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**Environmental Implementation Review  
Country Report - THE NETHERLANDS**

*Accompanying the document*

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

**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 the Netherlands for the implementation of EU environmental policy and law were:

- optimising the contribution of the Natura 2000 and the national ecological networks to achieve favourable conservation status, and to reduce habitat fragmentation and **biodiversity** loss, atmospheric nitrogen deposition, desiccation and acidification, while addressing the decline of meadow and farmland birds;
- reducing **air pollution**, in particular the concentrations of nitrogen oxide levels (NO<sub>x</sub> – NO<sub>2</sub>) in urban areas and the transport sector, by measures such as reducing traffic emissions, restrictions on vehicle access or fiscal incentives;
- addressing **water pollution** caused by the nitrogen surplus from agricultural sources and identifying measures to achieve the objectives of the Water Framework Directive and Nitrates Directive.

The Netherlands continues to make efficient use of EU funds and loan opportunities in particular to support the **circular economy**. The country is among the best performers in the EU as regards resource productivity, secondary materials use and waste management. However, further progress could be made by introducing new economic instruments to prevent waste by not incinerating reusable or recyclable waste and by making the reuse and recycling of waste more economically attractive.

Protecting **biodiversity** presents major challenges, since over three quarters of the protected habitats and species still have unfavourable conservation status. One main reason for the deterioration of habitats is the continued significant pressure from agriculture, in particular due to nitrogen deposition affecting many sensitive habitats from bogs to forests and the changes in water regime (drainage). Furthermore, the situation for forested areas

protected under the nature directives is severe, as more than half of assessments show a bad conservation status.

As regards **water pollution**, progress has been made, although challenges remain. The Netherlands need to substantially reinforce their Nitrate Action Programme with measures that match the severity and the urgency of the situation, in line with the obligations under the Nitrates Directive, and to ensure the objectives of the Water Framework Directive and the legislation for Natura 2000 and air quality are met.

**Air quality remains a cause of concern** in the Netherlands. While emissions of several air pollutants have fallen significantly in recent years, the Netherlands is not projected to comply with the 2020-2029 emissions reduction commitments for any pollutant. Additional efforts are needed in particular on ammonia emissions from agriculture. The Commission recently recommended that the Netherlands prioritise ammonia reduction measures as part of the new national Common Agricultural Policy Strategic Plan.

On **water management**, efforts should be made to improve coordinated implementation between water, marine and nature policies.

Total environmental financing reached around 0.87% of GDP in 2014-2020 (almost exclusively based on national sources), that needs to be increased to cover the investment needs in the coming years (at least 1% of GDP) that signals a potential financing gap of over 0.13% of GDP.

## Part I: Thematic areas

### 1. Circular economy and waste management

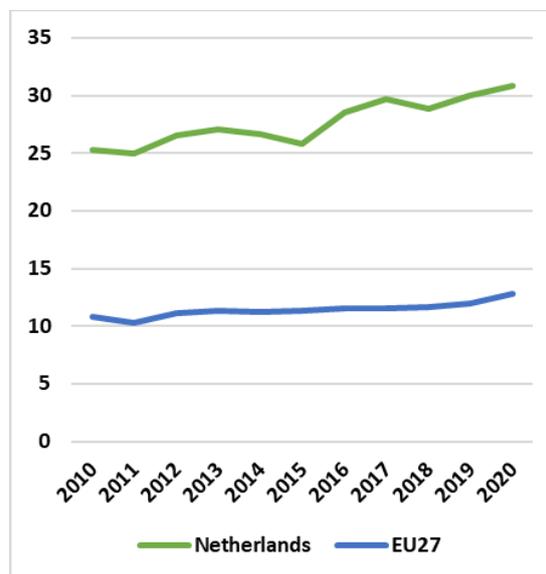
#### Measures towards a circular economy

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 across countries. To help achieve the EU Circular Economy Action Plan's goal of doubling the EU circular material use rate by 2030, ambitious measures targeting the whole product life cycle are needed at Member States' level. Such measures range from sustainable product design able to increase durability, reparability, upgradability and recyclability of products, to other measures like remanufacturing, increasing the circularity in production processes, recycling, as well as boosting eco-innovation and increasing the uptake of green public procurement.

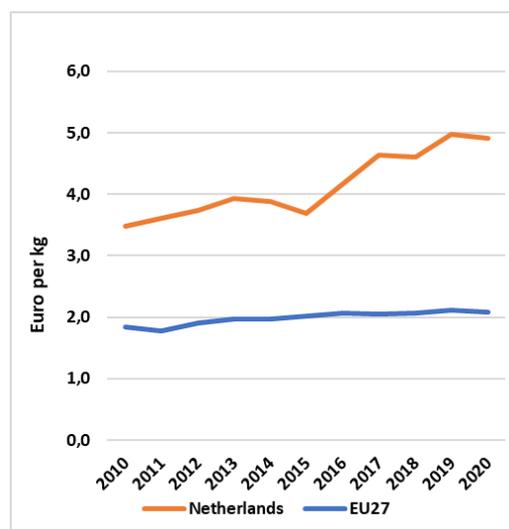
The circular (secondary) use of material in the Netherlands was 26.6% in 2014 and was 30.9 in 2020. Such performances make the Netherlands the first country in the EU for circular materials used, well above the EU average of 12.8.

Figure 1 – Circular material use rate (%), 2010-2020<sup>1</sup>



Resource productivity expresses how efficiently the economy uses material resources to produce wealth. Improving resource productivity can help minimise negative impacts on the environment and reduce dependency on volatile raw material markets. As shown in Figure 2, with EUR 4.91 generated per kg of material consumed in 2020, resource productivity in the Netherlands is well above the EU average of EUR 2.09 per kg. This positive performance is further supported by a continuous increase in the resource productivity of the Netherlands over the last decade.

<sup>1</sup> Eurostat, [Circular Economy Monitoring Framework](#).

**Figure 2: Resource productivity, 2010-2020<sup>2</sup>**

### Circular economy strategies

The Commission encourages Member States to adopt and implement national/regional circular economy strategies covering the whole life cycle of products, as they are one of the most effective ways to progress towards a more circular economy at Member State level. Since the launch of the European Circular Economy Stakeholder Platform in 2017<sup>3</sup>, national, regional or local authorities have used the platform to share their strategies and roadmaps.

The country has a circular economy strategy, called “A Circular Economy in the Netherlands by 2050”. The long-term strategy has been in place since 2016, targeting the entire lifecycle of products. The programme’s ambition is to achieve an interim objective of a 50% reduction in the use of primary raw materials (minerals, fossil-based materials and metals) by 2030. In 2019, the government adopted a Circular Economy Implementation Programme – covering the implementation measures for the years 2019-2023. Every two years the Netherlands Environmental Assessment Agency (PBL) publishes a progress report on the implementation, and the country has committed to update the programme every five years. A new programme for 2023 and further is in preparation.

The Netherlands puts extra effort in policies regarding plastics and textiles. Moreover, plastics, construction, manufacturing industry, consumer goods, and biomass

<sup>2</sup> Eurostat, [Resource productivity](#).

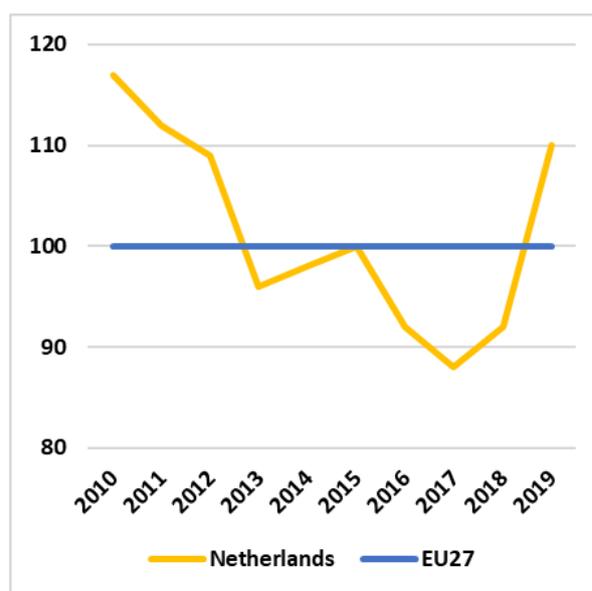
<sup>3</sup> [Circular Economy Stakeholder Platform](#)

and food are included in the integral Dutch Circular Economy Strategy as priority sectors or chains.

### Eco-innovation

A successful transition to a circular economy requires social and technological innovation as it’s the full potential of circular economy can only be reached when implemented across all value chains. Therefore, eco-innovation is an important enabling factor for the circular economy. Product design approaches and new business models can help to produce innovations with systemic circularity, creating new business opportunities.

The country ranked 9th in the list of EU countries with a total score of 124 in the Eco-Innovation Scoreboard of 2021, and it performs as an eco-innovation leader. In two out of five components of the Eco-innovation index of 2021, the Netherlands perform below the EU average (eco-innovation activities and socio-economic outcomes).

**Figure 3 – Eco-innovation performance, 2010-2020<sup>4</sup>**

### Green public procurement

Public procurement accounts for a large proportion of European consumption, with public authorities’ purchasing power representing 14% of EU GDP. This can help drive the demand for sustainable (and circular) products and business cases that meet circularity standards. The Netherlands has a long tradition in sustainable public procurement policy. Evaluation

<sup>4</sup> European Commission - Directorate-General for Environment (DG ENV), Eco-innovation Observatory, [Eco-innovation index](#).

however has shown broad support for GPP, but still too little structural uptake.

To address this and significantly boost the impact of public procurement, a new National Plan on SPP has been adopted in 2021. This plan aims to create more political commitment, activate key decision makers in organisations and create more impact in key sectors.

For circular procurement specifically a number of activities are relevant. The Netherlands has so far set up around thirty so-called buyer groups to leverage collective procurement power in a relevant sector and provide a platform for sharing knowledge and learning experiences. Specifically for infrastructure, extensive transition paths have been worked out as part of the Climate neutral and Circular Infra Programme. These are supported by buyer groups as well for the procurement angle. The national buyer group for ICT has been linked to the Circular and Fair ICT Pact together with seven other countries, which the Netherlands has initiated.

An increasing number of circular procurement best practices are shared as part of the free online SPP criteria tool SPP criteria tool. The Netherlands promotes the use of internal carbon pricing, especially in the infrastructure sector. In addition, a growing number of organisations use the Dutch CO<sub>2</sub> Performance Ladder, which provides both a procurement tool and a plan-do-check-act management system. This approach speeds up carbon emission reduction in companies and governments certified on this Ladder, including (on the higher levels) emissions resulting from procurement. This provides a powerful impetus for circular procurement.

To boost political support for sustainable (and circular) procurement, a new political Manifest is being drawn up, which focuses on boosting SPP usage, providing support and creating a stronger foundation for it within signatory organisations.

### EU Ecolabel and the Eco Management and Audit Scheme (EMAS)

The number of EU Ecolabel products and EMAS-licensed<sup>5</sup> organisations in each country provides some indication of the extent to which the private sector and national stakeholders are actively engaged in the transition to a circular economy.

As of September 2021, the Netherlands had only 1626 products and 86 licenses registered in the EU Ecolabel scheme out of 83 590 products and 2 057 licences in the

<sup>5</sup> EMAS is the European Commission's Eco-Management and Audit Scheme, a programme to encourage organisations to behave in a more environmentally sustainable way.

EU, showing a low take-up of the scheme<sup>6</sup>. However this was an improvement on the 2019 figures of 1100 products and 83 licences. There is one organisation from the Netherlands currently registered in EMAS, the European Commission's Eco-Management and Audit Scheme<sup>7</sup>.

In the Netherlands ISO 14001 licensed organisations provides further indications on the extent to which the private sector and national stakeholders are actively engaged in the transition to a circular economy. In the Netherlands, 2,650 organizations are ISO 14001 certified with 7,700 sites.

### 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 landfilling of recyclable or recoverable waste.

This section focuses on management of municipal waste<sup>8</sup> for which EU law sets mandatory recycling targets.

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 re-use are the most preferred options and top the waste hierarchy. The amount of municipal waste generated is a good indicator for the effectiveness of waste prevention measures.

After a downward trend, municipal waste generation in the Netherlands has started to increase in recent years. It came to 508 kg/inhabitant in 2019 and 534 kg/inhabitant in 2020, remaining above the EU average (505

<sup>6</sup> European Commission, [Ecolabel Facts and Figures](#).

<sup>7</sup> As of May 2018. European Commission, [Eco-Management and Audit Scheme](#).

<sup>8</sup> Municipal waste consists of (a) mixed waste and separately collected waste from households, including paper and cardboard, glass, metals, 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).

kg/year/inhabitant), as Figure 4 shows. It indicates that the Netherlands's economic growth is not yet decoupled from its generation of waste.

**Figure 4: Municipal waste by treatment in the Netherlands, 2010-2020<sup>9</sup>**

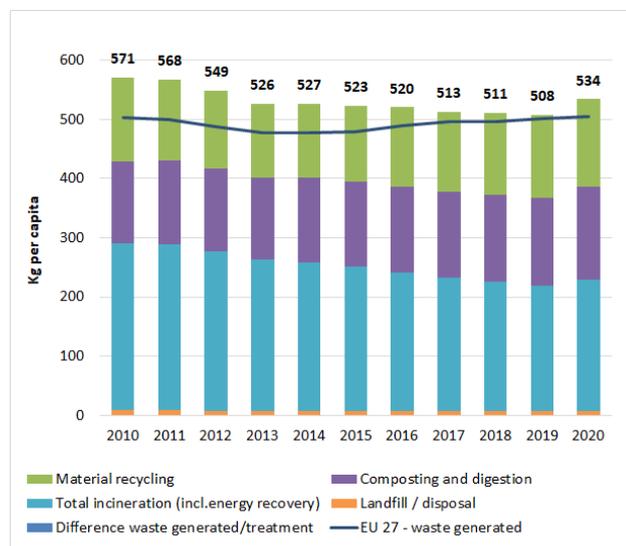
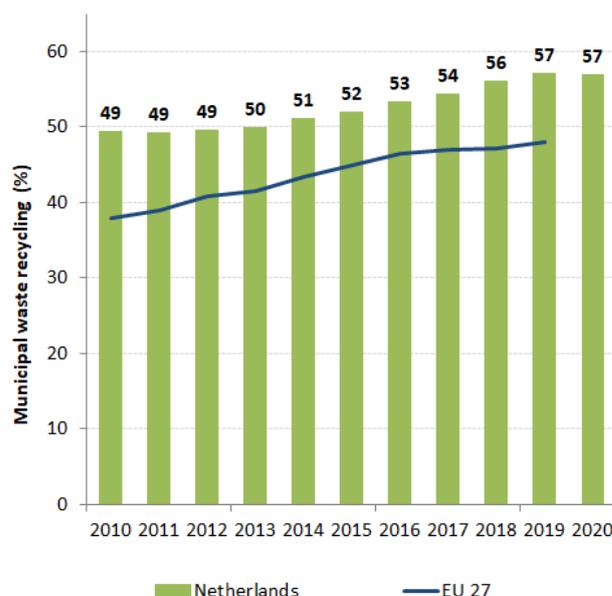


Figure 4 also shows municipal waste by treatment, in terms of kilos per capita. Much of the waste in the Netherlands is incinerated with energy recovery (223 kg per capita in 2020, out of the 534 kg treated).

Netherlands's municipal waste recycling rate is around 57 %, well above the EU average of around 48 %, and above the 2020 and 2025 EU targets of 50% and 55% respectively. Recycling remains the main form of treatment of municipal waste, while landfilling, at 3 %, is well below the EU average as a result of landfill taxes and bans. This comparatively high value illustrates the advanced level of waste management in the Netherlands. However, there is scope to shift reusable and recyclable waste away from incineration, including through economic instruments, to ensure that the post-2020 recycling targets, in particular on plastics, are met. This will in particular require action to reduce the incineration of municipal waste. Waste prevention and re-use are the most preferred options and top the waste hierarchy.

Figure 5 shows that the Netherlands needs to step up investment in recycling to meet the EU 2020 and 2025 recycling targets<sup>10</sup>.

**Figure 5: Recycling rate of municipal waste, 2010-2020<sup>11</sup>**



The Netherlands was not listed in the Commission's Early Warning report<sup>12</sup> as being at risk of missing the EU 2020 target of recycling 50 % of municipal waste. The Commission is currently finalising its analysis of the progress on the recommendations from the 2018 Early Warning Reports as a well as an analysis of progress towards achieving the 2025 waste recycling targets. This report will be presented at the end of 2022 and will assess the progress made to date.

As mentioned in the 2019 report, the Netherlands is invited to promote waste prevention and shift reusable and recyclable waste away from incineration.

### Implementation of the 2018 waste legislative package

The Netherlands has notified the transposition of the 2018 waste package<sup>13</sup> to the Commission. A conformity assessment is now ongoing.

Waste Management Plans and Waste Prevention Programmes are instrumental for a sound implementation of EU waste legislation. They set out key provisions and investment 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.

<sup>9</sup> Eurostat, [Municipal waste by waste operation](#), april 2022.

<sup>10</sup> Member States may choose a different method from the one used by ESTAT (and referred to in this report) to calculate their recycling rates and track compliance with the 2020 target of 50% recycling of municipal waste.

<sup>11</sup> Eurostat, [Recycling rate of municipal rate](#), april 2022.

<sup>12</sup> 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, [SWD\(2018\)422](#) accompanying [COM\(2018\)656](#).

<sup>13</sup> [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.

The second amendment to the National Waste Management Plan 2017-2029 was adopted on 11 January 2021 and entered into force on 2 March 2021<sup>14</sup>. It refers to the years 2017-2023 and gives a preview to the upcoming period 2023-2029. It covers household, hazardous, industrial and bulky waste. Following clarifications provided by the Dutch authorities, Commission services have concluded that the revised Waste Management Plan meets the requirements of Article 28 of the revised Framework Directive.

#### 2022 priority actions

- Introduce new policies, including economic instruments, to promote waste prevention, make reuse and recycling more economically attractive.
- Shift reusable and recyclable waste away from incineration.

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<sup>14</sup> <https://lap3.nl/>

## 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 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;

(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 Habitats and the Birds Directives are key legislative tools to deliver on the Strategy's targets and are the cornerstone of European legislation on the conservation of the EU's wildlife<sup>15</sup>.

The Netherlands launched the Program of Strengthening Biodiversity in 2020<sup>16</sup> that builds on the 2030 Biodiversity Strategy and strives to achieve 100% of the objectives of the Birds and Habitats Directives by 2050. The new Strategy identifies goals for 2030 that are reflected in more than 100 measures, each with corresponding indicators, priorities, deadlines, verification means, tools and responsible entities.

### Nature protection and restoration

Natura 2000<sup>17</sup>, the largest coordinated network of protected areas in the world, is the key instrument to achieve the Birds and Habitats Directives' objectives of

ensuring the long term protection, conservation and survival of Europe's most valuable and threatened species and habitats and the ecosystems they underpin. Key milestones towards meeting the objectives of the Directives include setting up a coherent Natura 2000 network, designating Sites of Community Importance (SCI) as Special Areas of Conservation (SAC)<sup>18</sup>, and setting conservation objectives and measures for the Natura 2000 sites.

### Setting up a coherent network of Natura 2000 sites

The Netherlands hosts 52 habitat types<sup>19</sup> and 80 species<sup>20</sup> covered by the Habitats Directive. The country also hosts populations of 70 bird taxa listed in the Birds Directive Annex I<sup>21</sup>.

By 2021, 14.7% of the national land area of the Netherlands was covered by Natura 2000 (EU average 18.5%), with Special Protection Areas (SPAs) classified under the Birds Directive covering 12.8% (EU coverage 12.8%) and Sites of Community Importance (SCIs) or Special Areas of Conservation (SACs) under the Habitats Directive covering respectively 8.3% and 9.9% total (EU average 14.2%) of the Netherlands' territory.

The latest assessment of the SCI part of the Natura 2000 network shows that there are potential insufficiencies in designation (even though there is no need to designate additional sites), as some habitats and species do not appear in the designation decrees for some sites. The adoption of a related (still at draft stage) amendment decree covering 100 SACs has been pending since 2018. Also, the coverage by the network of three species should be ensured by adding them to the Standard Data Forms of the relevant sites. As regards SPAs, while good progress has been made (new site designated on 8/12/2021), the classification of one marine site is still pending. Therefore, the Netherlands still has to complete its Natura 2000 Network, in particular the marine network.

<sup>15</sup> These should be reinforced by the Nature Restoration Law, according to the new EU Biodiversity Strategy.

<sup>16</sup> [Kamerbrief Programma versterken biodiversiteit | Kamerstuk | Rijksoverheid.nl](#)

<sup>17</sup> 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; the coverage figures do not add up because some SCIs and SPAs overlap. Special Areas of Conservation (SACs) means an SCI designated by Member States.

<sup>18</sup> Sites of Community Importance (SCIs) are designated under the Habitats Directive whereas Special Protection Areas (SPAs) are designated under the Birds Directive; the coverage figures do not add up because some SCIs and SPAs overlap. Special Areas of Conservation (SACs) are SCIs designated by Member States.

<sup>19</sup> [EEA, Article 17 dashboard, Annex I total, 2019.](#)

<sup>20</sup> [EEA, Article 17 dashboard, Annex II + Annex IV excluding those in Annex II + Annex V excluding those in Annex II, 2019. This counting only takes into account species and habitats for which assessment of conservation status was requested.](#)

<sup>21</sup> [EEA, Article 12 dashboard, Annex I, 2020. This counting only takes into account birds taxa for which information was requested.](#)

Considering both Natura 2000 and other nationally designated protected areas, the Netherlands legally protects 26,6% of its terrestrial areas (EU 27 average 26,4%) and 25,6% of marine areas (EU 27 average 10,7%). It strictly protects 1% of terrestrial and marine areas.<sup>22</sup>

Figure 6: Marine & terrestrial protected area coverage, 2021<sup>23</sup>

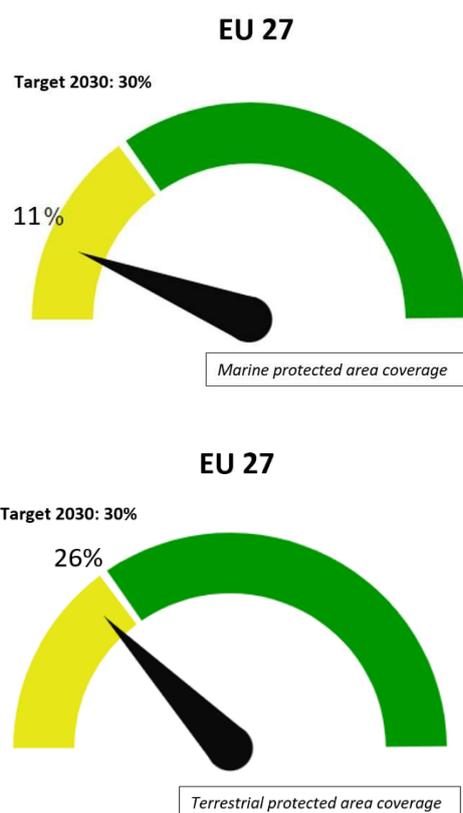
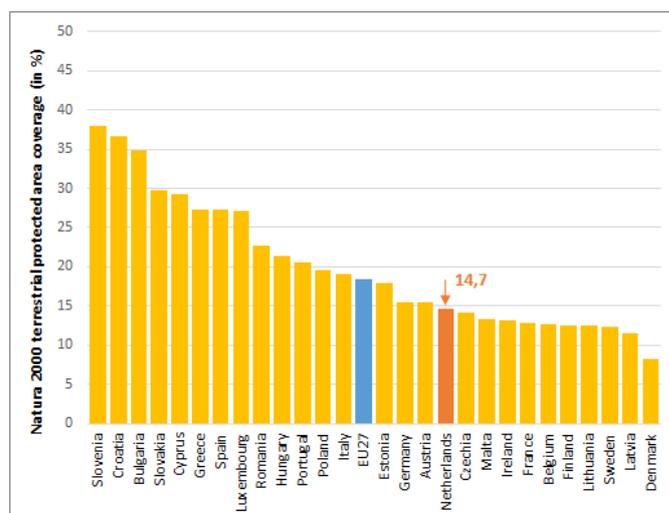


Figure 7: Natura 2000 terrestrial protected area coverage, 2021<sup>24</sup>



### Designating Special Areas of Conservation (SACs) and setting conservation objectives and measures

The 6-year deadline set by the Habitats Directive to designate SCI as SAC and establish appropriate conservation objectives and measures has expired for 2 sites in the Netherlands.

Overall, 3 SCIs have not yet been designated as SACs. Definitive site specific conservation objectives have been established for all sites, except for those where designation is still pending. Two of them already have draft objectives, while for the third site where the 6 year deadline has not yet expired there are no objectives yet.

### Progress in maintaining or restoring favourable conservation status for species and habitats

The results of reports under Habitats Directive Article 17 and Birds Directive Article 12 on progress towards maintaining or restoring favourable conservation status of species and habitats are key to measuring the performance of Member States.

According to the report submitted by the Netherlands on the conservation status of habitats and species covered by the Article 17 of the Habitats Directive for 2013-2018<sup>25</sup>, the share of assessments for habitats in good conservation status in 2018 is more than the 3.85% reported under the previous reporting period

<sup>22</sup> European Environment Agency, [Protected Areas](#), terrestrial protected area percentage (2021) and marine protected area percentage (2019), March 2022.

<sup>23</sup> [EU Biodiversity Strategy Dashboard](#), indicators A1.1.1 and A1.2.1, February 2022.

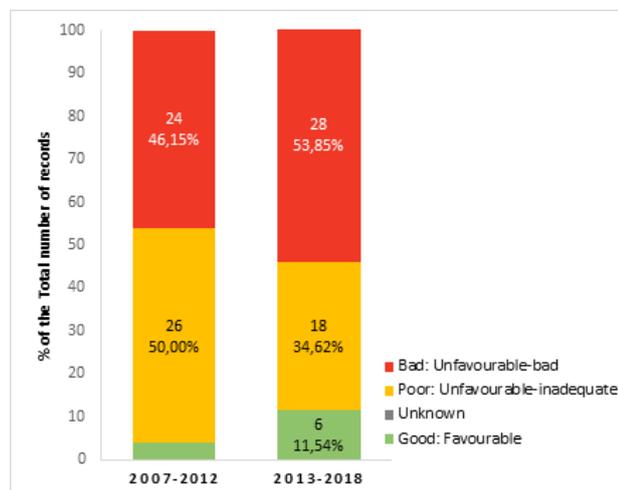
<sup>24</sup> European Environment Agency, [Natura 2000 Barometer](#), February 2022.

<sup>25</sup> [Conservation status and trends of habitats and species — European Environment Agency \(europa.eu\)](#)

(2007-2012). As regards protected species, the share of assessments in good conservation status in 2018 is 26.25%, more than the 22.78% reported under the previous reporting period (2007-2012). Of the forest habitats protected under the EU nature directives none show a favourable conservation status<sup>26</sup>. As far as birds are concerned, 58% of the breeding species showed short-term increasing or stable population trends (for key wintering species this figure was 62%).

At the same time, the share of habitats in bad conservation status has increased to 53.85% and the share of assessments for species in bad conservation status has decreased to 38.75%. The main pressures are agriculture, human-induced changes in water regime and natural succession<sup>26</sup>.

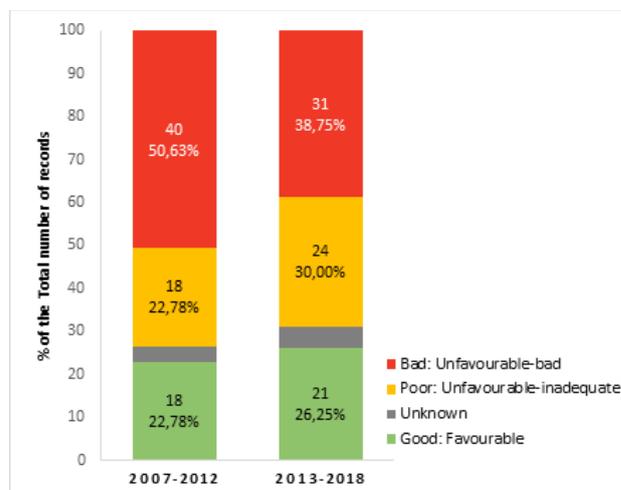
**Figure 8: Assessments on conservation status for habitats for the 2007-2012 and 2013-2018 reporting periods<sup>27</sup>**



<sup>26</sup> NL indicates that the pressures under “natural processes” mainly are “natural succession”, these are pressures because the succession is accelerated due to high nitrogen depositions. NL also indicates that invasive species and climate change are not in the top 3 of pressures, but also very relevant, because they are hard to deal with.

<sup>27</sup> European Environment Agency, [Conservation status and trends of habitats and species](#), December 2021. Please note when comparing the figures shown for 2007-12 and 2013-18 these may also be affected by changes of methods or due to better data availability.

**Figure 9: Assessments on conservation status for species for the 2007-2012 and 2013-2018 reporting periods<sup>28</sup>**



The Netherlands made good progress improving the conservation status of an increasing proportion of habitats and species and as a result the percentage of habitats in favourable status tripled compared to the previous reporting under Article 17, though it is still below 12%. At the same time while there was a considerable fall in the percentage of species in bad status dropping from over 50% to below 39%, the trend for habitats was opposite as they increased from 46% in bad status to 54%. One main reason for the deterioration of habitats is the continued very significant pressure from agriculture: in particular nitrogen deposition affecting many sensitive habitats from bogs to forests and the changes in water regime (drainage). In the case of birds, the Article 12 report indicates a minimal 1% improvement of species with increasing population trend, while the population of 5% more species is decreasing. This is in particular of major concern for meadow birds, dependent on the agricultural landscape, and for which the Netherlands is a key breeding and wintering area. By 2020, the flagship species blacktailed godwit breeding population had dropped by 50% since 2001. An EU Pilot investigation was launched in 2017 on the decline of meadow birds and the alleged insufficiency of the measures taken. According to a 2021 report by the Dutch Court of Auditors, the decline has still not been halted despite measures put in place<sup>29</sup>. That Court of Auditors points at

<sup>28</sup> Idem.

<sup>29</sup> Partly as result of the WFD, and related directives as Nitrate directive, the water quality improved significantly. Also the biodiversity in the water. See several recent publications: [Eindelijk goed nieuws over biodiversiteit: diversiteit watergebonden insecten neemt toe \(h2owaternetwerk.nl\)](#)

a major weakness: most measures are financial in nature and based on voluntary uptake by farmers. This means that the measures implemented are not necessarily the best. The Dutch government has been asked to inform the Commission of the action it will take to solve the matter.

### Bringing nature back to agricultural land and restoring soil ecosystems

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.

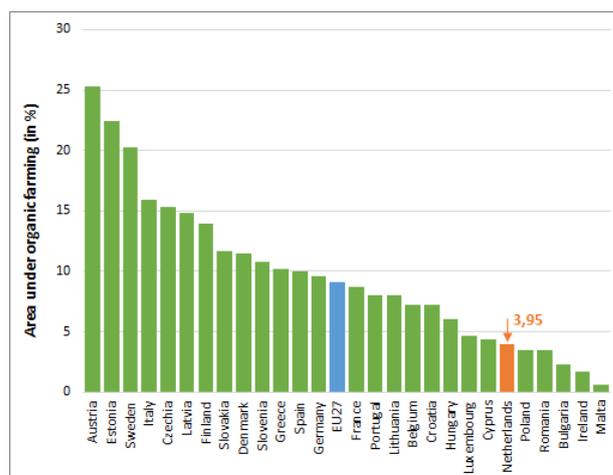
The biodiversity and farm to fork strategies have set four important targets for 2030:

- 50% reduction in the overall use of – and risk from – chemical pesticides;
- 50% reduction in the use of more hazardous pesticides;
- 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);
- bringing back at least 10% of agricultural area under high-diversity landscape features;
- increasing areas under organic farming to at least 25%.

### Agricultural land

As shown in the figure 10, with an estimated 3.95% of its agricultural area under organic farming, the Netherlands is well below the EU average of 9,07% (2020 data, Eurostat). Given the benefits of organic farming, for example in terms of soil quality and its positive impact in reducing the use of chemical pesticides and inorganic fertilisers, extending the Dutch areas under organic farming would also contribute to a more sustainable food production system.

Figure 10: Share of total utilised agricultural area occupied by organic farming, by Member State, 2020<sup>30</sup>



The Dutch agricultural sector is characterised as a highly productive, innovative and export-oriented industry with intensive agricultural production largely based on lowering cost prices and encouraging economies of scale. The transition to a sustainable food system brings both significant economic benefits and challenges for Dutch farmers.

The Netherlands has the highest greenhouse gas emissions (CH<sub>4</sub> and N<sub>2</sub>O) per hectare of agricultural land, more than four times higher than the EU-27 average<sup>31</sup>. This shows the higher intensity of Dutch agricultural activities. As regards the Water Framework Directive, good status has not yet been achieved for all Dutch waters, which is largely due to the effects of agriculture. In addition, in 2016-2019 13% of groundwater bodies were of poor quality, with nitrate levels above the standard of 50 mg/l laid down in the Nitrates Directive. The nitrogen surplus in the Netherlands is four times higher than the EU average at 200 kg N per hectare per year. Under the Farm to Fork Strategy, the Netherlands should use the resources provided by the CAP to contribute to a significant reduction in the use of inorganic fertilisers and manure (especially on sandy soils). In addition, the use and risk of pesticides should be reduced by: (i) continuing to implement and promote non-chemical pesticide and low pesticide input policies; and (ii) ensuring full implementation of integrated pesticides management.

<sup>30</sup>

[https://ec.europa.eu/eurostat/databrowser/view/sdg\\_02\\_40/default/table?lang=en](https://ec.europa.eu/eurostat/databrowser/view/sdg_02_40/default/table?lang=en) (Eurostat, Area under organic farming, February 2022).

<sup>31</sup> [Commission SWD \(2020\) 388 final](#)

This would improve the status of water bodies at the end of the programming period and, in addition, reduce the air pollution caused by nitrogen and ammonia.

The availability of agricultural land is under pressure from urbanisation, recreation and the need for renewable energy. The potential for expansion is limited by the excess nitrogen/manure and the high density of livestock in the Netherlands. Due to the high deposition of nitrogen (above critical deposition values) in Natura 2000 sites, more effort is needed to protect and restore biodiversity in nature reserves and on farmland. As about 40% of nitrogen deposition comes from agriculture, the agricultural sector plays an important role in addressing this problem. This challenge includes reducing ammonia emissions (air pollution contributing to nitrogen deposition but also affecting human health), which has increased since 2013. The Netherlands is at high risk of non-compliance with the commitments to reduce ammonia emissions. This applies for both 2020-2029 and from 2030 onwards.

### Soil ecosystems

Soil is a finite and extremely fragile resource and 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 objectives of the Green Deal 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. As regards the quantitative aspect, land scarcity is a major problem in the Netherlands, due to the high population density (more than four times the EU average of 118/km<sup>2</sup>). Two thirds of the total area of the Netherlands is used as agricultural land, but due to the high population density, the share of rural areas is small (2 %). The decline in the area of agricultural land is expected to continue due to increasing urbanisation and the need for space for recreation.

Soil sealing is also a source of concern; in this respect<sup>32</sup>, degradation is influenced by the area of soil that is

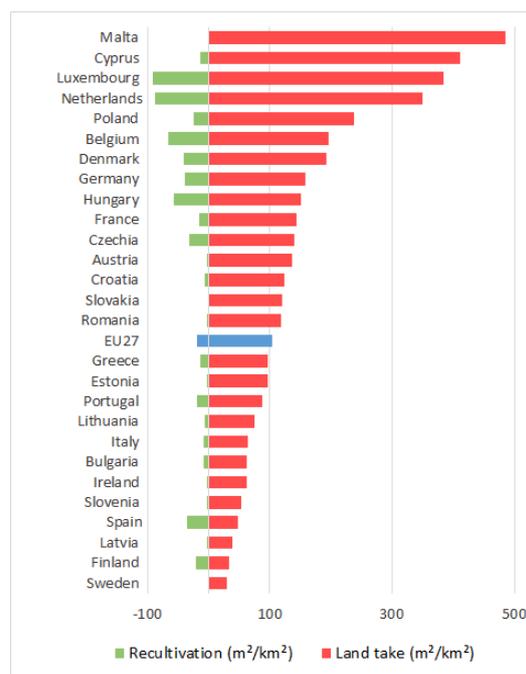
<sup>32</sup> Artificial land cover is defined as the total of roofed built-up areas (including buildings and greenhouses), artificial non-built-up areas (including sealed area features, such as yards, farmyards, cemeteries, car parking areas etc. and linear features, such as streets, roads,

sealed or artificialised in the Netherlands (Figure 12). The land taken per year in 2012-2018 can be seen as a significant pressure on nature and biodiversity, as well as being a change in land use that constitutes an environmental pressure on people living in urbanised areas.

The Netherlands ranks well above the EU average with net land take of 262.5 m<sup>2</sup>/km<sup>2</sup> (EU-27 average: 83.8 m<sup>2</sup>/km<sup>2</sup>). In proportion to its area, the Netherlands was one of the two Member States that saw the largest amount of land take between 2000 and 2018. 6.4% of its soil was sealed or artificialized in 2018 (EU-28 average: 4.2%, Eurostat)<sup>33</sup>. At the same time, the Netherlands was among the leading countries for the increased re-cultivation of land between 2012 and 2018.

In 2018, the Netherlands updated its reporting on land degradation according to the next PRAIS3 reporting platform<sup>34</sup>, including action intended to achieve the degradation identified.

**Figure 11: Land take and re-cultivation in EU27 (m<sup>2</sup>/km<sup>2</sup>), 2012-2018<sup>35</sup>**



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).

<sup>33</sup> Land take in Europe — European Environment Agency (europa.eu) fig 6

<sup>34</sup> All Reports | Prais3 (unccd.int)

<sup>35</sup> European Environment Agency, Land Take in Europe, December 2021.

However, the Netherlands has not yet committed to setting land degradation neutrality targets under UNCCD<sup>36</sup>.

Contamination can severely reduce soil quality and threaten human health and the environment. The latest available estimates based on information from Member States<sup>37</sup> indicate that potentially polluting activities have taken or are still taking place on approximately 2.8 million sites in the EU. At EU level, 650 000 of these sites have been registered in national or regional inventories. 65 500 contaminated sites have already been remediated. The Netherlands had registered 181 sites with either current or past potentially polluting activities, and had already remediated or applied aftercare measures on 83 of these.

Soil organic matter plays an important role in the carbon cycle and in climate change. Soils are the second largest carbon sink in the world after the oceans.

As regards capacity building on this issue, the Netherlands attended a TAIEX-EIR Peer to Peer workshop on sustainable urban development on 26-27 March 2019 in Belgium. In addition, a TAIEX-EIR Peer to Peer workshop on Maintaining and Enhancing Ecosystem Services in Urban Regions was carried out on 4-5 July 2019 in the Netherlands.

### 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.

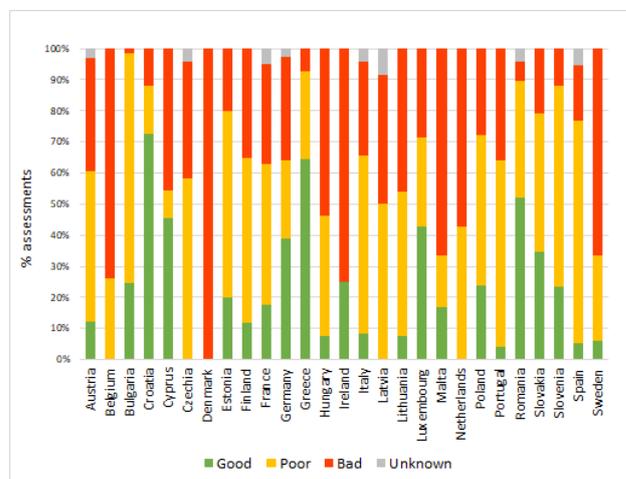
Forests are important carbon sinks and conserving them is vital if the EU is to achieve climate neutrality by 2050.

Of the 27% of EU forest area protected under the Habitats Directive, less than 15% of assessments result in favourable conservation status<sup>38</sup>. Bad conservation status increased from 27% to 31% in the EU, compared to 2015.

In the Netherlands, forests cover 8.78% of territory<sup>39</sup> and the situation of forest habitats protected under the Habitats Directive is particularly worrying as more than half of the assessed protected forests have bad status

and 100% of the assessments reveal bad to poor status<sup>40</sup>.

**Figure 12: Conservation status of forests protected under the Habitats Directive in EU Member States, 2013-2018 (% assessments)<sup>41</sup>**



Under the European Union Timber Regulation (EUTR)<sup>42</sup>, which prohibits the selling of illegally harvested timber in the EU, Member State authorities must conduct regular checks on operators and traders, and apply penalties in the event of non-compliance. With the amendment of Article 20 of the Regulation, biennial reporting has become annual and covers the calendar year as of 2019.

Between March 2017 and February 2019 the Netherlands carried out 83 checks on operators importing timber. It is estimated that the Netherlands had 100 operators placing domestic timber and 4 900 operators placing imported timber on the single market during the reporting period.

The new Deforestation Regulation<sup>43</sup> will repeal and replace the EU Timber Regulation, as the new Deforestation Regulation will essentially integrate and improve the existing system to check the legality of sold and exported 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).

<sup>36</sup> [The LDN Target Setting Programme | UNCCD](#)

<sup>37</sup> Ana Paya Perez, Natalia Rodriguez Eugenio (2018), Status of local soil contamination in Europe: Revision of the indicator "Progress in the management Contaminated Sites in Europe".

<sup>38</sup> EEA, [State of Nature in the EU](#)

<sup>39</sup> EEA, [Forest information system for Europe](#).

<sup>40</sup> [COM SWD \(2021\) 652](#)

<sup>41</sup> European Environment Agency, [Conservation status and trend in conservation status by habitat group - forests](#), January 2022.

<sup>42</sup> Regulation (EU) No 995/2010 of the European Parliament and of the Council of 20 October 2010.

<sup>43</sup> A proposal for the Regulation on the making available on the EU market and export of products associated with deforestation and forest degradation.

Besides inflicting major damage on nature and the economy, many invasive alien species 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 invasive alien species<sup>52</sup> (the IAS Regulation) is the list of "Invasive Alien Species of Union concern".

The total number of species on this list is currently 66, of which: 30 animal species and 36 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 report<sup>44</sup> on the review of the application of the IAS Regulation for the period 2015-2018, the implementation of the IAS Regulation is already starting to deliver on its objectives such as a coherent framework for addressing IAS at EU level and increased awareness of the problem of invasive alien species, including among the public. At the same time, the above report identified some challenges and areas for improvement. Given that the deadlines for implementing the various obligations of the IAS Regulation applied gradually between July 2016 and July 2019, it is premature to draw conclusions on several aspects of the implementation of the IAS Regulation.

According to a 2021 report<sup>45</sup>—on the review of the application of the IAS Regulation, the implementation of the IAS Regulation is already starting to deliver on its objectives such as a coherent framework for addressing IAS at EU level and increased awareness of the problem of invasive alien species. At the same time, the above report identified some challenges and areas for improvement. Given that the deadlines for implementing the various obligations of the IAS Regulation applied gradually between July 2016 and July

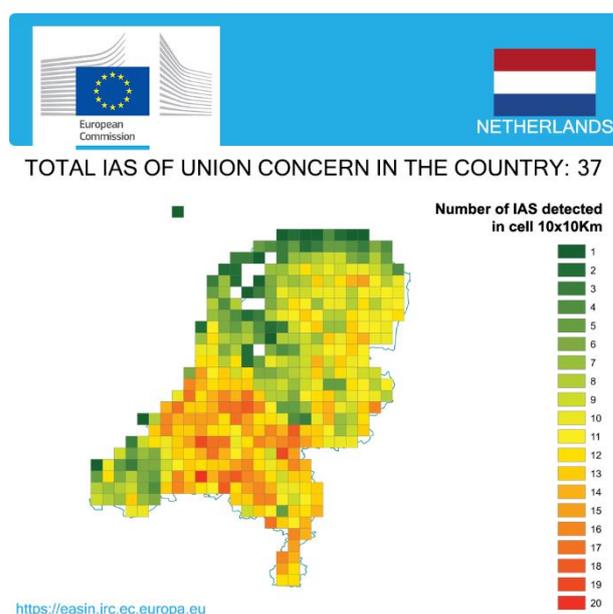
<sup>44</sup> Report from the Commission to the European Parliament and the Council on the review of the application of Regulation (EU) No 1143/2014 of the European Parliament and of the Council of 22 October 2014 on the prevention and management of the introduction and spread of invasive alien species, COM(2021) 628 final, 13.10.2021

<sup>45</sup> Report from the Commission to the European Parliament and the Council on the review of the application of 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, [COM\(2021\) 628 final](#), 13.10.2021.

2019, it is premature to draw conclusions on several aspects of the implementation of the IAS Regulation.

A 2021 report<sup>46</sup> on the baseline distribution shows that of these 66 species, 37 have been observed in the environment in the Netherlands. For their distribution, see Figure 13.

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



## 2022 priority actions

- Ensure the completion of the Natura 2000 network by the designating the still pending few sites on the one hand, and by adopting the overarching decree updating a large number of designation decrees to reflect the more accurate list of species and habitats for the sites concerned. This will also ensure that the relevant conservation objectives are in place.
- Improve the conservation status of habitats and species, in particular by addressing the extremely high pressure from agricultural activities - nitrogen deposition being the main cause, and from the changes in water regimes.

<sup>46</sup> 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 30689 EN, Publications Office of the European Union, Luxembourg, 2021, ISBN 978-92-76-37420-6, doi:10.2760/11150, [JRC123170](#).

- Reduce nutrient pollution of water and air, reduce nitrogen deposition in the nitrogen-sensitive Natura 2000 areas below critical values, and contribute to achieving the European Green Deal nutrient loss target in the Netherlands through well-integrated measures to support the transition towards a more sustainable and less intensive agriculture.
- Contribute to the objective of the European Green Deal for organic farming by supporting conversion and conservation schemes.
- Promote sustainable forest management and reforestation, while enhancing the multifunctionality and protection of forests and restoring forest ecosystems.

## Marine ecosystems

The EU Biodiversity Strategy 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<sup>47</sup>.

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

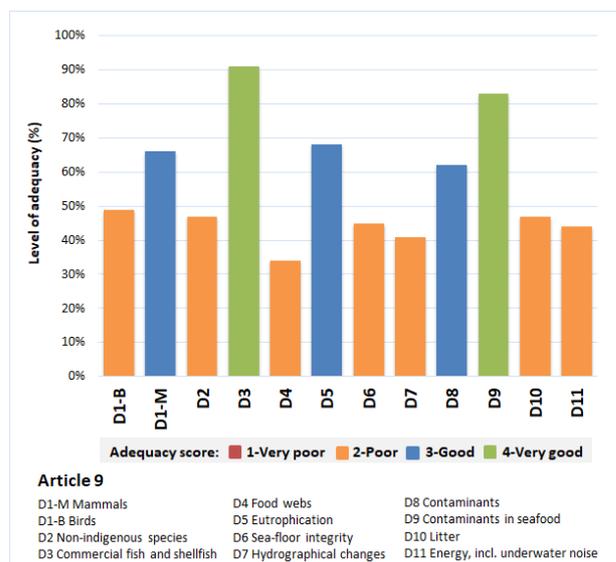
The Directive also required Member States by 15 October 2018 to have: (i) laid down a set of GES characteristics for each descriptor (Article 9); and (ii) provided an initial assessment of their marine waters (Article 8). The Commission then assesses whether this constitutes an appropriate framework to meet the requirements of the Directive.

The Commission assessed the Netherlands's 2018 determinations of GES for each of the 11 descriptors in the Directive<sup>48</sup> and determined their level of adequacy<sup>49</sup>.

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 "good environmental status" determination by the Netherlands (ANS region) with criteria set under the Commission GES Decision– Article 9 (2018 reporting exercise)<sup>50</sup>**



The Netherlands has one marine sub-region, ANS-NE Atlantic: Greater North Sea. In this marine sub-region, 5 of 11 determinations of GES were assessed as good or very good. The national determination of GES by the Netherlands is consistent for 5 out of 11 descriptors.

The MSFD also requires Member States to 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.

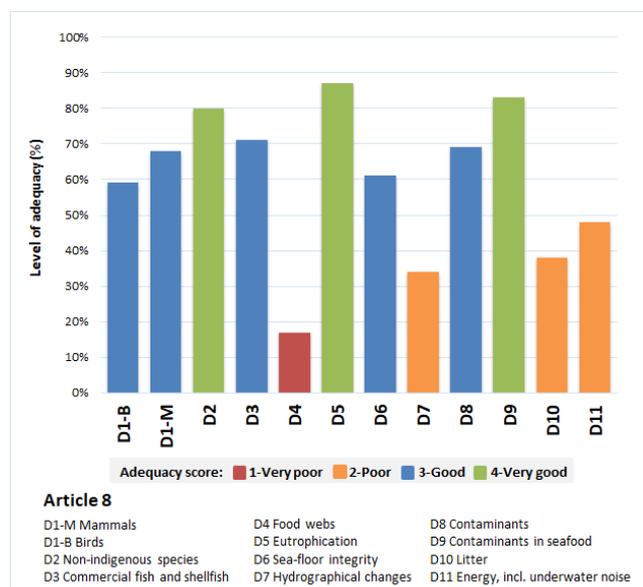
<sup>47</sup> The EU Common Fisheries Policy (CFP) aims to contribute to the achievement of the objectives of the environmental legislation for marine ecosystems.

<sup>48</sup> Annex I of Directive 2008/56/EC establishing a framework for community action in the field of marine environmental policy (Marine Strategy Framework Directive), OJ L 164, 25.6.2008, p. 19–40.

<sup>49</sup> This assessment was made in relation to the "Commission GES Decision", [Commission Decision No 2017/848, pp. 43-74](#).

<sup>50</sup> Assessment carried out by the European Commission on the data reported by 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 national assessment of Netherland's marine environment (ANS region) with criteria set under the Commission GES Decision – Article 8 (2018 reporting exercise)<sup>51</sup>**



A total of 7 descriptors out of 11 were scored as good or very good. The Netherlands's assessment of its marine environment is consistent with requirements set under the Commission GES Decision for 7 of 11 descriptors.

In the 2019 EIR, the Netherlands received three priority actions: (i) to set targets for GES; (ii) to determine timelines for achieving GES; and (iii) to provide more information about marine protection measures, establish more measures that have a direct impact on the relevant pressures and quantify the level of pressure reduction expected because of these measures.

As highlighted in the Commission's report on implementing the MSFD<sup>52</sup>, while regional cooperation has improved since the Directive was adopted, more cooperation is needed to attain full consistency between the regional marine strategies, as required by the Directive. Furthermore, in March 2022, the Commission published a Communication with recommendations for Member States. The Commission assessment highlights that 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

<sup>51</sup> Assessment carried out by the European Commission of the data reported by 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.

<sup>52</sup> [COM\(2020\)259 final](#)

considerations form the basis for the 2022 priority actions.

### 2022 priority actions

- Ensure regional cooperation with Member States sharing the same marine (sub)region to address predominant pressures.
- Implement the recommendations for each Member State and region made by the Commission<sup>53</sup> in the Staff Working Document accompanying the Communication<sup>54</sup> on the 2018 updated reports for Articles 8, 9 and 10 of the MSFD.

### 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.

The Dutch Atlas of Natural Capital (ANK) was launched in 2015. All content has now been translated into English. To improve the quality of data the Netherlands Natural Capital model was developed based on the National Land Cover and Ecosystem Units map. The model consists of a set of input maps, a simulation tool and output maps which define the relationship between the ecosystems and the services they provide. The services are simulated at a 100 and 10 m grid-scale. The applicability of the maps was tested in various pilots studies, cooperating with various stakeholders. For communication purposes a brochure on the ANK has been developed.

The TEEB-city project has delivered a tool which calculates the monetary value of green areas in cities (2016). This has been further developed into a high resolution map-based tool to analyse and predict the benefits (and costs) of different scenario's for green infrastructure in an urban environment: the 'Green Benefits Planner'<sup>55</sup>, which is being implemented in green infrastructure planning in a growing number of cities. The Netherlands' Environmental Assessment Agency (PBL) conducted an extensive programme from 2014-2016 with conceptual analysis, cross-sectoral evaluations and case-studies all focusing on the application of the TEEB-model in practice. After successful pilots (phase I) in some municipalities and provinces, the Central Bureau for Statistics (CBS)

<sup>53</sup> [SWD\(2022\)1392](#).

<sup>54</sup> [COM\(2022\)550](#).

<sup>55</sup> [Groene Baten Planner | Atlas Natuurlijk Kapitaal](#)

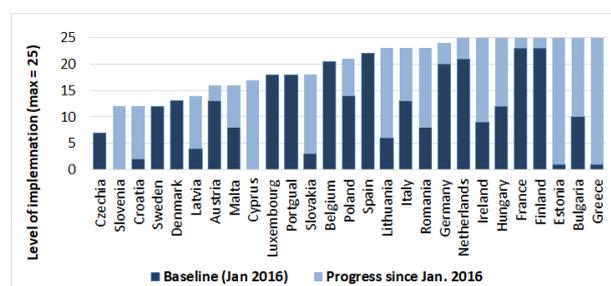
together with Wageningen University & Research (WUR) have developed a National Natural Capital Account, building on the SEEA-EEA and MAES-frameworks. Eventually this led to the first national natural capital account of the Netherlands in 2018, which was updated in 2021. Further work is underway to improve and extend this account, to test the applicability in national and regional planning and to feed indicators in the National Monitor on Wellbeing and performance on the SDG's.

In 2016 an International conference on Natural Capital ("Let's talk business!") took place in The Hague. Also the WAVES (Wealth Accounting and the Valuation of Ecosystem Services) policy forums in 2016 and 2017 took place in The Hague.

In 2018 a national guide was published on accounting for impacts on ecosystems and ecosystem services in societal cost-benefit analyses.

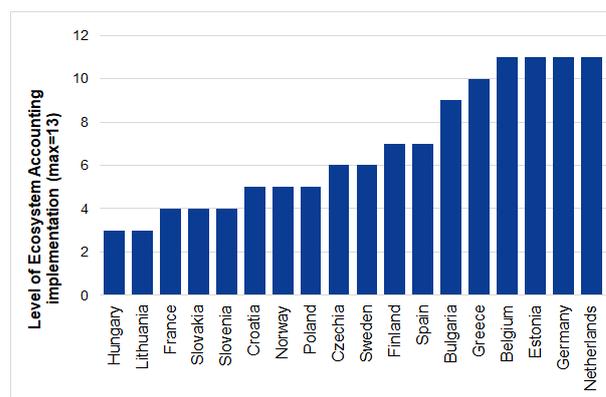
The Netherlands has provided updated information and progress has been recorded since January 2016 (Figure 16). This assessment is based on 27 implementation questions and updated every six months.

**Figure 16: ESMEALDA MAES Barometer, January 2016 - March 2021**<sup>56</sup>



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

**Figure 17: Ecosystem accounting barometer, September 2021**<sup>57</sup>



The Netherlands has a high level of expertise in ecosystem accounting. This is reflected in the high number of published accounts. The extent and condition accounts are available on a regional and national scale. A wide variety of ecosystem services are incorporated in their accounts on (i) ecosystem assets, (ii) biophysical and (iii) monetary supply and use for ecosystem services. These accounts have been set up in 2013, 2018 and 2020, thus enabling trend analyses. On specific issues, accounts are published on carbon and biodiversity, and a marine account at national scale is being developed.

The Netherlands has difficulties similar to the ones often highlighted in international meetings, for example during the revision process for the SEEA EA guidelines. It is actively trying to engage policymakers and other stakeholders in the accounting process and looking for relevant key indicators and information on the usage of the accounts. Their marine and biodiversity accounts need further development and still have some data gaps.

An important line of action has been to stimulate business and financial institutions to account for natural capital impacts, dependencies and risks in their operations, in order to fulfill their CSR-responsibilities and to develop innovative and more sustainable services and supplychains. From 2017 onwards a government funded 'Societal Natural Capital Programme' was set up and implemented by CSR Netherlands to inspire, stimulate and facilitate businesses in different economic sectors to respond to this challenge. Also the development of cooperation on

<sup>56</sup> European Commission, Joint Research Centre, Publication Office, [EU Ecosystem assessment: summary for policymakers](#), page 80, May 2021.

<sup>57</sup> 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 a comprehensive statistical framework that is based on five core accounts: ecosystem extent, condition, services and monetary ecosystem asset.

protocols, tools and data for natural capital and biodiversity-accounting in the financial sector has been strongly supported. To this end the Dutch Government also has invested in improving the quality, usability and number of certified data in the Ecosystem Services Valuation Database<sup>58</sup> (or TEEB-database).

The MAIA project can facilitate exchange of methods and knowledge between members and the Netherlands is eager to support other partners. Other specific needs include developing an improved viewer for interested stakeholders who are unable to use the GIS datasets.

### 2022 priority actions

- Support the development of marine account.
- Expand the scale of ecosystem accounting to both local and international level, to cater the needs of both local and international stakeholders.

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<sup>58</sup> [Ecosystem Services Valuation Database | Foundation for Sustainable Development | Environmental Research \(esvd.info\)](#)

### 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%.

The EU has developed a comprehensive suite of air quality legislation, which sets health-based air quality standards<sup>59</sup> and emissions-reduction commitments<sup>60</sup> by Member State for a number of air pollutants.

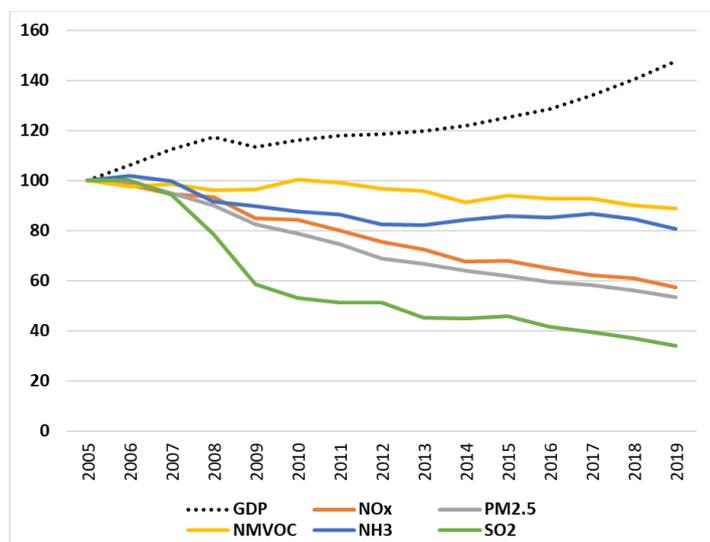
Air quality in the Netherlands is generally good with exceptions. The latest available annual estimates (for 2019) by the European Environment Agency<sup>61</sup> point to some 8 900 premature deaths (or 95 200 years of life lost (YLL)) attributable to fine particulate matter concentrations<sup>62</sup>, 380 premature deaths (or 4 300 YLL) to ozone concentrations<sup>63</sup> and 1 000 premature death (10 700 YLL) to nitrogen dioxide concentrations<sup>64</sup> <sup>65</sup>.

Emissions of several air pollutants have decreased significantly in the Netherlands over the last years, while GDP growth continued (see graph). According to the latest air pollutant emission projections as submitted under Article 10(2) of the national emission reduction

commitments Directive (NECD)<sup>66</sup>, Netherlands projects to reach emission reduction commitments for all air pollutants covered by the Directive for 2030 onwards. The projections however do not demonstrate reaching the emission reduction commitments for 2020-2029 for any pollutant. Latest inventory data submitted by the Netherlands, prior to review by the Commission, indicate that the Netherlands is in compliance with the emission reduction commitments for all pollutants in 2020.

The Netherlands has submitted its National Air Pollution Control Programme on 1 April 2019. In addition to this National Programme, the Netherlands takes action to permanently improve air quality by means of a Clean Air Agreement (in Dutch: Schone Lucht Akkoord, "SLA"), which was signed January 2020 by the national government and a large number of provinces and municipalities. The SLA is in effect until 2030, and aims at working towards the WHO-recommended limits for nitrogen dioxide and fine particulate matter. It also aims to reach health gains of at least 50% from domestic sources relative to 2016.

**Figure 18: Emissions trends for main pollutants/ GDP 2005-2019 in the Netherlands, 2005-2019<sup>67</sup>**



<sup>59</sup> European Commission, 2016. [Air Quality Standards](#)

<sup>60</sup> European Commission, [Reduction of National Emissions](#).

<sup>61</sup> European Environment Agency, Air Quality in Europe –2021 Report. Please see details in this report as regards the underpinning methodology, p.106

<sup>62</sup> Particulate matter (PM) is a mixture of aerosol particles (solid and liquid) covering a wide range of sizes and chemical compositions. PM10 refers to particles with a diameter of 10 micrometres or less. PM2.5 refers to particles with a diameter of 2.5 micrometres or less. Particulate matter is emitted from many human sources, including combustion.

<sup>63</sup> Low-level ozone is produced by photochemical action on pollution.

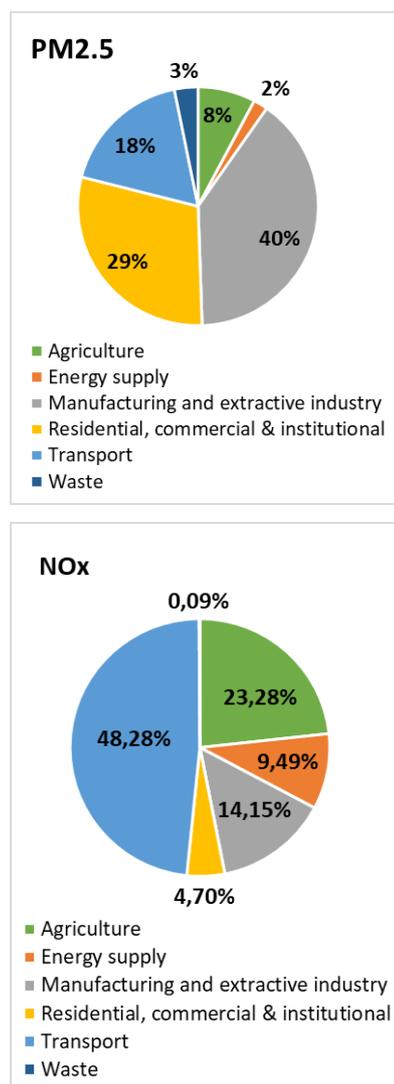
<sup>64</sup> NOx is emitted during fuel combustion e.g. from industrial facilities and the road transport sector. NOx is a group of gases comprising nitrogen monoxide (NO) and nitrogen dioxide (NO<sub>2</sub>).

<sup>65</sup> 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.

<sup>66</sup> Directive 2016/2284/EU.

<sup>67</sup> European Environment Agency.

Figure 19: PM2.5 and NOx emissions by sector in the Netherlands, 2019<sup>68</sup>



For 2020, no exceedances above the limit values set by the *ambient air quality Directive* were registered. However, for several air quality zones the target values regarding ozone concentration have not been met<sup>69</sup>.

The nitrogen deposition stems mainly from agriculture and traffic and specific measures still need to be discussed. The Netherlands needs to (i) substantially reinforce its Nitrate Action Programme with measures that match the severity and the urgency of the situation, in line with their obligations under the Nitrates Directive, and (ii) ensure they meet the objectives of the Water Framework Directive, and Natura 2000 legislation.

In the 2019 EIR, the Netherlands received two priority actions. The first was related to taking specific actions

<sup>68</sup> European Environment Agency.

<sup>69</sup> European Environment Agency, [Eionet Central Data Repository](#).

under the National Air Pollution Control Programme (NAPCP) to reduce the main emissions sources, with particular attention to reducing PM2.5 and ammonia. The second was to reduce nitrogen oxide (NOx) emissions and nitrogen dioxide (NO<sub>2</sub>) concentrations by (among other things) further reducing transport emissions — in particular in urban areas or using fiscal incentives. Only limited progress has been achieved for both.

Ammonia emissions are of particular importance for continued discussion and prioritisation since they are reported to have remained almost stable since 2010. Tackling ammonia emissions is important for the Dutch ambition to reach the WHO guideline levels of particulate matter, as ammonia is a precursor for secondary particulate matter. These emissions are also important to address for the sake of the overall nitrogen pollution situation. The Commission recently recommended that the Netherlands prioritise ammonia reduction measures as part of its new national CAP strategic plan. The Netherlands has a high share of intensive farming with a high density of livestock units as well as energy-intensive greenhouse installations. Emissions from livestock farming are found to cause 11% of the health effects attributable to national air pollution according to the Clean Air Agreement analysis<sup>70</sup>.

#### 2022 priority actions

- Take action towards reducing the main emission sources, as part of the National Air Pollution Control Programme.
- Ensure full compliance with the **EU air quality standards** and maintain downward emissions trends for air pollutants, to reduce adverse air pollution impacts on health and the economy **guideline values** in the future.

#### Industrial emissions

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

- protect air, water and soil;
- prevent and manage waste;
- improve energy and resource efficiency;
- clean up contaminated sites.

<sup>70</sup> Clean Air Dialogue NL Joint Conclusions (17-18.2.2021): [https://ec.europa.eu/environment/air/pdf/CAD\\_NLJoint\\_Conclusions-17-18Feb2021.pdf](https://ec.europa.eu/environment/air/pdf/CAD_NLJoint_Conclusions-17-18Feb2021.pdf)

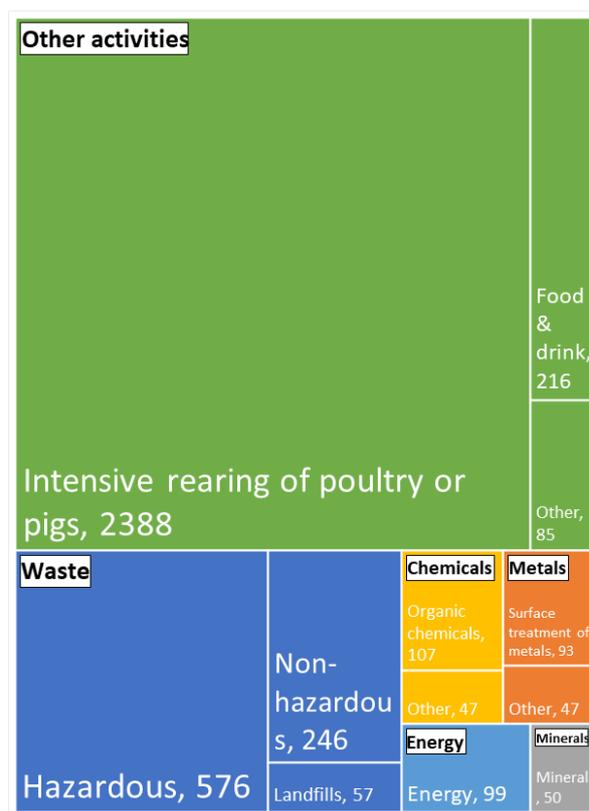
To achieve this, the EU takes an integrated approach to the prevention and control of routine and accidental industrial emissions. The cornerstone of the policy is the Industrial Emissions Directive<sup>71</sup> (IED). The Commission tabled a proposal in April 2022<sup>72</sup>. The revision seeks to improve the Directive's contribution to the zero-pollution objective, as well as its consistency with climate, energy and circular-economy policies.

The overview below of the industrial activities regulated by the Industrial Emissions Directive is based on data reported to the EU Registry (2018)<sup>73</sup>.

In the Netherlands, some 4 000 industrial installations are required to have a permit based on the Directive. The distribution of installations is shown in the Figure below. This is an increase of almost 500 installations since the last report, mostly associated with the waste management sector and the intensive rearing of poultry or pigs.

The industrial sectors in the Netherlands with most IED installations in 2018 are intensive rearing of poultry and pigs (60%), followed by the waste management, including landfills (22%), the food and drink industry (5%) and the chemicals industry (4%).

**Figure 20: Number of IED industrial installations per sector in the Netherlands, 2018<sup>74</sup>**



The industrial sectors identified as contributing the largest burden to the environment for **emissions to air** were:

- the metal sector for emissions of heavy metals to air, such as Zinc (Zn), Lead (Pb), Nickel (Ni), Cadmium (Cd) and Arsenic (As);
- coating and other solvents use for non-methane volatile organic compounds (NMVOC);
- intensive rearing of poultry or pigs for ammonia (NH<sub>3</sub>)
- the waste management sector for emissions of dioxins.

The breakdown is shown in the following figure.

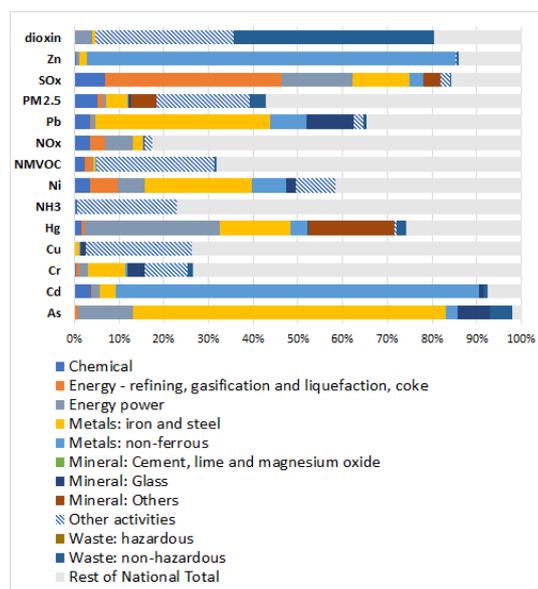
<sup>71</sup> Directive 2010/75/EU covers industrial activities carried out above certain thresholds. It covers energy industry, metal production, mineral and chemical industry and waste management, as well as a wide range of industrial and agricultural sectors (e.g. intensive rearing of pig and poultry, pulp and paper production, painting and cleaning).

<sup>72</sup> 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).

<sup>73</sup> European Environment Agency, [European Industrial Emissions Portal](#).

<sup>74</sup> European Environment Agency, EU Registry, [European Industrial Emissions Portal \(data retrieved on 3 November 2021\)](#).

Figure 21: Emissions to air from IED sectors and rest of national total air emissions in the Netherlands, 2018<sup>75</sup>

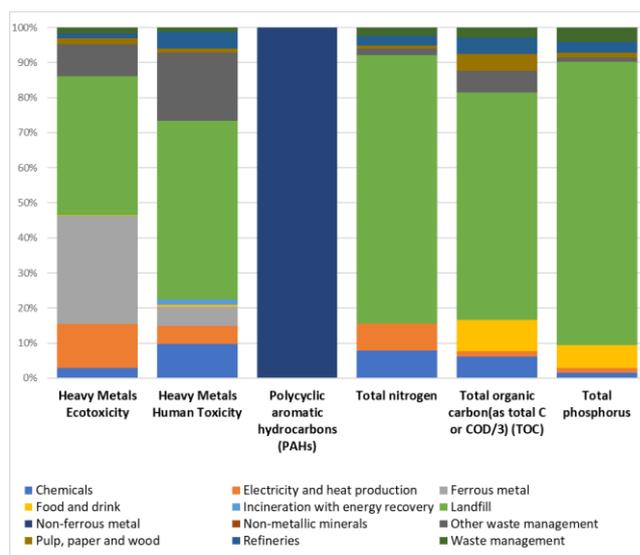


Noted that according to the information reported into the European Pollutant Release and Transfer Register, only 3% of the installations carrying out such activity in the Netherlands report ammonia emissions, whereas this ratio is 40% on average at EU-27 level. This suggests underreporting.

In 2017, one facility in the Netherlands was identified in the top 30 of facilities in the Register for absolute damage costs from emissions of the main air pollutants and greenhouse gases in the EU<sup>76</sup> (Tata Steel IJmuiden BV). The Dutch competent authority also identified deposition of heavy metals and polycyclic aromatic hydrocarbons (PAHs) in the neighbourhood of the installation<sup>77</sup>.

The environmental burdens from industrial **emissions to water** mainly result from (i) waste management for nitrogen, phosphorous, total organic carbon and heavy metals, and (ii) refineries for polycyclic aromatic hydrocarbons (PAHs). The breakdown, based on the data in the Register, is presented in the figure below.

Figure 22: Relative releases to water from industry in the Netherlands, 2018<sup>78</sup>



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. This empowers both the public and NGOs to ensure that permits are appropriately granted and the conditions in these permits are complied with. As part of environmental inspection, competent authorities undertake site visits to IED installations to take samples and to gather necessary information. According to Article 23(4) of the IED, site visits must be made between once a year and once every 3 years, depending on the environmental risks posed by the installations. In 2018 the Netherlands undertook 2 624 site visits, mostly to installations in the waste management sector (39%), followed by the chemical sector (17%) and the intensive rearing of poultry or pigs (15%).

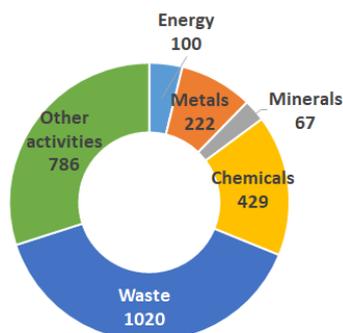
<sup>75</sup> European Environment Agency, LRTAP, [Air pollutant emissions data viewer \(Gothenburg Protocol, LRTAP Convention\) 1990-2019 \(data retrieved on 3 November 2021\)](#).

<sup>76</sup> EEA (2021). [Costs of air pollution from European industrial facilities 2008–2017](#). Eionet Report - ETC/ATNI 2020/4. The ranking is based on the approach accounting for the value of a life year (VOLY), table 42, p.129 and table 44, p.139.

<sup>77</sup> RIVM report 2021-0110, <https://www.rivm.nl/publicaties/depositieonderzoek-ijmond-2020-monstername-analyse-en-risicobeoordeling-van-pak-en>

<sup>78</sup> 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) [\(data retrieved on 3 November 2021\)](#).

**Figure 23: Number of inspections in IED installations in the Netherlands in 2018<sup>79</sup>**



The development of best available techniques (BAT) reference documents (BREFs) and BAT conclusions ensures a good collaboration between stakeholders and enables a better implementation of the IED<sup>80</sup>. Since the last EIR report, the Commission adopted BAT conclusions for (i) waste incineration, (ii) the food, drink and milk industries and (iii) surface treatment using organic solvents including wood and wood products preservation 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 2019, the Netherlands received priority actions to review permits to ensure they comply with the new adopted BAT conclusions and to strengthen control and enforcement to ensure compliance with the BAT conclusions. These actions have been followed up by the Commission through the reporting of the Netherlands to the EU Registry and there were no findings indicating a systematic breach of EU law. The Netherlands also received priority actions to address pollution (e.g. dust) from certain activities, and take actions to improve IED and EPRTR reporting, specifically for intensive rearing of poultry or pigs. These two actions are still relevant, the first one especially for the metal sector.

### 2022 priority actions

- Address air pollution from the metal sector, especially from the Tata Steel plant.
- Improve the reporting to the E-PRTR.

<sup>79</sup> European Environment Agency, EU Registry, [European Industrial Emissions Portal \(data retrieved on 3 November 2021\)](#).

<sup>80</sup> 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:

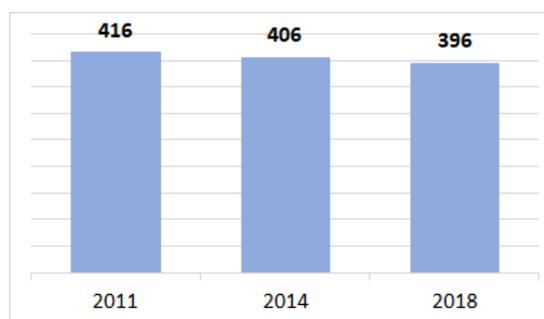
- control major accident hazards involving dangerous substances, especially chemicals;
- limit the consequences of such accidents for human health and the environment;
- continuously improve prevention, preparedness and response to major accidents.

The cornerstone of the policy is Directive 2012/18/EU (the Seveso-III Directive)<sup>81</sup>.

The overview below of industrial plants regulated by the Seveso-III Directive, ('Seveso establishments'), is based on data reported to the eSPIRS database (2018)<sup>82</sup> and the Netherlands report on the implementation of the Seveso-III Directive for 2015-2018<sup>83</sup>.

In the Netherlands, among the 396 Seveso establishments, 136 are categorised as lower-tier establishments (LTE) and 260 as upper-tier establishments (UTE) – 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 24.

**Figure 24: Number of Seveso establishments in the Netherlands, 2011, 2014 and 2018<sup>84</sup>**



According to the Netherlands, the External Emergency Plan (EEP) is required for 256 UTE. In 2018, 236 UTE had a plan and 236 of these had been tested over the last 3 years. The summary is shown in Figure 29. Creating EEPs is essential for allowing proper preparation and effective

<sup>81</sup> Directive 2012/18/EU on the control of major-accident hazards involving dangerous substances.

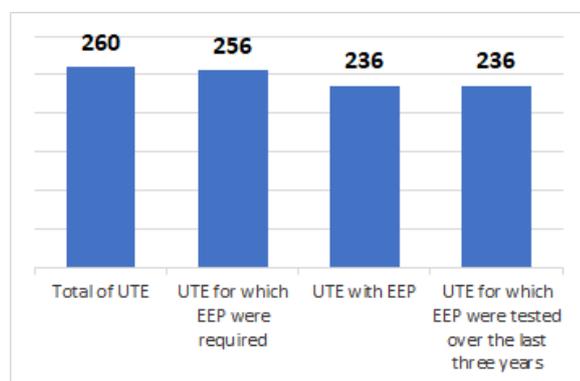
<sup>82</sup> European Commission, [Seveso Plants Information Retrieval System](#).

<sup>83</sup> As provided for by Article 21(2) of the Seveso-III Directive

<sup>84</sup> 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.

implementation of the necessary action to protect the environment and the population, in the event of a major industrial accident.

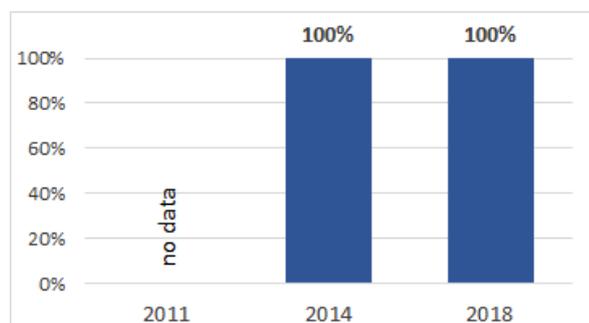
**Figure 25: Situation regarding EEPs in the Netherlands, 2018<sup>85</sup>**



The information for the public referred to in annex V of the Seveso-III Directive is permanently available for 100% of Seveso establishments in Netherlands. This applies – especially to how the public concerned will be warned in the event of a major accident; the appropriate behaviour to take in the event of a major accident; and the date of the last site visit.

The share of UTE for which information on safety measures and requisite behaviours were actively made available to the public in recent years are presented in Figure 30.

**Figure 26: Share of UTE for which information on safety measures and requisite behaviours were actively made available to the public in the Netherlands, 2011, 2014 and 2018<sup>86</sup>**



## 2022 priority action

<sup>85</sup> Idem.

<sup>86</sup> Idem.

- Strengthen **control and enforcement to ensure compliance with Seveso-III Directive** provisions, especially on EEP.

## Noise

The Environmental Noise Directive<sup>87</sup> 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 relevant 2030 zero pollution action plan target is a reduction by 30% of 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 produces ischaemic heart disease, strokes, interrupted sleep, cognitive impairment and stress<sup>88</sup>.

In the Netherlands, based on a limited set of data<sup>89</sup>, environmental noise is estimated to cause at least around 150 premature deaths and 1 200 cases of ischaemic heart disease annually<sup>90</sup>. Moreover, some 110 000 people suffer from disturbed sleep. In the Netherlands, the number of people exposed to noise increased by approximately 5% between 2012 and 2017.

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

<sup>87</sup> Directive [2002/49/EC](#)

<sup>88</sup> WHO 2018, Environmental Noise Guidelines for the European Region

<sup>89</sup> For further information: European Environment Agency, [Noise Fact Sheets 2021](#).

<sup>90</sup> 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.

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)<sup>91</sup> is the cornerstone of the EU water policy in the 21<sup>st</sup> century<sup>92</sup>. The WFD and other water-related legislation<sup>93</sup> set the framework for sustainable and integrated water management, which aims at a high level of protection for water resources, prevention of further deterioration and restoration to good status.

By March 2022, Member States have to report the third generation of River Basin Management Plans (RBMPs) under the WFD. The Netherlands has recently adopted and reported the third RBMPs. The Commission will assess the reported status and progress, checking how the findings identified in the assessment of the second RBMPs<sup>94</sup> have been addressed.

The Commission also published in December 2021 the 6<sup>th</sup> Implementation Report<sup>95</sup>. It includes an interim assessment on progress of the implementation of the Programmes of Measures and on monitoring of the new priority substances. The assessment report for the Netherlands<sup>96</sup> showed that measures as foreseen in the RBMP are being implemented and are effective in the sense that progress is being made, but the pace of progress is such that much remains to be accomplished in the 2021-2027 cycle. Pressures from diffuse sources and hydromorphological pressures in the Rhine and Meuse basin in particular are persistent. Water abstraction pressures, although not very commonly identified as a pressure, are even expected to worsen in the Meuse and Rhine basin.

<sup>91</sup> The [Water Framework Directive \(2000/60/EC\)](#).

<sup>92</sup> [EU Water Policy](#).

<sup>93</sup> 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 \(2020/741\)](#).

<sup>94</sup> Detailed information can be found in the [5<sup>th</sup> Report from the Commission on the implementation of the Water Framework Directive and the Floods Directive](#), as well as in the 2019 EIR.

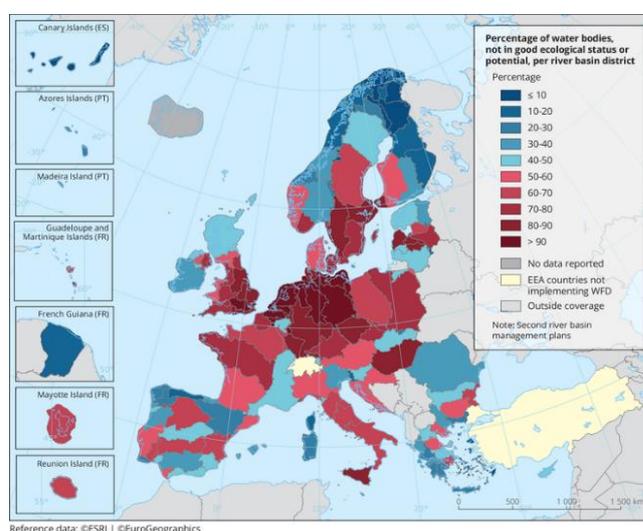
<sup>95</sup> See the [6<sup>th</sup> Implementation Report of the WFD and FD](#).

<sup>96</sup> European Commission, Directorate-General for Environment, Assessment of Member States' progress in programmes of measures during the second planning cycle of the Water Framework Directive. Member State: The [Netherlands](#), 2022.

Based on the 2<sup>nd</sup> RBMPs reporting and data published in 2020<sup>97</sup>, in the Netherlands 0.3% of all surface water bodies<sup>98</sup> reach good ecological status (with unknown status 0.4%) and only 39.2% have good chemical status (with unknown 9.0%). For groundwaters, 13% failed to achieve good chemical status and 100% are in good quantitative status.

Figure 27 illustrates the proportion of surface water bodies in the Netherlands 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, 2021<sup>99</sup>**



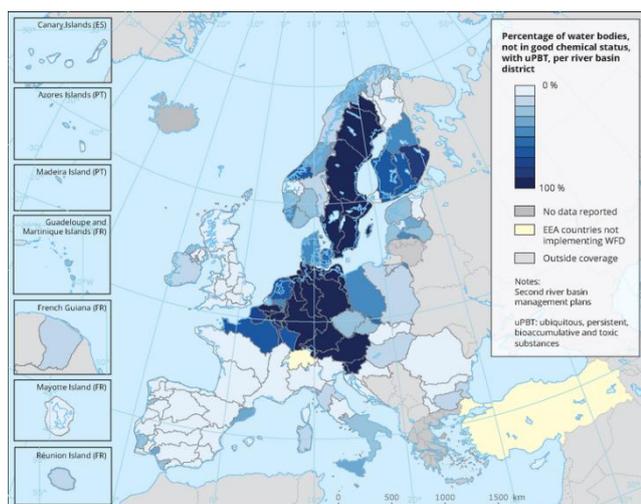
The following figure presents the percentage of surface water bodies in the Netherlands and other European countries failing to achieve good chemical status. For the Netherlands, the percentage is 52%, if we include water bodies failing due to substances behaving as ubiquitous PBTs (persistent, bio-accumulative, toxic). Without uPBTs, 49% of surface water bodies are failing good chemical status.

<sup>97</sup> [WISE Freshwater \(europa.eu\)](#)

<sup>98</sup> River, lake, transitional, coastal, territorial

<sup>99</sup> European Environment Agency, [2021](#).

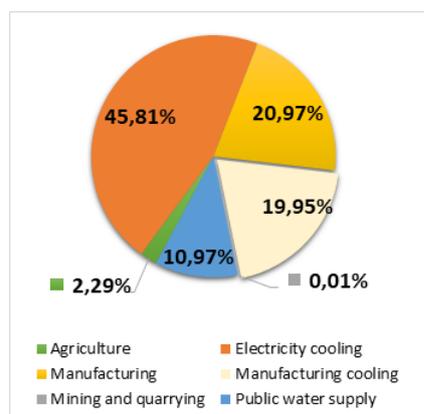
**Figure 28: Percentage of surface water bodies not achieving good chemical status, 2019<sup>100</sup>**



Under the IED framework, it should be stressed that the Netherlands showed over the last decade a significant decrease (53.4%) in releases of heavy metals like Cd, Hg, Ni, PL and (38%) in Total Organic Carbon, TOC to water<sup>101</sup>.

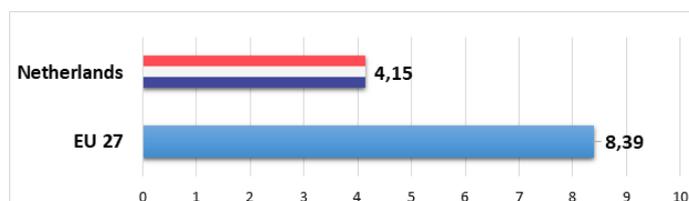
Total water abstracted annually (corresponding to the 2019 baseline) in the Netherlands from surface and groundwater sources is 11 600.55 hm<sup>3</sup> (EEA, 2022). The percentage for water abstraction per sector is 2.29% for agriculture, 10.97% for public water supply, 45.81% for electricity cooling, 20.97% for manufacturing and 19.95% for manufacturing cooling, as illustrated in the following Figure. The Netherlands uses a register to record water abstractions that are more than 150.000 m<sup>3</sup> per year. Abstractions for drinking water are registered in the Register of Protected Areas. For groundwater abstractions of up to 10 m<sup>3</sup> per hour, an exemption from the permit obligation may be allowed. For surface waters, small abstractions are permitted without notification, as long as sufficient surface water is available. Mid-sized abstractions have to be notified and may require a permit to protect nature or buildings. Abstractions over 50 m<sup>3</sup> per hour require a permit.

**Figure 29: Water abstraction per sector in the Netherlands, 2022<sup>102</sup>**



In the Netherlands, the water exploitation index plus (WEI+)<sup>103</sup> is 4.15%, well below the 20% that is generally considered an indication of water scarcity<sup>104</sup>. The Netherlands is ranked 12<sup>th</sup> (from high to low score) in the EU level in terms of WEI+.

**Figure 30 : Water exploitation index plus (WEI+) Inside EU, 2017<sup>105</sup>**



### Floods Directive

As mentioned, in December 2021 the Commission published the 6<sup>th</sup> Implementation Report. It includes the review and update of the preliminary flood risk assessments (PFRA) during the second cycle (2016-2021).

The assessment report<sup>106</sup> showed that the PFRA is balanced with providing sufficient information on the

<sup>100</sup> European Environment Agency, [December 2019](#).

<sup>101</sup> European Environment Agency, June 2021

<sup>102</sup> European Environment Agency, [Water abstraction by source and economic sector in Europe](#), 2022.

<sup>103</sup> 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.

<sup>104</sup> By May 2022, EEA will develop seasonal WEI+ at river basin and NUTS2 level, which provide a more complete picture of water stress and water scarcity for each Member State.

<sup>105</sup> European Environment Agency, [Water exploitation Index Plus](#), 2022.

<sup>106</sup> European Commission, Directorate-General for Environment, Assessment of Second Cycle Preliminary Flood Risk Assessments and

methodology and actual content on the flood risks in the different units of management (UoMs). The description of past floods is to a large extent based upon quantitative information. A consistent national strategy to deal with (future) flood risks has been implemented and climate change was taken into consideration. The assessment identified that the methodology for evaluating floods could be refined to reflect the differentiation between past and future floods.

The Netherlands has recently adopted and 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 Plan and publish a new report, as it did in 2019.

### Drinking water Directive

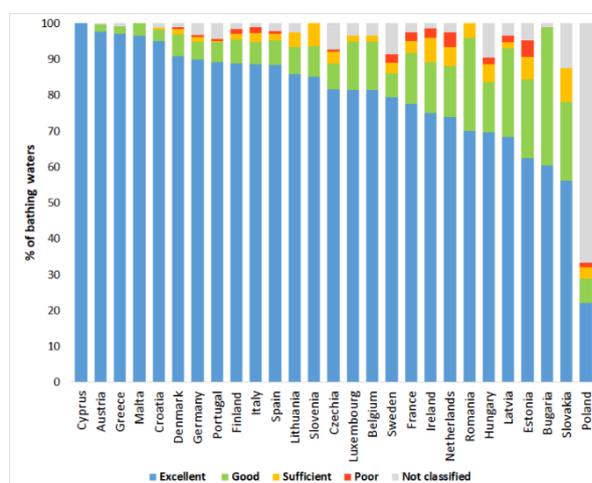
As regards the drinking water Directive<sup>107</sup>, no new assessment of the quality of drinking water is available since the 2019 EIR. The quality of drinking water in the Netherlands has not been indicated as an area of concern.

The recast Directive<sup>108</sup> entered into force on 12 January 2021 and Member States have until 12 January 2023 to transpose it into their national legal system. The Netherlands will have to comply with these reviewed quality standards.

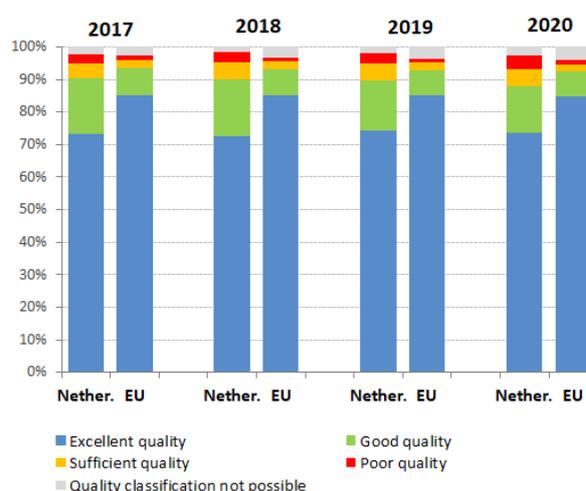
### Bathing water Directive

Regarding the bathing water Directive, Figure 31 shows that in 2020, out of the 736 Dutch bathing waters, 73.8% were of excellent quality,<sup>109</sup>. Detailed information on Dutch bathing waters is available.

**Figure 31: Bathing water quality in Europe in the 2020 season<sup>110</sup>**



**Figure 32: The Netherlands, bathing water quality 2017-2020<sup>111</sup>**



\*For 2017, 2018 and 2019, data about the UK bathing waters are included under the EU average.

### Nitrates Directive

The Netherlands has a very high livestock pressure, and a high surplus of nitrogen. The phosphorus surplus remains limited. There is a well-developed network of monitoring stations. There are groundwater hotspots with nitrate concentration > 50 mg/l or which have an increasing trend, in particular in the southern and central sand regions and the loess region. A very high number of the surface waters are found to be eutrophic.

Identification of Areas of Potential Significant Flood Risk under the Floods Directive : Member State : [The Netherlands](#), 2022

<sup>107</sup> OJ L 330, 5.12.1998, p. 32–54.

<sup>108</sup> OJ L 435, 23.12.2020, p. 1–62.

<sup>109</sup> European Environment Agency, 2021. [State of bathing water — European Environment Agency \(europa.eu\)](#), p. 17.

<sup>110</sup> European Environment Agency, [State of bathing waters in 2020](#), 2022.

<sup>111</sup> European Environment Agency, [European Bathing Water Quality in 2017, 2018, 2019, 2020](#).

The Netherlands recently adopted its seventh Nitrate Action Programme for the period 2022-2025.

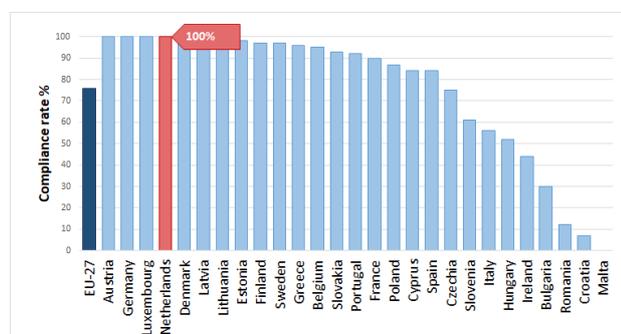
The Commission recommends that the Netherlands reinforce its action programme to (i) reduce nitrate pollution in particular in the ground waters of the sand and loess regions, (ii) tackle eutrophication and (iii) help farmers switch to more sustainable and less intensive production.

According to the last report on the implementation of the Nitrates Directive, covering 2016-2019<sup>112</sup>, groundwater quality has been degraded as compared to the previous reporting period, with the percentage of stations reaching or exceeding 50 mg nitrate per litre having increased to 14.1%. This can be related to the drought in the year in 2018.

### Urban Waste Water Treatment

The Netherlands demonstrates excellent levels of compliance with the Urban Wastewater Treatment Directive. Overall, in the Netherlands 100 % of the waste water is collected and undergoes more stringent treatment.

**Figure 33: Proportion of urban waste water that meets all requirements of the urban wastewater treatment Directive (collection, biological treatment, biological treatment with nitrogen and/or phosphorus removal) in compliant urban areas of the Directive ('compliance rate'), 2018<sup>113</sup>**



### 2022 priority actions

- Assess new physical modifications of water bodies in line with Article 4(7) of the water framework Directive. In these assessments alternative options and adequate mitigation measures have to be considered.
- Continue current efforts to further reduce nitrates pollution from agriculture in groundwater and step up efforts to ensure the implementation of measures to

ensure the timely achievement of the objective under the water framework Directive.

- Improve the coordinated implementation between water, marine and nature policies.

### 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<sup>114</sup>, 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<sup>115</sup> provides baseline protection for human health and the environment. It also ensures stability and predictability for businesses operating within the single 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 States' reports on the implementation and enforcement of these Regulations<sup>116</sup>, in line with REACH Article 117(1) and CLP Article 46(2). According to the latest available data, national enforcement structures have not changed much. 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 the law enforcement. Recorded compliance levels seem to be quite stable over time, but with a slight worsening trend 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<sup>117</sup> of the two main EU Regulations on chemicals (REACH and CLP) using a set of indicators on different aspects of enforcement.

<sup>114</sup> [COM\(2020\) 667 final](#)

<sup>115</sup> REACH: OJ L 396, 30.12.2006, p.1. - CLP: OJ L 252, 31.12.2006, p.1

<sup>116</sup> European Commission, Final Report, on the operation of REACH and CLP, [Final report REACH-CLP MS reporting 2020.pdf \(europa.eu\)](#)

<sup>117</sup> [European Commission, REACH and CLP enforcement: EU level enforcement indicators](#)

<sup>112</sup> [Commission Report on the implementation of the Nitrates Directive for the period 2016-2019](#)

<sup>113</sup> European Commission, [WISE Freshwater](#), 2021.

Responsibility for checking compliance with REACH in the Netherlands lies with the following authorities<sup>118</sup>:

- Dutch Food and Consumer Product Safety Authority (NVWA) and with the CLP Regulation as well
- Inspectorate for Human Environment and Transport (ILT) and with the CLP Regulation as well
- Labour Inspectorate (ISZW)
- State Supervision of Mines (SodM)
- Customs

The Netherlands has devised and fully implemented both REACH and CLP enforcement strategies<sup>119</sup>.

The content of the REACH enforcement strategy consists of a mixture of general activities and activities focused on specific target groups. Its prioritisation is based on:

- The year in which the various REACH articles enter into force;
- the priority these articles have been given;
- information on unknown or nonorganised businesses in the supply chain in specific target groups.

A mixture of enforcement tools to be used is included, ranging from information and compliance assistance to enforcement and sanctions.

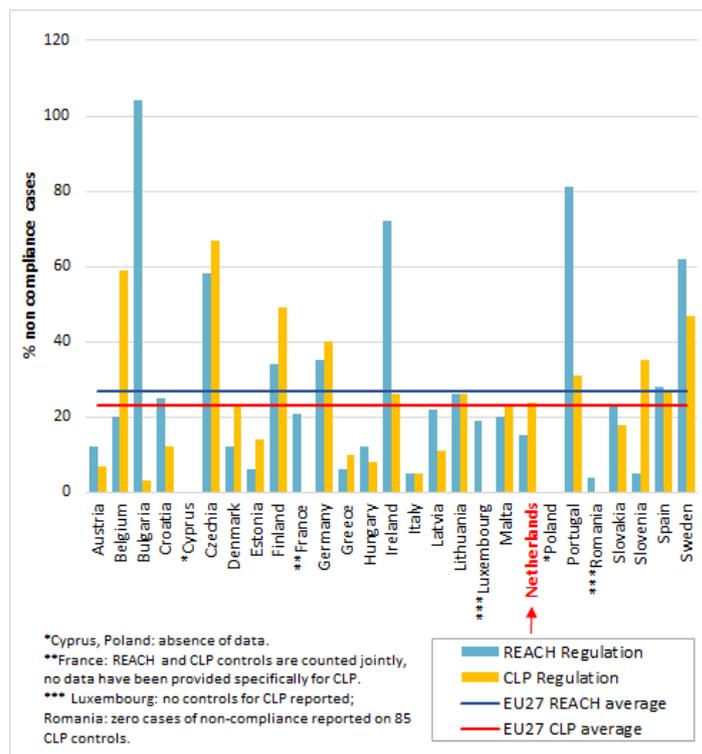
The CLP enforcement strategy is based on risk analysis of the effect and likelihood of target groups not complying with legislation. Its prioritisation of enforcement activities is based on the risk analysis, and refined on the basis of further target group analysis.

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 the Netherlands some 20-25 inspectors were (partly) involved in REACH enforcement. No other quantification is allocated to REACH and CLP enforcement<sup>120</sup>. Accordingly, REACH controls during 2019 remain 770 and CLP controls 93. The Dutch competent authorities did not specify how many of these controls were proactive (inspections) or reactive/non-routine controls (investigations in response to complaints, accidents and referrals). Although the actual level of expertise has increased since the last reporting, it

is still not sufficient for some specific tasks under REACH, namely in relation to risk management and some specific areas of concern such as nanomaterials and endocrine disruptors. The percentage of non-compliance cases out of the total number of REACH and CLP controls, is almost the EU average<sup>121</sup>.

**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<sup>122</sup>**



## 2022 priority actions

- Upgrade the implementation and enforcement administrative capacities, towards a zero tolerance for non-compliance.

<sup>118</sup> European Commission, Final Report, on the operation of REACH and CLP, [Final report REACH-CLP MS reporting 2020.pdf \(europa.eu\)](#), p. 70

<sup>119</sup> European Commission, Final Report, on the operation of REACH and CLP, [Final report REACH-CLP MS reporting 2020.pdf \(europa.eu\)](#), p. 76

<sup>120</sup> European Commission, Final Report, on the operation of REACH and CLP, [Final report REACH-CLP MS reporting 2020.pdf \(europa.eu\)](#), p. 75.

<sup>121</sup> European Commission, Final Report, on the operation of REACH and CLP, [Final report REACH-CLP MS reporting 2020.pdf \(europa.eu\)](#), p. 88.

<sup>122</sup> European Commission, [Final report, on the operation of REACH-CLP](#), p. 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<sup>123</sup> and sets binding GHG emission standards for different vehicle categories<sup>124</sup>. 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 GHG from Land Use Change and Forestry (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<sup>125</sup> 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

The Netherlands has an integrated *National Energy and Climate Plan* (NECP) for 2021-2030. The work is consistent with the long-term strategy. The Netherlands is bound to reaching climate neutrality in line with the EU general target. The national objective is to reduce emissions by 49 % (compared to 1990) by 2030 and become climate neutral by 2050. The Netherlands has a national Climate Law, Supreme Court case law, and a political consensus which binds it to climate policy objectives.

The Netherlands is expected to publish its Recovery and Resilience Plan, detailing the investment in the climate and energy transition (more details in Chapter 5).

Monitoring of the *National Climate Adaptation Strategy* started in autumn 2021, based on a plan developed in 2019-2020. It entails monitoring the progress of the implementation programme, monitoring the extent to which climate adaptation measures are effective reducing risks and monitoring the development of climate change risks to all sectors.

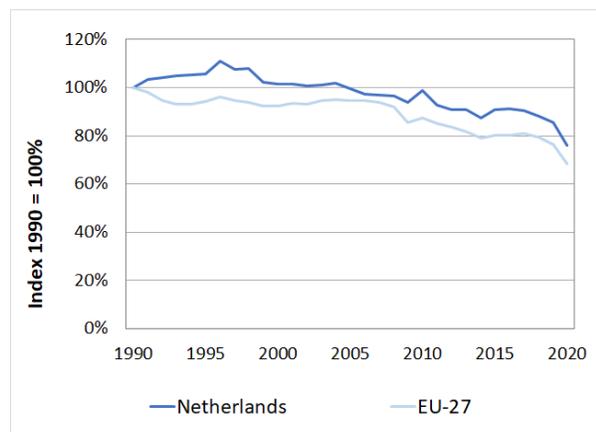
Between 1990 and 2020, economy wide greenhouse gas emissions in the Netherlands decreased by 24%. The country's greenhouse gas emission intensity is smaller than the EU's average, but its per capita emissions remain high.

<sup>123</sup> 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.

<sup>124</sup> Regulation (EU) 2019/631

<sup>125</sup> Article 29 of Regulation (EU) 2018/1999.

**Figure 35: Total greenhouse gas emissions (incl. international aviation) in the Netherlands, 1990-2020**

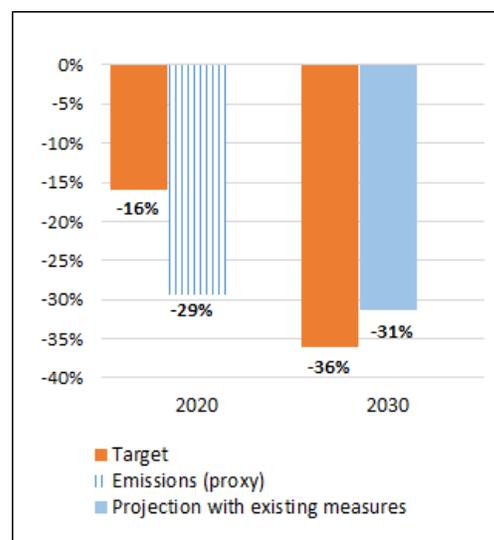


### Effort sharing target

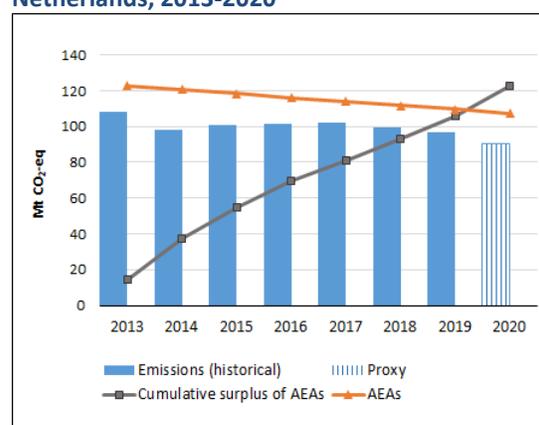
For emissions not covered by the EU’s emissions trading scheme (ETS), Member States have binding national targets under the Effort Sharing legislation. Under EU legislation, the Netherlands has a target to reduce greenhouse gas emissions in the non-ETS sectors (buildings, road and domestic maritime transport, agriculture, waste and small industries) by 16 % by 2020 and 36% by 2030 compared to 2005 levels. The Netherlands has largely overachieved its 2020 target.

In its NECP, the Netherlands intends to meet its current ESR target for 2030 of -36%.

**Figure 36: Emissions and targets under the Effort Sharing Decision/ Effort Sharing Regulation in the Netherlands, 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 the Netherlands, 2013-2020**



### Key sectoral developments

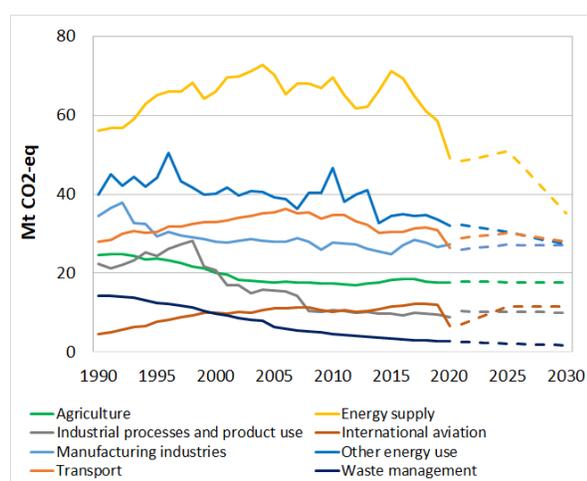
On **road transport** the greenhouse gas intensity of vehicle fuels in the Netherlands decreased by 5.7% from 2010 to 2019, and the country is close to achieving the current EU-wide reduction target of 6% by 2020.

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) incentivizing the development and deployment of renewable fuels of non-biological origin and (iv) reducing upstream emissions before refining processes.

Road transport emissions in 2019 in the Netherlands represented 15% of the total greenhouse gas emissions, and they have decreased by 12% compared to 2005. The NECP stresses the importance of electric vehicles, based on smarter energy infrastructure and smart grids. The Netherlands has a (non-binding) objective of reaching 100% zero emissions in new car sales by 2030.

**Figure 38: Greenhouse gas emissions by sector in the Netherlands<sup>126</sup> – historical emissions 1990-2019, projections 2021-2030<sup>127</sup>**



On **buildings**, more deep renovations will be needed beyond a scale-up of ongoing efficiency improvements. In the NECP, the Netherlands has provided information on buildings, such as indicative milestones for 2030, 2040 and 2050 in terms of CO<sub>2</sub> emission reductions, wider benefits and new measures planned for the coming years.

To reduce emissions in **agriculture**, the most urgent priority is reducing nitrogen emissions, as the limited emissions space has led to legal stalling of projects in all sectors. Policies to support sustainable

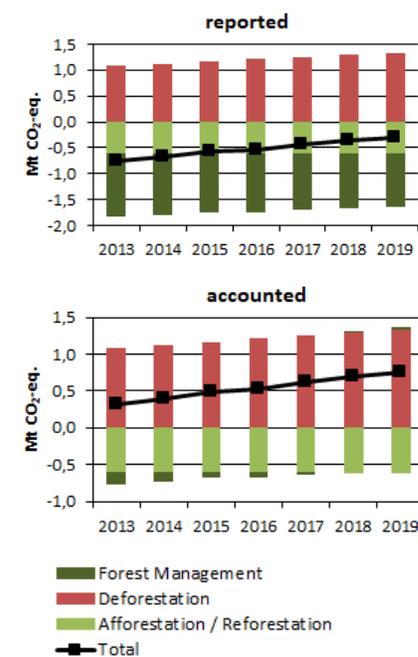
<sup>126</sup> The sectors in the figure correspond to the following IPCC sectors: Energy supply: 1A1, 1B and 1C. Energy use in manufacturing industries: 1A2. Industrial processes and product use: 2. Transport: 1A3. Other energy use: 1A4, 1A5 and 6. Agriculture: 3. Waste: 5. International aviation: 1.D.1.a.

<sup>127</sup> European Environmental Agency, [Total GHG trends and projections](#).

agriculture in the broad sense, due to the nitrogen issue, might have co-benefits for climate.

**In the Land Use, Land Use Change and Forestry (LULUCF) sector**, the Netherlands projects a further increase in net removals by 2030. Reported quantities under the Kyoto Protocol for the LULUCF sector in the Netherlands show net removals, on average, of -0.5 Mt CO<sub>2</sub>-eq for the period 2013 to 2019. In this regard, the Netherlands contribute with 0.2% to the annual average sink of -344.9 Mt CO<sub>2</sub>-eq of the EU-27. Accounting for the same period depicts net debits, on average, of 0.5 Mt CO<sub>2</sub>-eq, which represents -0.5% of the EU-27 accounted sink of 115.0 Mt CO<sub>2</sub>-eq. Reported net removals show a declining trend; the same pattern is replicated for accounted net debits with an increasing tendency. The Netherlands 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 the Netherlands**



## Use of revenues from the auctioning of EU ETS allowances

The total revenues from auctioning emission allowances under the EU ETS over the years 2012-2021 were nearly EUR 3,1 billion. In the Netherlands, auctioning revenues go to the national general

budget which is to finance climate and energy projects. The Netherlands spends more on climate change and energy than their auctioning revenues.

### 2022 priority actions

- Increase the uptake of renewables. The Netherlands intends to considerably increase the deployment of renewable energy, with a particular focus on offshore wind, heating and cooling in buildings, and renewable, low-carbon hydrogen and green gases. These efforts will allow the Netherlands to significantly contribute to the country's green transition.
- Accelerate sustainable transport based on smarter energy infrastructure and smart grids. Increase use of electric vehicles and the deployment of charging infrastructure
- Increase energy efficiency and renewable energy in the building sector through extensive renovation, which will also address energy poverty and create more green jobs.

## Part II: Enabling framework: Implementation tools

### 5. Financing

#### Environmental investment needs in the EU

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 gap between countries.

Post-2020, environmental measures will also be supported by the EU's COVID-19 Recovery Fund (via the Recovery and Resilience Facility (RRF)) and the 'do no significant harm' (DNSH) principle which runs across the EU budget. The renewed commitments made at COP26 (Glasgow, Oct-Nov 2021) and the Biodiversity Convention (April-May 2022), will also be reflected in the EU budget<sup>128</sup>.

#### Overall environmental investment gaps (EU-27)

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 to be EUR 390 billion per year (EU-27)<sup>129,130</sup>. 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<sup>131</sup>. Those investment needs reflect the implementation objectives to 2020 and to 2030 (except for climate 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 Table 1<sup>132</sup>. Almost 40% of the environmental investment needs relate to dealing with pollution, which accounts for nearly two-thirds of the investment gap if combined with water management. The investment gap in circular economy and waste is

estimated between EUR 13-28 billion a year, depending on levels of circularity implemented. The annual biodiversity financing gap is estimated to be around EUR 20 billion.

**Table 1: Estimated breakdown of the EU's environmental investment needs, by objective, 2021-2030 (per year)<sup>133</sup>**

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 <sup>134</sup>	21.5	20%
R & D & I and other	6.2	6%
<b>Total</b>	<b>110.1</b>	<b>100%</b>

#### Environmental investment needs in the Netherlands

Climate is a political priority in the Netherlands in line with the strategic objectives of the Integrated National Energy and Climate Plan 2021-2030. The INEK's objective is to achieve a 49 % greenhouse gas reduction compared to 1990 and to contribute to 32 % renewable energy by 2030. In addition, NL introduced a "Nitrogen Reduction and Nature Improvement law" since 1 July 2021. The main elements of this law comprise legally binding target values for nitrogen reduction for 2025, 2030 and 2035, the operationalisation and implementation of nature and nitrogen measures via a legal nitrogen reduction and

<sup>128</sup> [The Convention on Biological Diversity \(cbd.int\); Post-2020 Global Biodiversity Framework | IUCN](https://www.cbd.int/postes/post-2020-global-biodiversity-framework)

<sup>129</sup> [SWD\(2021\)621](#), accompanying proposal COM(2021)557 to amend the REDII Directive (EU) 2018/2001.

<sup>130</sup> [SWD\(2020\) 98 final/2](#).

<sup>131</sup> [SWD\(2018\)292](#). Impact assessment accompanying the Proposal for the LIFE Regulation (COM(2018)385).

<sup>132</sup> 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.

<sup>133</sup> European Commission, DG Environment, "Study supporting EU green investment needs analysis" (ongoing, 2021-2023) and DG Environment internal analysis "Environmental Investment needs and financing in the EU's green transition", July 2020.

<sup>134</sup> 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.

nature improvement programme and 12 regional plans to be presented in 2023.

The following environmental investment needs have been identified by sector:

### **Pollution prevention & control**

The EU's first Clean Air Outlook<sup>135</sup> estimates that for the Netherlands to reach, by 2030, the emission reduction requirements (ERRs)<sup>136</sup> under the Directive on national emissions reduction commitments, the total air pollution costs amount to EUR 3.185 billion per year. This includes EUR 1.890 billion per year for capital investment (assuming the 2030 climate and energy targets are met).

As the second Clean Air Outlook suggests<sup>137</sup>, implementing (i) all relevant legislation adopted up to 2018<sup>138</sup>, (ii) the 2030 climate/energy measures and (iii) the national air pollution control programmes (NAPCP) will largely allow the EU to reach its 2030 climate and 2018 energy targets. Furthermore, if the Member States implement the measures announced in their NAPCP, the EU would largely achieve the reductions of air pollutant emissions that correspond to the obligations under the NEC Directive for 2030, except for 15 Member States for ammonia (NH<sub>3</sub>), excluding the Netherlands<sup>139</sup>.

### **Water management**

Annual expenditures for both water supply and wastewater were approximately EUR 5.6 billion for the Netherlands by 2011-2015 (total expenditure)<sup>140</sup><sup>141</sup>. Up to 2030, the additional cumulative investment need over baselines for the Netherlands was estimated to be EUR 4.8 billion (around EUR 480 million per year on average), with over 95% of that related to wastewater. Moreover, the recent 6<sup>th</sup> Water Framework Directive and Floods Directive Implementation Report<sup>142</sup> and the financial -

economic study<sup>143</sup> accompanying it, are also a relevant source of information in this domain.

### **Waste & circular economy**

According to a Commission study<sup>144</sup> to meet the recycling targets for municipal waste and packaging waste, the Netherlands still needs to invest an additional EUR 430 million over baselines in 2021-2027 (61 million per year on average) in collection, recycling reprocessors, biowaste treatment, waste sorting facilities and waste registry digitalisation. This does not include the investment necessary for other key waste streams (plastics, textile, furniture) or to unlock a higher uptake of circularity and waste prevention across the economy.

### **Biodiversity & ecosystems**

Prioritised action frameworks (PAFs) adopted by the Member States according to Article 8 of the Habitats Directive present (i) the conservation priorities for the Natura 2000 network and its supporting green infrastructure, (ii) their costs and (iii) planned funding sources for the period corresponding to the current multiannual financial framework (MFF) (2021-2027). For the Netherlands, the total identified needs amount to EUR 903.1 million per year, including EUR 739 million annual one-off costs<sup>145</sup>. This excludes additional costs to implement the Biodiversity Strategy to 2030, including on increased protection and restoration.

## **EU environmental funding 2014-2020**

The MFF for the years 2014-20 allocated almost EUR 960 billion (in commitments, 2011 prices)<sup>146</sup> for the EU to spend over this period. The commitment to green transition included a 20% climate spending target and funding opportunities for the environment, in particular, under the European Structural and Investment (ESI) Funds<sup>147</sup>. The 2014-2020 MFF budget was subsequently topped up with over EUR 50 billion (current prices) from REACT-EU (Recovery Assistance for Cohesion and the

<sup>135</sup> International Institute for Applied Systems Analysis (IIASA), *Progress towards the achievement of the EU's air quality and emissions objectives*, 2018.

[https://ec.europa.eu/environment/air/pdf/clean\\_air\\_outlook\\_overview\\_report.pdf](https://ec.europa.eu/environment/air/pdf/clean_air_outlook_overview_report.pdf)

<sup>136</sup> Covering the reductions of and the emission ceilings for 5 atmospheric pollutants, SO<sub>x</sub>, NO<sub>x</sub>, PM<sub>2.5</sub>, NH<sub>3</sub> and VOC by 2030, compared to 2005. Requirements are based on [Directive \(EU\) 2016/2284](#).

<sup>137</sup> [COM\(2021\) 3 Final](#) and [Report Annex](#).

<sup>138</sup> [COM\(2021\) 3 final](#). International Institute for Applied Systems Analysis (IIASA), *Support to the development of the Second Clean Air Outlook*, 2020 and [Annex](#).

<sup>139</sup> [COM\(2021\) 3 final](#). International Institute for Applied Systems Analysis (IIASA), *Support to the development of the Second Clean Air Outlook*, 2020 and [Annex](#).

<sup>140</sup> OECD, *Financing a Water Secure Future*, 2022.

<sup>141</sup> OECD, *Financing a Water Secure Future*, 2022., [Country Fact Sheet Netherlands](#), Page 4

<sup>142</sup> [WFD and FD Implementation Reports](#) – DG Environment – European Commission.

<sup>143</sup> 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.

<sup>144</sup> European Commission, *Study on investment needs in the waste sector and on the financing of municipal waste management in Member States*, 2019.

<sup>145</sup> The N2K Group, *Strengthening investments in Natura 2000 and improving synergies with EU funding instruments report to the European Commission*, 2021.

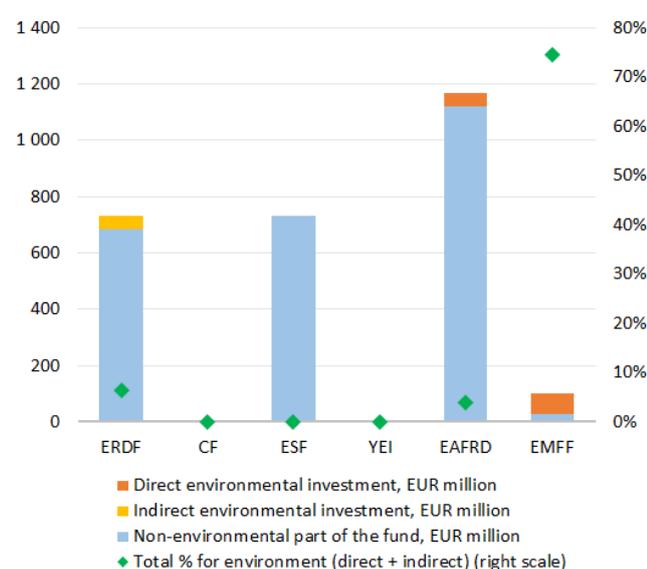
<sup>146</sup> [Council Regulation \(EU, Euratom\) No 1311/2013](#).

<sup>147</sup> 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).

Territories of Europe). This money was spent on action against COVID-19, under EU cohesion policy<sup>148</sup>.

The Netherlands received EUR 2.7 billion from the ESI Funds over 2014-20 to invest in job creation and a sustainable and healthy European economy and environment. The planned direct environmental investment amounted to EUR 121.9 million with a further EUR 47.6 million identified as indirect environmental investment value, totalling EUR 169.6 million. Figure 41 shows an overview of (planned) individual ESI Funds earmarked for the Netherlands (EU amounts, without national amounts).

**Figure 40: ESI Funds allocated to the Netherlands, including environmental investments 2014-2020<sup>149</sup>**



<sup>148</sup> [Regulation \(EU\) 2020/2221](#).

<sup>149</sup> 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 Regulation (EU) No 1303/2013 and Regulation (EU) 2021/1060. This allows for a more precise identification and valuation of relevant environmental investments. N.B. Indirect environmental investments are valued using the Annex I environmental coefficients in Regulation (EU) 2021/1060 (as opposed to full value).

**Table 2: Direct and indirect environmental investments under the ESI Funds in the Netherlands, 2014-2020<sup>150</sup>**

Instrument	Allocations for the environment (EUR million)
<b>Under cohesion policy (ERDF)</b>	<b>47.6</b>
Indirect environmental investments	47.6
renewable energy	5.0
energy efficiency	21.8
other energy <sup>151</sup>	0.8
business development, R&I	20.1
<b>Under EAFRD/rural development</b>	<b>46.4</b>
Direct environmental investments	46.4
climate and risk management	46.4
<b>Under EMFF</b>	<b>75.5</b>
Direct environmental investments	75.5
environment protection & resource efficiency	75.5
<b>Under ESI Funds total</b>	<b>169.6</b>
Direct environmental investments	121.9
Indirect environmental investments	47.6

Funding for the environment from the ESI Funds has been also supplemented by other EU funding programmes available to all Member States, such as, the LIFE programme or Horizon 2020 or EIB loans, that add up to an estimated total of EUR 2.3 billion of EU environmental financing for the Netherlands in 2014-2020.

The LIFE programme<sup>152</sup> is entirely dedicated to environmental and climate objectives. It finances demonstration and best-practice actions for green solutions to be deployed. In the 2014-2020 period, the Netherlands has received EU support for 10 LIFE projects with EUR 48.5 million (for nature and environment) from the LIFE programme (out of 1 028 EU27 LIFE projects with the total EU contribution of EUR 1.74 billion)<sup>153</sup>.

<sup>150</sup> 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: (i) the set of environmental coefficients used and (ii) the range of funds assessed. DG Environment's analysis here covered the full range of ESI Funds. See also the footnote of the figure "ESI Funds allocated to the Netherlands, including environmental investments 2014-20"

<sup>151</sup> 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) in Regulation (EU) 2021/1060, Annex I.

<sup>152</sup> [European Commission, LIFE Programme](#).

<sup>153</sup> Source: [CINEA](#)

In 2014-2020, Horizon 2020 allocated about EUR 175.1 million for the Netherlands, in particular, for the circular economy, including raw materials, climate action, nature and resources, water and earth observation, which is about 3.3% of the country's total allocation.<sup>154</sup> From the European Fund for Strategic Investments (EFSI), the Netherlands received EUR 382.9 million for direct environmental investment and EUR 12.0 million for indirect environmental investments (totalling to EUR 394.9 million) out of its total allocation (EUR 2.0 billion).<sup>155</sup> From the EIB, the Netherlands received EUR 1.8 billion for direct environmental investment (specifically, for water and sewerage) out of the total EIB loans for the Netherlands (EUR 15.8 billion)<sup>156</sup>. The country ranks number 6 in size of total EIB lending.

In 2020, the EIB provided EUR 24.2 billion to fight climate change at EU level, 37% of its total financing. It also provided EUR 1.8 billion (3% of its financing) for broader environmental lending<sup>157 158</sup>.

### EU environmental funding 2021-2027

The 2020 European Green Deal investment plan calls for EUR 1 trillion in green investment (public and private) 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.<sup>159</sup> Following the EU Green Deal's<sup>160</sup> pledge to 'do no harm' and the Interinstitutional Agreement on the 2021-2027 MFF<sup>161</sup>, 30% of the EU budget in that period will support climate efforts, while biodiversity will receive 7.5% of the EU budget as of 2024 and 10% as of 2026, specifically under the 2021-2027 Cohesion policy and the 2023-2027 CAP to reach those targets.

Sustainable finance significantly increases transparency on environmental sustainability (a goal promoted by the

EU Taxonomy)<sup>162</sup>. It also strengthens non-financial reporting requirements and facilitates the issuance of green bond (by developing the EU green-bond standard<sup>163</sup>). Reinforced by the renewed sustainable finance strategy (2020)<sup>164</sup>, sustainable finance will increase investment flows to climate and environment. In support of financing climate adaptation, the new strategy on adaptation to climate change<sup>165</sup> can help close the insurance protection gap, which currently leaves many risks from climate-related events uninsured<sup>166</sup>. The EIB will align 50% of its lending with climate and environment projects by 2025<sup>167</sup>, with an EUR 250 billion contribution to the Green Deal investment plan by 2027.

Table 3 gives an overview of the EU funds earmarked specifically for the Netherlands for 2021-2027. These funds are also supplemented by other EU funding programmes available to all Member States.

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

Instrument	Country funding allocation (million EUR)
<b>Cohesion policy</b>	<b>Total: 1 298.9<sup>168</sup></b>
ERDF	506.3
ESF+	413.9
ETC (ERDF)	378.7 <sup>169</sup>
<b>Just Transition Fund</b>	<b>622.9<sup>170</sup></b>
<b>EAFRD/rural development</b>	<b>366.3<sup>172</sup></b>
under CAP Strategic Plans 2023-2027 <sup>171</sup>	

<sup>154</sup> Source: EASME, <https://sc5.easme-web.eu/>.

<sup>155</sup> Approved and signed EFSI financing - EIB, 2015-2020: Source: <https://www.eib.org/en/products/mandates-partnerships/efsi/index.htm>.

<sup>156</sup> EIB loans in EU countries in 2014-2020. Source: EIB Open Data Portal: <https://www.eib.org/en/infocentre/eib-open-data.htm>

<sup>157</sup> The EIB Group jointly works with the European Commission in implementing several programmes that finance environmental implementation: InvestEU, the successor of EFSI, and Pillars 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 budget under that mandate.

<sup>158</sup> [EIB 2021 Activity Report](#).

<sup>159</sup> European Commission, [2021-2027 long-term EU budget & NextGenerationEU](#).

<sup>160</sup> [COM/2019/640 final](#).

<sup>161</sup> [Interinstitutional Agreement, OJ L 433L](#).

<sup>162</sup> [https://ec.europa.eu/info/business-economy-euro/banking-and-finance/sustainable-finance/eu-taxonomy-sustainable-activities\\_en](https://ec.europa.eu/info/business-economy-euro/banking-and-finance/sustainable-finance/eu-taxonomy-sustainable-activities_en)

<sup>163</sup> [EU Green Bond Standard - 2021/0191 \(COD\)](#).

<sup>164</sup> COM (2021) 390 Final - European Commission, Strategy for Financing the Transition to a Sustainable Economy.

<sup>165</sup> COM(2021) 82 final.

<sup>166</sup> The strategy would support improved insurance gap coverage including through the natural catastrophe markets as reflected with the EIOPA (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 \(europa.eu\)](#).

<sup>167</sup> EIB Climate Bank Roadmap 2021-2025, November 2020

<sup>168</sup> European Commission, [2021-2027 Cohesion policy EU budget allocations](#).

<sup>169</sup> Interreg initial allocations per MS including ETC transnational and ETC cross-border co-operation.

<sup>170</sup> European Commission, [2021-2027 Cohesion policy EU budget allocations](#).

<sup>171</sup> European Commission, [CAP strategic plans](#).

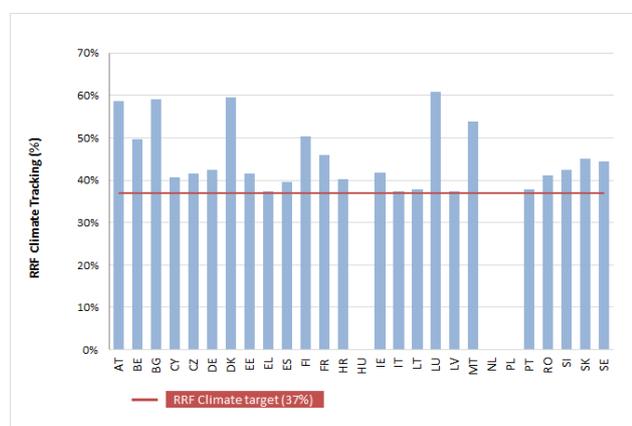
<sup>172</sup> [Regulation \(EU\) 2021/2115](#), Annex XI.

European Fisheries and Aquaculture Fund (EMFAF)	Maritime, and Fund	97.9 <sup>173</sup>
Recovery and Resilience Facility (RRF)		5.9 <sup>175</sup> (grants)
2021 – 2026 <sup>174</sup>		

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

To date, the Dutch RRP has not been adopted yet.

**Figure 41: Climate expenditure in RRP, 2021-2026<sup>176</sup>**  
(Without data on HU, NL, PL)



Under NextGenerationEU, the Commission will issue up to EUR 250 billion of **EU green bonds** (one third of all bonds issued under NextGenerationEU) until 2026 that will comply with the general spirit of the ‘do no significant harm’ principle. However, this EUR 250 billion in green bonds will not be subject to the currently developed delegated acts related to the EU Taxonomy and will not fully align with the proposed EU standard for green bonds.

In addition to EU funds earmarked specifically for Belgium in 2021-2027, there are also funding programmes that can be accessed at the EU level and which are open to all Member States. These include the

<sup>173</sup> [Regulation \(EU\) 2021/1139](#), Annex V.

<sup>174</sup> The actual reforms and investments under the RRF have to be implemented until 31 December 2026.

<sup>175</sup> [Regulation \(EU\) 2021/241](#), establishing the Recovery and Resilience Facility, Annex IV

<sup>176</sup> European Commission. [The contributions to climate objectives have been calculated using Annex VI of the RRF Regulation \(EU\) 2021/241.](#)

LIFE programme<sup>177</sup> (EUR 5.4 billion), Horizon Europe (EUR 95.5 billion)<sup>178</sup>, the Connecting Europe Facility<sup>179</sup> (EUR 33.7 billion)<sup>180</sup> or the funds to be mobilised via the InvestEU programme<sup>181</sup>. These other sources of funding will also support the green transition, including through research and innovation activities for environmental protection (Horizon Europe)<sup>182</sup>, clean transport and energy (the Connecting Europe Facility)<sup>183</sup> and sustainable infrastructure (InvestEU)<sup>184</sup>.

## National environmental financing

Total national **expenditure on environmental protection** (including all relevant current and capital expenditure)<sup>185</sup> 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. Although the largest absolute amounts of expenditure are concentrated in a few countries, most countries spend between 1-2% of their GDP on environmental protection, whereas the Netherlands directs 2.5% of its GDP to this field.

Of this spending, the EU-27's **capital expenditure on environmental protection (i.e. investment)** amounted to EUR 56.3 billion in 2018, lowering to EUR 54.5 billion in 2020, representing around 0.4% of GDP. Most Member States invested 0.2-0.5% of their GDP in environmental protection, the Netherlands dedicated 0.5%. During 2014-20, this spending totalled around EUR 376 billion of environmental investment in the EU27, and EUR 28 billion for the Netherlands.

<sup>177</sup> European Commission, [LIFE Programme](#).

<sup>178</sup> European Commission, [Multiannual financial framework 2021-2027 \(in commitments\) - Current prices](#).

<sup>179</sup> The CEF (Transport) also includes 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 follow the nationally earmarked amounts until 31 December 2023. Any unspent national amount, by that date, will be allocated to support all Member States covered by the Cohesion Fund.

<sup>180</sup> [Regulation \(EU\) 2021/1153](#).

<sup>181</sup> The InvestEU Fund plans to mobilise over EUR 372 billion of investment through an EU budget guarantee of EUR 26.2 billion to back investment by financial partners such as the European Investment Bank (EIB) Group and others.

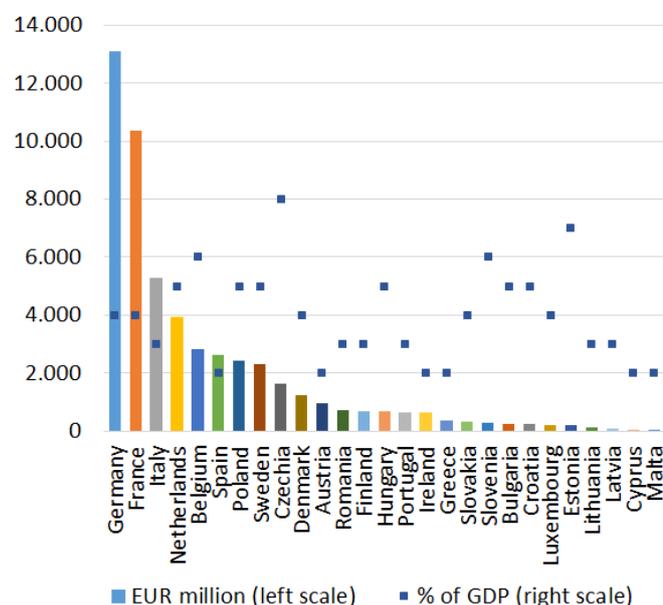
<sup>182</sup> European Commission, [Horizon Europe](#).

<sup>183</sup> European Commission, [Connecting Europe Facility](#).

<sup>184</sup> European Union, [InvestEU](#).

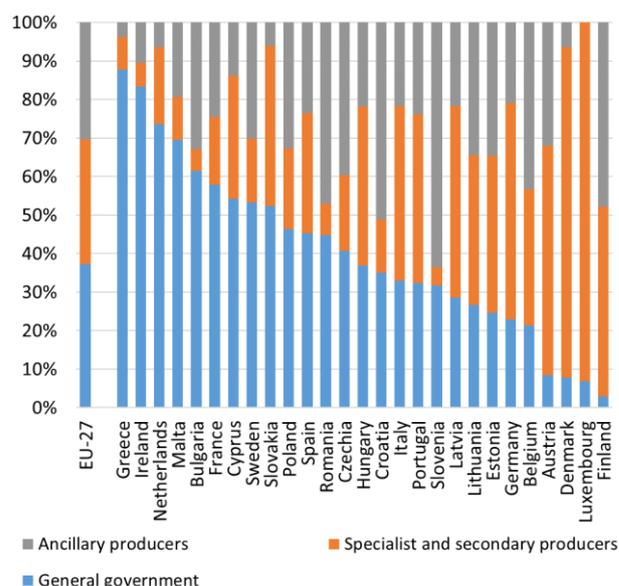
<sup>185</sup> At economy level, including final consumption, intermediate consumption and capital expenditure by households, corporations and governments related to goods and services in the environmental protection sector. This excludes EU funds, but may include some international expenditure (beyond domestic). Data source: Environmental Protection Expenditure Accounts (EPEA), Eurostat. EPEA accounts are based on the [CEPA 2000 classification](#), excluding climate, energy and circular economy.

**Figure 42: Direct and indirect environmental protection investment in the EU-27 (EUR million and % of GDP), 2018<sup>186</sup>**



By **institutional sector**, around 74% of the Netherlands' environmental protection investments (capital expenditure) came from the general government, 20% from specialist producers (of environmental protection services, e.g. waste and water companies) and 6.5% from the typical industry (or business) sector that normally pursues environmental activities as ancillary to their main activities. At EU level, 37% comes from governments, 33% from specialist producers and 30% from industry (business).

**Figure 43: EU-27 Member States environmental protection investment (capital expenditure), by institutional sector (Total economy = 100%), 2018<sup>187</sup>**



Breakdown of investment **by environmental issue** is partially available, at the level of institutional sectors only (rather than at economy level), due to different reporting patterns<sup>188</sup> At the Netherlands' general government level, in 2018 53% of environmental protection investments went to wastewater, 34% on waste management and 5% on biodiversity in 2018. The country's specialist producers mainly focused on waste management, with 92% of their environmental investment, with wastewater and water- and soil protection receiving 4-4% (each). For industry (business) the main priority was the protection of air, with 60% of relevant investments, followed by wastewater (22%) to name the most significant items.

In 2020, the total annual issuance of European **green bonds**<sup>189</sup> (including some non-EU countries) was USD 156 billion (EUR 137 billion), up from USD 117 billion (EUR

<sup>187</sup> Eurostat, Environmental Protection Expenditure Accounts (env\_epe).

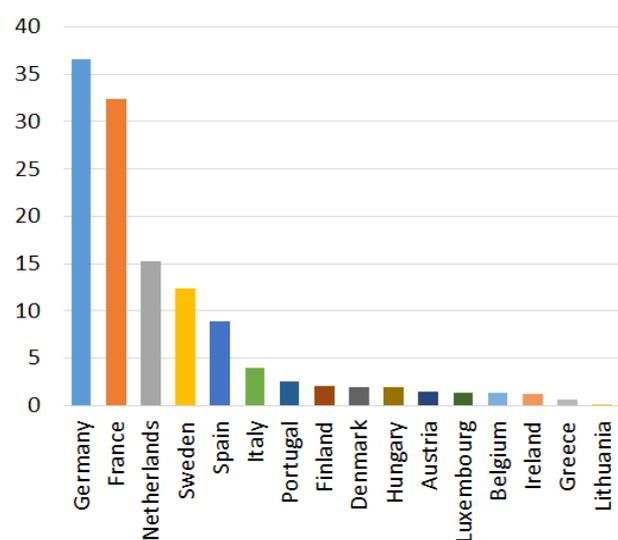
<sup>188</sup> Data reporting is different for the 3 institutional sectors, leading to aggregation difficulties. Specialist companies provide comprehensive data across all environmental areas (CEPA 1-9), while this is less the case for general government and industry, which often report (the non-obligatory) data in merged categories only (which are difficult to separate out), or indeed not at all.

<sup>189</sup> 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 AAA-rated issuance from multilateral institutions, the European Investment Bank (EIB) and the World Bank.

<sup>186</sup> Eurostat, [Environmental Protection Expenditure Account](#), 2021.

105 billion) in 2019<sup>190</sup>. Looking only at EU-27 Member States, green bond issuance in 2020 was EUR 124 billion. The Netherlands issued green bonds worth EUR 15.3 billion in 2020. In 2014-2020, 83% of the green bonds issued by European countries served objectives in energy, buildings or transport, while 8% supported water and waste, with a further 6% supporting land use – with links to ecosystem conservation & restoration<sup>191</sup>.

**Figure 44: Annual EU green bond issuance in 2020 (EUR billion)**<sup>192</sup>



## Green budget tools

### Green taxation & tax reform

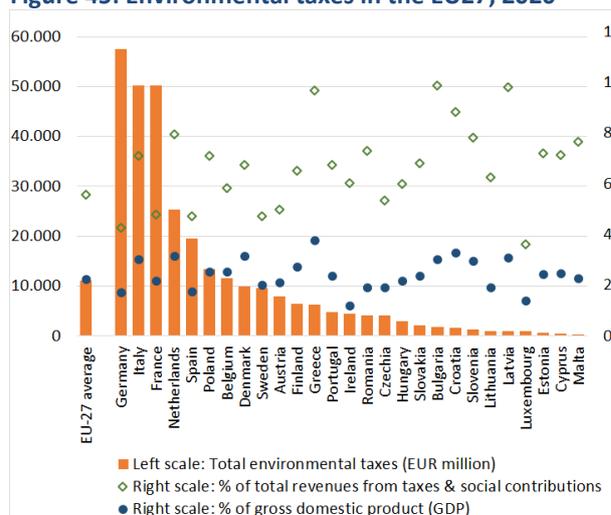
The Netherlands’ revenue from environmentally-related taxes is one of the highest above the EU average in 2020, as shown in the graphic. Environmental taxes stood at 3.16% of GDP in 2020 (EU average: 2.24%). The largest portion of the environmental taxes were energy taxes at 1.79% of GDP, above the EU average of 1.74%. Transport taxes, at 0.92% of GDP, were well above the EU average (0.42%), as were taxes on pollution and resources at 0.45% (the highest among all Member States, while the EU average is 0.08%). In the same year, the environmental tax came to 7.97% of total revenues from taxes and social security contributions (above the EU average of 5.57%).

<sup>190</sup> Climate Bonds Taxonomy - <https://www.climatebonds.net/standard/taxonomy>. USD value is converted via Eurostat’s annual average EUR/USD exchange rates.

<sup>191</sup> Interactive Data Platform at [www.climatebonds.net](http://www.climatebonds.net). Climate Bonds Taxonomy is similar to the EU Taxonomy.

<sup>192</sup> [Climate Bonds Initiative](https://www.climatebonds.net), 2022.

**Figure 45: Environmental taxes in the EU27, 2020**<sup>193</sup>



The 2019 European Green Deal underlines that well-designed tax reforms can boost economic growth and resilience, foster a fairer society and 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<sup>194</sup>. The Green Deal promotes the ‘polluter pays principle’ (PPP)<sup>195</sup> which stipulates that polluters should bear the cost of measures to prevent, control and remedy pollution. This principle is facilitated by the Commission’s Technical Support Instrument (TSI) project<sup>196</sup> on greening taxes. The Netherlands applies economic instruments such as water consumption charges and pay-as-you-throw schemes<sup>197</sup>.

### Environmentally-harmful subsidies

Addressing and removing environmentally-harmful subsidies is a further step towards wider fiscal reforms<sup>198</sup>. Fossil-fuel subsidies are costly for public budgets, and make it difficult to achieve the Green Deal objectives. In

<sup>193</sup> Eurostat, Environmental taxes accounts (env\_eta).

<sup>194</sup> [COM \(2019/640 final\)](https://eur-lex.europa.eu/eli/reg/2019/640/final), p.17.

<sup>195</sup> 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”.

<sup>196</sup> European Commission, [Greening taxes- applying polluter pays principle in practice, green budgeting TSI participation](https://ec.europa.eu/eip/eip-technical-support-instrument/).

<sup>197</sup> European Commission, [Green taxation and other economic instruments](https://ec.europa.eu/eip/eip-technical-support-instrument/), 2021.

<sup>198</sup> European Commission, [Study on assessing the environmental fiscal reform potential for the EU 28](https://ec.europa.eu/eip/eip-technical-support-instrument/), 2016.

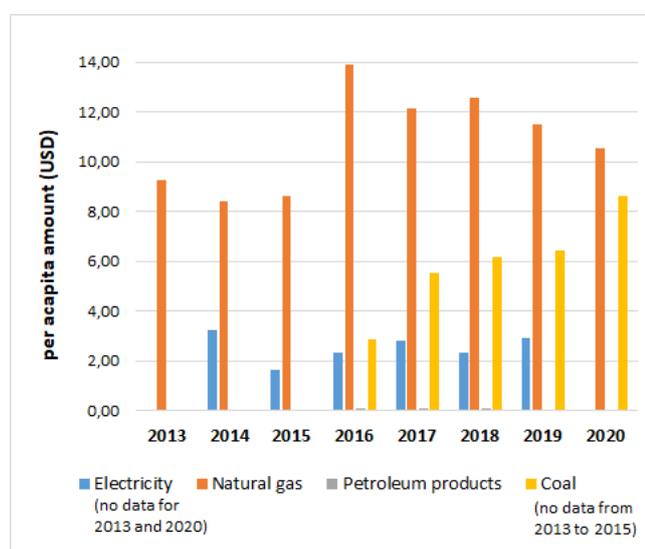
many cases, these subsidies also counteract incentives for green investments.

Annual fossil-fuel subsidies have been around EUR 55 billion in the EU since 2015. They rose by 4% between 2015 and 2019, although some countries (such as Latvia, Lithuania, Sweden, Greece and Ireland) managed to decrease them in this period.

In the EU, subsidies for petroleum products in sectors such as transport and agriculture continued to increase in 2015-2019. However, subsidies for coal and lignite decreased, due 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 (being an EU average of 0.4%). In the Netherlands, they amounted to EUR 0.8 billion in 2019, representing 0.09% of GDP (one-fourth of the EU average). In 2020, the EU27'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<sup>199</sup>.

**Figure 46: Trends in natural gas, petroleum products, electricity and coal subsidies<sup>200</sup>**



% GDP	2013	2014	2015	2016	2017	2018	2019	2020
Electricity	0.00	0.01	0.00	0.01	0.01	0.00	0.01	0.00
Natural gas	0.02	0.02	0.02	0.03	0.02	0.02	0.02	0.02
Petroleum	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coal	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.02

<sup>199</sup> State of the Energy Union report, [COM\(2021\) 950 and Annex](#)

<sup>200</sup> OECD, [Fossil Fuel Subsidy Tracker](#).

## Green budgeting practices

Green budgeting encompasses various climate and environmental tagging and tracking practices in budgets. Some EU Member States already use green budgeting practices<sup>201</sup>. 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)<sup>202</sup>.

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<sup>203</sup>. It has also developed a green budgeting reference framework<sup>204</sup> and launched a technical support project (TSI) on green budgeting in 2021, to help Member States develop (or further develop) national green budgeting frameworks, to improve policy coherence and the green transition. The Netherlands did not participate in the Commission's green budgeting TSI, which started in 2021.

A green budgeting approach has been established in the Netherlands through the 2017 Climate Act, which requires the government to report on progress towards the goals in the climate law on an annual basis, including details of the budgetary impact of climate- and energy-related policies. The 2019 national climate agreement comprised a set of measures to reduce greenhouse gas emissions by 49% by 2030<sup>205</sup>. The governance framework for meeting these targets is described in the national climate act. The act also mandates the drafting of a national climate plan every 5 years and tasks the Environmental Assessment Agency with the role of "climate watchdog", i.e., to assess whether the government remains on track to reach its reduction targets. Within this, the Netherlands Bureau for Economic Policy Analysis (CPB) has the task of assessing the fiscal and possible macroeconomic impacts (through the income channel) of any climate policy measure. According to their assessment, the measures related to the climate agreement will increase public expenditure on climate and energy policy by EUR 3.9 billion (around

<sup>201</sup> European Commission, [Green Budgeting Practices in the EU: A First Review](#), 2021, [Green Budgeting in the EU Key insights from the 2021 Commission survey](#) and OECD, Public Governance Directorate, Climate Change and Long-term Fiscal Sustainability, Working Paper, February 2021. [Climate Change and Long-term Fiscal Sustainability \(oecd.org\)](#)

<sup>202</sup> OECD Paris Collaborative on Green Budgeting initiative, 2017.

<sup>203</sup> European Commission, [Technical guidance on sustainability proofing for the InvestEU Fund](#).

<sup>204</sup> European Commission, [European Commission Green Budgeting Reference Framework](#).

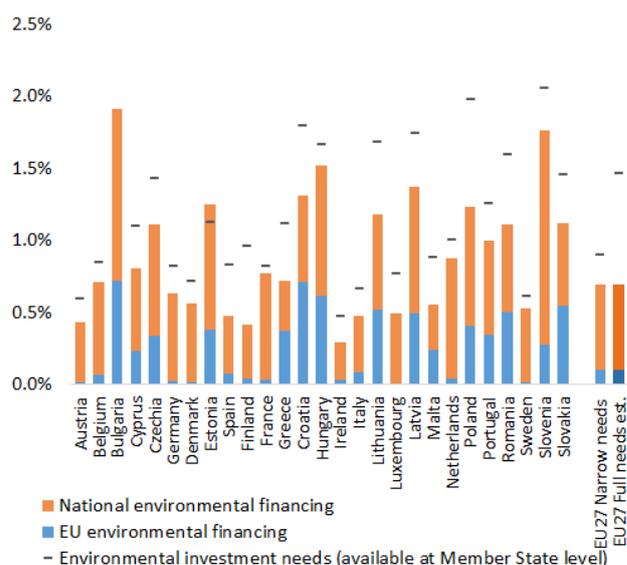
<sup>205</sup> Ministry of Economic Affairs and Climate (2019), [Integraal Nationaal Energie- en Klimaatplan 2021-2030 Nederland](#).

0.5% of current GDP) annually by 2030, whereas the tax burden will increase by around EUR 4.6 billion (also around 0.5% of GDP)<sup>206</sup>. Therefore, the Netherlands appears to currently be implementing good practice in green budgeting, which is also in line with its green bond issuance<sup>207</sup>.

### Overall financing compared to the needs

The EU's overall financing for environmental investment is estimated to have been 0.6-0.7% of GDP in 2014-20 period, 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 0.9-1.5% of the projected total EU GDP(2021-2027), suggesting a potential environmental financing of 0.6-0.8% of GDP at EU level, compared to previous financing levels<sup>208</sup>.

**Figure 47: Total environmental financing baseline (2014-2020) and estimated needs (2020-2030) in the EU27 (% of GDP)<sup>209</sup>**



The Netherlands' environmental financing for investments came to 0.87% of GDP (EU average: 0.7%) in 2014-20, overwhelmingly (over 90%) relying on national sources. The country's environmental investment needs in 2021-2027 are estimated to reach over 1% of GDP (covering needs with country breakdowns available), suggesting a potential environmental financing gap of at least 0.13% of GDP, likely to be higher when also accounting for needs estimated currently at EU-level only (e.g. water protection, higher circularity, biodiversity strategy etc.).

### 2022 priority actions

In the 2019 EIR, the Netherlands had a priority action for environmental financing to tackle some of the main challenges affecting the country and ensure that the rural development programme and greening measures boost biodiversity and contribute to achieving favourable conservation status for habitats and species. However, there is room for improvement in the coming years:

- Devise 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, in particular further exploring private financing flows (currently around a fourth of the total), to cover the investment needs across the environmental objectives and closing the investment gaps.

<sup>206</sup> CPB Netherlands Bureau for Economic Policy Analysis (2019), Doorrekening Klimaattoord, CPB Netherlands Bureau for Economic Policy Analysis, The Hague.

<sup>207</sup> [https://ec.europa.eu/info/publications/green-budgeting-practices-eu-first-review\\_en](https://ec.europa.eu/info/publications/green-budgeting-practices-eu-first-review_en)

<sup>208</sup> Source: 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 capital expenditure (investment) on environmental protection - source: Eurostat EPEA dataset. Cut-off date for data: end 2021. N.B. The total financing may be higher, in particular through further indirect investment. If so, this would require further analysis in future.

<sup>209</sup> Eurostat, Environmental taxes accounts (env\_eta).

## 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<sup>210</sup>. 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 and administrative procedures to protect the environment<sup>211</sup>. It includes the right to bring legal challenges ("legal standing")<sup>212</sup>.

#### Environmental information

This section focuses on the Netherlands' implementation of the Infrastructure for Spatial Information in Europe (INSPIRE) Directive. This Directive aims to establish a European spatial data infrastructure for sharing environmental spatial information between public authorities across Europe, assisting in policymaking 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. Data identification and documentation have made good progress, and implementation levels are good. However, more efforts are needed to:

- (i. make the data more widely accessible, and

ii. prioritise environmental datasets in implementation, especially those identified as high-value spatial datasets for implementing environmental legislation<sup>213</sup>.

**Table 4: Country dashboard on the implementation of the INSPIRE Directive (2016-2020)<sup>214</sup>**

	2016	2020	Legend
<b>Effective coordination and data sharing</b>			<ul style="list-style-type: none"> <li>■ Implementation of this requirement is well advanced or (nearly) completed. Outstanding issues are minor and can be addressed easily. Percentage: &gt;89%</li> <li>■ Implementation of this requirement has started and made some or substantial progress but is still not close to be complete. Percentage: 31–89%</li> <li>■ Implementation of this requirement is falling significantly behind. Serious efforts are necessary to close implementation gap. Percentage: &lt;31%</li> </ul>
Ensure effective coordination	■	■	
Data sharing without obstacle	■	■	
<b>INSPIRE performance indicators</b>			
i. Conformity of metadata	■	■	
ii. Conformity of spatial data sets <sup>215</sup>	■	■	
iii. Accessibility of spatial data sets through view and download services	■	■	
iv. Conformity of network services	■	■	

The Netherlands received a priority action in 2019 on the need to improve access to spatial data and services. However, it is making stronger links to the country INSPIRE portals and better informing the public about their access to justice rights, notably in relation to air pollution and nature, where some progress can be seen. Therefore no priority action is proposed in 2022.

<sup>210</sup> 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 sharing environmental information between public authorities and with the public. This EIR focuses on the implementation of the INSPIRE Directive.

<sup>211</sup> These guarantees are explained in the Commission Notice on access to justice in environmental matters, OJL 275, 18.8.2017 and a related Citizen's Guide.

<sup>212</sup> This EIR report focuses on the means implemented by Member States to guarantee rights of (i) access to justice and (ii) to bring legal challenges ("legal standing") and to overcome other major barriers to bringing cases on nature and air pollution.

<sup>213</sup> European Commission, [European Commission, List of high value spatial data sets](#).

<sup>214</sup> INSPIRE, [knowledge base](#).

<sup>215</sup> The deadlines for implementing 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 most countries provide as-is-data sets in addition to the INSPIRE-aligned data sets.

## Public participation

Extensive information and electronic tools are available in the Netherlands to facilitate public participation in procedures for environmental impact assessment (EIA) and strategic environmental assessment (SEA). A Dutch government webpage collects all official notifications and publications regarding initiation of plans and projects to which EIA or SEA procedures apply<sup>216</sup>. In addition, the Ministry of Infrastructure and Water Management provides an online participation platform<sup>217</sup> and quick scan facility<sup>218</sup> for citizens and developers to determine whether an EIA procedure applies. Furthermore, public participation in EIA and SEA procedures is embedded in national environmental law, providing rules for participation in national, provincial and municipal planning procedures<sup>219</sup> including information obligations, obligatory public consultation and a duty to explain to what extent public feedback was considered.

A new 'Environment and Planning Act' is expected to enter into force in the Netherlands on 1 January 2023, consolidating various areas of environmental law to make decision making more effective and efficient and further improve public participation in environmental decision making<sup>220</sup>. An Environment Platform is being developed as part of the digital infrastructure to facilitate the entry into force of the new Environment Act and stimulate participation by citizens<sup>221</sup>. Some data on public participation in EIA and SEA procedures and the extent to which public views are considered is published, but only for procedures in which the Netherlands Commission for Environmental Assessments is specifically requested to take public views into account<sup>222</sup>.

## Access to justice

NGOs do not have to demonstrate an interest to have standing in an administrative environmental court case

<sup>216</sup> Officiële bekendmakingen.nl Government website containing all official publications

<sup>217</sup> Platform Participatie, available at: <https://www.platformparticipatie.nl/default.aspx>

<sup>218</sup> EIA-scan in the knowledge database of the Ministry of Infrastructure and Water

<sup>219</sup> Chapter 7 (SEA and EIA) and Chapter 4 of the Environmental Management Act.

<sup>220</sup> More information on the new Environment and Planning Act and its entry into force is available at the dedicated government website: <https://www.rijksoverheid.nl/onderwerpen/omgevingswet> and <https://iplo.nl/regelgeving/omgevingswet/english-environment-and-planning-act/>.

<sup>221</sup> More information on the Digital System for the Environment Act (DSO) and the Environment Platform (Omgevingsloket) is available on: <https://aandeslagmetdeomgevingswet.nl/ontwikkelaarsportaal/dso/dso/digitaal-stelsel/>

<sup>222</sup> Facts and figures from Annual Report NCEA.

or in cases which have significant effects on the environment, but they do have to meet some conditions regarding their legal status and operation. For citizens the requirement is to have a sufficient interest in the decision. In practice meeting that standard in environmental cases may be more demanding on citizens than on NGOs.

As regards impact assessment reports: the (EIA) environmental report itself can only be made subject to review together with the decision (such as on the application for a permit). If the EIA report is found to be flawed, the decision will be ruled to be flawed as well (because not substantiated by the EIA report) and will – typically – be annulled because of this (Article 3:46 GALA).

Under Dutch administrative law, only final decisions can be subject to legal review and appeal to the courts. Decisions are defined in Article 1:3 of the Dutch General Administrative Law Act (Algemene wet bestuursrecht). Administrative review and judicial review is not available against general binding rules or policy rules, only against the decisions based on them. Article 120 of the Dutch Constitution does not allow the judge to check the validity of laws adopted by Parliament against the Constitution ("The constitutionality of Acts of Parliament and treaties shall not be reviewed by the courts."). The judge is allowed, though, in a dispute over the (formal or material) legality of a decision, to raise arguments calling into question the legality of the legal basis on which the decision is based. So it is possible to check whether a decision is compatible with EU law, environmental law included. It is also possible for the national judge to check whether national law complies with binding international law. Where it does not, the judge can leave aside international law.

Plans and programmes (as defined in the SEA Directive) do not constitute a decision as per Article 1:3 of the General Administrative Law Act and cannot be challenged before an administrative supervisory forum or at court. Action based on civil law may be possible before the civil courts if an interest is proven based on the general rules.

There is easily accessible information on access to justice, including in the media and social media, maintained by the government, in different languages if the country is a multi-lingual one. Advice and legal aid is available online<sup>223</sup>. More specific information about Dutch environmental law and procedures, including information on access to justice, can be found on the website of the Knowledge Centre InfoMil<sup>224</sup>.

In 2019, there was a priority action addressed to the Netherlands on access to justice, in particular, to better

<sup>223</sup> [www.rechtwijzer.nl](http://www.rechtwijzer.nl) and [www.juridischloket.nl](http://www.juridischloket.nl) [www.juridischloket.nl](http://www.juridischloket.nl)

<sup>224</sup> [www.infomil.nl](http://www.infomil.nl)

inform the public about their rights on access to justice. It is concluded that there has been significant progress made.

### 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.
- Collect and publish data on public participation in EIA and SEA processes, including information on the extent to which final decisions are affected by public comments.
- Improve access to courts by the groups concerned, when it comes to challenging administrative or regulatory decisions, particularly in areas of planning related to water, nature and air quality.

### 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<sup>225</sup>. It includes support measures provided by the authorities such as:

(i) compliance promotion<sup>226</sup>;

(ii) inspections and other checks that they carry out, i.e. compliance monitoring<sup>227</sup>;

(iii) the steps that they take to stop breaches, impose penalties and require damage to be remedied, i.e. enforcement<sup>228</sup>.

Citizen science and complaints enable authorities to focus their efforts better. Environmental liability<sup>229</sup> ensures that the polluter pays to remedy any damage.

<sup>225</sup> 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.

<sup>226</sup> This EIR focuses on the help given to farmers to comply with nature and nitrates legislation.

<sup>227</sup> This EIR focuses on inspections of major industrial installations.

<sup>228</sup> This EIR focuses on the availability of enforcement data and co-ordination between authorities to tackle environmental crime.

<sup>229</sup> The Environmental Liability Directive, 2004/35, creates the framework.

### Compliance promotion and monitoring

Regarding the Nature Directives, various compliance promotion tools are in place in the Netherlands. Via the platform 'Bij12', information is provided for use by authorities, stakeholders, farmers and duty-holders alike on nature management, species protection rules and legislation regarding Natura 2000<sup>230</sup>. The Netherlands Enterprise Agency (RVO) promotes compliance through education, enforcement communication, project visits, administrative controls and provides information on its website for duty-holders<sup>231</sup>. In December 2020, the Dutch government announced a nature policy programme to stimulate sustainable nature management, improve conservation in protected areas such as Natura 2000 sites and increase nature inclusive agriculture to improve the restoration and development of nature in the Netherlands by 2030<sup>232</sup>.

Regarding the Nitrates Directive, detailed online information is available to duty holders via websites of the Dutch government<sup>233</sup> and the Dutch Enterprise Agency<sup>234</sup>, giving information on issues such as production and usage control, leakage prevention and sustainability projects.

As already indicated in the 2019 EIR, systematic and centralised inspection plans and inspection reports of industrial installations under the industrial emissions directive (IED) are missing in the Netherlands, although information on inspections of installations under the Seveso III Directive, including summaries of results, is published systematically<sup>235</sup>. Permitting, supervision and enforcement regarding installations under the IED is mandated to all 29 environmental services, some of which have started publishing enforcement decisions on their websites<sup>236</sup>. The Ministry of Infrastructure and Environment published a report on the performance of the environmental services in 2020, providing details such as number of installations under supervision, amount of employees and amount of administrative

<sup>230</sup> Bij12 [website](#)

<sup>231</sup> See for example RVO [website](#) on cross-compliance conditions; RVO POP3 Rural development programme, [website](#)

<sup>232</sup> [Publication](#) by the national government regarding the agreement on a 'Nature Programme' for nature restoration and development.

<sup>233</sup> See for example the Dutch government [website](#) on measures for manure use; and the Dutch government [website](#) on usage and distribution of manure.

<sup>234</sup> See for example the Dutch Enterprise Agency (RVO) [webpage](#) on fertilisation rules and policy in the Netherlands; Dutch Enterprise Agency (RVO), [website](#) on manure and related topics.

<sup>235</sup> BRZO+ overview and list of inspection results, available at: <https://brzoplus.nl/inspectie-resultaten/>

<sup>236</sup> See for example, Environmental Service North Sea Channel Area, [overview enforcement decisions](#) on website; DCMR Environmental Service Rijnmond, [overview of sanctions](#)

sanctions imposed<sup>237</sup>. Annual activity reports regarding activities and findings from supervisory authorities under Seveso III are published, but not regarding the IED. However, the annual reports by environmental services provide some additional information on environmental inspections required under the IED. An official report of 4 March 2021 ("OM DE LEEFOMGEVING Omgevingsdiensten als gangmaker voor het bestuur) raised concerns about the functioning of the regional inspection services (Omgevingsdiensten) and suggested action the Dutch government could take. Those actions are under preparation.

### Complaint handling and citizen science

As set out in the 2019 EIR, clear online information on how to submit complaints regarding environmental problems is available in the Netherlands on websites and environmental hotlines run by provinces<sup>238</sup> and regional environmental services<sup>239</sup>, aided by NGOs that direct citizens to the right platforms<sup>240</sup>. Information from public complaints is collected through the online citizen's complaints platforms of the competent authorities (provinces and environmental services) and used to initiate investigations into infringements of environmental legislation where relevant. The people making the complaints are informed about the follow-up to it.

The Netherlands participates in EU-Citizen.Science, a Horizon 2020-funded project with a number of sub-projects in the Netherlands, including the use of citizen science to measure water quality<sup>241</sup>, citizen observatories on environmental indicators in urban and rural areas<sup>242</sup> and the use of citizen's environmental monitoring to investigate the effect of climate change on nature<sup>243</sup>. Moreover, citizen science plays a role in data collection on biodiversity. The National Flora and Fauna Database<sup>244</sup>, the Dutch online species atlas, makes use of

species observations submitted by citizens through Waarneming.nl<sup>245</sup>, which works together with a large biodiversity museum in the Netherlands in using automatic recognition software. This has drastically increased the number of submitted observations<sup>246</sup>.

### Enforcement

There is no centralised online publication of statistics on non-compliance with environmental legislation, but most environmental services publish decisions on their websites covering environmental infringements for which penalties have been applied<sup>247</sup>. Every four years, a National Threat Assessment on Environmental Crime is carried out by the Strategic Environmental Chamber, which involves all parties involved in enforcement of environmental legislation in the Netherlands, both administrative and criminal enforcement services as well as specialised inspectorates. The most recent National Threat Assessment dates from 2021 and provides an overview of the main trends in nine major forms of environmental crime in the Netherlands and analyses their impact on nature and public health<sup>248</sup>. Moreover, some regional environmental services publish online information on sanctioning decisions related to environmental law infringements.

Cooperation between administrative enforcement and criminal enforcement regarding environmental crime remains a challenge. Despite existing formal cooperation structures and information exchange agreements, however concrete action has been taken since 2019 to enhance cooperation between enforcement authorities. Further to reports by the Dutch Justice and Infrastructure ministries<sup>249</sup> and the Dutch Court of Auditors<sup>250</sup> regarding enforcement challenges in the area of environmental crime, a policy programme was enacted, the Dutch

<sup>237</sup> Available at: <https://www.rijksoverheid.nl/documenten/kamerstukken/2021/09/17/voortgang-opvolging-rapport-adviescommissie-vth-aanbieding-rapporten-kwantitatief-en-juridisch-onderzoek>

<sup>238</sup> See for example, the environmental complaints webpages of the Province of [South-Holland](#), [Overijssel](#), [Limburg](#), and [Zeeland](#).

<sup>239</sup> See, for example: the environmental service of Middle-Holland, providing information on its enforcement power and complaints via its [FAQ](#) the environmental service covering 15 municipalities in South-Holland and Zeeland, with a [webpage](#) containing a central complaints service and providing information on which complaints to file where, and the environmental service covering the North Sea Channel area, including the greater Amsterdam area, which also has a [complaints facility](#) specifically dedicated to one particular installation (Tata Steel).

<sup>240</sup> For example, [Milieuklachten.nl](#)

<sup>241</sup> See EU-citizen.science [webpage](#) on the EyeOnWater project.

<sup>242</sup> See EU-citizen.science [webpage](#) on the Ground Truth 2.0 project.

<sup>243</sup> See EU-citizen.science [webpage](#) on the GrowApp project.

<sup>244</sup> [website](#) of National Flora and Fauna Database.

<sup>245</sup> Website of [Waarneming.nl](#)

<sup>246</sup> See the [webpage of Naturalis](#) on its cooperation with Waarneming.nl

<sup>247</sup> See for example, Environmental Service North Sea Channel Area, [overview enforcement decisions](#) on website; DCMR Environmental Service Rijnmond, [overview of sanctions](#)

<sup>248</sup> Openbaar Ministerie, Omgevingsdienst NL, ILT, NVWA, Politie, 'Dreigingsbeeld Milieucriminaliteit 2021', 2021, available at <https://www.om.nl/onderwerpen/milieucriminaliteit/dreigingsbeeld-milieucriminaliteit>; See also the [summary](#) and [factsheet](#) on regarding the publication 'Image of Threats from Environmental Crime' (*Dreigingsbeeld Milieucriminaliteit 2021*).

<sup>249</sup> [Een onzichtbaar probleem | Rapport | Algemene Rekenkamer](#); Dutch Court of Auditors, 'Handhaven in het duister, de aanpak van milieucriminaliteit en overtredingen', deel 2, Algemene Rekenkamer, juni 2021, available at: [Handhaven in het duister | Rapport | Algemene Rekenkamer](#)

<sup>250</sup> <https://www.rekenkamer.nl/publicaties/rapporten/2021/01/20/een-onzichtbaar-probleem>; Dutch Court of Auditors, 'Handhaven in het duister, de aanpak van milieucriminaliteit en overtredingen', deel 2, Algemene Rekenkamer, juni 2021, available at: <https://www.rekenkamer.nl/publicaties/rapporten/2021/06/30/handhaven-in-het-duister>

government started an 'Action plan on environmental crime' with the aim to create a more effective and interconnected system of enforcement of environmental legislation in the Netherlands<sup>251</sup>. Further policy measures to improve resources, division of tasks, capacity, level of expertise and information exchange of enforcement authorities involved in the fight against environmental crime in the Netherlands, are being prepared by the Ministry of Infrastructure and Water Affairs<sup>252</sup>.

### Environmental Liability Directive (ELD)

Infomil registers notifications by competent authorities of cases of environmental damage that fall under the Environmental Liability Directive (ELD). However, it is not clear whether Infomil keeps a register of cases or only provides for a form to be used by competent authorities to notify the Ministry of any ELD cases. There is no publicly available register or central database of environmental incidents or ELD cases. The Dutch National Institute for Public Health publishes certain incidents with hazardous substances in which the Environmental Accident Service was involved for risk assessment purposes<sup>253</sup>, however these cases are not necessarily ELD cases. There is a notification obligation on competent authorities and operators regarding cases of environmental damage or cases of imminent threat of environmental damage that fall under the Environmental Management Act which transposes ELD<sup>254</sup> which is registered by Infomil but there is no publicly available database where environmental incidents or ELD cases are collected. The Netherlands does not have a system of mandatory financial security for liability under the ELD<sup>255</sup>. However, the introduction of mandatory financial security is currently under consideration, as a result of various incidents in which parties causing environmental damage could not provide sufficient recourse. A legislative proposal to make the provision of financial security by certain high risk companies obligatory is currently pending for advice by the Council of State<sup>256</sup>.

<sup>251</sup> Ministry of Infrastructure and Environment, 'Rather a good neighbour – a stronger permitting, supervision and enforcement strategy and a more effective approach to infringements' (Dutch), November 2020, available at: <https://www.rijksoverheid.nl/documenten/rapporten/2020/12/03/bijlage-1-liever-een-goede-buur-een-sterkere-vth-uitvoering-en-effectievere-aanpak-van-overtredingen>

<sup>252</sup> Information obtained from the Ministry of Infrastructure and Water Management during consultations with national authorities for this report.

<sup>253</sup> RIVM [webpage](#) with an overview of recent environmental incidents.

<sup>254</sup> Pursuant to Article 17.18 of the Environmental Management Act.

<sup>255</sup> Regarding Seveso companies a decree provides provinces with the competence to include financial security as a permit condition (entry into force on 1 January 2023).

<sup>256</sup> Ministerie van Infrastructuur en Waterstaat, Beslisnota 'Wijziging omgevingsbesluit i.v.m. verplicht stellen financiële zekerheid', 2 July

The obligation would apply to (i) companies to which the Major Hazards Decree (implementing the EU Directive 2012/18/EU) applies, (ii) companies under Annex I, category 4 of the Industrial Emissions Directive (chemical industry) and (iii) waste processing companies.

### 2022 priority actions

- Publish inspection plans, inspection reports and annual activity reports/statistics linked to environmental inspections of industrial installations under the industrial emissions Directive, in the same manner as is done for installations falling under Seveso III.
- Improve cooperation between enforcing authorities on environmental crime, for example by improving information exchange, resources, level of expertise and cooperation systems of administrative and criminal authorities involved.
- Set up a financial security system for environmental liability to meet the costs of environmental damage.

### 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.

### Administrative capacity and quality

Overall, during the last decade an improvement in the implementation of EU environmental law in the different sectors can be observed. In general, the Netherlands take early and effective measures to deal with potential breaches of EU environmental law. The Dutch authorities approach is to discuss with the Commission as soon as they become aware of an issue, hence the relatively low number of infringements in this sector. For instance, the implementation of the environmental impact assessment Directive (EIA) is expected to improve with the Dutch Act (Omgevingswet) expected to enter into force on 1 January 2023.

2021, IENW/BSK-2021/193316 and [online consultation](#) launched on 24 November 2020 regarding the proposal; see [Overheid.nl](#) for tracking of progress of the legislative procedure with regard to the proposal.

### Coordination and integration

The Commission encourages the streamlining of the environmental assessments, to reduce duplication and avoid overlaps in environmental assessments applicable to projects. Moreover, streamlining helps reduce unnecessary administrative burdens and accelerates decision making, provided it is done without compromising the quality of the environmental assessment procedure<sup>257</sup>. The Netherlands has introduced the streamlining of environmental assessments under the EIA and Habitats Directives before the revision of the EIA Directive. It reports annually to the Parliament on the progress made as regards the sustainable development goals (SDGs). Coordinated procedures have been established for EIA, water framework Directive and Industrial emissions Directive.

What can be highlighted as a good practice is the Single Environmental Permitting Platform, which has been developed to operationalise the Single Environmental Permitting Regime. This regime simplifies, aligns and coordinates many environmental permits.

### Reforms through the Commission's technical support instrument (TSI)

The Commission supports environmental implementation and the green transition, not only through the EU financing programs, but also granting technical assistance such as the Technical Support Instrument (TSI).

The Commission's TSI supported two environment-related projects in the Netherlands under the TSI 2020: one related to the capacity building of municipalities to support faster implementation of car sharing and the other on the implementation of an integrated management plan and socio economic data model. In 2021, two other projects were selected: "Use of precaution in the energy transition and extending the knowledge base for risk regulation of new hydrogen applications" and "Citizens participation and green solutions in smart cities". Under the TSI 2022, two new requests were considered: one to develop clean, smart and fair urban mobility and one related to the digitisation of the East Atlantic Flyway for birds in the Wadden Sea (together with Germany and Denmark).

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<sup>257</sup> The Commission issued a guidance document in 2016 about setting up 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.

### TAIEX EIR peer-to-peer projects

The TAIEX EIR peer-to-peer tool<sup>258</sup> has been launched by the Commission to facilitate peer-to-peer learning between environmental authorities.

During the reporting period, the Netherlands has taken actively part in many TAIEX EIR peer-to-peer events on various topics, including sustainable urban development (2019), green public procurement (2020), maintaining and enhancing ecosystem services in urban regions (2019), ammonia reducing technology and measures (2021), zero pollution for air, water and soil (2022), etc.

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<sup>258</sup> [http://ec.europa.eu/environment/eir/p2p/index\\_en.htm](http://ec.europa.eu/environment/eir/p2p/index_en.htm)