollution action plan is to reduce by 30% the share of people chronically disturbed by transport noise compared to 2017.

Excessive noise from aircraft, railways and roads is one of the main causes of environmental-health-related issues in the EU. It can cause ischaemic heart disease, stroke, interrupted sleep, cognitive impairment and stress[81].

In Finland, based on a limited set of data[82], environmental noise is estimated to cause at least around 50 premature deaths and 200 cases of ischaemic heart disease every year[83]. Moreover, some 23 000 people suffer from disturbed sleep. In Finland, the overall noise exposure decreased by 27% between 2012 and 2017 based on reported data.

On the basis of the latest full set of information that has been analysed, noise mapping of agglomerations, roads and railways is complete .

Water quality and management

EU legislation and policy requires that the impact of pressures on transitional, coastal and fresh waters (including surface and ground waters) be significantly reduced. Achieving, maintaining or enhancing a good status of water bodies 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 (WFD)[84] and other water-related legislation[85] set the framework for sustainable and integrated water management, which aims at a high level of protection of water resources, prevention of further deterioration and restoration to good status.

By March 2022, Member States had to report the third generation of river basin management plans (RBMPs) under the WFD. Finland has recently done so. The Commission will assess the reported status and progress, checking what measures have been taken in response to findings identified when the second RBMPs[86] were assessed.

[81] WHO 2018, Environmental Noise Guidelines for the European Region.
[82] For further information: European Environment Agency, Noise Fact Sheets 2021.
[83] These figures are an estimation by the European Environmental Agency based on: **(i)** the data reported by Member States on noise exposure covered by Directive 2002/49/EC; **(ii)** ETC/ATNI, 2021, Noise indicators under the Environmental Noise Directive 2021: Methodology for estimating missing data, ETC/ATNI Report No 2021/06, European Topic Centre on Air Pollution, Transport, Noise and Industrial Pollution; **(iii)** the methodology for health impact calculations, ETC/ACM, 2018, Implications of environmental noise on health and wellbeing in Europe, Eionet Report ETC/ACM No 2018/10, European Topic Centre on Air Pollution and Climate Change Mitigation.
[84] The Water Framework Directive (2000/60/EC).
[85] This includes the Groundwater Directive (2006/118/EC), the Environmental Quality Standards Directive (2008/105/EC), the Floods Directive (2007/60/EC), the Bathing Water Directive (2006/7/EC), the Urban Waste Water Treatment Directive (91/271/EEC), the new Drinking Water Directive (2020/2184/EC), the Nitrates Directive (91/676/EEC), the Marine Strategy Framework Directive (2008/56/EC), the Industrial Emissions Directive (2010/75/EU) and the new Regulation on minimum requirements for water reuse (2020/741).
[86] Detailed information can be found in the 5th Report from the Commission on the implementation of the Water Framework Directive and the Floods Directive, as well as in the 2019 EIR.

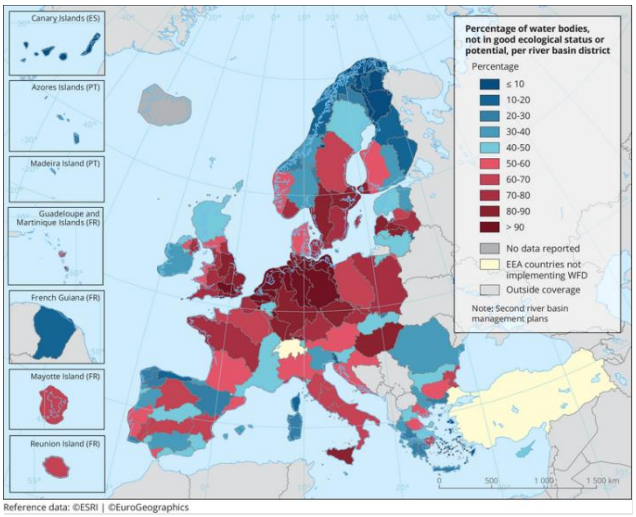
In December 2021, the Commission published the sixth implementation report, which assesses implementation of the WFD and the Floods Directive[87]. This report includes an interim assessment of progress on: (i) implementation of the programmes of measures; and (ii) the new priority substances.

The assessment report for Finland[88] shows that programmed measures are included in the 2nd RBMP. New regulations have been adopted in all the River Basin Districts (RBDs). Measures to help reach the WFD objectives have been planned, and their implementation has started without delay. Finland reports that good progress in reducing pollution from point sources has been achieved in urban and industry sectors. There has been progress on the actions associated with forestry and aquaculture. More measures are needed in the treatment of rural waste water and agriculture and partly in aquaculture. There is a delay in implementing agriculture measures due to insufficient resources. Measures to achieve reductions in diffuse source pollution due to agriculture are mainly based on voluntary agreements with farmers. Most of the farms (>90%) are committed to the CAP's environmental payments.

The second set of RBMP reports and data published in 2020[89] reveal that in Finland 73.2% of all surface water bodies (i.e. rivers, lakes, transitional, coastal, territorial) have good ecological status (with 1.4% unknown) and only 49.5% have good chemical status. For groundwaters, 2.5% failed to achieve good chemical status and 98.3% are in good quantitative status.

The figure below illustrates the proportion of surface water bodies in Finland and other European countries that failed to achieve good ecological status.

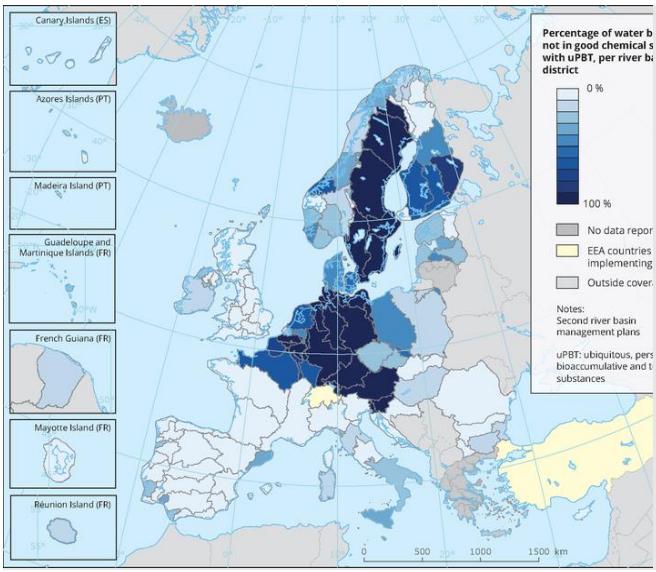
Figure 27. Proportion of surface water bodies (rivers, lakes, transitional and coastal waters) in less than good ecological status per River Basin District[90]



The following figure shows the proportion of surface water bodies in Finland and other European countries that failed to achieve good chemical status. For Finland, the percentage is 50.5%, if one includes water bodies failing due to substances behaving as ubiquitous PBTs (persistent, bio-accumulative, toxic chemicals). Without uPBTs, 1% of surface water bodies fail to achieve good chemical status.

[87] See the 6th WFD and FD implementation report FD.
[88] KH0921556ENN.en.pdf
[89] WISE Freshwater (europa.eu)
[90] European Environment Agency, 2021.

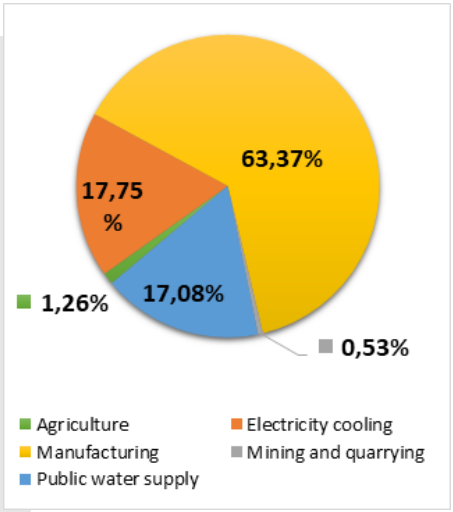
Figure 28. Proportionof surface water bodies not achieving good chemical status[91]



Under the IED framework, it should be stressed that Finland showed a significant decrease in the last decade (59.3%) in industrial releases of heavy metals like Cd, Hg, Ni, Pb and in total organic carbon -TOC (63%) to water[92].

The total amount of water abstracted annually (corresponding to the 2019 baseline) in Finland from surface and groundwater sources is 2 456.60 hm^3 (EEA, 2022). The percentage for water abstraction per sector is 1.26% for agriculture, 17.08% for public water supply, 17.75% for electricity, 63.37% for manufacturing and 0.53% for mining and quarrying, as illustrated in the following figure. Finland uses a register to control water abstractions. Abstractions less than 100 m^3/day do not require permits in Finland, and are not registered. In addition, all abstractions of water intended for domestic supply require permits, namely water abstraction over 250 m3/day, and over 100 m3/day needs to be registered. Any abstraction that could cause deterioration or have a negative impact on nature always requires a permit.

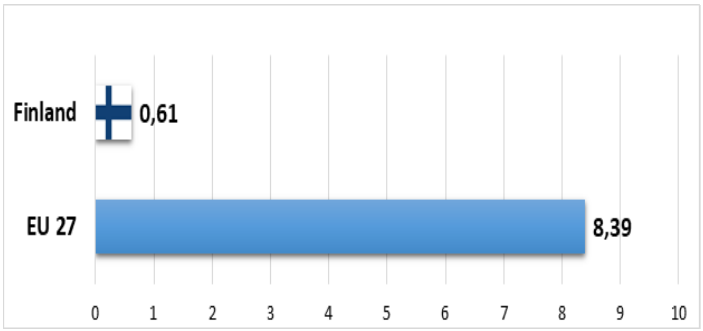
Figure 29. Water abstraction per sector in Finland[93]



In Finland, the water exploitation index plus (WEI+)[94] is 0.61% (for 2017), which is far below the 20% generally considered as an indication of water scarcity.

The bar below presents the WEI+ in Finland and other European countries. Finland is ranked 22nd (from high to low score) in the EU in terms of WEI+.

Figure 30. Water exploitation index plus (WEI+) inside EU, 2017[95]



Floods Directive

As mentioned above, in December 2021 the Commission published the 6th implementation report on the Directive. It includes a review and update of the preliminary flood risk assessments during the second cycle (2016-2021).

[91] European Environment Agency, December 2019.
[92] European Environment Agency, June 2021.
[93] European Environment Agency, Water abstraction by source and economic sector in Europe, 2022.
[94] The Water Exploitation Index plus (WEI+) is a measure of total fresh water use as a percentage of the renewable fresh water resources (groundwater and surface water) at a given time and place. It quantifies how much water is abstracted and how much water is returned after use to the environment.
[95] European Environment Agency, Water exploitation Index Plus, 2022.

According to the assessment report[96], it is considered good practice to consider long-term developments such as population and economic growth when assessing future flood risk. A concise report on the effects of climate change has also been published. Information exchange with the Swedish and Norwegian authorities in international units of management (UoMs) has been systematic in all planning phases. The report also suggests that Finland has developed a clear methodology for defining past floods with significant adverse impacts, including a mechanism for collecting detailed information on the impact of flooding. However, no clear criteria appear to be in place for determining the future flood risk in areas of potential significant flood risk (APSFRs), particularly as a result of long-term developments.

Finland has reported the second generation of Flood Risk Management Plans (FRMPs) under the Floods Directive. The European Commission will assess progress since the adoption of the first Flood Risk Management Plans and publish a new report, as done in 2019.

Drinking Water Directive

On the Drinking Water Directive[97], no new assessment of the quality of drinking water is available since the 2019 EIR. The quality of drinking water in Finland has not been indicated as an area of concern.

The recast Directive[98] entered into force on 12 January 2021, and Member States have until 12 January 2023 to transpose it into their national legal system. Finland will have to comply with these reviewed quality standards.

Bathing Water Directive

On the Bathing Water Directive, Figure 31 shows that in 2020, 269 Finnish bathing waters, (88.8%) were of excellent quality[99], 20 (6.6%) were of good quality, 5 (1.7%) were of sufficient quality, 4 (1.3%) were of poor quality and 5 (1.7%) were not classified.

Figure 31: Bathing water quality in Europe in the 2020 season[100]

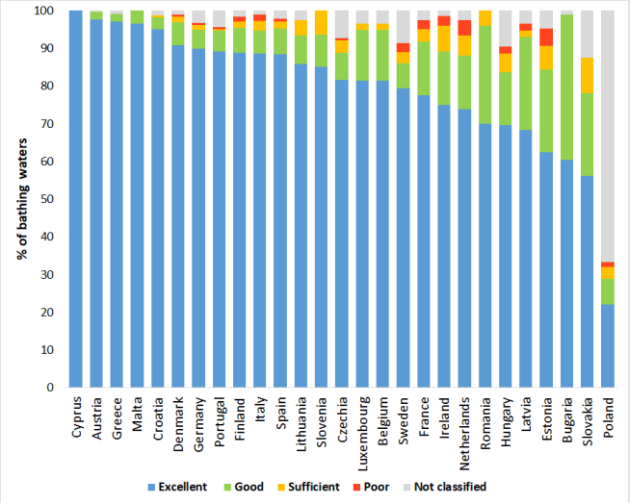
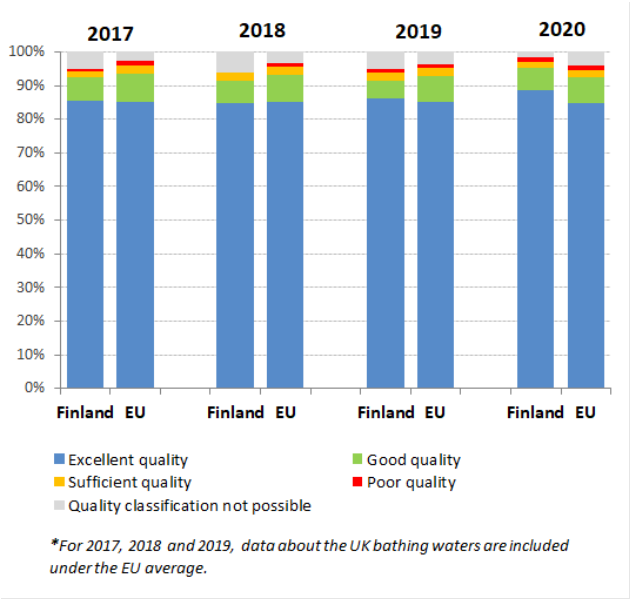


Figure 32: Bathing water quality 2017-2020[101]



Nitrates Directive

The latest Commission report on the implementation of the Nitrates Directive[102], for 2016-2019[103], warns that nitrates are still causing harmful pollution to water in the EU. Excessive nitrates in water are harmful to both human

[96] European Commission, Directorate-General for Environment, Assessment of Second Cycle Preliminary Flood Risk Assessments and Identification of Areas of Potential Significant Flood Risk under the Floods Directive: Member State: Finland, 2022.
[97] OJ L 330, 5.12.1998, p. 32-54.
[98] OJ L 435, 23.12.2020, pp. 1-62.
[99] European Environment Agency, 2021. State of bathing water – European Environment Agency (europa.eu), p. 17.
[100] European Environment Agency, Bathing Water Quality in 2020, 2022.
[101] European Environment Agency, European Bathing Water Quality in 2017, 2018, 2019, 2020.
[102] Implementation of the Nitrates Directive in the EU.
[103] Last implementation report 2016-2019.

health and ecosystems, causing oxygen depletion and eutrophication. Where national authorities and farmers have cleaned up waters, it has had a positive impact on drinking water supply and biodiversity, and on sectors such as fisheries and tourism that depend on them. Nevertheless, excessive fertilisation remains a problem in many parts of the EU

Finland is one of the countries facing the greatest challenges in tackling nutrient pollution from agriculture while Finland's surplus of nitrogen and phosphorus are close to the EU averages.

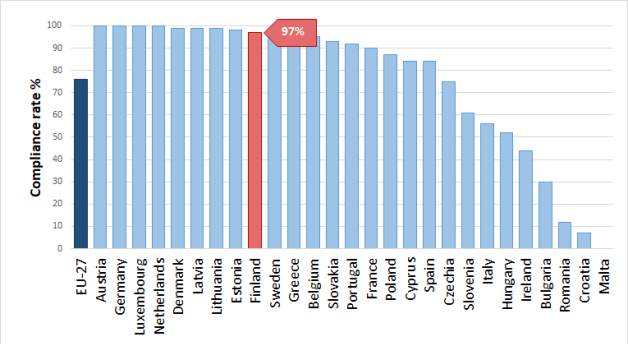
According to the Commission's report, Finland stands out for its high number of waters that are eutrophic. Also, Finland records bad water quality across its territory and faces a systemic problem in managing nutrient losses from agriculture.

Urban Waste Water Treatment Directive

Overall, 97% of urban wastewater in Finland is treated according to the requirements of the Urban Waste Water Treatment Directive (UWWTD). This is above the EU average of 76%. According to the UWWTD, Finland is required to provide in urban areas:

- collection of 5.6 million p.e. of waste water;
- biological treatment to 5.5 million p.e. of waste water;
- biological treatment with phosphorus removal to 5.0 million p.e. of waste water.

Figure 33: Proportion of urban waste water that meets all requirements of the UWWTD (collection, biological treatment, biological treatment with nitrogen and/or phosphorus removal) in compliant urban areas of the UWWTD ('compliance rate'), 2018[104]



The use of EU funding has been fundamental in improving the compliance and implementation of the UWWTD over the years.

In the 2019 EIR, Finland received priority actions to improve the monitoring of water bodies; to take measures to address diffuse pollution from agriculture, mainly phosphates; and to take steps to ensure that the flood risk management plans are coordinated with the national climate change adaptation strategy. Only limited progress has been noted in this area.

2022 priority actions

- Assess new physical modifications to water in line with Article 4(7) of the WFD. In these assessments, alternative options and appropriate mitigation measures must be considered.
- Continue efforts to further reduce nitrates pollution from agriculture in groundwater. Reinforce the national action programme to tackle eutrophication issues for both inland and marine waters where the agricultural pressure is significant.
- Improve coordination of measures to implement policies on water, marine and nature.
- Complete implementation of the Urban Waste Water Treatment Directive for all agglomerations, by building up the necessary infrastructure.

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'[105] 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[106] provides a baseline protection for human health and the environment. It also ensures stability and predictability for businesses operating within the internal market.

Since 2007, the Commission has gathered information on the enforcement of the Regulation on the Registration, Evaluation, Authorisation and Restriction of Chemicals ('the REACH Regulation') and the Regulation on Classification, Labelling and Packaging ('CLP Regulation'). In December 2020, the Commission assessed the Member

[104] European Commission, WISE Freshwater, 2021.
[105] COM(2020) 667 final.
[106] REACH: OJ L 396, 30.12.2006, p.1. - CLP: OJ L 252, 31.12.2006, p.1

States' reports on the implementation and enforcement of these Regulations[107], in line with Article 117(1) of the REACH Regulation and Article 46(2) of the CLP Regulation. According to the latest available data, national enforcement structures have not changed much in recent years. However, it is apparent from this report that there are still many disparities in the implementation of the REACH and CLP Regulations, and notably in the area of law enforcement. Recorded compliance levels in Member States seem to be quite stable over time, but with a slight worsening trend, which is likely due to: (i) enforcement authorities being more effective in detecting non-compliant products/companies; and (ii) more non-compliant products being put on the EU market.

In August 2021, the Commission published a measurable assessment of the enforcement[108] of the two main EU Regulations on chemicals using a set of indicators on different aspects of enforcement.

Responsibility for checking compliance with REACH in Finland lies with the following authorities:

- Finnish Safety and Chemicals Agency (Tukes), with CLP as well,
- Occupational health and safety authority (Regional State Administrative Agencies)
- Centre for Economic Development, Transport and the Environment (ELY)
- The Finnish Customs
- The Finnish Defence Forces
- Finnish Medicines Agency

Finland has drawn up and fully implemented enforcement strategies for both REACH and CLP[109]. They include:

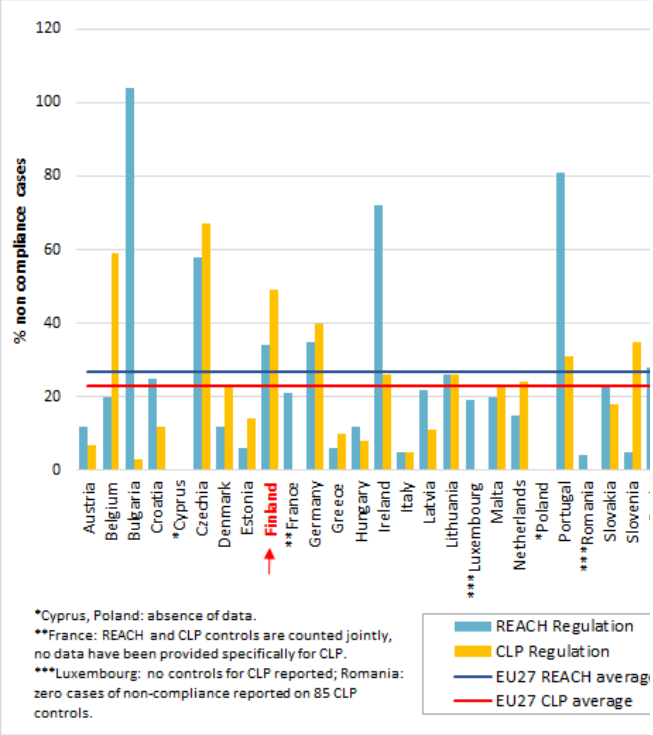
- Risk-based prioritisation taking into account the effect of non-compliance and the probability that non-compliance will occur.
- Risk to human health and the environment depends on the probability of exposure, the scale of exposure and the level of danger presented by the chemical. The probability that non-compliance will occur depends on, for example, the level of awareness and knowledge of the regulations among businesses and other operators, combined with their ambition to be in compliance, and the economic implications of complying, the probability of being found in non-compliance and the possibility of adverse public reaction.

As a rule, all infringements of REACH are classed as 'serious' or 'very serious' environmental administrative offences. If the infringement is sufficiently 'serious', the competent authority may decide to impose further penalties in addition to a fine. That authority may also, where necessary, order the provisional seizure of assets and documents.

In Finland, 7 staff-years are allocated for both REACH and CLP (and other chemicals regulations and market surveillance), as well as 6-7 staff-years in Customs authorities for REACH controls[110]. There were nearly 7 000 REACH controls in 2019 alone, and more than 33 000 in the entire reporting period. Most REACH controls are proactive (inspections) rather than reactive/non- controls (i.e. investigations in response to complaints, accidents and referrals). The high percentage of non-compliance cases out of the total number of controls should be underlined[111].

[107] European Commission, Final report on the operation of REACH and CLP, Final report_REACH-CLP MS reporting_2020.pdf (europa.eu).
[108] European Commission, REACH and CLP enforcement: EU level enforcement indicators
[109] Final report_REACH-CLP MS reporting_2020.pdf (europa.eu), p. 76.
[110] European Commission, Final report_REACH-CLP MS reporting_2020.pdf (europa.eu), p. 75.
[111] Final report_REACH-CLP MS reporting_2020.pdf (europa.eu), p. 87-88.

Figure 34: Percentage of non-compliance cases out of the total number of REACH and CLP controls during 2019 per Member State and compared to the EU average[112]



2022 priority actions

Upgrade administrative capacities for the implementation and enforcement of the REACH and CLP Regulations.

[112] European Commission, Final Report, on the operation of REACH and CLP, pp.87-88, 2022.

4. Climate action

In line with the Paris Agreement and as part of the European Green Deal, the European Climate Law sets the EU target of reaching climate neutrality by 2050 and reducing greenhouse gas (GHG) emissions by 55% by 2030 compared to 1990. The law also limits the contribution that carbon removals can make towards emission reductions in 2030 to ensure a sufficient mitigation effort.

The EU and its Member States submitted updated Nationally Determined Contribution (NDC) to the UNFCCC in December 2020.

The EU is working across all sectors and policies to cut GHG emissions and make the transition to a climate-neutral and sustainable economy, as well as addressing the unavoidable consequences of climate change.

EU climate legislation incentivises emissions reductions from power generation, industry, transport, the maritime sector and fluorinated gases (F-gases) used in products.

For road transport, EU legislation requires the GHG intensity of vehicle fuels to be cut by 6% by 2020 compared to 2010[113] and sets binding GHG emission standards for different vehicle categories[114].

Under the F-gas Regulation, the EU's F-gas emissions will be cut by two thirds by 2030 compared with 2014 levels.

From 2021, emissions and removals of GHGs from LULUCF have been included in the EU emission-reduction efforts.

The EU adaptation policy is an integral part of the European Green Deal. From 2021, Member States are required to report on their national adaptation policies[115], as the EU Climate Law recognises adaptation as a key component of the long-term global response to climate change. Member States will be required to adopt national strategies, and the EU will regularly assess progress as part of its overall governance on climate action. The updated EU adaptation strategy, published in February 2021, sets out how the EU can adapt to the unavoidable impacts of climate change and become climate resilient by 2050.

Key national climate policies and strategies

Finland submitted its integrated national energy and climate plan (NECP) for 2021-2030. The work builds on long-term energy and climate plans and roadmaps, including the *long-term strategy to reduce greenhouse gas emissions* (2020). The government's objective is to reach carbon neutrality by 2035 and become carbon negative shortly thereafter. The government has approved the proposal for the new Climate Change Act[116] to ensure that Finland's carbon neutrality target for 2035 and other international and EU climate objectives will be met. In addition to the carbon neutrality target, the Act sets emission reduction targets for 2030, 2040 and 2050. The Act lays down provisions on climate policy plans, and the reform will extend the scope of the Act to the land use sector. A target to strengthen carbon sinks will also be included in the Act.

In its recovery and resilience plan (RRP), Finland allocates 50% of the plans to climate objectives and outlines crucial reforms and investments to further the low carbon transition, including clean energy production and infrastructure (more details in Chapter 5).

Finland was the first EU country to adopt a national climate change adaptation strategy in 2005, which was updated by the national adaptation plan 2022[117]. A midterm evaluation of the national adaptation plan (2014) was published in April 2019. The evaluation was coordinated by the Finnish Environment Institute (SYKE) and Natural Resources Institute Finland (Luke) and included a broad stakeholder engagement process. The national adaptation plan 2030 is currently under preparation. Aside from its national adaptation strategy and plan, Finland has developed sectoral adaptation plans.

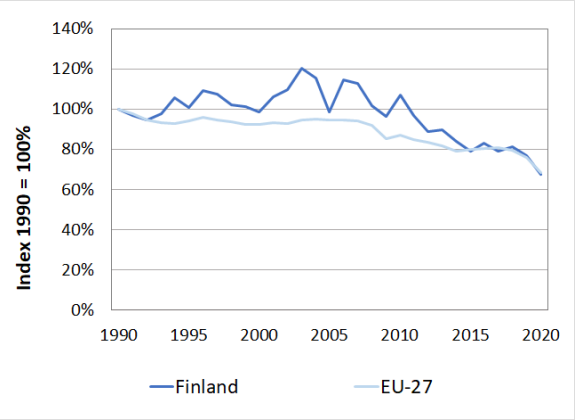
Between 1990 and 2020, greenhouse gas emissions in Finland decreased by 32%. Finland's greenhouse gas emission intensity is below the EU average, but

[113] The Fuel Quality Directive (Directive 98/70/EC) sets strict quality requirements for fuels used in road transport in the EU to protect human health and the environment, and to make road travel across the EU safer.
[114] Directive 98/70/EC.
[115] Article 29 of Regulation (EU) 2018/1999.

[116] https://www.eduskunta.fi/FI/vaski/KasittelytiedotValtiopaivaasia/Sivut/HE_27+2022.aspx
[117] MMM-_193086-v1-Finland_s_National_climate_Change_Adaptation_Plan_2022.pdf

emissions per capita remain well above the EU average.

Figure 35: Total greenhouse gas emissions (incl. international aviation) in Finland, 1990-2020 (index 1990 = 100 %).



Effort sharing target

For emissions not covered by the EU's emissions trading scheme (ETS), Member States have binding national targets under the Effort Sharing legislation[118]. For 2020, Finland's national target under the EU legislation is to reduce non-ETS emissions by 16% compared to 2005.

Under its NECP, Finland intends to achieve reductions similar to its current Effort Sharing target for 2030.

Figure 36: Emissions and targets under the Effort Sharing Decision/ Effort Sharing Regulation in Finland, 2020 and 2030 as percentage change from 2005.

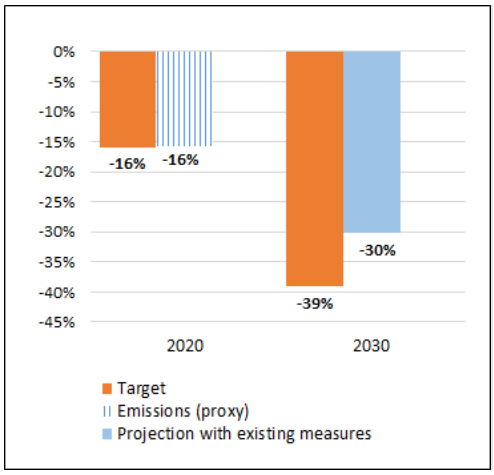
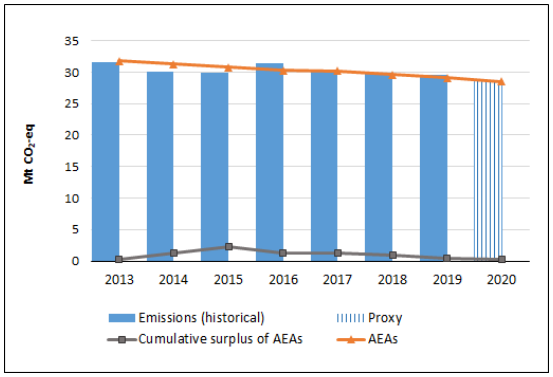


Figure 37: Emissions, annual emission allocations (AEAs) and accumulated surplus/ deficit of AEAs under the Effort Sharing Decision in Finland, 2013-2020



Key sectoral developments

In road transport, the GHG intensity of vehicle fuels in Finland decreased by 7.7%, meaning that Finland achieved the current EU-wide reduction obligation of 6% by 2020. There are several types of action that Member States can take in this regard, for example: (i) further expanding the use of electricity in road transport; (ii) supporting the use of biofuels, and advanced biofuels in particular; (iii) incentivising the development and deployment of renewable fuels of non-biological origin; and (iv) reducing upstream emissions before refining processes.

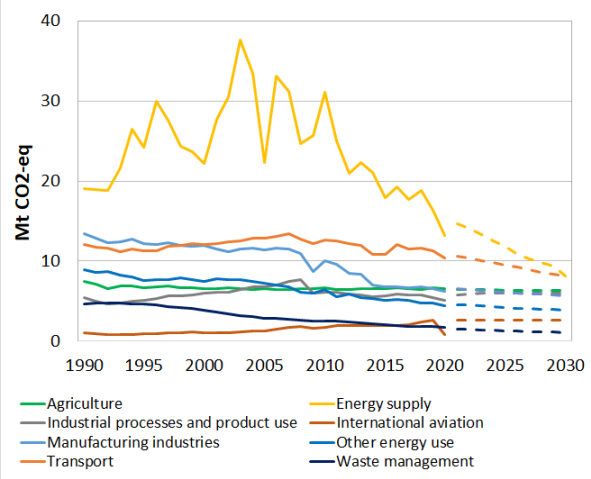
In 2019, road transport in Finland accounted for 19% of total greenhouse gas emissions. Emissions have decreased by 11% compared to 2005. The target set in the government programme for the transport sector is to halve its emissions from 2005 levels by 2030. To this end, the government adopted in May 2021 a resolution on a roadmap for fossil-free transport, which is intended to provide a basis for achieving the target.

Emissions from agriculture have remained unchanged over the last few years. The current measures included in the medium-term climate change policy plan (2021) are expected to lead to a slight downward trend in agricultural emissions.

Emissions from buildings, mainly from heating, have decreased in recent years due to the reduced oil heating and the improved energy efficiency of buildings. Finland has an action plan for phasing out fossil fuel oil in heating and a grant programme to phase out oil use in residential properties.

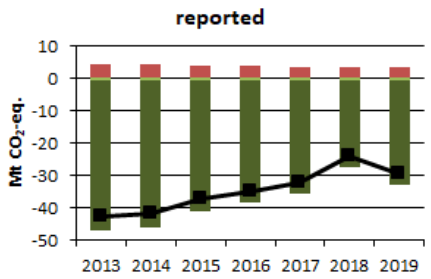
[118] Regulation (EU) 2018/842

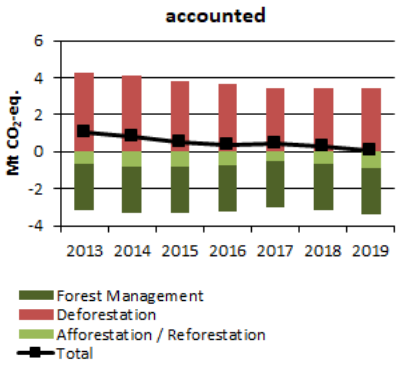
Figure 38: Greenhouse gas emissions by sector in Finland[119] – historical emissions 1990-2020, projections 2021-2030[120]



In the Land Use, Land Use Change and Forestry (LULUCF) sector, Finland projects a small increase of net removals in the land use and forestry sector by 2030. Reported quantities under the Kyoto Protocol for the LULUCF sector in Finland show net removals of, on average, -34.6 Mt CO_2-eq for the period 2013 to 2019. In this regard, Finland contributes with 10.0% to the annual average sink of -344.9 Mt CO_2-eq of the EU-27. Accounting for the same period depicts net debits of, on average, 0.5 Mt CO_2-eq, which represents -0.4% of the EU-27 accounted sink of -115.0 Mt CO_2-eq. Reported net removals show a decreasing trend from 2013 to 2018 and an increase for 2019. Accounted net debits show a decreasing trend. Finland is one of six EU Member States with average net debits and one of 14 EU Member States that show net debits for at least one year in this preliminary accounting exercise.

Figure 39: Reported and accounted emissions and removals from LULUCF in Finland [121]





Use of revenues from the auctioning of EU ETS allowances

Total revenues from the auctioning of emission allowances under the EU ETS between 2012 and 2021 amounted to over EUR 1.5 billion. All of these auctioning revenues have been used for climate and energy purposes. In Finland, revenues are not earmarked. National spending on climate and energy amounts to more than 100% of auctioning revenues. Only a part of the actual spending has been reported, but up to 100% of revenues went towards specific projects in some years, even though this funding cannot be directly linked to the auctioning revenues

2022 priority actions

- Increase efforts to reduce both final and primary energy consumption by 2030. The renovation of buildings will also lead to further green job creation in the country.
- Improve energy networks.
- Enhance the electrification of transport by increasing charging points.
- Take-up renewable energy and renewable energy technologies, especially wind energy.
- Ensure the sustainability of biomass.

[119] The sectors in the figure correspond to the following IPCC sectors: Energy supply: 1A1, 1B and 1C. Energy use in manufacturing industries: 1A2. Industrial processes and product use: 2. Transport: 1A3. Other energy use: 1A4, 1A5 and 6. Agriculture: 3. Waste: 5. International aviation: 1.D.1.a.

[120] European Environmental Agency, Total GHG trends and projections.

[121] The differences between reported and accounted emissions from LULUCF under the Kyoto Protocol are described in the '*explanatory note on LULUCF – accounted and reported quantities under the Kyoto Protocol*'.

Part II: Enabling Framework: Implementation Tools

5. Financing

Environmental investment needs in the European Union

Financing environmental measures is essential for their success. Although most financing comes from national sources, various EU funds contribute significantly, helping to close the financing gaps.
Post-2020, environmental implementation will also be supported by the EU's COVID-19 Recovery Fund (via the RRF) and the 'do no significant harm' principle which runs across the EU budget. The renewed commitments made at COP26 (Glasgow, October-November 2021) and the Biodiversity Convention (April-May 2022)[122] will also be reflected in the EU budget.

Overall environmental investment gaps (EU27)

The EU's investment needs for the green transition cover a range of interlinked areas. The additional investment needs over the baselines (i.e. the gap between what is needed and what is forecast to be invested if no additional action is taken) for climate, energy and transport were estimated in 2021 at EUR 390 billion a year (EU-27)[123], with a further EUR 130 billion to deliver the EU's core environmental objectives[124]. The costs of climate change adaptation can also be significant, and are estimated to reach a total of EUR 35-62 billion (narrower scope) or EUR 158-518 billion (wider scope) per year[125]. Those investment needs reflect the implementation objectives to 2020 and to 2030 (except for climate change adaptation, the costs of which are expected to last over a longer time horizon).

A preliminary update of the EU's core environmental investment gap is provided in the following table.[126] Almost 40% of the environmental investment needs relate to dealing with pollution, accounting for nearly two-thirds of the total gap if combined with water management. The investment gap in circular economy and waste is estimated to be between EUR 13-28 billion p.a., depending on levels of circularity implemented. The annual biodiversity financing gap is estimated at around EUR 20 billion.

Table 1: Estimated breakdown of the EU's environmental investment gaps, by environmental objective, 2021-2030 (per year)[127]

Environmental objective	Estimated investment gap (EU-27, p.a.)	
	EUR billion	%
Pollution prevention & control	42.8	39%
Water management & industries	26.6	24%
Circular economy & waste	13.0	12%
Biodiversity & ecosystems[128]	21.5	20%
R & D & I and other	6.2	6%
Total	**110.1**	**100%**

Environmental investment needs in Finland

In its recovery and resilience plan (RRP) Finland's investment priorities are clearly shifting towards support for the transformation of the energy system, reducing the climate and environmental impacts of building stock, and industrial reforms and investments for the green and digital transition. EUR 2.1 billion will be spent under the Recovery and Resilience Fund to support these priorities and leverage additional private investments. Nevertheless, major investment efforts are still needed in

[122] The Convention on Biological Diversity (cbd.int); Post-2020 Global Biodiversity Framework | IUCN.
[123] SWD(2021)621, accompanying proposal COM(2021) 557 to amend the REDII Directive (EU) 2018/2001.
[124] SWD(2020) 98 final/2.
[125] SWD(2018)292
[126] With decreases due to Brexit and some reconciliation among the objectives. DG ENV "Study supporting EU green investment needs analysis" (ongoing, 2021-2023) and DG ENV internal analysis "Environmental Investment needs and financing in the EU's green transition", July 2020.
[127] European Commission, DG Environment, "Study supporting EU green investment needs analysis" (ongoing, 2021-202 3) and DG Environment internal analysis "Environmental Investment needs and financing in the EU's green transition", July 2020.
[128] To meet the needs of the 2030 Biodiversity Strategy (Natura 2000, green infrastructure), at least EUR 20 billion a year should be unlocked for nature (COM/2020/380 final) while to fully cover the strategy (including restoration) EUR 30-35 billion may be needed, indicating a gap of EUR 10-20 billion a year compared to current baseline expenditure.

the following fields to support the implementation of EU environmental legislation.

Pollution prevention & control

The EU's first Clean Air Outlook[129] under the clean air programme estimated that the total air pollution control costs for Finland to reach the NECD emission reduction requirements (ERRs)[130] by 2030 amount to a total need of EUR 1 107 million per year, including EUR 792 million for capital investment (assuming the achievement the 2030 climate and energy targets.

The second Clean Air Outlook suggests[131] that the EU would largely achieve the reductions of air pollutant emissions that correspond to the obligations under the NEC Directive for 2030 if: (i) all relevant legislation adopted up to 2018 is implemented (including all air pollution legislation and the 2030 climate and energy targets set in 2018); and (ii) Member States also implemented the measures announced in their national air pollution control programmes. The only exception is for ammonia (NH_3) for 15 Member States, including Finland.

Water management

According to the OECD study 'Financing a Water Secure Future' (2022), Finland's compliance with the Drinking Water Directive and the Urban Wastewater Treatment Directive is high; the financing gap to rehabilitate, renew and replace the water supply system (WSS) is widening; and the current price levels demonstrate the ability to recover costs of WSS services. Healthy fiscal conditions would make it possible recourse to public spending, should need be. EU funding has provided a significant share of public funding over the past decade[132]. It is estimated that Finland will need to invest an additional cumulative EUR 1 309 million by 2030 for drinking water and sanitation[133] (beyond the baseline investment), over 90% of which relates to wastewater. Moreover, the recent 6th Water Framework Directive and Floods Directive Implementation Report[134] and the financial - economic study[135] accompanying it, are also a relevant source of information in this domain.

Waste & circular economy

According to a Commission study[136] to meet the recycling targets for municipal waste and packaging waste, Finland still needs to invest an additional EUR 289 million (around EUR 41.3 million per year) between 2021 and 2027 (beyond the baseline investment) on collection, recycling reprocessors, biowaste treatment, waste sorting facilities and digitalising waste registries.

This does not include the investment necessary across the economy to unlock a higher uptake of circularity, waste prevention and to tackle other key waste streams such as plastics, textiles and furniture.

Biodiversity & ecosystems

The recently-submitted priority action framework (PAF) for Finland shows that nature protection costs (including Natura 2000) in 2021-2027 amount to EUR 6.03 billion in total - or around EUR 862.4 million per year[137]. Of this, annual one-off costs amount to EUR 99 million.

This excludes additional costs to implement the biodiversity strategy to 2030, including on increased protection and restoration.

EU environmental funding 2014-2020

The multiannual financial framework (MFF) for 2014-2020 allocated almost EUR 960 billion (in commitments, 2011 prices)[138] for the EU to spend over this period. The commitment in this 2014-2020 MFF to the green transition included a 20% climate spending target. It also included funding opportunities for the environment, in particular under the European Structural and Investment (ESI) Funds[139]. The 2014-2020 MFF budget was subsequently topped up with over EUR 50 billion (in current prices) from the REACT-EU programme for cohesion policy action against COVID-19[140].

Finland received EUR 4.9 billion from the ESI Funds in 2014-2020 to invest in job creation and a sustainable and healthy European economy and environment. The planned direct environmental investment amounted to

[129] International Institute for Applied Systems Analysis (IIASA), Progress towards the achievement of the EU's air quality and emissions objectives, 2018.

[130] Covering the reductions of and the emission ceilings for 5 atmospheric pollutants, SO_x, NO_x, $PM_{2.5}$, NH_3 and VOC by 2030, compared to 2005. Source: Progress towards the achievement of the EU's air quality and emissions objectives, IIASA 2018. (page 29). Requirements are based on Directive (EU) 2016/2284.

[131] COM(2021) 3 Final and Report Annex.

[132] OECD, Financing Water Supply, Sanitation and Flood Protection: Challenges and Options, 2020 6893cdac-en.pdf (oecd-ilibrary.org).

[133] OECD, *Financing a Water Secure Future*, 2022.

[134] WFD and FD Implementation Reports – DG Environment – European Commission.

[135] European Commission, Directorate-General for Environment, Economic data related to the implementation of the WFD and the FD and the financing of measures, Final report. Publications Office, 2021.

[136] European Commision, *Study on investment needs in the waste sector and on the financing of municipal waste management in Member States*, 2019.

[137] See PAF Priorities.

[138] Council Regulation (EU, Euratom) No 1311/2013.

[139] The European Structural and Investment (ESI) Funds include the European Regional Development Fund (ERDF), the Cohesion Fund (CF), the European Social Fund (ESF) with the Youth Employment Initiative (YEI), the European Agricultural Fund for Rural Development (EAFRD) and the European Maritime and Fisheries Fund (EMFF).

[140] Regulation (EU) 2020/2221.

EUR 64.6 million, with a further EUR 81.5 million in indirect environmental investment, bringing the total to EUR 146.1 million. Figure 41 gives an overview of (planned) individual ESI Funds earmarked for Finland (EU amounts, without national amounts).

Figure 40: ESI Funds allocated to Finland, including environmental investments, 2014-2020[141]

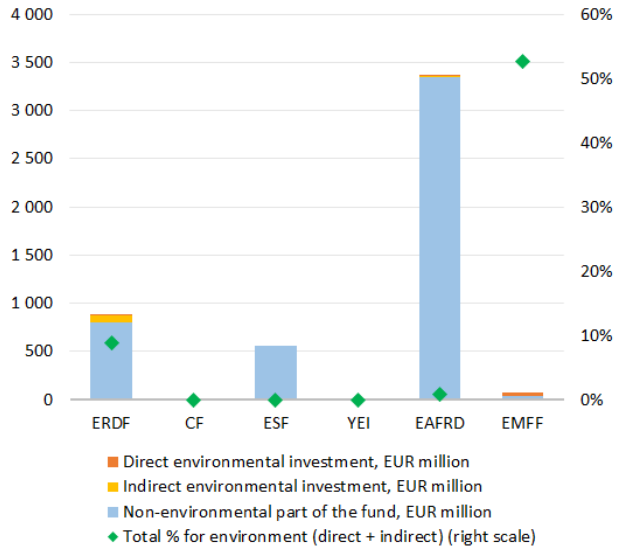


Table 2: Direct and indirect environmental investments under the ESI Funds in Finland, 2014-2020[142]

Instrument	Allocations for the environment (EUR million)
Under Cohesion policy (ERDF)	**78.8**
Direct environmental investments	6.2
climate and risk management	6.2
Indirect environmental investments	72.6
renewable energy	2.8
energy efficiency	22.9
other energy[143]	0.8
business development, R&I	46.1
Under EAFRD/rural development	**28.1**
Direct environmental investments	19.4
climate and risk management	19.4
Indirect environmental investments	8.7
renewable energy	7.4
energy efficiency	1.4
Under EMFF	**39.2**
Direct environmental investments	39.0
environment protection & resource efficiency	39.0
Indirect environmental investments	0.2
Business development	0.2
Under ESI Funds total	**146.1**
Direct environmental investments	64.6
Indirect environmental investments	81.5

Funding for the environment from the ESI Funds has also been supplemented by other EU funding programmes available to all Member States such as the LIFE programme, Horizon 2020, or loans from the EIB. This adds up to an estimated total of EUR 679 million of EU environmental financing for Finland in 2014-2020.

The LIFE programme[144] is entirely dedicated to environmental and climate objectives. It finances demonstration and best practice actions for green solutions to be deployed. In 2014-2020, Finland received EU support for 12 LIFE projects (for nature and environment) for an amount of EUR 65.5 million (out of 1 028 EU-27 LIFE projects with a total EU contribution of EUR 1.74 billion)[145].

In 2014-2020, Horizon 2020 allocated about EUR 75.4 million to Finland for the environment (in particular, for climate action and circular economy), which is 5% of its total allocation[146]. Finland also received EUR 150.0 million in direct environmental funding, with a further EUR 82.0 million for the environment from multi-purpose projects that included environmental objectives.

This brings Finland's total amount for the environment from the European Fund for Strategic Investments (EFSI) to EUR 232.0 million out of its total allocation of EUR 1.23

[141] European Commission, DG Environment - Data analysis, DG Environment analysis based on ESI Funds Open Data Portal (cohesiondata.ec.europa.eu), Integration of environmental concerns in Cohesion Policy Funds (COWI, 2017), Regulation (EU) No 1303/2013,Regulation (EU) 2021/1060 and Implementing Regulation (EU) No 215/2014. Cut-off date for data: December 2021. Environmental investments here are captured via the combined use of intervention fields and coefficients under the Regulation (EU) No 1303/2013 and Regulation (EU) 2021/1060 allowing for a more precise identification and valuation of relevant environmental investments. N.B. Indirect environmental investments are valued using the Annex I environmental coefficients of the Regulation (EU) 2021/1060 (as opposed to full value).

[142] European Commission, DG Environment - Data analysis. The values of environmental investments identified here in the specific environmental areas may differ from the tracking values at cohesiondata.ec.europa.eu, e.g. for clean air or biodiversity due to two factors: the set of environmental coefficients used and the range of funds assessed. DG Environment's analysis here covered the full range of ESI Funds. See also previous footnote.

[143] Intelligent energy distribution systems (smart grids) and high efficiency co-generation and district heating, based on intervention field 53 and 54 respectively (with 40% environmental coefficients) of REGULATION (EU) 2021/1060, Annex I.

[144] European Commission, LIFE Programme.

[145] LIFE Country overview Finland 2021 (europa.eu).

[146] Horizon 2020 Environment and resources data hub (easme-web.eu).

billion[147]. EIB support for the environmental sector amounted to EUR 361.5 million, in particular for water and sewerage, with some limited funding for waste, out of Finland's overall EIB support for this period (EUR 10.38 billion)[148]. The country ranks 11th in the EU in terms of total EIB lending.

In 2020, the EIB provided EUR 24.2 billion in funding across Europe to fight climate change, 37% of its total financing. It also provided EUR 1.8 billion (3% of its financing) for broader environmental lending[149].

EU environmental funding 2021-2027

The 2020 European Green Deal investment plan calls for EUR 1 trillion in green investments (public and private) to be made across the EU by 2030. The 2021-2027 MFF and the NextGenerationEU spending programme will mobilise EUR 2.018 trillion (in current prices) to support the recovery from COVID-19 and the EU's long-term priorities, including environmental protection[150]. Following the EU Green Deal's[151] pledge to 'do no harm' and the Interinstitutional Agreement on the 2021-2027 MFF[152], 30% of the EU budget in 2021-2027 will support climate efforts, while biodiversity will receive 7.5% of the EU budget as of 2024 and 10% as of 2026. To reach these targets, more financial resources will need to be allocated to biodiversity, specifically under the 2021-2027 cohesion policy and the 2023-2027 CAP.

Sustainable finance significantly increases transparency on environmental sustainability (a goal promoted by the EU Taxonomy)[153]. It also strengthens non-financial reporting requirements and facilitates the issuance of green bonds (by developing the EU Green Bond Standard)[154]. Reinforced by the renewed sustainable finance strategy (2020)[155], sustainable finance will increase investment flows to climate and the environment. The new strategy on adaptation to climate change[156] can help to close the insurance-protection gap, which currently leaves many risks from climate-related events uninsured[157]. The EIB will align 50% of its lending for climate and environment projects by 2025[158], with a EUR 250 billion contribution to the Green Deal investment plan by 2027.

Table 3: Key EU funds allocated to Finland (current prices), 2021-2027

Instrument	Country funding allocation (million EUR)
Cohesion policy	**Total: 1 655.1[159]**
ERDF	887.8
ESF+	604.6
ETC (ERDF)	162.7[160]
Just Transition Fund	**465.7[161]**
EAFRD/rural development under CAP Strategic Plans 2023-2027[162]	**772.8[163]**
European Maritime, Fisheries and Aquaculture Fund (EMFAF)	**71.8[164]**

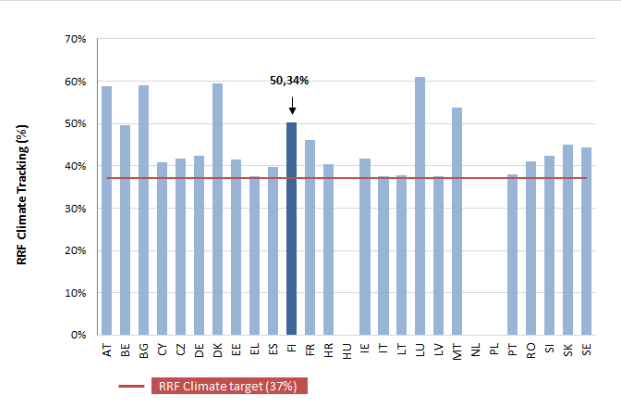
[147] European Investment Bank, Approved and signed EFSI financing, 2015-2020. https://www.eib.org/en/products/mandates-partnerships/efsi/index.htm.
[148] European Investment Bank, EIB loans in EU countries in 2014-2020. Source: EIB Open Data Portal: EIB Open Data.
[149] The EIB Group jointly works with the European Commission in implementing several programs that finance environmental implementation: InvestEU, the successor of EFSI, Pillar II and III of the Just Transition Mechanism. The EIB Group stands as a key implementing partner for InvestEU with responsibility for managing 75% of the overall budgetary capacity of the mandate.
[150] European Commission, 2021-2027 long-term EU budget & NextGenerationEU.
[151] COM/2019/640 final.
[152] Interinstitutional Agreement, OJ L 433I.
[153] EU taxonomy for sustainable activities | European Commission (europa.eu).
[154] EU Green Bond Standard - 2021/0191 (COD).
[155] COM (2021) 390 Final - European Commission, Strategy for Financing the Transition to a Sustainable Economy.
[156] COM(2021) 82 final.
[157] The strategy would support improved insurance gap coverage including through the natural catastrophe markets as reflected with the EIOPA (the Association for European Insurance and Occupational Pension Authorities) dashboard on insurance protection gap for natural catastrophes. See: The pilot dashboard on insurance protection gap for natural catastrophes | Eiopa (europa.eu).
[158] EIB Climate Bank Roadmap 2021-2025, November 2020.
[159] European Commission, 2021-2027 - EU allocations available for programming | Data | European Structural and Investment Funds (europa.eu)
[160] Interreg initial allocations per MS including ETC transnational and ETC cross-border cooperation.
[161] European Commission, 2021-2027 - EU allocations available for programming | Data | European Structural and Investment Funds (europa.eu)
[162] European Commission, CAP strategic plans.
[163] Regulation (EU) 2021/2115, Annex XI.
[164] Regulation (EU) 2021/1139, Annex V.

Recovery and Resilience Facility (RRF) 2021 – 2026[165]	**2 085.3**[166] (grants)

In Finland, the programming for the majority of EU funds (cohesion policy funds, EAFRD and EMFAF) is ongoing.

Finland's RRP consists of 39 investments and 18 reforms that will be supported by EUR 2.1 billion in grants. 50.3% of the plan will support climate objectives (see Figure 42). This exceeds the RRF's overall 37% climate target and puts Finland among the top Member States as regards the climate commitment. For the green transition, the RRP reflects Finland's climate pledge by transforming the energy system (EUR 318.7 million); providing support to industry for a green and digital transition (EUR 326 million); reducing the climate and environmental impacts of the building stock (EUR 110 million); providing low carbon solutions for communities and transport (EUR 40 million); and supporting environmental sustainability and nature-based solutions (EUR 30 million)[167].

Figure 41: Climate expenditure in RRP, 2021-2026[168]



Under NextGenerationEU, the Commission will issue up to EUR 250 billion in EU green bonds (one third of the NGEU) until 2026 that will comply with the general spirit of the do no significant harm principle, but will not be subject to the current delegated acts on EU Taxonomy and will not fully align with the proposed EU green bond standard.

In addition to the EU funds earmarked specifically for Finland in 2021-2027, various other EU funding programmes are open to all Member States. These include the LIFE programme (EUR 5.4 billion), Horizon Europe (EUR 95.5 billion)[169], the Connecting Europe Facility[170] (EUR 33.7 billion)[171] and InvestEU[172]. These instruments will also support the green transition, including research and innovation activities for environmental protection (Horizon Europe)[173], clean transport and energy (the Connecting Europe Facility)[174] and sustainable infrastructure (InvestEU)[175].,

National environmental financing

Total expenditure on environmental protection (including all relevant current and capital expenditure)[176] in the EU-27 was EUR 272.6 billion in 2020, representing 2% of EU-27 GDP. This percentage has remained quite stable over time. While absolute expenditure is concentrated in a few countries, as a share of GDP, most countries spend between 1-2%, including Finland (1.6%).

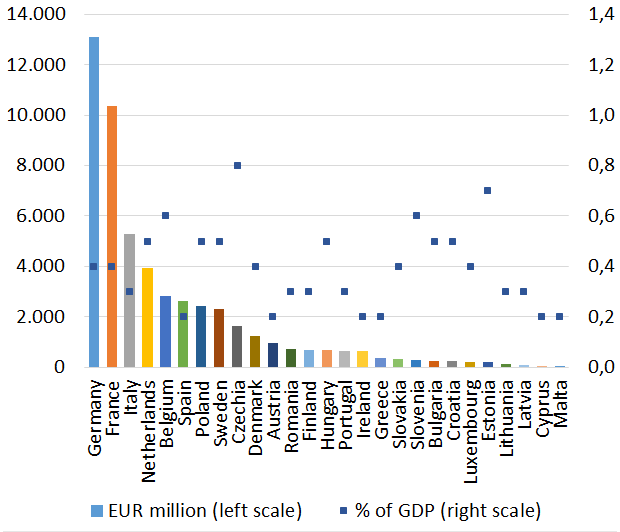
Of this spending, the EU-27's capital expenditure on environmental protection (i.e. investment**)** amounted to EUR 56.3 billion in 2018, falling to EUR 54.5 billion in 2020, representing around 0.4% of EU-27 GDP. Most Member States invested 0.2-0.5% of their GDP in environmental protection. Finland dedicated 0.3% of GDP. In 2014-2020, this amounted to around EUR 376 billion of environmental investment in the EU-27, of which EUR 4.6 billion was for Finland.

Total national environmental protection expenditure (including all relevant current and capital expenditure)[177]

[165] The actual reforms and investments under the RRF have to be implemented until 31 December 2026.
[166] Council Implementing Decision, FIN 523.
[167] European Commission, Finland's recovery and resilience plan.
[168] European Commission. The contributions to climate objectives have been calculated using Annex VI of the RRF Regulation (EU) 2021/241.
[169] European Commission, Multiannual financial framework 2021-2027 (in commitments) - Current prices.
[170] The CEF (Transport) includes also EUR 11.3 billion transferred from the Cohesion Fund. 30% of the transferred amount 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. Any unspent amount, by that date, under national envelopes will support all Cohesion Fund's Member States.
[171] Regulation (EU) 2021/1153.
[172] The InvestEU Fund is expected 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 European Investment Bank (EIB) Group and others.
[173] European Commission, Horizon Europe.
[174] European Commission, Connecting Europe Facility.
[175] European Union, InvestEU.
[176] At economy level, including final consumption, intermediate consumption and capital expenditure of households, corporations and governments related to environmental protection goods and services. It excludes EU funds, while may include some international expenditure beyond domestic. Data source: Environmental Protection Expenditure Accounts (EPEA), Eurostat. EPEA accounts are based on the CEPA 2000 classification, excluding climate, energy and circular economy.
[177] At economy level, including final consumption, intermediate consumption and capital expenditure of households, corporations and governments related to environmental protection goods and services. It excludes EU funds, while may include so me international expenditure

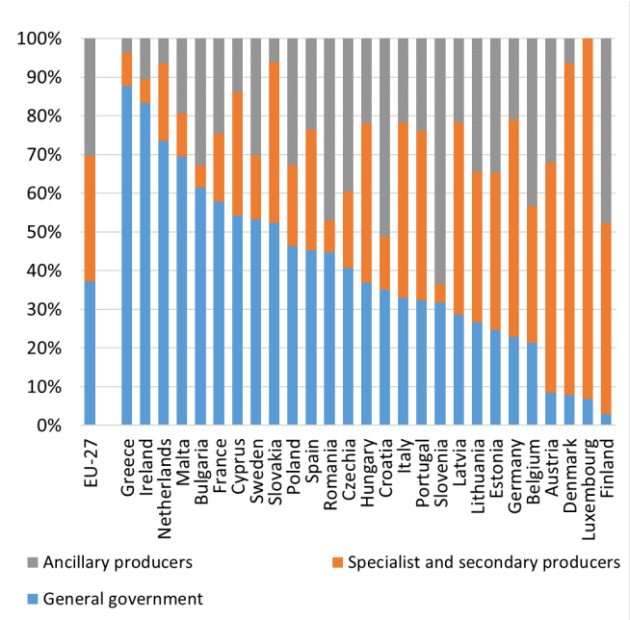
in the EU-27 was EUR 272.6 billion in 2020, representing 2% of the common GDP being quite stable over time.

Figure 42: Direct and indirect environmental protection investments in the EU-27 (EUR million and % of GDP), 2018[178]



By institutional sector, specialist producers (of environmental protection services, e.g. waste and water companies) and industry (businesses) provide the main share of Finland's environmental protection investments (49% and 48%, respectively), with only 3% left to general governments. At EU level (EU average), 37% comes from governments, 33% from specialist producers and 30% from industry (business).

Figure 43: EU-27 Member States' environmental protection investments (Capex) by institutional sectors (Total economy = 100%), 2018[179]



A breakdown of investment by environmental topic is only available at institutional sector level (rather than at economy level), due to different reporting patterns[180]. Based on data reported by Finland, 48% of the general government's environmental protection investments served biodiversity, while the other half concerned R&D and non-classified items. In the case of the country's specialist producers, 55% of the respective investments went towards wastewater and 42% towards waste management. The business sector mainly focused on air pollution (33%), wastewater (27%), water and soil (23%), and waste management (13%).

In 2020, the total annual issuance of green bonds[181] (including some non-EU countries) was USD 156 billion (EUR 137 billion), up from USD 117 billion (EUR 105 billion) in 2019[182]. Looking only at EU-27 Member States, green-bond issuance in 2020 was EUR 124 billion. To this, Finland contributed by issuing green bonds worth EUR 2.12 billion. 83% of the green bonds issued by European countries served energy, buildings or transport objectives between

beyond domestic. Data source: Environmental Protection Expenditure Accounts (EPEA), Eurostat. EPEA accounts are based on the CEPA 2000 classification, excluding climate, energy and circular economy.

[178] Eurostat, Environmental Protection Expenditure Account, 2021.

[179] Eurostat, Environmental Protection Expenditure Accounts (env_epe).

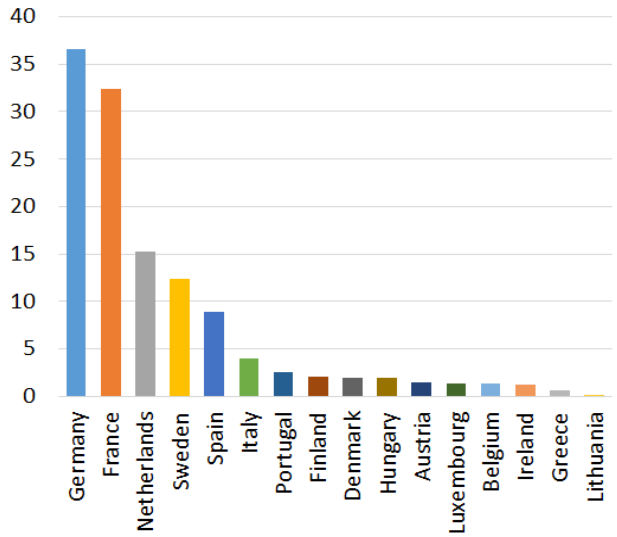
[180] Data reporting differs for the three institutional sectors, leading to aggregation difficulties. Specialist companies provide comprehensive data across all environmental areas (CEPA 1-9), while this is less the case for general government and industry that often report (the non-obligatory) data in merged categories only (with difficulty to split) or not at all.

[181] Green bonds were created to fund projects that have positive environmental and/or climate benefits. The majority of green bonds issued are green 'use of proceeds' or asset-linked bonds. The very first green bond was issued in 2007 with the AAA-rated issuance from multilateral institutions, the European Investment Bank (EIB) and the World Bank.

[182] Climate Bonds Taxonomy - https://www.climatebonds.net/standard/taxonomy. USD value is converted via Eurostat's annual average EUR/USD exchange rates.

2014-2020, 8% water and waste, with further 6% land use – with links to ecosystem conservation & restoration[183].

Figure 44: Annual EU green bond issuance in 2020 (EUR billion)[184]

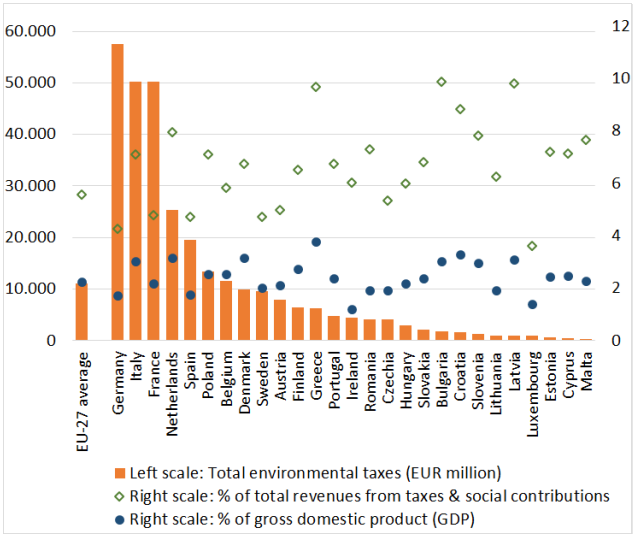


Green budget tools

Green taxation and tax reform

Finland's revenue from environmental taxes is slightly above the EU average (2.75% of GDP in 2020 compared with the EU-27 average of 2.24 %). At 1.92% of GDP, energy taxes accounted for the largest proportion of environmental taxes (EU average: 1.74 %), followed by transport taxes (0.81% of GDP compared with an EU average of 0.42%), and taxes on pollution and resources (0.02% of GDP compared with 0.08%). In the same year, environmental tax accounted for 6.52% of total revenues from taxes and social security contributions (above the EU average of 5.57 %)[185].

Figure 45: Environmental taxes in the EU-27, 2020[186]



The 2019 European Green Deal underlines that well-designed tax reforms can boost economic growth and resilience, foster a fairer society, and promote a just transition. Tax reforms can contribute to this by sending the right price signals and incentives to economic actors. The Green Deal creates the context for broad-based tax reforms, the removal of fossil fuel subsidies, and a shift in the tax burden from labour to pollution. It achieves this while simultaneously taking account of social considerations[187]. The Green Deal promotes the 'polluter-pays' principle[188], which stipulates that polluters should bear the cost of measures to prevent, control and remedy pollution. The polluter-pays principle is facilitated by the European Commission's Technical Support Instrument (TSI) project on greening taxes. Finland applies economic instruments such as packaging tax and peat burning taxes (the latter however at a low rate)[189].

Environmentally-harmful subsidies

Addressing and removing environmentally-harmful subsidies (EHS) is a further step towards wider fiscal reforms[190].

Fossil fuel subsidies are costly for public budgets and undermine Green Deal objectives. They also often deincentivise green investments and do not contribute to levelling the playing field. Fossil fuel subsidies have varied by around EUR 55 billion in the EU since 2015. They rose by 4% between 2015 and 2019, although some countries,

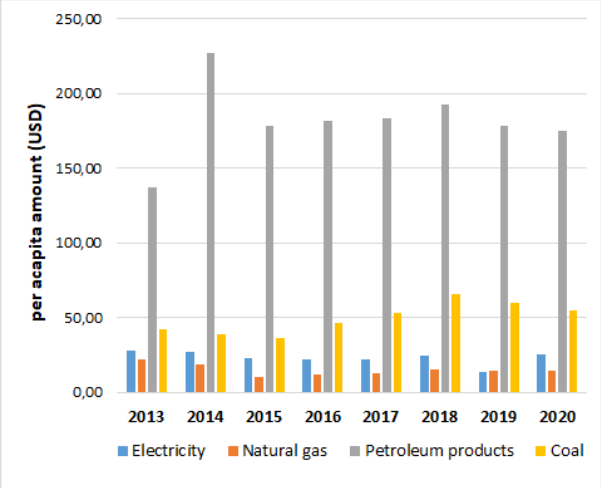
[183] Interactive Data Platform at www.climatebonds.net. Climate Bonds Taxonomy is similar to the EU Taxonomy.
[184] Climate Bonds Initiative, 2022.
[185] Eurostat, Environmental taxes (env_eta).
[186] Eurostat, Environmental taxes accounts (env_eta).
[187] COM (2019/640 final), p. 17.
[188] Enshrined in Article 191(2) of the Treaty on the Functioning of the European Union: 'Union policy on the environment (…) shall be based on the precautionary principle and on the principles that preventive action should be taken, that environmental damage should as a priority be rectified at source and that the polluter should pay'.
[189] European Commission, Green taxation and other economic instruments, 2021.
[190] European Commission, Study on assessing th environmental fiscal reform potential for the EU-28, 2016.

such as Latvia, Lithuania Sweden, Greece or Ireland, managed to decrease subsidies for fossil fuels.

At EU level, subsidies on petroleum products, in sectors such as transport and agriculture, continued to increase in 2015-2019, whereas subsidies on coal and lignite decreased, largely owing to the diminishing role of solid fuels in electricity generation. As a share of GDP, fossil fuel subsidies ranged from 1.2% in Hungary to less than 0.1% in Malta in 2019 (EU average: 0.4%). In Finland, total fossil fuel subsidies amounted to EUR 0.7 billion in 2019, representing 0.28% of GDP (below the EU average).

In 2020, the EU-27's total fossil fuel subsidies decreased to EUR 52 billion (due to falling consumption trends amid the COVID-19-related restrictions). Without Member State actions, these subsidies are likely to rebound as economic activity picks up from 2020[191].

Figure 46: Trends in fossil fuel subsidies in Finland[192]



% GDP	2013	2014	2015	2016	2017	2018	2019	2020
Coal	0,08	0,08	0,09	0,11	0,11	0,13	0,12	0,11
Natural gas	0,04	0,04	0,02	0,03	0,03	0,03	0,03	0,03
Petroleum	0,27	0,45	0,42	0,42	0,40	0,39	0,37	0,36
Electricity	0,06	0,05	0,05	0,05	0,05	0,05	0,03	0,05

Green budgeting practices

'Green budgeting' encompasses various climate and environmental tagging and tracking practices in budgets. Some EU Member States already use certain green budgeting practices[193]. Green budgeting helps identify and track green expenditure and green revenues to increase transparency on the environmental implications of budgetary policies. This is aimed at improving policy coherence and supporting green policies (including climate and environmental objectives)[194].

The Commission has also drawn up climate-proofing and sustainability-proofing guidance as tools to assess project eligibility and a project's compliance with environmental legislation and criteria[195]. The Commission developed a green budgeting reference framework[196] and launched a Technical Support Instrument (TSI) project on green budgeting in 2021 to help Member States develop national green budgeting frameworks to improve policy coherence and the green transition.

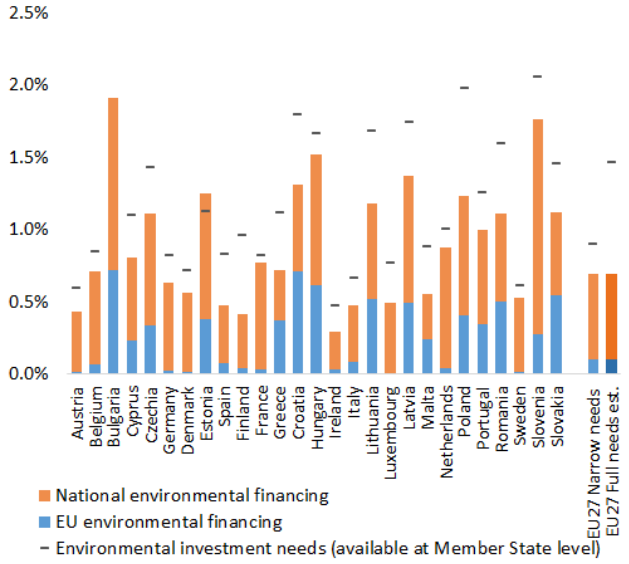
Finland does not participate in the Commission's green budgeting project started in 2021. However, it benefits from a DNSH-themed TSI project to support its significant green transition efforts. Finland has also carried out sustainable development budgeting since 2018, and since 2019 has estimated the amount of appropriations dedicated to actions that support the government's carbon neutrality goal.

Overall financing compared to the needs

The EU's overall financing for environmental investments is estimated to have been 0.6-0.7% of GDP in 2014-2020, comprising both major EU funds and national financing. This ranged from 0.3% (Ireland) to 1.91% (Bulgaria), depending on the level of environmental challenges in different Member States. In 2021-2027, it is estimated that the EU's environmental investment needs will range between 0.9 and 1.5% of the projected GDP (in 2027-2030), suggesting a potential environmental financing gap of 0.6-0.8% of GDP, with baseline financing levels assumed[197].

Figure 47: Total environmental financing baseline (2014-2020) and estimated needs (2020-2030) in the EU27 (% of GDP)[198]

[191] State of the Energy Union report, COM(2021) 950 and Annex
[192] OECD Fossil Fuel Subsidy Tracker.
[193] European Commission, Green Budgeting Practices in the EU: A First Review, 2021.
[194] European Commission, European Commission Green Budgeting Reference Framework. European Commission, Green Budgeting in the EU Key insights from the 2021 Commission survey.
[195] European Commission, Technical guidance on sustainability proofing for the InvestEU Fund.
[196] European Commission, Green Budgeting Reference Framework, based on the review of the OECD Paris Collaborative on the Green Budgeting initiative, 2017.
[197] DG Environment data analysis. EU financing sources covered: ESI Funds (ERDF, CF, ESF, YEI, EAFRD, EMFF), Horizon 2020, LIFE, EFSI (EU amount), EIB loans. National financing: total national environmental protection capital expenditure (investments). Sources: ESI Funds Open Data (cohesiondata.ec.europa.eu, European Commission, Eurostat.
[198] Eurostat, ESI Funds Open Data, 2021.



Finland's environmental financing for investments is estimated to have been 0.42% of GDP in 2014-2020, mostly relying on national financing sources (90%). Environmental investment needs in 2021-2027 are expected to be over 0.96% of Finland's GDP (partial coverage, including needs with country breakdown available), suggesting an environmental financing gap of at least 0.54% of GDP, likely to be higher when also accounting for needs currently identified at EU level only (e.g. water protection, circularity, biodiversity strategy etc.). This gap is to be addressed by mobilising additional financing sources to environmental priorities.

2022 priority actions

In the 2019 EIR, Finland had no priority actions for environmental financing and the high share of private financing can provide useful examples to other EU Member States. However, there is room for improvement in the coming years.

- Draw up an environmental financing strategy to maximise opportunities for closing environmental implementation gaps, bringing together all relevant administrative levels.
- Ensure an increased level of financing for the environment to cover the investment needs for all environmental objectives and to close the investment gaps.

6. Environmental governance

Information, public participation and access to justice

Citizens can more effectively protect the environment if they can rely on the three 'pillars' of the Aarhus Convention:
(i) access to information;
(ii) public participation in decision-making;
(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[199]. 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[200]. It includes the right to bring legal challenges ('legal standing')[201].

Environmental information

This section focuses on Finland's implementation of the INSPIRE Directive. The INSPIRE Directive aims at establishing a European spatial data infrastructure for sharing environmental spatial information between public authorities across Europe, assisting in policy-making across boundaries and facilitating public access to this information. Geographic information is needed for good governance at all levels and should be readily and transparently available.

Finland's performance has been reviewed based on the country's 2021 country fiche[202]. Progress on data identification and documentation has been slow, and implementation levels need improvement. More efforts are needed to:

- make the data more widely accessible, and
- prioritise environmental datasets in implementation, especially those identified as high-value spatial datasets for implementing environmental legislation[203].

Table 4: Country dashboard on the implementation of the INSPIRE Directive, 2016-2020[204]

	2016	2020
Effective coordination and data sharing		
Ensure effective coordination	🟩	🟩
Data sharing without obstacle	🟨	🟩
INSPIRE performance indicators		
i. Conformity of metadata	🟨	🟨
ii. Conformity of spatial data sets[205]	🟨	🟥
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) completed. Outstanding issues are minor and can be addressed easily. Percentage: >89%

🟨 Implementation of this provision has started and made some or substantial progress but is still not close to be complete. Percentage: 31–89%

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

Public Participation

Finland is committed to facilitating public participation in the environmental impact assessment (EIA) and strategic environmental assessment (SEA) procedures. The regional ELY centres are the competent EIA authorities. There is a central data source for all open and closed EIA procedures

[199] The Aarhus Convention, the Access to Environmental Information Directive (Directive 2003/4/EC) and the INSPIRE Directive, (Directive 2007/2/EC) together create a legal foundation for the sharing of environmental information between public authorities and with the public. This EIR focuses on implementation of the INSPIRE Directive.
[200] The guarantees are explained in Commission Notice on access to justice in environmental matters, OJ L 275, 18.8.2017 and a related citizen's guide.
[201] This EIR report focuses on measures taken by the Member State to guarantee access to justice, legal standing and to overcome other major barriers to bringing cases on nature and air pollution.
[202] https://inspire.ec.europa.eu/INSPIRE-in-your-Country/FI.
[203] European Commission, List of high value spatial data sets.
[204] INSPIRE knowledge base, 2021.
[205] The deadlines for implementation of the spatial data interoperability were in 2016 still in the future: 23/11/2017 for Annex I data and 21/10/2020 for Annex II and III data. It must be also considered that this conformity indicator will in many cases never reach 100% conformity as majority of the countries provide as-is-data sets in addition to the INSPIRE harmonised data sets.

in Finland[206][207]. To facilitate participation, a video and a leaflet explaining what EIA is and how to participate in it has been produced for the public[208][209].A service design working group for the EIA authorities (ELY centres) looked at options for improving the public participation process, although it is unclear when and how these will be put into practice.

Not enough data are available to assess the level of public participation in decision-making processes related to the EIA or SEA Directives. Individual EIA projects may receive a large amount of feedback from the public participation process, but no data are available on the general level of participation.

Access to justice

With a few exceptions, there are no specific provisions on legal standing during the administrative procedure, i.e. NGOs can generally participate through public consultation in decision-making procedures that include public consultation. To challenge plans, in general, the provisions of Administrative Judicial Procedure Act (AJPA) on legal standing and access to justice apply to plans and programmes adopted by the state authorities and the provisions of the Local Government Act on municipal appeal apply to plans and programmes at the local level of administration. However, in most cases the right to appeal for environmental plans is to be determined by the special provisions on access to justice in different environmental Acts. Under these special provisions, access to justice also covers the standing of NGOs. In light of the national case law, access to national courts in environmental matters is guaranteed. There is also a system of regular supervision of regulatory legally-binding acts but it is largely inaccessible to members of the public and NGOs, who can only flag cases to bodies or officials that are entitled to initiate an extraordinary supervision procedure.

Comprehensive information on access to justice is not available for environmental matters specifically. General information about administrative (and general) court proceedings is available on the website of the Finnish justice system. Information about the legislation is available in the FINLEX database. The general website of the environmental administration provides information on different environmental procedures, including information on access to the courts. The websites of the four Regional State Administrative Agencies competent in environmental and water permit matters include registers on pending permit matters and permit decisions. There is also a joint web-based Permit Information Service available on environmental and water permit matters[210]. Further information on specific environmental procedures and access to justice may be provided on the websites of municipalities, for example.

In the 2019 EIR Finland received priority actions on access to justice, in particular, to provide broader legal standing to the public and to better inform them about their rights. Progress on both aspects has been limited.

2022 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.
- Improve access to courts by the public concerned for administrative or regulatory planning decisions on water, nature and air quality.
- Better inform the public using the relevant Commission eJustice fact sheets[211] about their access to justice rights.
- Consider further improvements to the tools available for public participation in the light of the service design working group's recommendations.
- Monitor levels of public participation to assess whether Finland's ambitions for improved public engagement are being met.

Compliance assurance

Environmental compliance assurance covers all the work undertaken by public authorities to ensure that industries, farmers and others fulfil their obligations to protect water, air and nature, and manage waste[212]. It includes support measures provided by the authorities such as:
(i) compliance promotion[213];
(ii) inspections and other checks that they carry out, i.e.

[206] https://www.ymparisto.fi/yva-hankkeet?n5=1
[207] https://www.suomi.fi/palvelut/ymparistovaikutusten-arviointimenettely-elinkeino-liikenne-ja-ymparistokeskus/99980420-f076-4636-a752-d16ae39e5e16
[208] https://www.ymparisto.fi/fi-FI/Asiointi_luvat_ja_ymparistovaikutusten_arviointi/Ymparistovaikutusten_arviointi
[209] https://www.ely-keskus.fi/documents/10191/40025628/YVA-kuulemisen_palvelumuotoilu.pdf/b3b909a0-6449-4be8-bb22-d5036f4c53e1
[210] ylupa.avi.fi
[211] https://e-justice.europa.eu/content_access_to_justice_in_environmental_matters-300-en.do
[212] The concept is explained in detail in the Communication on 'EU actions to improve environmental compliance and governance' COM(2018) 10 and the related Commission Staff Working Document, SWD(2018)10.
[213] This EIR focuses on the help given to farmers to comply with nature legislation and nitrates legislation.

compliance monitoring[214];
(iii) the steps that they take to stop breaches, impose sanctions and require damage to be remedied, i.e. enforcement[215].
Citizen science and complaints enable authorities to focus their efforts better. Environmental liability[216] ensures that the polluter pays to remedy any damage.

Compliance promotion and monitoring

Finland has taken steps to improve the practical information available to forest owners, particularly on habitats for the flying squirrel[217]. Additional measures to promote the implementation of the Birds and Habitats Directives have been introduced since the 2019 EIR, mainly focusing on the forestry sector. Measures and information for the agricultural sector are currently lacking.There is also a website jointly managed by several public authorities that provides information on coexistence with large carnivores, including material relevant to farmers and foresters[218]. However, there do not appear to be similar tools targeted at farmers in relation to the Nitrates Directive; information available to farmers is largely confined to details on the cross-compliance requirements for CAP payments, and while research has been carried out into farm-level actions, this does not seem to have been translated yet into accessible online information[219].

The planning of Industrial Emissions Directive inspections is the responsibility of the regional environmental authorities, the Centres for Economic Development, Transport and the Environment (ELY centres). Each regional centre prepares a separate inspection plan for its own geographical area, describing the special characteristics of the area, supervision needs, and the resources and objectives for inspections. Inspection reports are not automatically published online; in principle they can be requested by members of the public. The ELYs publish annual data on inspections[220]. By contrast, inspections of waste incineration plants must be published: the list of installations in the geographical area of each ELY centre and a report on the activities of each installation[221] is available online.

Complaint handling and citizen science

Some general information is available online on how to submit a complaint to authorities, which is however not tailored to environmental issues[222]. Some municipalities also provide specific information on how to complain about environmental issues specifically[223]. Generally, a complaint on the Finnish administrative system is addressed to the supervisory authority legally responsible for supervising an activity. This is either an ELY centre or a municipal authority, depending on the matter[224]. Where the complainant is not a party to any open proceedings or permitting procedure, they would need to identify the right contacts at regional level for submitting the complaint or submit their observations/complaints via the general service email or registry. There are no statistics or information available on the numbers of complaints or on the ways the complaints are usually initiated with the authorities.

While, as noted above, the use of information provided by citizens in the form of complaints or infringement reports is not systematic, there are a number of citizen science initiatives in Finland. These include the Finnish Biodiversity Information Facility[225], which is an open access data repository for researchers, government, and the public, allowing users to search and download information, and to record and share their own observations. The database combines officially gathered data with data submitted by citizens and NGOs. The environmental services website Ymparisto.fi also includes information on how to submit citizen observations with a few links on how to submit the information[226].

[214]This EIR focuses on inspections of major industrial installations.
[215] This EIR focuses on the availability of enforcement data and coordination between authorities to tackle environmental crime.
[216] The Environmental Liability Directive, 2004/35, creates the framework.
[217]See e.g. https://tapio.fi/oppaat-ja-tyovalineet/liito-oravan-huomioon-ottaminen-metsankayton-yhteydessa-neuvontamateriaali/
[218] See www.suurpedot.fi
[219] See for example the development of a calculator tool for the use of fertilisers (https://mmm.fi/documents/1410837/0/Typpitaselaskuri_Loppuraportti.pdf/60a54676-e53b-6491-fbbd-3ccb3483e749/Typpitaselaskuri_Loppuraportti.pdf?t=1622007989988), and research aimed at improving water management: https://www.syke.fi/fi-FI/Tutkimus_kehittaminen/Tutkimus_ja_kehittamishankkeet/Hankkeet/KiertoVesi_hanke
[220] Available at: https://www.ymparisto.fi/fi-FI/Asiointi_luvat_ja_ymparistovaikutusten_arviointi/Luvat_ilmoitukset_ja_rekisterointi/Ymparistolupa/Valvonta?f=VarsinaisSuomen_ELYkeskus
[221] These can be accessed at https://www.ymparisto.fi/fi-FI/Asiointi_luvat_ja_ymparistovaikutusten_arviointi/Luvat_ilmoitukset_ja_rekisterointi/Ymparistolupa/Valvonta/Jatteenpoltto_ja_rinnakkaispolttolaitoks(32775)
[222]General information on how to submit a complaint is available on on the police website ((https://poliisi.fi/en/environmental-and-animal-offences).
[223] See for example Helsinky's website: https://www.hel.fi/helsinki/fi/kaupunki-ja-hallinto/hallinto/palvelut/palvelukuvaus?id=2761
[224]Information on how to report alleged environmental offences is available on a dedicated section of the Finnish Police website ((https://poliisi.fi/en/environmental-and-animal-offences) .
[225] https://laji.fi
[226] https://www.ymparisto.fi/fi-FI/Asiointi_luvat_ja_ymparistovaikutusten_arviointi/Kansalaishavainnot

Enforcement

Environmental crimes are monitored by the government's Finnish Environmental Crime Monitoring Group (Ympäristörikosten seurantaryhmä), which publishes an annual report[227]. The total number of offences affecting the environment has increased in 2021 as compared to 2020, and the number of environmental offences, natural resource offences and health and safety offences has reached a record high. The reports provide summary data, not details of individual cases or penalties imposed.

An updated national strategy to combat environmental crime was published in 2020[228], covering the period 2020-2026. It aims to facilitate cooperation between authorities working on environmental crime prevention, including sharing of best practices; to coordinate budgetary and other supervision; to develop joint training materials; and to further develop statistical information. The strategy is monitored by a joint executive board of relevant stakeholders at governmental and regional level. Biennial programmes will help to implement the strategy; the programme for 2021-2022 can be accessed online[229].

Environmental Liability Directive

The Statistical Centre of Finland publishes data and statistics on the investments and private expenses caused by environmental damages, as part of regular reports on the costs of environmental protection. This data does not cover the number of reported ELD cases or incidents of damage[230]. The Finnish Environmental Institute SYKE publishes reports on environmental damage. The most recent was published in 2019[231], and resumes a series of regular reports interrupted in 2005. It notes that since the last ELD reporting period in 2013, there have been one new certain ELD case (the decision is final) and two potential ELD cases (one is under appeal and one is under consideration by the competent authority). The list of certain ELD cases and ELD cases under an appeal, with the relevant hyperlinks are available on the web page of the Ministry of Environment[232], under the national register for ELD cases. . The national register for ELD cases. Since the information is on the web page, it is easily available to the public. Private insurance companies offer insurance products aimed at covering liability for environmental damage. There are many issuers for these insurance instruments. However, the environmental insurance market in Finland for stand-alone environmental insurance policies is not well developed. Demand by small to medium sized businesses for environmental insurance is low but steadily growing. Demand by large businesses is also steadily growing[233].

In the 2019 IER Finland received priority actions to better inform the public about compliance promotion, monitoring and enforcement by at least ensuring that the following information is available online: (i) guidance to Finnish farmers on how to comply with obligations on nitrates and nature, (ii) inspection plans and reports on industrial inspections, and (iii) guidance on how to file environmental complaints. It was also recommended to publish information on the outcome of administrative enforcement action and the follow-up to detected cross-compliance breaches on nitrates and nature; and finally to improve financial security for liabilities and ELD guidance and publish information on environmental damage.

Limited progress is noted and Finland still falls short on its compliance assurance obligations.

2022 priority actions

- Better inform the public about compliance promotion, monitoring and enforcement. Provide clear and well-signposted information for citizens on how to report environmental complaints or infringements.
- Take forward the commitments set out in the national strategy on environmental crime, including on developing better statistics.

Effectiveness of environmental administrations

Those involved in implementing environmental legislation at EU, national, regional and local levels need to have the knowledge, tools and capacity to ensure that the legislation and the governance of the enforcement process bring about the intended benefits.

[227] https://valtioneuvosto.fi/-/25235045/ymparistorikollisuus-nostaa-paataan

[228] https://ym.fi/-/ymparistorikosten-torjuntastrategia-korostaa-viranomaisten-yhteistyota-ja-koulutusta

[229] https://julkaisut.valtioneuvosto.fi/handle/10024/162667 (**Can our translator replace the hyperlink to the Finnish publication with hyperlink to the shorter Swedish version or should we leave the hyperlink to the Finnish publication instead? JD: Yes no problem**

[230] https://www.stat.fi/til/ympsm/2019/ympsm_2019_2021-10-28_tie_001_fi.html

[231] https://helda.helsinki.fi/bitstream/handle/10138/327983/SYKEra_8_2021_Ymparistovahingot-Suomessa-2013-2019.pdf?sequence=4&isAllowed=y

[232] **https://ym.fi/ymparistovahinkojen-ehkaiseminen**

[233] https://ec.europa.eu/environment/legal/liability/pdf/Annex-I_Finland.pdf MS Finland country report. Annex to the Report: Improving financial security in the context of the Environmental Liability Directive No 07.0203/2018/789239/SER/ENV.E.4 May 2020.

Administrative capacity and quality

Environmental policy developments in Finland are mainly driven by EU directives and regulations, and the relevant EU rules are generally transposed in time. At present, the number of complaints and infringements in the environmental field can be considered below the EU average.

Overall, during the last decade an improvement in the implementation of EU environmental law can be observed across sectors. For instance, progress has been made on the implementation of environmental assessments. A recent package of legislation aimed at speeding-up the licencing of the 'projects of national interest' raised some doubts but no serious problems were identified when it entered into force.

Coordination and integration

As mentioned in the 2017 EIR, the transposition of the revised Environmental Impact Assessment (EIA) Directive[234] provides an opportunity to streamline the regulatory framework on environmental assessments. Despite a delay in full transposition in relation to the deadline (May 2017), Finland has transposed the revised Directive. The quality of the transposition is currently undergoinga conformity check by the Commission.

The Commission encourages the streamlining of the environmental assessments to reduce duplication and avoid overlaps in environmental assessments applicable to projects. Moreover, streamlining helps to reduce unnecessary administrative burden and accelerates decision-making, provided it is done without compromising the quality of the environmental assessment procedure[235]. Finland started streamlining environmental assessments under the EIA and Habitats Directives even before the revision of the EIA Directive. Coordinated procedures have been put in place for the EIA Directive, the Water Framework Directive and the IED.

A notable good practice is the Single Environmental Permitting Platform developed to operationalise the Single Environmental Permitting Regime, which simplifies, harmonises and articulates many environmental permits.

2022 priority actions

- Continue to build adminstrative capacity to support the green transition, particularly in the areas of circular economy, governance and public administration, the financial sector and access to finance.

Reforms through the Commission's Technical Support Instrument (TSI)

The Commission supports environmental implementation and the green transition, not only through the EU financing programmes, but also granting technical assistance such as the TSI.

The Commission's TSI supported several environment-related projects in Finland, including a project on sustainable finance ecosystems under the 2020 TSI and a project on the emerging forest pest risks under the 2021 TSI. Under the 2022 TSI, a request has been validated on the Do no significant harm (DNSH) guidelines to implement the green transition in Finland.

TAIEX EIR peer to peer

The TAIEX EIR peer-to-peer tool[236] as launched in 2017 by the Commission to facilitate peer-to-peer learning between environmental authorities.

In 2019, Finland benefited from an expert mission on circular procurement training. It also participated in two workshops on advancing cities' sustainability targets strategically through public procurement and on EU Timber Regulation Nordic Baltic Competent Authorities. In 2022, Finland participated in two multi country workshop on zero pollution and ammonia reducing technology and measures.

[234] Directive 2014/52/EU of the European Parliament and of the Council of 16 April 2014 amending Directive 2011/92/EU on the assessment of the effects of certain public and private projects on the environment.
[235] The Commission issued a guidance document in 2016 regarding the setting up of coordinated and/or joint procedures that are simultaneously subject to assessments under the EIA Directive, Habitats Directive, Water Framework Directive, and the Industrial Emissions Directive, OJ C 273, 27.7.2016, p. 1.
[236] TAIEX - Environmental Implementation Review - PEER 2 PEER - Environment - European Commission (europa.eu)