Environmental Protection Agency
An Ghníomhaireacht um Chaomhnú Comhshaoil

Ireland's Air Pollutant Emissions: Trends and Outlook

April 2026

The EPA is responsible for protecting and improving the environment as a valuable asset for the people of Ireland. We are committed to protecting people and the environment from the harmful effects of radiation and pollution.

The work of the EPA can be divided into three main areas:

- **Regulation:** Implementing regulation and environmental compliance systems to deliver good environmental outcomes and target those who don't comply.
- **Knowledge:** Providing high-quality, targeted and timely environmental data, information and assessment to inform decision making.
- **Advocacy:** Working with others to advocate for a clean, productive and well-protected environment and for sustainable environmental practices.

Our responsibilities include:

LICENSING

- Large-scale industrial waste and petrol storage activities;
- Urban wastewater discharges;
- The contained use and controlled release of genetically modified organisms;
- Sources of ionising radiation;
- Greenhouse gas emissions from industry and aviation through the EU Emissions Trading Scheme.

NATIONAL ENVIRONMENTAL ENFORCEMENT

- Audit and inspection of EPA-licensed facilities;
- Drive the implementation of best practice in regulated activities and facilities;
- Oversee local authority responsibilities for environmental protection;
- Regulate the quality of public drinking water and enforce urban wastewater discharge authorisations;
- Assess and report on public and private drinking water quality;
- Coordinate a network of public service organisations to support action against environmental crime;
- Prosecute those who flout environmental law and damage the environment.

WASTE MANAGEMENT AND CHEMICALS IN THE ENVIRONMENT

- Implement and enforce waste regulations including national enforcement issues;
- Prepare and publish national waste statistics and the National Hazardous Waste Management Plan;
- Develop and implement the National Waste Prevention Programme;
- Implement and report on legislation on the control of chemicals in the environment.

WATER MANAGEMENT

- Engage with national and regional governance and operational structures to implement the Water Framework Directive;
- Monitor, assess and report on the quality of rivers, lakes, transitional and coastal waters, bathing waters and groundwaters, and measurement of water levels and river flows.

CLIMATE SCIENCE AND CLIMATE CHANGE

- Publish Ireland's greenhouse gas emission inventories and projections;
- Provide the Secretariat to the Climate Change Advisory Council and support to the National Dialogue on Climate Action;
- Support National, EU and UN climate science and policy development activities.

ENVIRONMENTAL MONITORING & ASSESSMENT

- Design and implement national environmental monitoring systems: technology, data management, analysis and forecasting;
- Produce the State of Ireland's Environment and Indicator Reports;
- Monitor air quality and implement the EU Clean Air for Europe Directive, the Convention on Long Range Transboundary Air Pollution and the National Emissions Ceiling Directive;
- Oversee the implementation of the Environmental Noise Directive;
- Assess the impact of proposed plans and programmes on the Irish environment.

ENVIRONMENTAL RESEARCH AND DEVELOPMENT

- Coordinate and fund national environmental research activity to identify pressures, inform policy and provide solutions;
- Collaborate with national and EU environmental research activity.

RADIOLOGICAL PROTECTION

- Monitoring radiation levels and assess public exposure to ionising radiation and electromagnetic fields;
- Assist in developing national plans for emergencies arising from nuclear accidents;
- Monitor developments abroad relating to nuclear installations and radiological safety;
- Provide, or oversee the provision of, specialist radiation protection services.

GUIDANCE, AWARENESS RAISING, AND ACCESSIBLE INFORMATION

- Provide independent evidence-based reporting, advice and guidance to government, industry and the public on environmental and radiological protection topics;
- Promote the link between health and wellbeing, the economy and a clean environment;
- Promote environmental awareness including supporting behaviours for resource efficiency and climate transition;
- Promote radon testing in homes and workplaces and encourage remediation where necessary.

PARTNERSHIP AND NETWORKING

- Work with international and national agencies, regional and local authorities, non-governmental organisations, representative bodies and government departments to deliver environmental and radiological protection, research coordination and science-based decision making.

MANAGEMENT AND STRUCTURE OF THE EPA

The EPA is managed by a full-time Board, consisting of a Director General and five Directors. The work is carried out across five Offices:

- Office of Environmental Sustainability
- Office of Environmental Enforcement
- Office of Evidence and Assessment
- Office of Radiation Protection and Environmental Monitoring
- Office of Communications and Corporate Services

The EPA is assisted by advisory committees who meet regularly to discuss issues of concern and provide advice to the Board.

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ENVIRONMENTAL PROTECTION AGENCY

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Disclaimer

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Key Findings

Assessment	Ireland is compliant with current and future emission reduction commitments for four out of five key air pollutants: sulphur dioxide (SO_2), nitrogen oxides (NO_x), ammonia (NH_3), and fine particulate matter ($PM_{2.5}$), which are projected to meet the 2030 commitments under all scenarios. Consistent implementation of existing national policies and measures will ensure Ireland stays compliant.
	Since 1990, key pollutants associated with acid rain have reduced dramatically, with sulphur dioxide levels down 96%, and nitrogen oxide down by 67%. Pollutants that negatively impact human health such as particulate matter and non-methane volatile organic compounds, are also down by 67% and 32%, respectively.
	For the third year in succession (2022-2024) emissions of ammonia remain in compliance with the 2020-2029 emission reduction commitments, being 5% below the 2005 baseline compared to the 1% reduction target.
Causes	**Sulphur dioxide (SO_2)** down by 4.4%: due to reduced fossil fuel combustion in power stations. This reduction is also partly due to a 54.5% increase in electricity importation and an increase in the renewable share in electricity generation.
	Ammonia (NH_3) up by 0.5%: driven mainly by a 22% rise in emissions from nitrogen fertiliser. Reduction in dairy cattle and non-dairy cattle numbers, with resultant decreases in nitrogen excreted on pasture, did not offset increased emissions from other livestock, residential and commercial buildings, and road transport.
	Fine particulate matter ($PM_{2.5}$) down by 1.9%: due to a reduction in the combustion of fossil fuels in the lime and cement production sectors, food processing, beverages and tobacco industries and off-road vehicles and other machinery in the Agriculture, Forestry and Fishing sectors.
	Nitrogen oxide (NO_x) down by 1.3%: from the replacement of older peat and coal-fired plants with modern gas fired power plants, increased share of renewables, and greater electricity importation. Higher heating demand and increased application of fertiliser drove increases in emissions from Residential and Commercial buildings, and Agriculture sectors, respectively.
	Non-methane volatile organic compound (NMVOC) down by 1.0%: primarily driven by changes in the Agriculture sector, along with decreases in the Residential and Commercial sectors. Increases in fugitive and solvent emissions, transport, and some industrial activities partly offset the overall decline. The Food and Beverages industry remained a major source, though emissions fell in 2024.
Actions	The National Air Pollution Control Programme (NAPCP) and Clean Air Strategy set out measures to achieve 2030 targets, including actions with co-benefits for greenhouse gas mitigation. An updated NAPCP and Clean Air Strategy is in development.
	Achieving the 2030 NO_x commitment requires full implementation of NAPCP, Clean Air Strategy and Climate Action Plan measures, including accelerated transport electrification, modal shift, residential heat electrification and district heating deployment.
	Rising NMVOC emissions from spirit production require targeted mitigation and further research. Meeting post-2030 commitments is projected to become increasingly challenging.
	NH_3 compliance depends on sustained farm-level abatement, while $PM_{2.5}$ compliance is projected to continue, contingent on accelerated phase-out of solid fuels.

1. Introduction

This report provides details of emissions of air pollutants in Ireland from 1990 to 2024, and projected emissions of these pollutants for 2025 to 2030. The information used to compile this report is sourced from several Agencies and Government Departments, as well as from Annual Environmental Reports submitted by industry and waste management activities licensed by the EPA. The EPA has calculated emissions using the methodologies described in EU[1] and UN[2] reporting guidelines to comply with the annual reporting requirements of the Convention on Long Range Transboundary Air Pollution (CLRTAP) and the National Emission reduction Commitments Directive (NEC Directive).

The Revised Gothenburg Protocol to abate Acidification, Eutrophication and Ground-level Ozone was adopted in May 2012. The Gothenburg Protocol (Annex II) under the United Nations Economic Commission for Europe (UNECE, 2013[3]) established emission reduction commitments (ERCs) for 2020 and onwards for five pollutants: sulphur dioxide (SO_2), nitrogen oxides (NO_x), volatile organic compounds (VOCs), ammonia (NH_3) and particulate matter < 2.5 µm ($PM_{2.5}$). The amended protocol was ratified by Ireland in April 2023, and the Protocol entered into force in July 2023. The revised obligations under the Gothenburg Protocol apply from the 2024 data submission onwards. However, the EU has implemented its provisions via the NEC Directive (Directive (EU) 2016/2284)[4], setting out emission reduction commitments for these five air pollutants for 2020-2029. These more ambitious targets were agreed for 2030 to reduce the health impacts of air pollution by half compared with 2005.

The European Environment Agency[5] estimates there are approximately 1,700 premature deaths in Ireland every year due to poor air quality. The EPA, working with local authorities and other public bodies, has established 115 air monitoring stations and monitoring data from these stations are available in real time. The EPA's annual Air Quality in Ireland Report presents the key findings from these stations[6].

This report provides emission projections for these air pollutants to give an indication of the likelihood of compliance with future emission reduction commitments. A summary of emission trends in air pollutants for which there are no emission reduction commitments under Gothenburg Protocol and NEC Directive are also presented in section 4.

1 https://www.eea.europa.eu/publications/emep-eea-guidebook-2023

2 https://unece.org/DAM/env/documents/2013/air/eb/ece.eb.air.125_E_ODS.pdf

3 UNECE, 2013: 1999 Protocol to Abate Acidification, Eutrophication and Ground-level Ozone to the Convention on Long Range Transboundary Air Pollution, as amended on 4 May 2012. Available at: https://unece.org/sites/default/files/2021-10/ECE.EB_.AIR_.114_ENG.pdf (17-02-2025).

4 Transposed into Irish law via S.I. No. 232/2018

5 https://www.epa.ie/publications/research/air/research-390-nitrogensulfur-critical-loads-assessment-of-the-impacts-of-air-pollution-on-habitats.php

6 https://www.eea.europa.eu/publications/air-quality-in-europe-2022/health-impacts-of-air-pollution

2. National Emission Reduction Commitments

In line with the Gothenburg Protocol, the NEC Directive sets reduction commitment for Ireland for 2020-2029 and 2030, and are expressed as percentage reductions on 2005 emission levels. A full outline of the reporting obligations and submission deadlines are outlined in Article 8 and Annex I of Directive (EU) 2016/2284.

Pollutants	2020-2029	2030 and onwards
Sulphur Dioxide (SO_2)	-65%	-85%
Ammonia (NH_3)	-1%	-5%
Particulate Matter < 2.5 µm ($PM_{2.5}$)	-18%	-41%
Nitrogen Oxides (NO_x)	-49%	-69%
Non-Methane Volatile Organic Compounds (NMVOCs)	-25%	-32%

Additionally, emissions should follow a linear trajectory of reduction between the levels defined by the emission reduction commitments for 2020-2029 and 2030 for NECD.

2.1 Compliance with National Emission Reduction Commitments

The current emission reduction commitments to which Ireland must comply under Gothenburg Protocol and NEC Directive, are set out in Table 1 along with the latest emission estimates for 2024. Emission reduction commitments are based on percentage reductions compared to 2005 emission levels. As the reductions are relative to a base year (2005), the absolute value of allowed emissions will continue to vary as emission estimates are revised and updated.

The findings of the EPA's assessment of Ireland's air pollutant emissions for 2024 are set out in Table 1 and show that:

- Ireland complied with the SO_2, NO_x, NH_3 and $PM_{2.5}$ emission reduction commitments for 2024.
- Emissions of NH_3 decreased by 5% compared to the required 1% emission reduction commitment.
- Ireland did not comply with its emission reduction commitments for NMVOC for 2024; emissions reduced by only 11% compared to the required 25% emission reduction commitment.
- Ireland is allowed to utilise a prescribed flexibility under NEC Directive and Gothenburg Protocol in relation to NMVOC compliance. When this flexibility under NEC Directive is applied, adjusted NMVOC emissions show a 40% reduction compared to the required 25% emission reduction commitment. When the flexibility under the Gothenburg Protocol is applied, emissions are reduced by 35% and outperforming the required 25% reduction commitment.

Table 1. Actual emissions for 2005 and 2024 and Emission reduction commitments for 2020-2029 for NEC relevant pollutants for 2024 compared to 2005

Pollutant	Emissions (kt)	Emission (kt) (% reduction compared to 2005)	Emission reduction commitments (% reduction compared with 2005)	
	2005	2024	2020-2029	2030 and onwards
Total SO_2	73.99	7.05 (-90%)	25.90 (-65%)	11.10 (-85%)
Total NH_3	123.87	117.43 (-5%)	122.63 (-1%)	117.68 (-5%)
Total $PM_{2.5}$	18.86	9.49 (-50%)	15.47 (-18%)	11.13 (-41%)
Total NO_x *(NECD)**	137.90	58.56 (-58%)	70.33 (-49%)	42.75 (-69%)
Total NO_x *(Gothenburg Protocol)***	138.88	59.35 (-57%)	70.83 (-49%)	***
Total NMVOCs *(NECD)**	77.30	68.68 (-11%)	51.69 (-25%)	46.87 (-32%)
Total NMVOCs (*Gothenburg Protocol)*	120.38	109.97 (-9%)	58.43 (-25%)	***

Note: Data in red highlights where the 2020-2029 emission reduction commitments have not been complied with.

* Emissions of NO_x and NMVOCs from manure management and agricultural soils are not accounted for the purpose of compliance assessment under Article 4(3) of the NEC Directive.

** Emissions of NO_x from agricultural soils are not accounted for the purpose of compliance assessment under Gothenburg Protocol (Annex II, footnote (a) to Table 3)

*** Under the Gothenburg Protocol, emission reduction targets set for 2020 also apply to 2030 and onwards.

Sulphur Dioxide (SO_2)

Ireland's national emission reduction commitment for SO_2 under the NEC Directive is a 65% reduction on 2005 levels to be achieved for 2020-2029 and an 85% reduction to be achieved for 2030 (Table 1). Emissions have reduced by 90.5% in the period 2005-2024 and therefore Ireland remains in compliance with the emission reduction commitment for 2024.

Ammonia (NH_3)

Ireland's national emission reduction commitment for NH_3 for 2020-2029 and 2030 under the NEC Directive is a 1% and 5% reduction, respectively compared to a 2005 baseline level. This is equivalent to 122.6 kt in 2020 and 117.7 kt in 2030 compared to the 2005 baseline level of 123.9 kt NH_3 (Figure 3). Ireland was in compliance with NH_3 emissions from 2006-2015 but became non-compliant between 2016-2021 because of an increase in both cattle numbers and the use of nitrogen fertilisers. However, NH_3 is now in compliance across 2022, 2023 and 2024. Emissions in 2024 were 117.4 kt and have decreased by 5.2% in the period 2005-2024 which is below the prescribed linear reduction pathway between 2020-2029 and 2030 target years.

Particulate Matter ($PM_{2.5}$)

Ireland's national emission reduction commitment for $PM_{2.5}$ for 2020 under the NEC Directive was an 18% reduction compared to a 2005 baseline level. Emissions have decreased by 49.6% in the period 2005-2024 and, therefore, Ireland remains in compliance with the emission reduction commitment for 2020-2029 (Figure 6).

Nitrogen Oxides (NO_x)

Ireland's national emission reduction commitment for NOx for 2020-2029 under the NEC Directive was a 49% reduction compared to a 2005 baseline level. Article 4(3) of the NEC Directive states that emissions from NFR category 3B (manure management) and 3D (agricultural soils) are not accounted for the purpose of compliance assessment. On that basis emissions have reduced by 57.5% in the period 2005-2024 (Table 1). For reporting under the Gothenburg Protocol (Annex II, footnote (a) to Table 3), NO_x emissions from NFR category 3D (Fertilisers and soil) are excluded from the reduction commitment. Emissions in 2024 were 59.35 kt and have reduced by 57.3% in the period 2005-2024 which is below the emission reduction commitment. Therefore, Ireland is in compliance with its NO_x emission reduction commitment for 2020, 2021, 2022, 2023 and 2024 under both NEC Directive and Gothenburg Protocol.

Non-Methane Volatile Organic Compounds (NMVOCs)

Ireland's national emission reduction commitment for NMVOCs for 2020-2029 was a 25% reduction relative to the 2005 baseline. As per Article 4(3) of the NEC Directive, emissions from manure management (NFR category 3B) and agricultural soils (NFR category 3D) are excluded for the purpose of compliance targets. Taking this flexibility into account, emissions have reduced by 11.2% in the period 2005-2024 and Ireland is non-compliant with the emission reduction commitment target for 2020-2029 (Table 1).

Unlike the NEC directive, the amended Gothenburg Protocol does not allow such flexibility for NMVOC when determining compliance. However, the NEC Directive and Decision 2012/3 under the Gothenburg Protocol (UNECE, 2012) allows Member States to adjust national inventories when non-compliance results from improved scientific methods, including updated emission factors and newly recognised emission sources. These flexibility mechanisms apply to all five key pollutants and ensure countries are not penalised for methodological updates that were not foreseen in 2012.

For the ninth consecutive submission under the NEC Directive, Ireland applied these flexibilities to exclude emissions from Spirit Production (2H2), and under the Gothenburg Protocol for the first time emissions from Manure Management: Dairy Cattle (3B1a), Other Cattle (3B1b) and Spirit Production (2H2), as these represent newly identified NMVOC sources since commitments were set (Ireland ratified the Gothenburg Protocol on 17 April 2023 and entered into force in July 2023). Adjusted NMVOC totals (Table 2) show that, once these flexibilities are applied, Ireland is compliant with NMVOC reduction commitments for 2024 under both NEC Directive and Gothenburg Protocol. Further details are provided in Ireland's Informative Inventory Report 2025[7].

7 https://www.epa.ie/publications/monitoring--assessment/climate-change/air-emissions/irelands-unece-submissions-2026.php

Table 2. Adjusted emission estimates for NMVOCs

Pollutant	Emission (kt)		% reduction in 2024 compared to 2005
	2005	2024	
Total NMVOCs *(NECD)*	77.30	68.68	-11%
Total NMVOCs *(NECD) (excluded emission from 2H2)*			
Adjusted Total NMVOCs *(NECD) (excluded emission from 2H2)*	68.90	41.20	-40%
Total NMVOCs *(Gothenburg Protocol)*	120.38	109.97	-9%
Adjusted Total NMVOCs *(Gothenburg Protocol) (excluded emission from 2H2, 3B1a, 3B1b)*	77.9	50.52	-35%

Note: Data in red highlights non-compliance with an emission reduction commitment

2.2 Future emission reduction commitments

Ireland must implement significant mitigation measures to achieve compliance with emission reduction commitments out to 2030 as outlined in the National Air Pollution Control Programme (NAPCP) and the Clean Air Strategy[8]. Table 3 sets out the latest estimated values for the reduction commitments in 2030 along with projected emissions under two scenarios, *With Existing Measures* (WEM) and *With Additional Measures (WAM)*.

The WEM scenario assumes that no future policy actions are taken beyond those already implemented by the end of 2024, the latest inventory year.

The WAM scenario provides an alternative scenario which includes additional planned policies and measures beyond 2024. This scenario includes policies and measures from Ireland's Climate Action Plans (CAPs) that aim to achieve Ireland's decarbonisation goals, full implementation of AgClimatise[9] which is the roadmap for the agriculture sector towards climate neutrality, the latest Teagasc Marginal Abatement Cost Curve for NH_3 emissions from the agriculture sector[10], and the National Air Pollution Control Plan[11] submitted in 2024 to meet the 2030 emission reduction commitments as assigned by the NEC Directive.

Often similar measures exist in both scenarios, for example Low Emission Slurry Spreading or the uptake of electric vehicles. For both of these measures the WEM scenario represents a projected uptake of the technology that is consistent with actions already in place and committed to, whereas the WAM scenario reflects a higher level of ambition as expressed in Government plans. The Clean Air Strategy[12] includes many of the measures included in the WAM scenario.

8 https://assets.gov.ie/255392/efe212df-d9a7-4831-a887-bea2703e2c64.pdf

9 gov – Ag Climatise – A Roadmap towards Climate Neutrality (www.gov.ie) http://www.gov.ie/en/publication/07fbe-ag-climatise-a-roadmap-towards-climate-neutrality/

10 https://www.teagasc.ie/publications/2023/macc-2023.php

11 https://www.gov.ie/en/publication/23bdb-national-air-pollution-control-programme-napcp/

12 https://www.gov.ie/en/publication/927e0-clean-air-strategy/

As summarised in Table 3, compliance with the Emission Reduction Commitments for 2030 for SO_2, NO_x, NH_3 and $PM_{2.5}$ is projected based on the continued adoption of measures in the WEM scenario. Further reductions are then seen with adoption of planned polices and measures under the WAM scenario. For NMVOC emissions, compliance is not achieved in either scenario without the inclusion of an adjustment under the flexibility mechanisms available under the NEC Directive and Gothenburg Protocol.

Table 3. Actual emissions for 2024, projected emissions for 2025 and 2030 and reduction commitments for NEC Directive relevant pollutants

Pollutants	Emissions (kilotonnes)[1]			2020-2029 and 2030 Reduction Commitments	
	2024	2025	2030	2020-2029	2030
Total SO_2 *WEM*	7.05	6.78	6.67	**25.90**	**11.10**
Total SO_2 *WAM*	7.05	6.55	6.61	-65%	-85%
Total NH_3 *WEM*	117.43	115.98	113.83	**122.63**	**117.68**
Total NH_3 *WAM*	117.43	114.98	106.80	-1%	-5%
Total $PM_{2.5}$ *WEM*	9.50	9.40	9.30	**15.47**	**11.13**
Total $PM_{2.5}$ WAM	9.50	9.41	9.11	-18%	-41%
Under NECD					
Total NO_x *WEM*	58.56	45.31	36.99	**70.33**	**42.75**
Total NO_x *WAM*	58.56	45.46	36.52	-49%	-69%
Under Gothenburg Protocol					
Total NO_x *WEM*	59.35	46.12	37.79	**70.83**	[4]
Total NO_x *WAM*	59.35	46.03	35.23	-49%	
Under NECD					
Total NMVOC *WEM*	68.68	69.50	76.64	**57.98**	**52.56**
Total NMVOC *WAM*	68.68	69.50	76.14	-25%	-32%
Under NECD					
Adjusted NMVOC *WEM*[2]	41.21	40.98	42.25	**51.69**	**46.87**
Adjusted NMVOC *WAM*[2]	41.21	40.98	41.75	-25%	-32%
Under Gothenburg Protocol					
Total NMVOC *WEM*	109.97	110.21	116.57	**90.28**	[4]
Total NMVOC *WAM*	109.97	110.16	115.79	-25%	
Under Gothenburg Protocol					
Adjusted NMVOC *WEM*[3]	50.52	50.19	51.66	**58.43**	[4]
Adjusted NMVOC *WAM*[3]	50.52	50.15	50.87	-25%	

1 Data for 2024 are from the latest Inventory; 2025 and 2030 data are projected.

2 The adjusted NMVOC scenario additionally excludes source category 2H2 (spirit production) under NECD

3 The adjusted NMVOC scenario additionally excludes source category 2H2 (spirit production), 3B1a (Dairy cattle) and 3B1b (other cattle) under Gothenburg Protocol

4 Under the Gothenburg Protocol, emission reduction targets set for 2020 also apply to 2030 and onwards.

Ammonia emissions are forecasted to be compliant with the 2030 emission reduction commitments under both the WEM and WAM scenarios. Assumptions include continued growth in the use of low emission spreading techniques, decreased crude protein in the diet of dairy cows and pigs, slurry amendments, drying of poultry manure, and various fertiliser nitrogen measures (e.g. increased use of inhibited urea, fertiliser reduction target, and cap on use of urea). Last year's projections indicated compliance with the 2020-2029 ERC in 2025 which has been affirmed by the national inventory submission this year. It is also evident that under both the WEM and WAM scenarios, NH_3 emission reduction commitments can be met by the widespread adoption of the measures outlined at farm level.

Section 3 of this report provides further detail on current and historic trends of the five pollutants for which emission reduction commitments are in place for 2020-2029 and 2030. It also provides an assessment of projected future emissions in 2030 of these pollutants, focusing on the With Additional Measures scenario.

2.3 Other pollutants

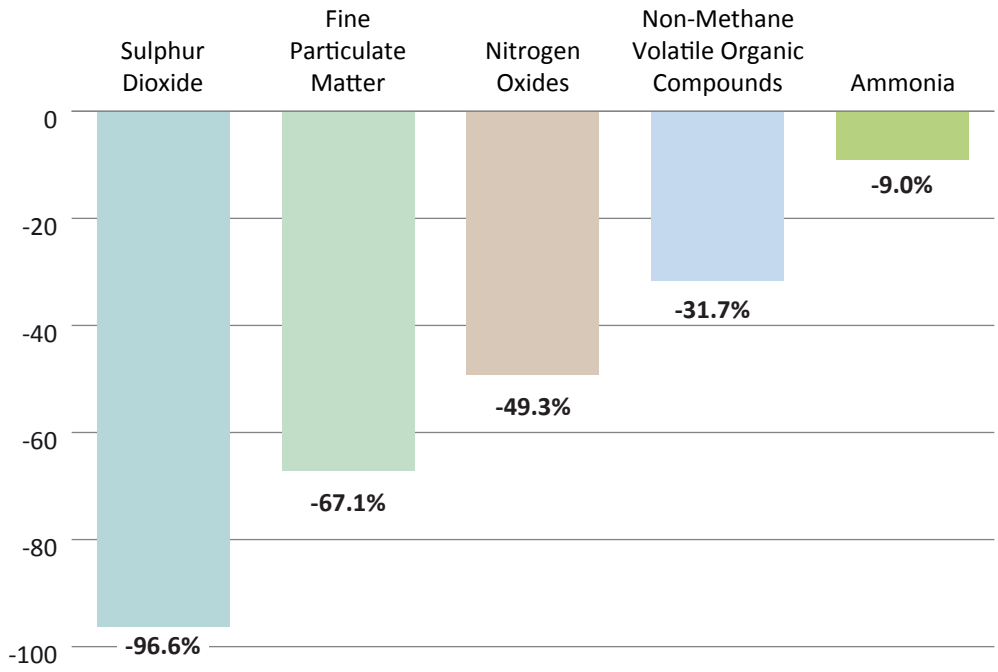
Data for a large number of other pollutants for which no emission reduction commitments exist under the NEC Directive are also reported annually by the EPA. The general trend with these pollutants is downward, largely as a result of fuel switching from coal and peat to natural gas and kerosene in the residential sector, penetration of renewables for electricity generation and reductions in the quantities of coal and peat combusted for electricity generation. Changes in the age structure of the national vehicle fleet have also had a positive impact. Further detail on these pollutants is presented in Section 4 and detailed information on these pollutants is also provided in Ireland's Informative Inventory Report 2026[13].

13 https://www.epa.ie/publications/monitoring--assessment/climate-change/air-emissions/irelands-unece-submissions-2026.php

3. Key Air Pollutants

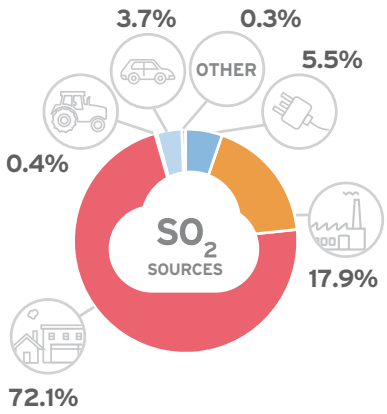
Ireland has seen large reductions in the emissions of all but one of these pollutants over the last thirty years (Figure 1). Despite this progress, challenges still remain in the face of increasing economic activity, particularly in relation to emissions from Transport, Agriculture and combustion of fossil fuels in industry.

Figure 1: Percentage change in key NECD Air Pollutants 1990-2024



3.1 Sulphur Dioxide

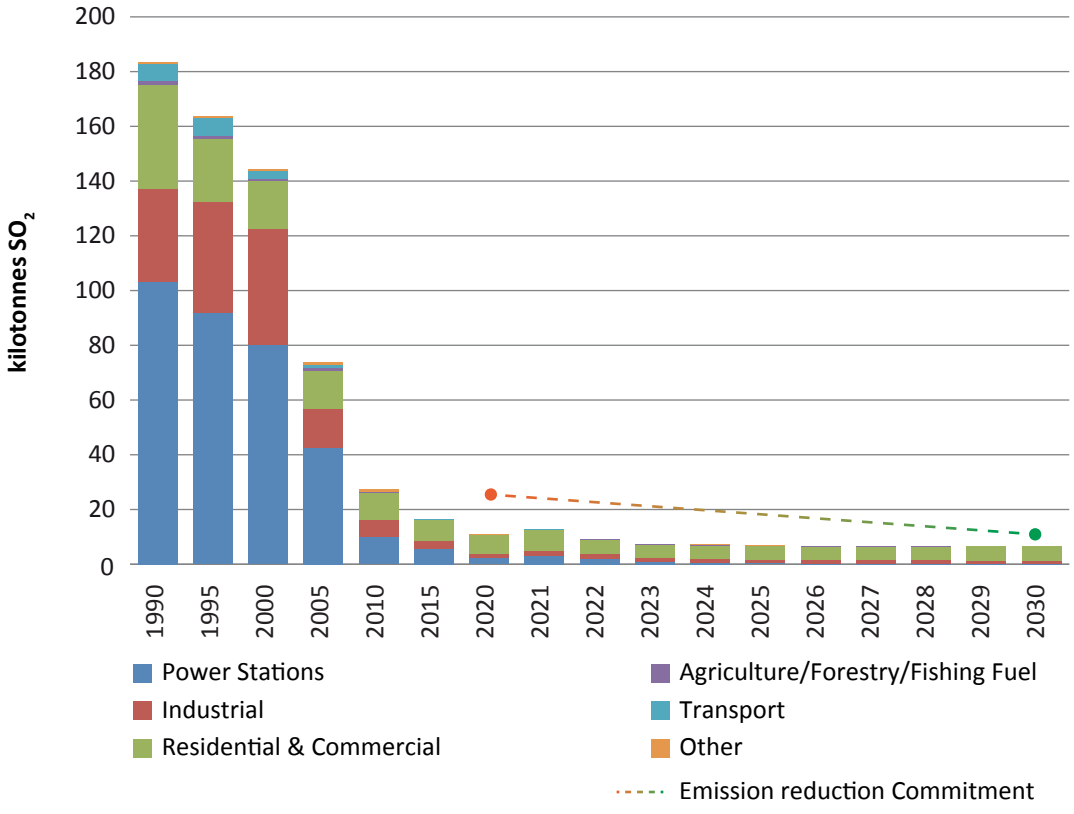
Sulphur dioxide (SO_2) is the major precursor to acid deposition, which is associated with the acidification of soils and surface waters and the accelerated corrosion of buildings and monuments. Emissions of SO_2 are derived from the sulphur in fossil fuels such as coal and oil used in combustion activities.



Current and future trends in SO_2 emissions

Total national emissions of SO_2 were 4.4% lower in 2024 compared to 2023, supported by a 54.5% increase in electricity imports and a higher share of renewable electricity generation. Emissions from fossil fuel combustion in the Residential and Commercial Heating sectors remained the largest source of SO_2 in 2024, accounting for 72.1% of the national total. Although emissions from these sectors have fallen by 86.7% since 1990, they increased by 3.6% between 2023 and 2024. Within the Residetial and Commercial sector, peat consumption declined by 8.1%, while the use of other fossil fuels rose, most notably a 31.6% increase in oil consumption. These changes were driven largely by 6.3% more heating degree days in 2024 compared with 2023, resulting in higher overall energy demand.

Figure 2: Trend in SO_2 emissions 1990-2030 (WAM) and emission reduction commitments 2020-2030



Emissions from non-metallic minerals (lime and cement) production decreased by 65.2%, leading to an overall 5.5% reduction in industrial emissions in 2024. Emissions from Power Stations accounted for 5.5% of the national total in 2024, which was 49.4% lower compared to 2023. This reflects the reductions in emissions from coal (35.5%), biomass and renewable waste (77.4%), and the complete elimination of emissions from peat in 2024.

Emissions from the Transport sector accounted for 3.7% of the national total in 2024 and decreased by 0.04% compared to 2023. The remaining emissions originated from combustion in oil refining and fuel use in the Agriculture, Forestry and Fishing sector, together accounting for 0.4% of the national total. Emissions from the Other sectors (including petroleum refining and waste) decreased by 67.4% in 2024.

In terms of the outlook for 2030, the emission projections indicate compliance with the 2030 emission reduction commitment which requires an 85% reduction on 2005 levels. It is projected that in 2030 emissions will be 90.5% below those in 2005. Key sources of SO_2 emissions in the projections include emissions from fuel combustion within the residential, commercial and manufacturing industry and construction sectors. Projected emission reductions are provided in Table 4.

Table 4. Projected SO_2 emission reduction in 2025 and 2030 compared to 2005

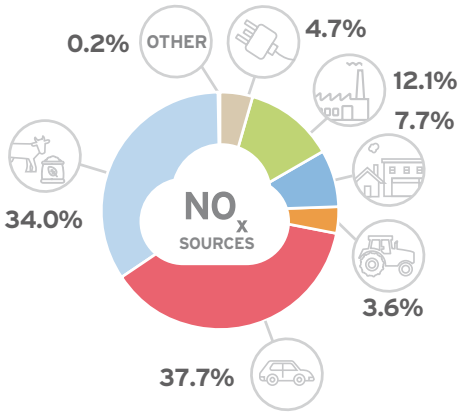
Projected SO_2 emissions	2025	2030
Emission Reduction Commitment (%)	-65.0	-85.0
With Additional Measures Scenario (%)	-90.1	-91.1

Historic SO_2 Emissions

Sulphur dioxide emissions in Ireland reduced considerably between 1990 and 2024. The latest estimates indicate a decrease of 96.2% from 183.35 kt in 1990 to 7.05 kt in 2024. Emissions from Power Stations and combustion in Residential and Commercial sectors decreased by 99.6% and 86.7% respectively, since 1990. Emissions from industrial sources decreased by 96.3% from 1990 while emissions in the Transport sector decreased by 95.8%. Emissions from transport have decreased due to reduced sulphur content of fuels. The remainder of SO_2 emissions are from combustion in oil refining, and combustion of fuels in Agriculture, Forestry, Fishing, and Other sectors (petroleum refining, waste, etc.). Emissions in these sectors decreased by 97.9% and 96.1%, respectively since 1990.

3.2 Nitrogen Oxides

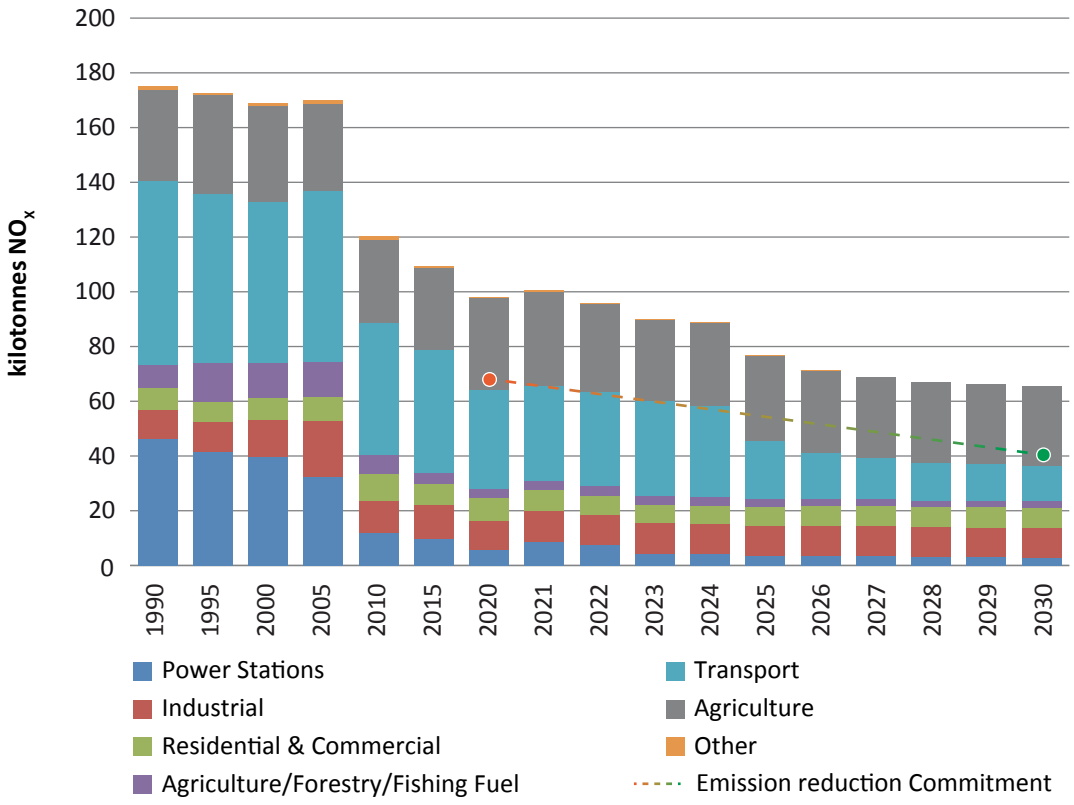
Emissions of nitrogen oxides (NO_x) contribute to acidification of soils and surface waters, ground level ozone formation and excess nitrogen or saturation in terrestrial ecosystems. Transport, agriculture (as a result of both organic and synthetic nitrogen use) and fossil fuel combustion in power generation are the principal sources.



Current and future trends in NO_x emissions

The latest estimate is that in total 88.75 kt of NO_x was emitted in 2024, including emissions from manure management and agricultural soils. Emissions of NO_x decreased by 1.3% in 2024 compared to 2023. NO_x emissions from public electricity and heat production decreased by 3.6% in 2024 compared with 2023.

Figure 3: Trend in NO_x emissions 1990-2030 (WAM) and emission reduction commitments 2020-2030



This reduction reflects a 57% fall in coal use and the complete elimination of peat in the public electricity and heat production. Emissions from oil and biomass with renewable waste increased by 165% and 19.6%, respectively, but overall emissions still declined due to the shift toward modern, efficient gas-fired power plants, increased renewable electricity generation, and a 54.5% increase in electricity imports. The Transport sector remained the largest source of NO_x emissions in 2024, contributing 37.7% of the national total, mainly from road transport. While improvements in vehicle technologies have reduced emissions by 27.72 kt (45.3%) between 2008 and 2024, these gains have been partially offset by increases in vehicle numbers and fuel use.

The Agriculture sector was the second largest source, accounting for 34.0% of national emissions. Emissions increased by 2.3% between 2023 and 2024, driven by a 17.7% rise in emissions from sewage sludge applied to soils and a 10.6% increase in nitrogen fertiliser use. The Industrial, Residential and Commercial, and Power Generation sectors contributed 12.1%, 7.7%, and 4.7% of total emissions, respectively. Emissions decreased by 4.9% in the Industrial sector and by 3.6% in power generation, while emissions from the Residential and Commercial sector increased by 6.3%, largely due to higher heating demand and increased fossil fuel use. Emissions from the Agriculture/Forestry/Fishing Combustion sector decreased by 3.7%, while the Other category (refining and storage, solid fuel manufacture, fugitive emissions and waste) recorded a substantial 45.1% reduction. Together, these smaller sectors accounted for 3.8% of total NO_x emissions in 2024.

The NO_x figures reported here are based on fuel used, not fuel sold, and therefore account for fuel tourism. This removes emissions associated with fuel purchased in Ireland but consumed in Northern Ireland as allowed for under the *Guidelines for Reporting Emissions and Projections Data under the Convention on Long-range Transboundary Air Pollution*[14], paragraph 23. Fuel tourism accounted for 0.43 kt of NO_x in 2024, a 72.0% reduction compared with 2023.

Total NO_x emissions in 2020-2024 and projections for all subsequent years through 2030 are compliant with emission-reduction commitments under both the WEM and WAM scenarios for the Gothenburg Protocol and NEC Directive (Table 5).

Table 5. Projected NO_x emission reduction in 2025 and 2030 compared to 2005

Projected NO_x emissions	2025	2030
Emission Reduction Commitment (%)	-49.0	-69.0
With Additional Measures Scenario (%) (NECD)	-67.0	-73.5
With Additional Measures Scenario (%) (Gothenburg Protocol)	-66.9	*

* Under the Gothenburg Protocol, emission reduction targets set for 2020 also apply to 2030 and onwards.

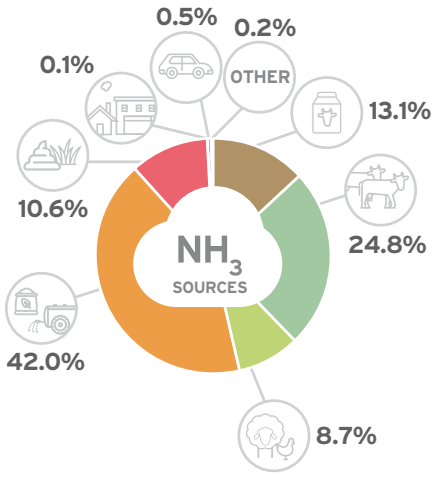
Historic NO_x Emissions

NO_x emissions in Ireland have decreased by 49.3% between 1990 and 2024. Emissions decreased due to reductions in combustion of fossil fuels for electricity generation, the ongoing move away from fossil fuel use in the Residential sector, and improved manure management and reductions in nitrogen fertiliser use in the Agricultural sector. This reduction was also achieved due to improved abatement in Moneypoint power plant. Emissions from the coal-fired power plant at Moneypoint have decreased by 96.6% between 2007 and 2024. The application of low-NO_x burner technology and increased natural gas use have reduced NO_x emissions from electricity generation by 91.1% since 1990, despite electricity final consumption increasing by 175.5% over the same period.

14 Paragraph 23, https://unece.org/DAM/env/documents/2013/air/eb/ece.eb.air.125_E_ODS.pdf

3.3 Ammonia

Ammonia (NH_3) emissions to air are associated with nitrogen deposition, acid rain and the formation of secondary particulate matter. The Agriculture sector accounts for virtually all (99.2%) of ammonia emissions in Ireland. Grasslands ultimately receive the bulk of the 39.68 million tonnes (Mt) of animal manures (equivalent to 500,805 tonnes of nitrogen) produced in Ireland along with nitrogen fertilisers which amounted to 310,413 tonnes (as nutrient nitrogen) in 2024. A proportion of the nitrogen in these inputs is volatilised into the air as ammonia.

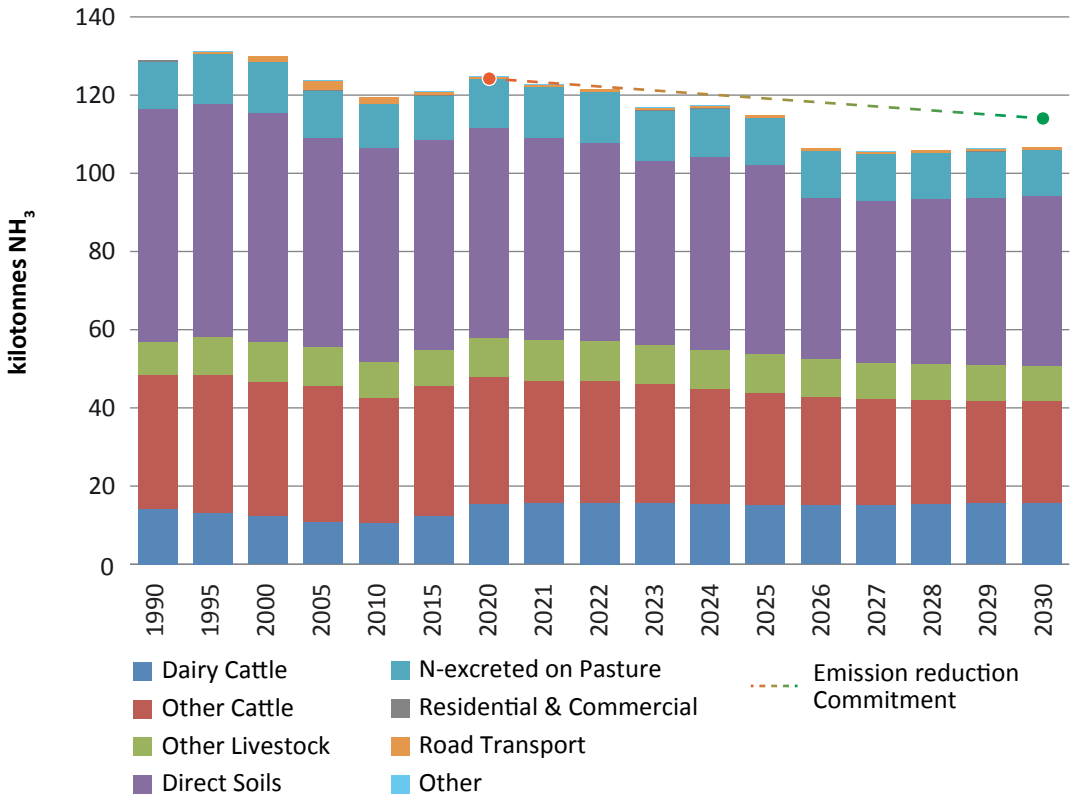


Current and future trends in NH_3 emissions

Ammonia emissions were 0.5% higher in 2024 than in 2023. This increase was largely driven by a 22.0% rise in emissions from nitrogen fertiliser (10.6% increase in use), which accounted for 16.0% of total national NH_3 emissions. Emissions from dairy cattle (13.1% national share) and other cattle (24.8% national share) decreased by 1.4% and 3.5% respectively, reflecting a 1.7% reduction in dairy cow numbers and a 2.5% reduction in other cattle numbers.

The use of low-emission slurry spreading techniques continued to expand. In 2024, 70.0% of cattle slurry was applied using these techniques, up from 64.1% in 2023. Road transport remained a minor source of ammonia emissions (<1%), mainly from petrol passenger cars with three-way catalysts, and emissions from this sector increased by 5.9% in 2024.

Figure 4: Trend in NH_3 emissions 1990-2030 (WAM) and emission reduction commitments 2020-2030



Limiting and reducing NH_3 emissions remains challenging given the strong growth of the Agriculture sector under Food Wise 2025 and the further ambitions of the Food Vision 2030 Strategy. However, the Teagasc NH_3 MACC[12], the DAFM AgClimatise[11] documents and the revised National Air Pollution Control Programme outline the measures that must be implemented in full to meet the more stringent target of a 5% reduction (relative to the 2005 baseline) by 2030.

Achievement of the 2030 Emission reduction Commitment is projected under the With Additional Measures scenario and With Existing Measures scenario (Table 6).

Table 6: Projected NH_3 emission reduction in 2025 and 2030 compared to 2005

Projected NH_3 emissions	2025	2030
Emission Reduction Commitment (%)	-1.0	-5.0
With Additional Measures Scenario (%)	-7.2	-13.8

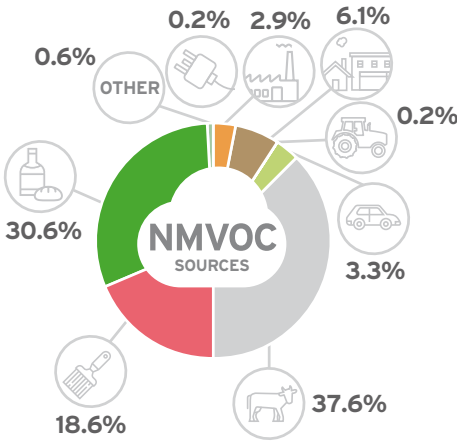
Historic NH_3 Emissions

Ammonia emissions in 2024 were 11.55 kt or 9.0% lower than emissions in 1990. Animal manures produced approximately 83.5% of agricultural ammonia emissions, with chemical fertilisers and sewage sludge applied to soils accounting for the remainder. The NH_3 emissions trend is largely determined by the cattle population and showed a steady increase up to 140.01 kt in 1998. There was some decline in the populations of cattle and sheep after 1998, as well as a decrease in fertiliser use, which contributed to a decrease in NH_3 emissions in the period 2000 to 2012.

Subsequently, increases in cattle numbers and fertiliser use have seen NH_3 emissions increase especially in response to the removal of milk quotas in 2015. NH_3 emissions increased up to 2018 to 130.59 kt, the highest emissions across the timeseries (response to significant drought conditions in 2018 and increase nitrogen fertiliser and concentrate feeding to bovines). In 2023, emissions (116.83 kt) fell below 2015 levels for the first time since the abolition of milk quotas.

Road transport produces a small proportion of emissions of ammonia (< 1%) mainly from petrol passenger cars with three-way catalysts.

3.4 Non-Methane Volatile Organic Compound (NMVOC) emissions

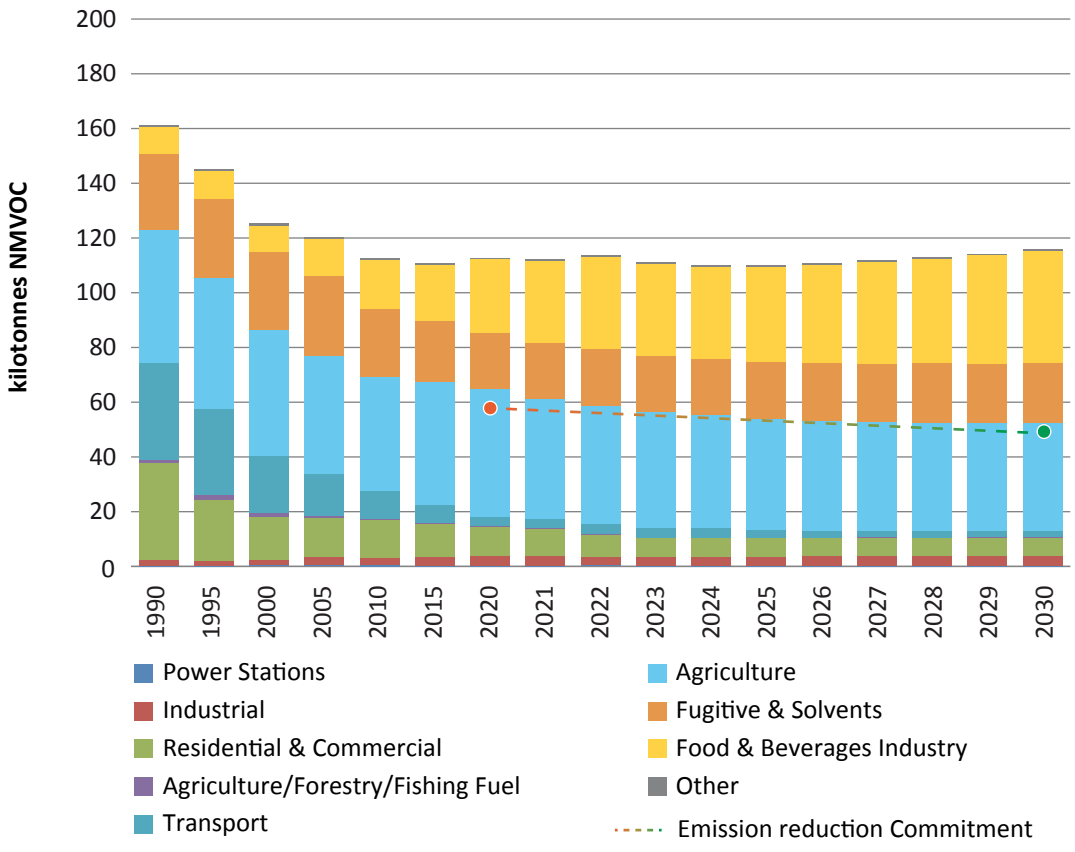


Non-methane volatile organic compounds (NMVOC) are emitted as gases by a wide array of products including paints, paint strippers, glues, cleaning agents and adhesives. They also arise as a product of incomplete combustion of fuels, from the storage and handling of animal manure and fertilisers in Agriculture, and from the Food and Beverages industry.

Current and future trends in NMVOC emissions

The latest estimate is that in total 109.97 kt of NMVOCs were emitted in 2024, including emissions from manure management and agricultural soils. Emissions of NMVOCs decreased by 1.0% in 2024 compared to 2023. The main sources of NMVOC emissions in Ireland are from manure management in Agriculture, the Food and Beverages industry and solvent use. These sources produced 37.6%, 30.6% and 18.6%, respectively of the annual total in 2024.

Figure 5: Trend in NMVOC emissions 1990-2030 (WAM) and emission reduction commitments 2020-2030



Emissions from combustion of fossil fuels across all sectors; Power Stations, Industrial, Residential, Commercial and Agriculture accounted for 9.4% of national total NMVOC emissions in 2024. Transport emissions accounted for 3.3% of national total emissions of NMVOC, mainly from exhaust and fugitive releases from gasoline vehicles.

Table 7 also presents a scenario where the NMVOC emissions from source category 3B and 3D (already allowed under the NEC Directive) and 2H2 (spirit production) are excluded, as 2H2 was not included in the national inventory at the time the 2020 and 2030 emission reduction commitments were established. NMVOC emissions in 2030 are projected in this case to be 46% below emission levels in 2005. The emission reduction commitment for 2030 is a 32 percent reduction; thus, compliance with the emission reduction commitment is projected for both the WEM and WAM scenarios when the flexibility outlined in Article 5(1) of Directive 2016/2284 in accordance with Part 4 of Annex IV is applied under the NEC Directive.

Under UNECE, total NMVOC emissions (excluding categories 3B1a, 3B1b and category 2H2 spirit production as new sources) under the WAM scenario are projected to be 57.7% below 2005). It is projected that with this adjustment applied the emission reduction commitments for 2030 will be complied with under both the WEM and WAM scenarios.

Table 7. Projected NMVOC emission reduction in 2025 and 2030 and associated emission reduction commitments compared to 2005

Projected NMVOC emissions	2025	2030
Emission Reduction Commitment (%)	-25.0	-32.0
With Additional Measures Scenario (%) *(excluding 3B, 3D, 2H2) (NECD)*	-47.0	-46.0
With Additional Measures Scenario (%) *(excluding 3B1a, 3B1b, 2H2) (Gothenburg Protocol)*	-58.3	*

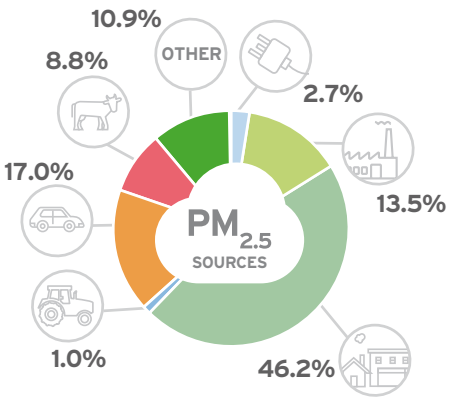
* Under the Gothenburg Protocol, emission reduction targets set for 2020 also apply to 2030 and onwards.

Historic NMVOC Emissions

Ireland's NMVOC emissions have shown a sustained long-term decline from 1990 to 2024, driven by cleaner fuels, EU solvent regulations, and major improvements in vehicle technology. The largest reductions occurred in Transport (-89.8%), Residential and Commercial (-81.2%), and Agriculture/Forestry/Fishing (-86.8%), reflecting the phase-out of petrol-intensive fleets, along with reduced use of coal and peat as a source of heating in the Residential sector, reduced use of solvent-rich household products, and modernisation of machinery. In contrast, emissions increased significantly in sectors linked to economic expansion, particularly Industrial (+72.5%) and the Food and Beverages Industry (+214.3%), due to growth in solvent-using manufacturing and agri-food processing.

3.5 Fine Particulate matter ($PM_{2.5}$) emissions

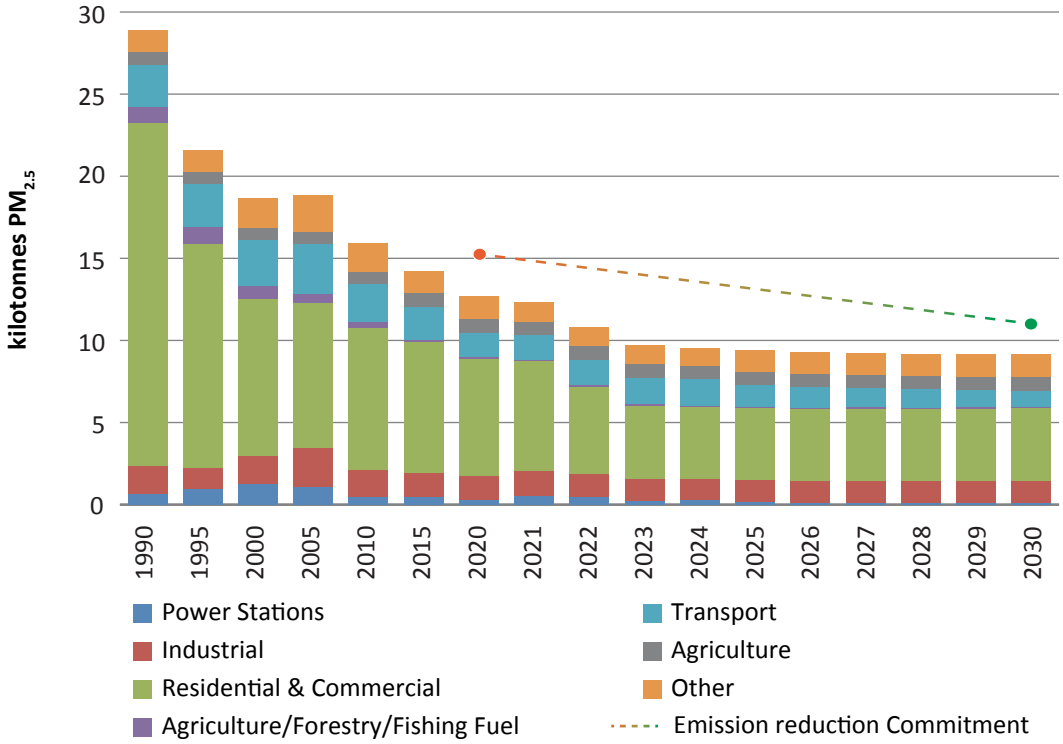
There are many sources of particulate matter (dust) including vehicle exhaust emissions, soil and road surfaces, construction works and Industrial emissions. Particulate matter can be formed from reactions between different pollutant gases. Small particles can penetrate the lungs and cause damage. These are known as PM_{10} (diameter less than 10µm) and $PM_{2.5}$ (diameter less than 2.5µm). $PM_{2.5}$ is a better indicator of anthropogenic (man-made) emissions.



Current and future trends in $PM_{2.5}$ Emissions

Total $PM_{2.5}$ emissions in 2024, at 9.5 kt decreased by 1.9% compared to 2023. The main sources of $PM_{2.5}$ emissions in Ireland are from the Residential and Commercial sectors (46.2% of national total) in 2024. The Industrial sector (13.5% of the national total) decreased by 4.6% in 2024, and the Other sector (10.9% of the national total) decreased by 8.7%.

Figure 6: Trend in $PM_{2.5}$ emissions 1990-2030 (WAM) and emission reduction commitments 2020-2030



These emissions from Other sectors arise from manufacture of solid fuels, oil refining/storage sectors, coal mining and handling, quarrying and mining of minerals other than coal, construction and demolition, storage, handling and transport of mineral products, road paving with asphalt, fireworks, use of tobacco, storage handling and transport of agricultural products and accidental vehicle and building fires. Emissions from Power Stations contributed 0.25 kt (2.7% of national share) increased 20.0% in 2024 compared to 2023, driven mainly by an increase in fuel oil use of 168.7% for electricity generation.

In terms of the outlook for 2030, the emission projections indicate compliance with the 2030 emission reduction commitment, which requires a 41% reduction on 2005 levels. It is projected that in 2030 emissions will be 51.7% below those in 2005. Achievement of the 2030 Emission reduction Commitment is projected under the With Additional Measures scenario and With Existing Measures scenario.

Table 8. Projected $PM_{2.5}$ emission reduction and emission reduction commitments

Projected $PM_{2.5}$ emissions	2025	2030
Emission Reduction Commitment (%)	-18.0	-41.0
With Additional Measures Scenario (%)	-50.1	-51.7

Historic $PM_{2.5}$ Emissions

Total $PM_{2.5}$ emissions have decreased by 67.8% since 1990. Reduced use of coal and peat in the Residential and Commercial sectors, with increased use of gasoil, kerosene and natural gas has resulted in 78.8% lower emissions between 1990 and 2024 in those combined sectors. Agriculture emissions have increased by 11.4% from their 1990 level largely as a result of the increased cattle herd. Emissions from the Transport sector, dominated by road transport have been decreasing since 2005, with a 38.2% reduction between 1990 and 2024. This was largely due to technological advances and the age structure of the national fleet (whereby in recent times an increasing proportion of the fleet is newer vehicles).

4. Air Pollutants with no Emission Reduction Commitment

The reporting obligations outlined in Article 8 and Annex I of the NEC Directive include mandatory reporting of emissions to air of carbon monoxide, cadmium, mercury, lead, polycyclic aromatic hydrocarbons, dioxins and furans, polychlorinated biphenyls (PCB), hexachlorobenzene, coarse particulate matter < 10µm and black carbon. Voluntary reporting is also carried out for annual emissions of arsenic, chromium, copper, nickel, selenium, Zinc and total suspended particulates (TSP). Emission reduction commitments are not set for these pollutants in the Directive.

A brief overview and trend in emissions of these pollutants is presented below. Table 9 summarises the relative importance of each sector to emissions of each air pollutant. If a sector is the largest source of a pollutant, this is indicated in the second column, followed in the third column by other air pollutants for which the sector is a significant source.

Table 9. Sectoral sources of Pollutants

Sector	Largest source	Significant source
Transport	Cu, Pb, Cr, Zn	CO, PM_{10}, TSP, BC, As, Hg
Power Stations	Ni	CO, PM_{10}, TSP, Cd, Hg, As, Cr, Se
Combustion in manufacturing industries	Cd, Hg	PM_{10}, BC, Cr, Ni, Zn
Industrial Processes	TSP	PM_{10}, BC, Cd, Zn
Residential and Commercial Combustion	CO, PM_{10}, BC, Se, Dioxins, PAH	TSP, Pb, Cd, Hg, Ni, Zn, PCB
Agriculture	HCB	PM_{10}
Industrial waste incineration	As	Cr
Solid waste disposal (landfills)		Hg
Vehicle and building fires and waste burning	PCB	Dioxins

Carbon monoxide (CO) emissions continue to decline, driven by major reductions due to three-way catalysts in gasoline vehicles in Transport, and a large decrease in the use of solid fuels for space heating in the Residential sector. National total CO emissions have reduced by 85.0% over the period 1990 to 2024.

Emissions of *coarse particulate matter* (PM_{10}) have reduced by 51.8% since 1990. The main determinant of the trend in PM_{10} emissions is a wide range of Other sources (cement production, construction and demolition, etc.), which accounted for 34.2% share of the national total in 2024. Total suspended particulate (TSP) emissions have decreased by 32.5% since 1990. *Black Carbon* (BC) emissions have decreased by 70.1%, between 1990 and 2024.

Over the period 1990-2024, total national *lead* (Pb) emissions have decreased by 95.2% with the Pb emissions trend largely determined by the Transport sector. There was a marked decrease between 1999 and 2005 when the lead content of petrol was reduced. Combustion of fuels in the Residential and Commercial/Institutional sectors is also an important source of Pb (13.8% of national total).

Total national emissions of *cadmium* (Cd) have decreased by 61.6% since 1990. Emissions of Cd are largely determined by combustion of fuels in the Manufacturing Industries and Construction sector, specifically combustion sources in Non-Ferrous Metals.

Total national emissions of *mercury* (Hg) have decreased by 70.7% between 1990 and 2024. Emissions from combustion in the Manufacturing Industries and Construction sectors are the largest source of Hg (33.6% of national total in 2024).

Emissions of *arsenic* (As) are primarily driven by the Waste Incineration sector, accounting for 69.1% of national emissions, mainly from hazardous and clinical waste incineration and crematoria. Due to rising cremation rates this sectors share of national arsenic emissions has increased by 29.8% since 1990. However, over the same time period, total arsenic emissions have declined by 42.8%, reflecting cleaner power generation and fuel switching

Emissions of *chromium* (Cr) have decreased by 26.2% between 1990 and 2024. Transport, Waste Incineration and combustion in the Manufacturing Industries and Construction sector are the three main sources (85.9% of national total).

Total *copper* (Cu) emissions in Ireland were steadily increasing over the 1990-2007 period and have been steadily decreasing since. Total emissions in 2024 were 4.6% lower than in their peak in 2007 but they are 145.4% higher than in 1990. Industrial Processes and Transport, together accounting for 97.3% of national emissions, increased by 170.1% and 173.8%, respectively between 1990 and 2024.

National total emission estimates of *nickel* (Ni) were steadily increasing over the 1990-1999 period and have been generally decreasing from 1999 onwards. Total emissions in 2024 were 78.3% below the 1990 level.

The main contributor to national *selenium* (Se) emissions has been fuel combustion in the Residential and Commercial/Institutional sectors which combined accounted for 76.2% of selenium emissions in 2024.

National total emissions of *zinc* (Zn) have fallen by 48.5% between 1990 and 2024. Following the closure of Ireland's only steel plant in 2001, emissions from the Metal Production sector decreased by approximately 75%. After the closure of this plant, national zinc emissions have been largely driven by fuel combustion across the Transport, Residential and Commercial/Institutional, Manufacturing Industries, Construction, and Public Electricity and Heat Production sectors.

Dioxin and *furan* emission levels decreased by 74.5% between 1990 and 2024. The main contributors to national emissions are the combined Residential and Commercial/Institutional sectors, with a 69.8% share of total emissions in 2024.

Hexachlorobenzene (HCB) emissions from secondary aluminum processing were the largest source of HCB emissions in Ireland up to 1996 after which the use of hexachloroethane (HCB being a contaminant of such gases) based cover gases was banned. Since then, the use of pesticides (in which HCB is a contaminant) in Agriculture is the largest source, accounting for 87.2% of national emissions in 2024.

Emissions of *polychlorinated biphenyls* (PCBs) have decreased by 87.7% between 1990 and 2024, with emissions from open burning of waste being the largest source (59.3%).

Polycyclic Aromatic Hydrocarbon (PAHs) emissions, which include emissions of *benzo[a]pyrene*, *benzo[b] fluoranthene*, *benzo[k]fluoranthene*, and *indeno[1,2,3-cd]pyrene*, are dominated by combustion in the Residential and Commercial/Institutional sectors. Combined, these four pollutants decreased by 74.2% between 1990-2024.

Appendix: Emissions of key NEC Directive Air Pollutants 1990-2024

	SO_2	NO_x	NMVOC	NH_3	$PM_{2.5}$
			kilotonnes		
1990	183.35	175.17	161.03	128.98	28.89
1991	184.67	176.88	160.30	129.58	28.76
1992	171.98	184.77	155.32	132.60	25.31
1993	163.03	176.85	151.98	130.76	24.94
1994	177.70	174.53	147.43	131.01	22.89
1995	163.66	172.67	145.06	131.13	21.55
1996	150.77	176.91	145.74	134.62	22.12
1997	169.06	167.82	141.26	136.16	20.29
1998	179.14	172.39	142.09	140.01	21.37
1999	161.25	171.09	132.48	137.19	18.46
2000	144.40	168.90	125.36	130.08	18.66
2001	142.41	169.41	125.13	128.35	18.63
2002	106.74	161.21	124.64	127.73	17.87
2003	82.91	162.51	123.05	127.35	17.84
2004	73.54	165.70	122.37	125.28	18.12
2005	73.99	169.82	120.38	123.87	18.86
2006	61.84	165.35	118.07	121.14	18.42
2007	55.91	160.39	119.62	118.57	17.83
2008	46.34	151.09	118.03	118.34	17.65
2009	33.19	128.12	115.96	119.19	16.85
2010	27.28	120.12	112.74	119.57	15.93
2011	25.33	107.70	109.72	115.28	14.08
2012	23.98	109.05	109.87	114.89	13.99
2013	24.00	111.34	111.69	115.62	14.43
2014	17.99	108.96	109.14	118.21	13.81
2015	16.45	109.36	110.68	121.05	14.20
2016	15.75	111.68	112.57	126.27	14.27
2017	15.02	113.89	116.25	129.59	13.28
2018	13.81	113.91	114.75	130.59	13.66
2019	11.19	107.32	115.68	128.17	12.71
2020	10.92	98.00	112.72	124.79	12.68
2021	12.83	100.38	112.29	122.71	12.34
2022	9.27	95.91	113.63	121.60	10.83
2023	7.38	89.88	111.12	116.83	9.68
2024	7.05	88.75	109.97	117.43	9.50

Tá an GCC freagrach as an gcomhshaol a chosaint agus a fheabhsú, mar shócmhainn luachmhar do mhuintir na hÉireann. Táimid tiomanta do dhaoine agus don chomhshaol a chosaint ar thionchar díobhálach na radaíochta agus an truaillithe.

Is féidir obair na Gníomhaireachta a roinnt ina trí phríomhréimse:

- Rialáil: Rialáil agus córais chomhlíonta comhshaoil éifeachtacha a chur i bhfeidhm, chun dea-thorthaí comhshaoil a bhaint amach agus díriú orthu siúd nach mbíonn ag cloí leo.
- Eolas: Sonraí, eolas agus measúnú ardchaighdeáin, spriocdhírithe agus tráthúil a chur ar fáil i leith an chomhshaoil chun bonn eolais a chur faoin gcinnteoireacht.
- Abhcóideacht: Ag obair le daoine eile ar son timpeallachta glaine, táirgiúla agus dea-chosanta agus ar son cleachtas inbhuanaithe i dtaobh an chomhshaoil.

I measc ár gcuid freagrachtaí tá:

CEADÚNÚ

- Gníomhaíochtaí tionscail, dramhaíola agus stórála peitril ar scála mór;
- Sceitheadh fuíolluisce uirbigh;
- Úsáid shrianta agus scaoileadh rialaithe Orgánach Géinmhodhnaithe;
- Foinsí radaíochta ianúcháin;
- Astaíochtaí gás ceaptha teasa ó thionscal agus ón eitlíocht trí Scéim an AE um Thrádáil Astaíochtaí.

FORFHEIDHMIÚ NÁISIÚNTA I LEITH CÚRSAÍ COMHSHAOIL

- Iniúchadh agus cigireacht ar shaoráidí a bhfuil ceadúnas acu ón GCC;
- Cur i bhfeidhm an dea-chleachtais a stiúradh i ngníomhaíochtaí agus i saoráidí rialáilte;
- Maoirseacht a dhéanamh ar fhreagrachtaí an údaráis áitiúil as cosaint an chomhshaoil;
- Caighdeán an uisce óil phoiblí a rialáil agus údaruithe um sceitheadh fuíolluisce uirbigh a fhorfheidhmiú
- Caighdeán an uisce óil phoiblí agus phríobháidigh a mheasúnú agus tuairisciú air;
- Comhordú a dhéanamh ar líonra d'eagraíochtaí seirbhíse poiblí chun tacú le gníomhú i gcoinne coireachta comhshaoil;
- An dlí a chur orthu siúd a bhriseann dlí an chomhshaoil agus a dhéanann dochar don chomhshaol.

BAINISTÍOCHT DRAMHAÍOLA AGUS CEIMICEÁIN SA CHOMHSHAOL

- Rialacháin dramhaíola a chur i bhfeidhm agus a fhorfheidhmiú lena n-áirítear saincheisteanna forfheidhmithe náisiúnta;
- Staitisticí dramhaíola náisiúnta a ullmhú agus a fhoilsiú chomh maith leis an bPlean Náisiúnta um Bainistíocht Dramhaíola Guaisí;
- An Clár Náisiúnta um Chosc Dramhaíola a fhorbairt agus a chur i bhfeidhm;
- Reachtaíocht ar rialú ceimiceán sa timpeallacht a chur i bhfeidhm agus tuairisciú ar an reachtaíocht sin.

BAINISTÍOCHT UISCE

- Plé le struchtúir náisiúnta agus réigiúnacha rialachais agus oibriúcháin chun an Chreat-treoir Uisce a chur i bhfeidhm;
- Monatóireacht, measúnú agus tuairisciú a dhéanamh ar chaighdeán aibhneacha, lochanna, uiscí idirchreasa agus cósta, uiscí snámha agus screamhuisce chomh maith le tomhas ar leibhéil uisce agus sreabhadh abhann.

EOLAÍOCHT AERÁIDE & ATHRÚ AERÁIDE

- Fardail agus réamh-mheastacháin a fhoilsiú um astaíochtaí gás ceaptha teasa na hÉireann;
- Rúnaíocht a chur ar fáil don Chomhairle Chomhairleach ar Athrú Aeráide agus tacaíocht a thabhairt don Idirphlé Náisiúnta ar Ghníomhú ar son na hAeráide;
- Tacú le gníomhaíochtaí forbartha Náisiúnta, AE agus NA um Eolaíocht agus Beartas Aeráide.

MONATÓIREACHT AGUS MEASÚNÚ AR AN GCOMHSHAOL

- Córais náisiúnta um monatóireacht an chomhshaoil a cheapadh agus a chur i bhfeidhm: teicneolaíocht, bainistíocht sonraí, anailís agus réamhaisnéisiú;
- Tuairiscí ar Staid Thimpeallacht na hÉireann agus ar Tháscairí a chur ar fáil;
- Monatóireacht a dhéanamh ar chaighdeán an aeir agus Treoir an AE i leith Aeir Ghlain don Eoraip a chur i bhfeidhm chomh maith leis an gCoinbhinsiún ar Aerthruailliú Fadraoin Trasteorann, agus an Treoir i leith na Teorann Náisiúnta Astaíochtaí;
- Maoirseacht a dhéanamh ar chur i bhfeidhm na Treorach i leith Torainn Timpeallachta;
- Measúnú a dhéanamh ar thionchar pleananna agus clár beartaithe ar chomhshaol na hÉireann.

TAIGHDE AGUS FORBAIRT COMHSHAOIL

- Comhordú a dhéanamh ar ghníomhaíochtaí taighde comhshaoil agus iad a mhaoiniú chun brú a aithint, bonn eolais a chur faoin mbeartas agus réitigh a chur ar fáil;
- Comhoibriú le gníomhaíocht náisiúnta agus AE um thaighde comhshaoil.

COSAINT RAIDEOLAÍOCH

- Monatóireacht a dhéanamh ar leibhéil radaíochta agus nochtadh an phobail do radaíocht ianúcháin agus do réimsí leictreamaighnéadacha a mheas;
- Cabhrú le pleananna náisiúnta a fhorbairt le haghaidh éigeandálaí ag eascairt as taismí núicléacha;
- Monatóireacht a dhéanamh ar fhorbairtí thar lear a bhaineann le saoráidí núicléacha agus leis an tsábháilteacht raideolaíochta;
- Sainseirbhísí um chosaint ar an radaíocht a sholáthar, nó maoirsiú a dhéanamh ar sholáthar na seirbhísí sin.

TREOIR, ARDÚ FEASACHTA AGUS FAISNÉIS INROCHTANA

- Tuairisciú, comhairle agus treoir neamhspleách, fianaise-bhunaithe a chur ar fáil don Rialtas, don tionscal agus don phobal ar ábhair maidir le cosaint comhshaoil agus raideolaíoch;
- An nasc idir sláinte agus folláine, an geilleagar agus timpeallacht ghlan a chur chun cinn;
- Feasacht comhshaoil a chur chun cinn lena n-áirítear tacú le hiompraíocht um éifeachtúlacht acmhainní agus aistriú aeráide;
- Tástáil radóin a chur chun cinn i dtithe agus in ionaid oibre agus feabhsúchán a mholadh áit is gá.

COMHPHÁIRTÍOCHT AGUS LÍONRÚ

Oibriú le gníomhaireachtaí idirnáisiúnta agus náisiúnta, údaráis réigiúnacha agus áitiúla, eagraíochtaí neamhrialtais, comhlachtaí ionadaíocha agus ranna rialtais chun cosaint chomhshaoil agus raideolaíoch a chur ar fáil, chomh maith le taighde, comhordú agus cinnteoireacht bunaithe ar an eolaíocht.

BAINISTÍOCHT AGUS STRUCHTÚR NA GNÍOMHAIREACHTA UM CHAOMHNÚ COMHSHAOIL

Tá an GCC á bainistiú ag Bord lánaimseartha, ar a bhfuil Ard-Stiúrthóir agus cúigear Stiúrthóir. Déantar an obair ar fud cúig cinn d'Oifigí:

- An Oifig um Inbhunaitheacht i leith Cúrsaí Comhshaoil
- An Oifig Forfheidhmithe i leith Cúrsaí Comhshaoil
- An Oifig um Fhianaise agus Measúnú
- An Oifig um Chosaint ar Radaíocht agus Monatóireacht Comhshaoil
- An Oifig Cumarsáide agus Seirbhísí Corparáideacha

Tugann coistí comhairleacha cabhair don Ghníomhaireacht agus tagann siad le chéile go rialta le plé a dhéanamh ar ábhair imní agus le comhairle a chur ar an mBord.

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An Ghníomhaireacht um Chaomhnú Comhshaoil

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