

Ireland's Air Pollutant Emissions

1990-2030

June 2021



SO₂

NO_x

NMVOC

PM_{2.5}

Environmental Protection Agency

The Environmental Protection Agency (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:** We implement effective regulation and environmental compliance systems to deliver good environmental outcomes and target those who don't comply.
- **Knowledge:** We provide high quality, targeted and timely environmental data, information and assessment to inform decision making at all levels.
- **Advocacy:** We work with others to advocate for a clean, productive and well protected environment and for sustainable environmental behaviour.

Our Responsibilities

LICENSING

We regulate the following activities so that they do not endanger human health or harm the environment:

- waste facilities (e.g. landfills, incinerators, waste transfer stations);
- large scale industrial activities (e.g. pharmaceutical, cement manufacturing, power plants);
- intensive agriculture (e.g. pigs, poultry);
- the contained use and controlled release of Genetically Modified Organisms (GMOs);
- sources of ionising radiation (e.g. x-ray and radiotherapy equipment, industrial sources);
- large petrol storage facilities;
- waste water discharges;
- dumping at sea activities.

NATIONAL ENVIRONMENTAL ENFORCEMENT

- Conducting an annual programme of audits and inspections of EPA licensed facilities.
- Overseeing local authorities' environmental protection responsibilities.
- Supervising the supply of drinking water by public water suppliers.
- Working with local authorities and other agencies to tackle environmental crime by coordinating a national enforcement network, targeting offenders and overseeing remediation.
- Enforcing Regulations such as Waste Electrical and Electronic Equipment (WEEE), Restriction of Hazardous Substances (RoHS) and substances that deplete the ozone layer.
- Prosecuting those who flout environmental law and damage the environment.

WATER MANAGEMENT

- Monitoring and reporting on the quality of rivers, lakes, transitional and coastal waters of Ireland and groundwaters; measuring water levels and river flows.
- National coordination and oversight of the Water Framework Directive.
- Monitoring and reporting on Bathing Water Quality.

MONITORING, ANALYSING AND REPORTING ON THE ENVIRONMENT

- Monitoring air quality and implementing the EU Clean Air for Europe (CAFÉ) Directive.
- Independent reporting to inform decision making by national and local government (e.g. periodic reporting on the State of Ireland's Environment and Indicator Reports).

REGULATING IRELAND'S GREENHOUSE GAS EMISSIONS

- Preparing Ireland's greenhouse gas inventories and projections.
- Implementing the Emissions Trading Directive, for over 100 of the largest producers of carbon dioxide in Ireland.

ENVIRONMENTAL RESEARCH AND DEVELOPMENT

- Funding environmental research to identify pressures, inform policy and provide solutions in the areas of climate, water and sustainability.

STRATEGIC ENVIRONMENTAL ASSESSMENT

- Assessing the impact of proposed plans and programmes on the Irish environment (e.g. major development plans).

RADIOLOGICAL PROTECTION

- Monitoring radiation levels, assessing exposure of people in Ireland to ionising radiation.
- Assisting in developing national plans for emergencies arising from nuclear accidents.
- Monitoring developments abroad relating to nuclear installations and radiological safety.
- Providing, or overseeing the provision of, specialist radiation protection services.

GUIDANCE, ACCESSIBLE INFORMATION AND EDUCATION

- Providing advice and guidance to industry and the public on environmental and radiological protection topics.
- Providing timely and easily accessible environmental information to encourage public participation in environmental decision-making (e.g. My Local Environment, Radon Maps).
- Advising Government on matters relating to radiological safety and emergency response.
- Developing a National Hazardous Waste Management Plan to prevent and manage hazardous waste.

AWARENESS RAISING AND BEHAVIOURAL CHANGE

- Generating greater environmental awareness and influencing positive behavioural change by supporting businesses, communities and householders to become more resource efficient.
- Promoting radon testing in homes and workplaces and encouraging remediation where necessary.

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 an Advisory Committee of twelve members who meet regularly to discuss issues of concern and provide advice to the Board.

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KEY FINDINGS

Assessment of targets	Ireland is not in compliance with the European Unions National Emissions Ceilings (NEC) Directive overall because it is exceeding its emission ceiling for ammonia, and has done for 7 of the years between 2010 and 2019. The exceedance was primarily driven by increased animal numbers and fertiliser nitrogen use.
	Ireland is currently compliant with the emissions ceilings for the other air pollutants in scope of the NEC Directive; nitrogen oxides, non-methane volatile organic compounds and sulphur dioxide.
	Unadjusted emissions of nitrogen oxides and non-methane volatile organic compounds exceed the current ceilings, due to use of better scientific data which was unavailable when the ceilings were set. As a result, Ireland is adjusting the emissions of these pollutants to achieve compliance, as allowed under Article 5(1) of the NEC Directive.
	Emissions of sulphur dioxide are well below the required EU emission limits and continue to decrease. This very positive result is substantially due to the switch to lower sulphur content fuels in electricity generation and transport.
Main drivers	COVID 19 is projected to have a downward impact on some (particularly transport related) air pollutant emissions in 2020 and 2021, but no significant impact on compliance with future emissions ceilings.
	The main drivers of the trend in nitrogen oxide emissions are emissions from organic and inorganic nitrogen use in agriculture and transport, particularly diesel fuelled vehicles.
	Particulate matter (PM _{2.5}) emissions decreased in 2019 after increasing in 2018, mostly due to decreased heating requirements in 2019. Generally, these emissions are declining due to reduced coal and peat use across all sectors.
Future outlook	The main sources driving increasing non-methane volatile organic compound emissions are housing and storage of manure within agriculture and the food and beverage industry, with the distillation industry becoming an important source.
	Ireland will have to implement significant mitigation measures to achieve compliance with emission ceilings out to 2030. Implementing the measures announced in the Climate Action Plan and other existing plans will not be sufficient to meet all future emission ceilings.
	Ireland can comply with emission ceilings for nitrogen oxides for 2020 and 2030 provided there is full implementation of the measures in the Climate Action Plan, including significant electrification of the transport sector.
	Measures have not yet been identified that will achieve compliance with the non-methane volatile organic compounds emission ceiling for 2030. These projections indicate that the measures included in the <i>With Additional Measures scenario</i> will not be sufficient.
	Full Implementation at farm level of ammonia abatement measures outlined in the AgClimatise plan (in line with the Teagasc Marginal Abatement Cost Curve analysis on ammonia emissions) is projected to bring Ireland into compliance with the 2030 emission ceiling for ammonia.
Particulate matter (PM _{2.5}) emissions are projected to remain in compliance with the NEC Directive ceilings until at least 2030.	

1. Introduction

This report provides details of emissions of air pollutants in Ireland in the period 1990 to 2019 and projected emissions of these pollutants for 2020 and 2030. The information used to compile this report is sourced from many 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 EU¹ and UN² reporting guidelines, to comply with the annual reporting requirements of the Convention on Long Range Transboundary Air Pollution (CLRTAP), and the National Emissions Ceiling Directive (NEC).

This report focuses on the five key pollutants with emission ceilings (limits) for which Ireland has compliance commitments under the National Emissions Ceiling Directive (Directive (EU) 2016/2284³). These pollutants are Sulphur Dioxide (SO₂), Nitrogen Oxides (NO_x), Ammonia (NH₃), Non-Methane Volatile Organic Compounds (NMVOCs) and Fine Particulate Matter (PM_{2.5}). For these pollutants the EPA has produced emissions projections to give an indication of the likelihood of compliance with future emissions ceilings. A summary of trends in air pollutants for which there are no emission ceilings under Directive (EU) 2016/2284 is also presented in section 4.



1 <https://www.eea.europa.eu/publications/emep-eea-guidebook-2019>

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

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

2. National Emissions Ceilings

The five air pollutants for which ceilings are set affect the environment and human health in different ways. Sulphur dioxide (SO₂), nitrogen oxides (NO_x) and ammonia (NH₃) are primarily associated with acid deposition leading to toxicity of soils and waters. Ammonia is however also responsible for secondary particulate matter formation and NO_x are precursors to tropospheric (ground level) Ozone formation. Fine Particulate Matter, tropospheric Ozone, NO_x and NMVOCs impact directly on human health, especially in higher concentrations in urban areas. In its 2020 Air Quality in Europe report⁴, the European Environment Agency (EEA) estimated that approximately 1,300 premature deaths a year occur in Ireland due to poor Air Quality.

The latest National Emissions Ceilings Directive (Directive (EU) 2016/2284) on the reduction of national emissions of certain atmospheric pollutants, harmonises the reporting obligations to the European Union under the Convention on Long Range Transboundary Air Pollution (CLRTAP) and details emission ceilings for the above-mentioned air pollutants for 2020 and 2030. The commitments under the previous National Emissions Ceilings Directive (2001/81/EC) continue to apply to emissions produced up to the 31st of December 2019. A full outline of the reporting obligations and submission deadlines are outlined in Article 8 and Annex I of Directive (EU) 2016/2284.

The emission ceilings for Ireland up to 31st December 2019 are as follows and are set as absolute emission values:

- | | |
|---|----------------|
| • Sulphur Dioxide (SO ₂) | 42 kilotonnes |
| • Nitrogen Oxides (NO _x) | 65 kilotonnes |
| • Ammonia (NH ₃) | 116 kilotonnes |
| • Non-Methane Volatile Organic Compounds (NMVOCs) | 55 kilotonnes |

There is no emission ceiling for PM_{2.5} under Directive 2001/81/EC but emission ceilings for this air pollutant are set for 2020 and 2030 under Directive (EU) 2016/2284 (Table 3). The National Air Pollution Control Programme (NAPCP) outlines the pathway Ireland will follow to achieve compliance with its commitments under the National Emission Ceilings Directive (NEC Directive)⁵.

2.1 Compliance with National Emissions Ceilings

The current emission ceilings for the years 2010 to 2019 which Ireland must comply with under Directive 2001/81/EC, are set out in Table 1 below along with the latest emission estimates for the period 2010 to 2019. Directive 2016/2284 has set emission ceilings based on percentage reductions using 2005 as the base year from which reductions are set. This differs from Directive 2001/81/EC which sets absolute emission value limits or ceilings. As the reductions are relative to a base year (2005) under the latest Directive, reduction commitments 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 2010 to 2019 are set out in Table 1 and show that;

- Ireland complied with the SO₂ emission ceilings for all years from 2010 to 2019, inclusive.
- Ireland exceeded its emission ceilings for NO_x and NMVOC for all years since 2010
- Ireland exceeded its emission ceiling for NH₃ in 2012, 2013, 2015, 2016, 2017, 2018 and 2019.

4 <https://www.eea.europa.eu/publications/air-quality-in-europe-2020-report>

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

Table 1. Ceilings and emission estimates for NEC relevant pollutants*

	Emissions (kilotonnes)									
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
National Total SO ₂	26.671	24.870	23.504	23.761	17.591	15.891	14.444	14.987	14.622	10.874
NEC ceiling 2010-2019	42.000	42.000	42.000	42.000	42.000	42.000	42.000	42.000	42.000	42.000
National Total NO _x	117.448	104.775	108.244	109.764	108.199	107.468	110.176	108.167	107.954	98.031
NEC ceiling 2010-2019	65.000	65.000	65.000	65.000	65.000	65.000	65.000	65.000	65.000	65.000
National Total NMVOC	110.730	107.924	109.130	110.990	108.013	108.543	109.798	114.852	115.094	113.747
NEC ceiling 2010-2019	55.000	55.000	55.000	55.000	55.000	55.000	55.000	55.000	55.000	55.000
National Total NH ₃	114.810	110.432	117.077	117.918	114.238	119.525	124.819	128.635	135.214	125.404
NEC ceiling 2010-2019	116.000	116.000	116.000	116.000	116.000	116.000	116.000	116.000	116.000	116.000
National Total PM _{2.5}	16.059	14.351	14.129	14.658	13.848	13.818	13.094	12.989	13.561	11.790
NEC ceiling 2010-2019	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

* Data in red highlights where emission ceilings have not been complied with

Directive (EU) 2016/2284 has a flexibility mechanism that allows Member States to make an adjustment to their Inventory for compliance purposes. This is allowed where non-compliance with national emission reduction commitments would result from applying improved emission inventory methods, updated in accordance with scientific knowledge. This flexibility applies to the five key pollutants and is available to all member states, ensuring that countries are not penalised for updating estimates with information that could not have been foreseen when the ceilings and commitments were agreed.

Unadjusted, Ireland is non-compliant with national emission reduction commitments for NO_x and NMVOCs in the period to 2019 as a result of applying improved emission inventory methods, by using more up-to-date emission factors and recognising new sources of emissions. As a result, and in accordance with Directive 2016/2284, Ireland is able to utilise the prescribed flexibility mechanism to achieve compliance.

As the non-compliance for NH₃ has not been attributed to improved inventory methods and is as a direct result of increased agricultural activity, the criteria for use of the flexibility mechanism does not apply in this case.

Adjusted total emissions for NO_x and NMVOC are presented in Table 2. When the adjustment is considered, Ireland is in exceedance of the emissions ceiling for NO_x and NMVOC for 2010 only. Detailed information relating to the use of the flexibility mechanism is outlined in Ireland's Informative Inventory Report 2021⁶.

Table 2. Adjusted emission estimates for NO_x and NMVOCs*

kilotonnes	Emissions (kilotonnes)										
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	
National Total NO _x	117.448	104.775	108.244	109.764	108.199	107.468	110.176	108.167	107.954	98.031	
Adjusted NO _x under Article 5(1)	71.823	62.253	63.877	62.963	61.464	61.341	62.090	58.381	56.074	57.689	
NEC ceiling 2010-2019	65.000	65.000	65.000	65.000	65.000	65.000	65.000	65.000	65.000	65.000	
National Total NMVOC	110.730	107.924	109.130	110.990	108.013	108.543	107.798	114.849	115.093	113.743	
Adjusted NMVOC under Article 5(1)	56.313	52.630	51.718	51.393	50.426	49.660	48.284	47.991	50.308	45.960	
NEC ceiling 2010-2019	55.000	55.000	55.000	55.000	55.000	55.000	55.000	55.000	55.000	55.000	

* Data in red highlights where emission ceilings have not been complied with

2.2 Future Compliance

The latest estimated values for the reduction commitments in 2020 and 2030 along with projected emissions under two scenarios, *With Existing Measures* (WEM) and *With Additional Measures* (WAM) are set out in Table 3. The WEM scenario assumes that no future policy actions are taken beyond those already in place by the end of 2019, the latest inventory year. This scenario includes the effect of policies and measures that have been established by this date. The WAM scenario provides an alternative scenario which includes additional planned policies and measures beyond 2019, such as the effect of Ireland's 2019 Climate Action Plan which sets out a major programme of policies and measures aimed to help Ireland achieve its decarbonisation goals. It also includes the effect of implementation of AgClimatise⁷ which is the national climate and air roadmap for the agriculture sector and an updated Marginal Abatement Cost Curve for NH₃ emissions from the agriculture sector⁸ which outlines the latest information on the abatement options available for the agriculture sector. Furthermore, the government has submitted to the EU a National Air Pollution Control Programme⁹ to meet the 2030 ceilings as assigned by Directive 2016/2284.

Additional measures included in the WAM scenario are projected to bring NO_x emissions into compliance with the 2030 ceiling, as can be seen from Table 3 below. NH₃ emissions however remaining non-compliant initially, but with the adoption of abatement measures, this pollutant is forecasted to be in compliance for 2025 and 2030. Further measures will be required to bring emissions of NMVOC into compliance for 2030. It is projected that even with the inclusion of the flexibility mechanism the emission ceiling for that year will not be met.

6 Informative Inventory Report: <https://www.epa.ie/publications/monitoring--assessment/climate-change/air-emissions/irelands-unece-submissions-2021.php>

7 <https://www.gov.ie/en/press-release/a8823-publication-of-ag-climatise-national-climate-air-roadmap-for-the-agriculture-sector/>

8 <https://www.teagasc.ie/news--events/news/2020/reduce-ammonia-emissions.php>

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

Table 3. Projected emissions and reduction commitments for NEC relevant pollutants

Pollutant	Emissions (kilotonnes)			2020-2029 and 2030 Reduction Commitments (% reduction compared with 2005 levels)	
	2020	2025	2030	2020-2029	2030
Total SO ₂ <i>With Existing Measures</i>	10.99	8.17	6.34	25.48	10.92
Total SO ₂ <i>With Additional Measures</i>	10.99	6.57	5.56	-65%	-85%
Total NO _x <i>With Existing Measures*</i>	55.79	45.05	37.87	69.04	41.97
Total NO _x <i>With Additional Measures*</i>	55.81	41.47	33.47	-49%	-69%
Total NMVOC <i>With Existing Measures*</i>	68.21	68.71	70.44	56.96	51.64
Total NMVOC <i>With Additional Measures*</i>	68.21	68.24	69.23	-25%	-32%
Total NH ₃ <i>With Existing Measures</i>	126.74	130.42	129.92	118.37	113.59
Total NH ₃ <i>With Additional Measures</i>	124.65	114.45	112.74	-1%	-5%
Total PM _{2.5} <i>With Existing Measures</i>	11.64	10.39	10.52	15.53	11.18
Total PM _{2.5} <i>With Additional Measures</i>	11.64	9.94	9.88	-18%	-41%

* Article 4 (3) of the National Emission Ceiling Directive provides that emissions of NO_x and NMVOC from categories 3B (manure management) and 3D (agricultural soils) are not accounted for the purpose of complying with 2020 and 2030 ceilings. The scenarios in this table exclude emissions from these categories (3B and 3D) for the period 2020 to 2030.

Section 3 of this report provides some insight into current and historic trends of the five pollutants for which emission ceilings exist for 2020 and 2030. It also provides an assessment of projected future emissions in 2020 and 2030 of these pollutants, focusing on the *With Additional Measures* scenario.

A large number of other pollutants for which no ceilings exist under Directive 2016/2284 are also reported on 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. Detailed information on these pollutants is also provided in Ireland's Informative Inventory Report 2021.

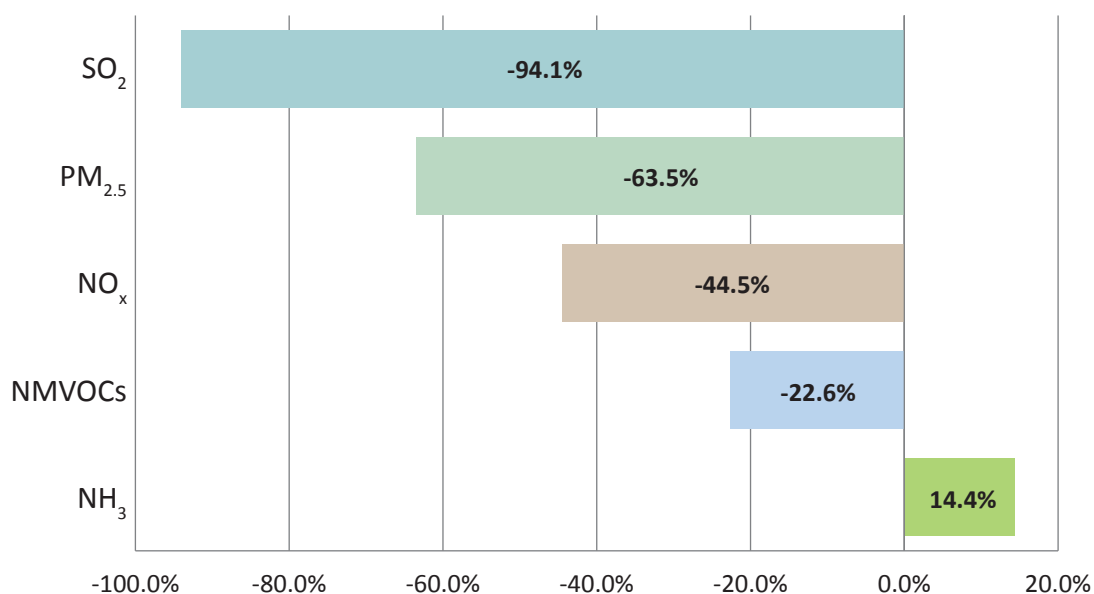
The emissions projections for 2020 and 2021 are impacted by the effects of the COVID 19 pandemic. Most notably this affects emissions associated with transport fuel use, including NO_x. The projected impact is not decisive however in relation to achieving/not achieving compliance with any of the 2020 emissions ceilings.

3. Key Air Pollutants under the NEC Directive

The Gothenburg Protocol to abate Acidification, Eutrophication and Ground-level Ozone was adopted on 30 November 1999. The Protocol set national emission ceilings for 2010 up to 2020 for four pollutants; sulphur dioxide (SO₂), nitrogen oxides (NO_x), volatile organic compounds (VOCs) and ammonia (NH₃) and was agreed based on an awareness of the adverse effects on human health and the environment of emissions of these air pollutants. Although Ireland has not officially ratified the Protocol, the EU has implemented its provisions via the National Emissions Ceiling Directive, setting out emissions ceilings for the five air pollutants described in this section.

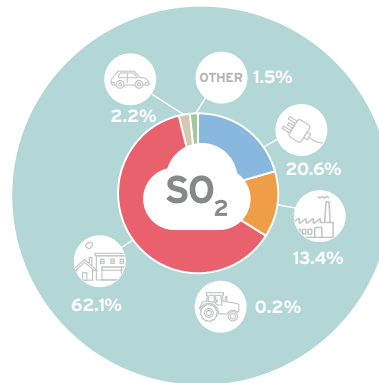
Ireland has seen big reductions in the emissions of most of these pollutants over the last thirty years as can clearly be seen in Figure 1 below. Despite this progress, challenges still remain to maintain a decreasing trend in the face of increasing economic activity, particularly in relation to emissions from Transport and Agriculture.

Figure 1: Percentage change in key NEC Air Pollutants 1990-2019



3.1 Sulphur Dioxide

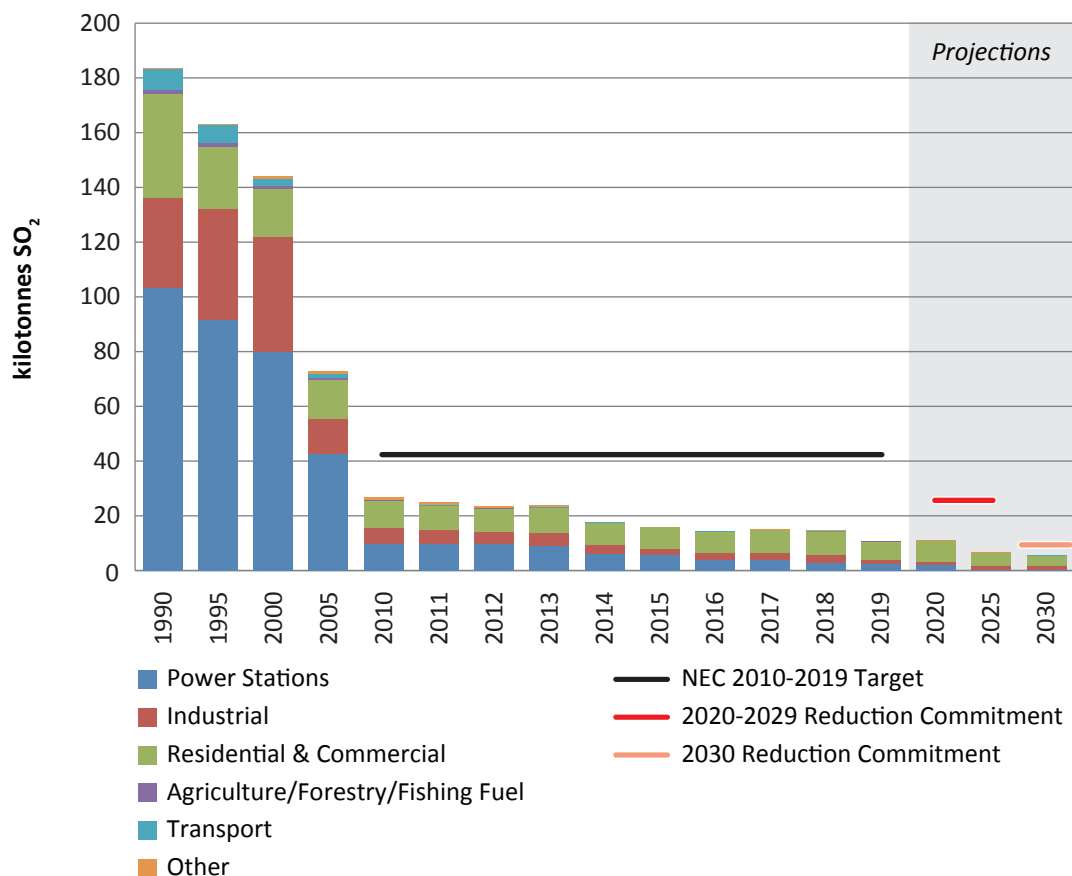
Sulphur dioxide (SO₂) is the major precursor to acid deposition, which is associated with the acidification of soils and surface waters and the accelerated corrosion of buildings and monuments. Emissions of SO₂ are derived from the sulphur in fossil fuels such as coal and oil used in combustion activities.



National Emissions Ceiling

Ireland's national emission ceiling for SO₂ under the NEC Directive is 42 kilotonnes (kt) to be achieved by 2010 and in each year after up to and including 2019. This is equivalent to a 77 per cent reduction from the 1990 baseline level of 183.6 kt SO₂ (Figure 2).

Figure 2: Trend in SO₂ emissions 1990-2030, current and future emission ceilings



Current and future trends in SO₂ emissions

Power stations and combustion of fossil fuels in residential and commercial sectors for heating are the two principal sources of SO₂ emissions, contributing 20.6 and 62.1 per cent respectively to the total in 2019. Combustion sources in the industrial sector accounted for 13.4 per cent in 2019. Total SO₂ emissions in 2010, and all subsequent years, are compliant with the 2010 ceiling.

In terms of the outlook for 2020, SO₂ emissions under the *With Additional Measures* scenario are projected to be 11.0 kt in 2020. The emission projections predict compliance with the 2020 emission reduction ceiling by 14.49 kt. In terms of 2030 total SO₂ emissions are projected to be 5.6 kt which is below the emission reduction ceiling for that year by 5.4 kt. Key sources of projected SO₂ emissions, similar to current trends, include fossil fuel combustion for electricity generation in power stations and emissions from fuel combustion within the residential, commercial and industry sectors. Projected emission levels are provided in Table 4.

Table 4 Projected SO₂ emissions in 2020 and 2030

Projected SO ₂ emissions	2020	2030
With Additional Measures Scenario (kt)	10.99	5.56
Projected Ceiling (kt)	25.48	10.92

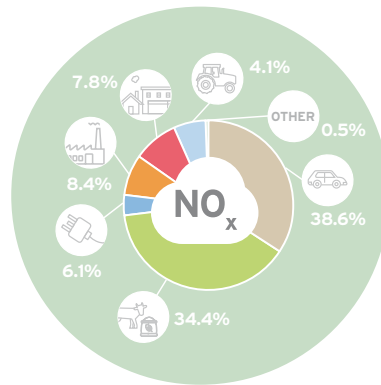
Historic SO₂ Emissions

SO₂ emissions in Ireland reduced considerably between 1990 and 2019. The latest estimates indicate a decrease of 94.1 per cent from 183.6 kt in 1990 to 10.9 kt in 2019. Emissions from Power stations and combustion in residential and commercial sectors decreased by 97.8 and 82.2 per cent respectively since 1990. The emissions from industrial sources decreased by 95.6 per cent from 1990 while the emissions in the transport sector decreased by 96.8 per cent. These large reductions reflect significant switching from the use of oil and solid fuels to natural gas, reduced sulphur content in coal and oil and implementation of abatement measures in electricity generation. Increased use of renewables rather than combustion of fossil fuels to meet increased electricity demand also contributes to this trend.

The remainder of SO₂ emissions are from combustion in oil refining, and combustion of fuels in agriculture, forestry, fishing. Emissions in these sectors decreased by 73.5 and 98.4 per cent, respectively since 1990.

3.2 Nitrogen Oxides

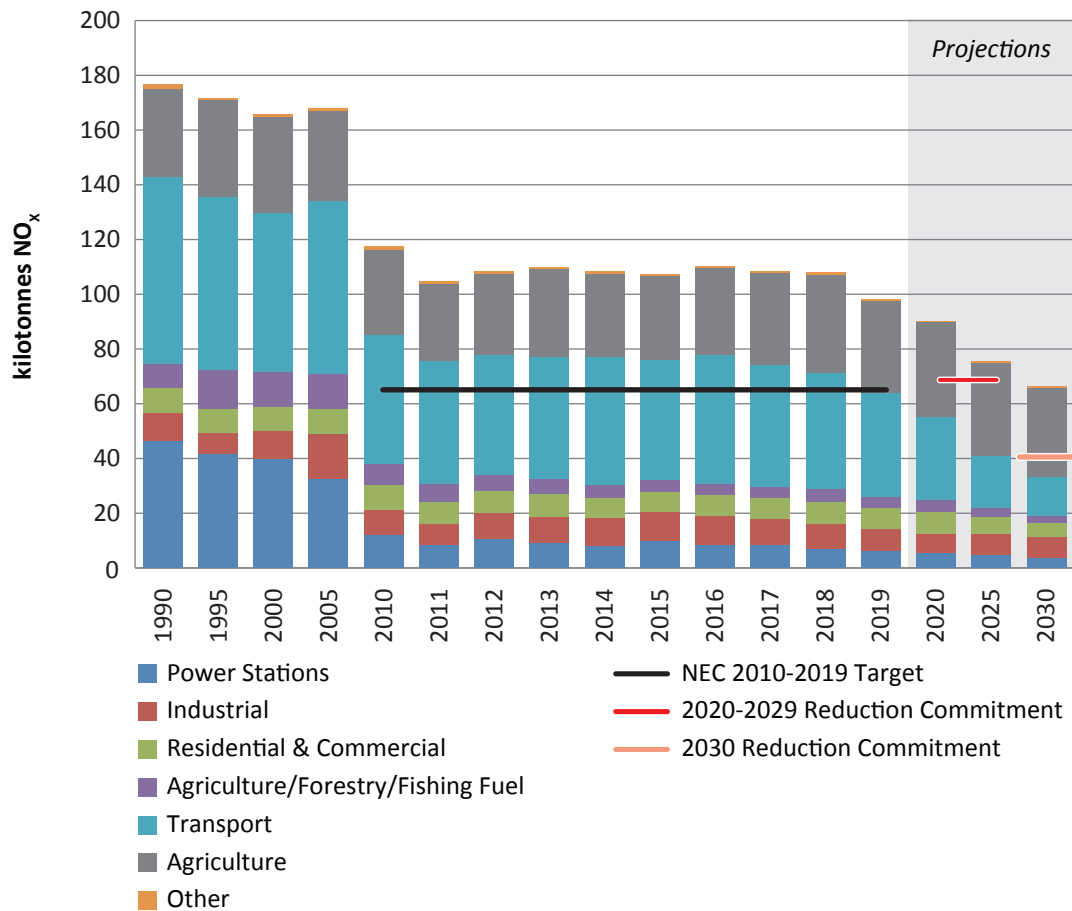
Emissions of **nitrogen oxides (NO_x)** contribute to acidification of soils and surface waters, ground level ozone formation and excess nitrogen or saturation in terrestrial ecosystems. Agriculture (as a result of both organic and synthetic nitrogen use) and fossil fuel combustion in power generation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



National Emissions Ceiling

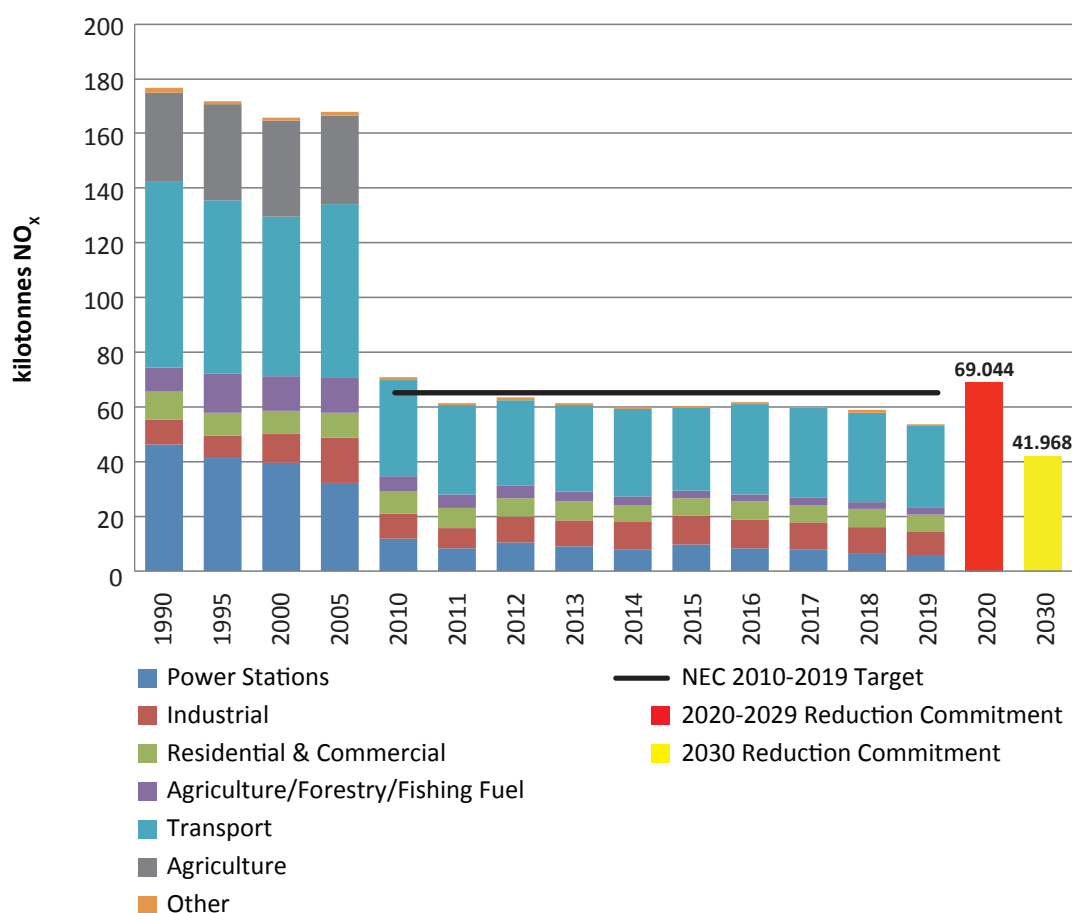
Ireland's national emission ceiling for NO_x under the NEC Directive is 65 kilotonnes (kt), to be achieved by 2010 and in each year after up to and including 2019. This is equivalent to a 63.2 per cent reduction from the 1990 baseline level of 176.6 kt NO_x. (Figure 3).

Figure 3: Trend in NO_x emissions 1990-2030, current and future emission ceilings



Directive (EU) 2016/2284 has a flexibility mechanism that allows Member States to make an adjustment to their Inventory for compliance purposes. This is allowed where non-compliance with national emission reduction commitments arise from applying improved emission inventory methods, updated in accordance with scientific knowledge. Ireland has applied for such an adjustment for NO_x emission estimates as improved inventory methods have resulted in non-compliance with national emission reduction commitments. Adjusted NO_x emissions are shown in Figure 4. Ireland exceeds the emission ceiling in 2010 and is compliant with the NO_x emission ceiling from 2011 onwards.

Figure 4: NO_x emissions 1990-2030 after use of flexibility mechanism, current and future emission ceilings



Current and future trends in NO_x emissions

The latest estimate is that 98.0 kt of NO_x was emitted in 2019. The transport sector, which mainly consists of road transport, is the principal source of NO_x emissions, contributing approximately 38.6 per cent of the total in 2019. Agriculture is the second biggest source of NO_x emissions, mainly from synthetic fertiliser application and emissions from urine and dung deposited by grazing animals, contributing approximately 34.4 per cent of the 2019 total. The industrial, power generation and residential/commercial sectors are the other main source of NO_x emissions, with contributions of 8.4 per cent, 6.1 per cent and 7.8 per cent respectively in 2019. The remainder of NO_x emissions emanate from combustion in the agriculture and other (refining and storage, solid fuel manufacture, fugitive emissions and waste) sectors, which together produced around 4.6 per cent of the total in 2019.

Overall NO_x emissions are projected to be in non-compliance with the 2020 emission reduction ceiling by 13.2 kt under the With Additional measures scenario. Under the same scenario the projections estimate compliance with the 2030 emission reduction ceiling by just over 8.5 kt (Table 5)¹⁰. Transport accounts for the largest share of projected emissions in 2020 and 2030 (54.8 and 42.7 per cent respectively).

Table 5. Projected NO_x emissions in 2020 and 2030

Projected NO _x emissions	2020	2030
With Additional Measures Scenario (kt)	55.81	33.47
Ceiling (kt)	69.04	41.97

Historic NO_x Emissions

NO_x emissions in Ireland have decreased by 44.5 per cent between 1990 and 2019 and emissions have decreased by 49.9 kt, or 33.7 per cent since 2008. This reduction was achieved due to improved abatement in Moneypoint power plant, reduced demand for clinker/cement and a reduction in emissions from road transportation. The application of low-NO_x burner technology in several major power stations and the increased use of natural gas have reduced NO_x emissions from electricity generation by 87.1 per cent on 1990 levels, even though electricity total final consumption has increased by 139.5 per cent over the same period. Emissions of NO_x from the coal-fired power plant at Moneypoint have decreased by 98.8 per cent between 1990 and 2019.

Road transport has seen a decline in emissions of 21.7 kt, or 36.5 per cent, between 2008 and 2019 due to the economic recession initially and in later years improvements in vehicle technologies. Progress towards limiting emissions to below the ceiling of 65 kt for NO_x in 2010 to 2019 has however proved difficult, even with large reductions in emissions from power stations and road transport in recent years. Ireland is 33.0 kt above the 2010 emission ceiling in 2019. The NO_x figures for transport reported here are based on, fuel used, and not fuel sold, and therefore take into account fuel tourism. This means that the impact on emissions of fuel sold in the Republic of Ireland for consumption across the border in Northern Ireland is removed as allowed for under the *Guidelines for Reporting Emissions and Projections Data under the Convention on Long-range Transboundary Air Pollution*¹¹, paragraph 23. It is estimated that fuel tourism accounted for 3.0 kt of NO_x in 2019.

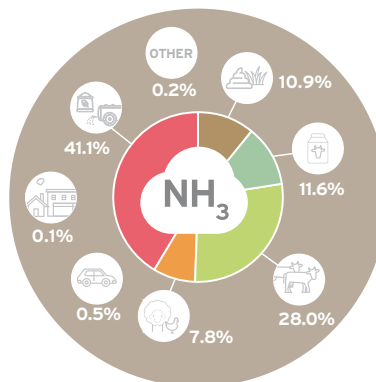
The increase in vehicle numbers and in road transport in general sustained emissions of NO_x through the period 2000 to 2019, even though improved technologies such as Selective Catalytic Reduction (SCR) are reducing the emissions from individual vehicles.

¹⁰ Article 4 (3) of the National Emission Ceiling Directive provides that emissions of NO_x and NMVOCs from categories 3B (manure management) and 3D (agricultural soils) are not accounted for the purpose of complying with 2020 and 2030 ceilings. The scenarios exclude emissions from these categories (3B and 3D) for the period 2020 to 2030 in this table.

¹¹ https://unece.org/DAM/env/documents/2013/air/eb/ece.eb.air.125_E_ODS.pdf

3.3 Ammonia

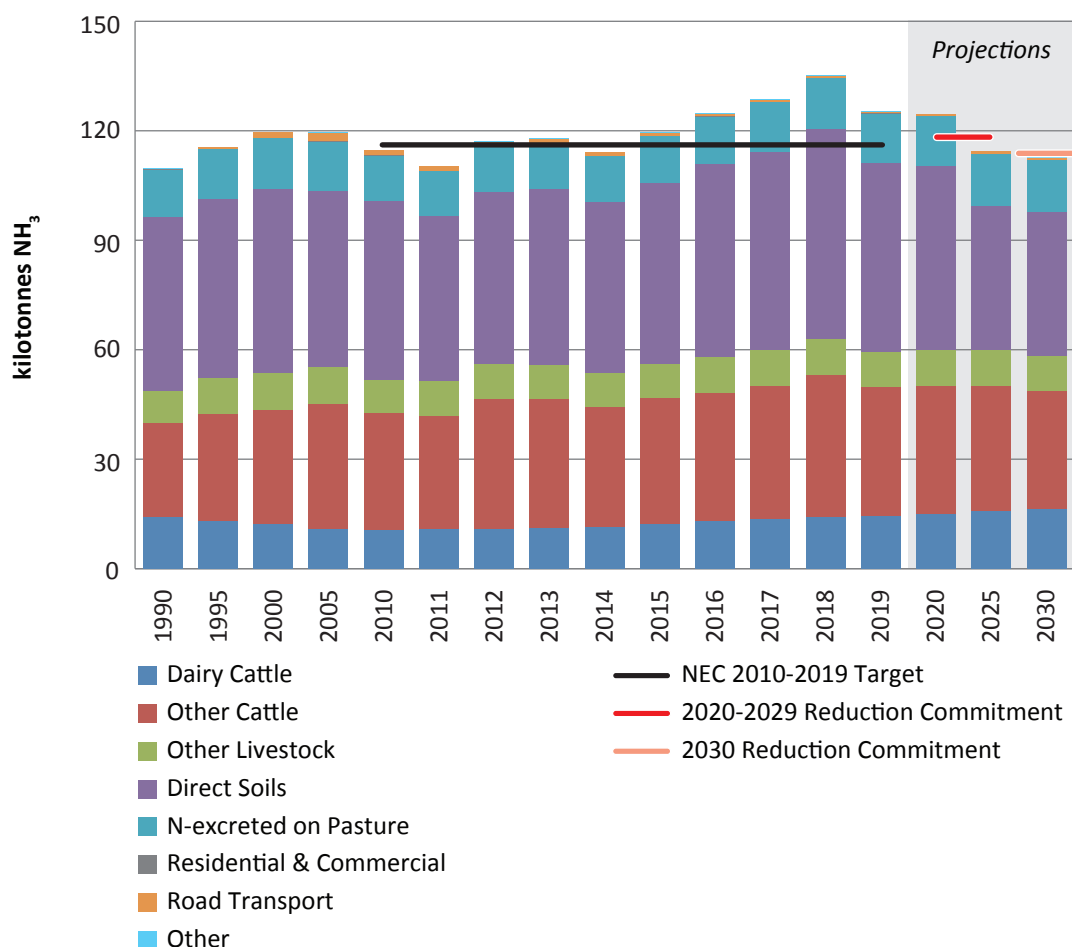
Ammonia (NH₃) emissions are associated with acid deposition/rain and the formation of secondary particulate matter. The agriculture sector accounts for virtually all (99.4 per cent) of ammonia emissions in Ireland. Grasslands ultimately receive the bulk of the 42 million tonnes (Mt) of animal manures (equivalent to 539,000 tonnes of nitrogen) produced annually in Ireland along with nitrogen fertilisers which amounted to 365,989 tonnes (as nutrient nitrogen) in 2019. A proportion of the nitrogen in these inputs is volatilised into the air as ammonia.



National Emissions Ceiling

Ireland's national emission ceiling for NH₃ under the NEC Directive is 116 kilotonnes (kt), to be achieved by 2010 and in each year up to and including 2019. This is equivalent to a 5.8 per cent permitted increase in emissions from the 109.6 kt 1990 baseline figure (Figure 5).

Figure 5: Trend in NH₃ emissions 1990-2030, current and future emission ceilings



Current and future trends in NH₃ emissions

NH₃ emissions decreased in 2019 by 9.8 kt, primarily as a result of the fact that in 2018 emissions were at their highest level across the timeseries at 135.2 kt, but also helped by increased uptake of measures such as 'low emission slurry spreading' and use of protected urea fertilisers. Emissions in 2018 increased by 5.1 per cent in response to higher concentrate feed inputs in that year in response to drought conditions which curtailed grass production and increased fertiliser nitrogen use. Road transport produces a small proportion of emissions of ammonia (< 1 per cent) mainly from petrol passenger cars with three-way catalysts.

The emissions of NH₃ are compliant with the 2010 ceiling for years 2010, 2011 and 2014 only with Ireland exceeding the emission ceiling in 2012, 2013, 2015, 2016, 2017, 2018 and 2019. Limiting and reducing NH₃ emissions into the future will require the ambitions within the AgClimatise Strategy¹² to be fully implemented at farm level to meet the 2030 target of a 5% reduction on 2005 emission levels as assigned by Directive 2016/2284.

Total NH₃ emissions under the With Additional Measures scenario are projected to be 124.65 kt in 2020 which is an exceedance of the 2020 emission reduction ceiling by 6.3 kt (Table 6). Post 2020, emissions reduce to 112.7 kt in 2030. Ireland's 2030 emission ceiling of a 5 per cent reduction on 2005 levels results in a ceiling of 113.6 kt in 2030 which under the With Additional Measures scenario is met by a margin of 0.85 kt. Under this scenario, measures as identified under the recent Teagasc Marginal Abatement Cost Curve (MACC) of NH₃ emissions to 2030 and the measures outlined in the DAFM strategy AgClimatise are assumed to be implemented.

Table 6: Projected NH₃ emissions in 2020 and 2030

Projected NH ₃ emissions	2020	2030
With Additional Measures scenario (kt)	124.65	112.74
Ceiling (kt)	118.37	113.59

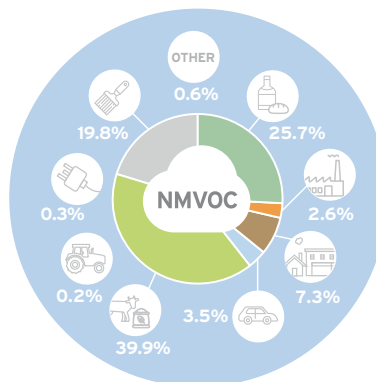
Historic NH₃ Emissions

The emissions in 2019 were 15.8 kt or 14.4 per cent higher than emissions in 1990. Animal manures produce about 90 per cent of ammonia emissions in agriculture and chemical fertilisers and road transport account for the remainder. It is estimated that approximately 18 per cent of the nitrogen in animal manures and 3 per cent of nitrogen contained in chemical fertilisers is lost to the atmosphere as NH₃ on average. The NH₃ emissions trend is consequently largely determined by the cattle population and showed a steady increase up to 127.5 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 NH₃ emissions in the period 2000 to 2011. Recent increases in cattle numbers and fertiliser use have seen NH₃ emissions above those in 2011 for all years to 2019. In 2019 approximately 16% of cattle slurry was applied using low emission techniques and there was a fourfold increase in the use of inhibited urea fertiliser products. This indicates that these measures which were identified in the Teagasc MACC and the AgClimatise are beginning to be implemented at farm level.

¹² <https://www.gov.ie/en/press-release/a8823-publication-of-ag-climatise-national-climate-air-roadmap-for-the-agriculture-sector/>

3.4 Non-Methane Volatile Organic Compound (NMVOC) emissions

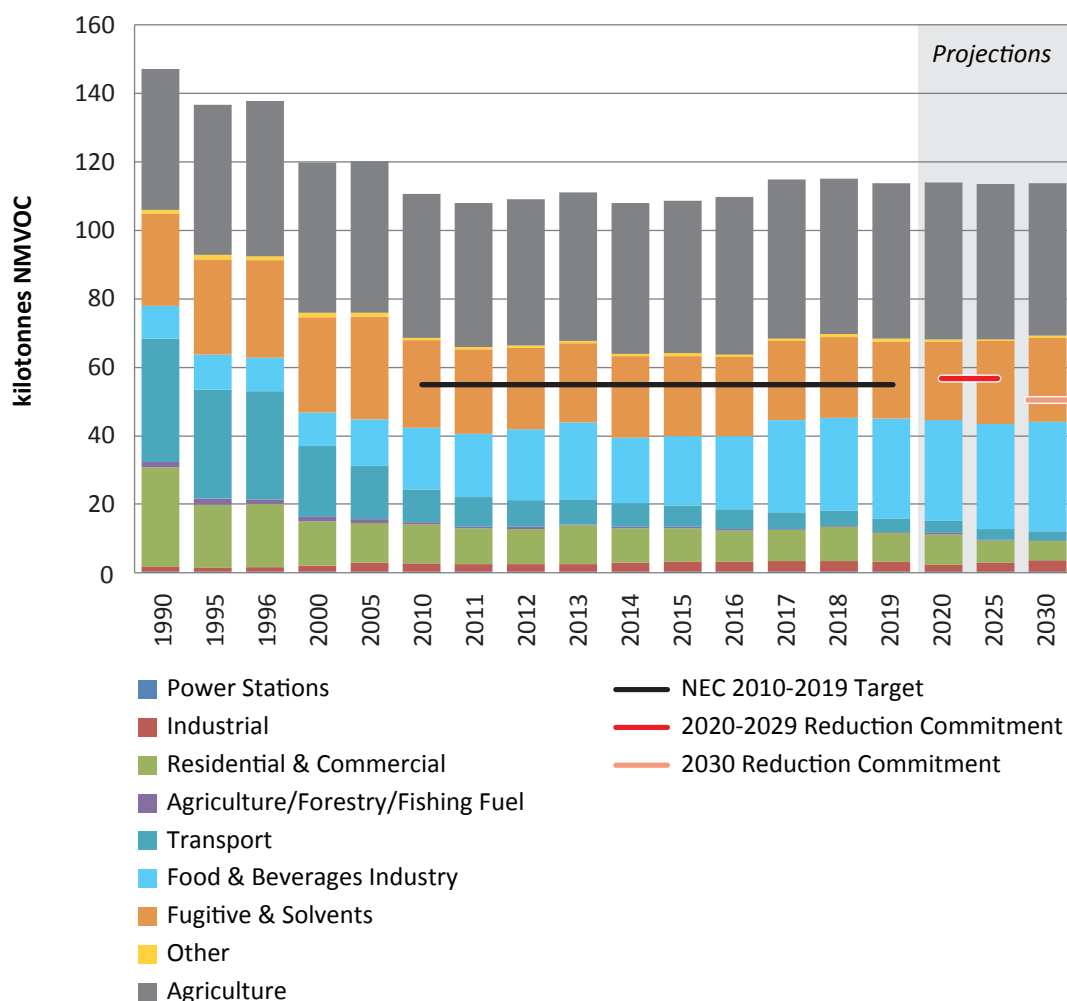
Non-methane volatile organic compounds (NMVOC) are emitted as gases by a wide array of products including paints, paint strippers, glues, cleaning agents and adhesives. They also arise as a product of incomplete combustion of fuels, from the storage and handling of animal manure and fertilisers in agriculture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



National Emissions Ceiling

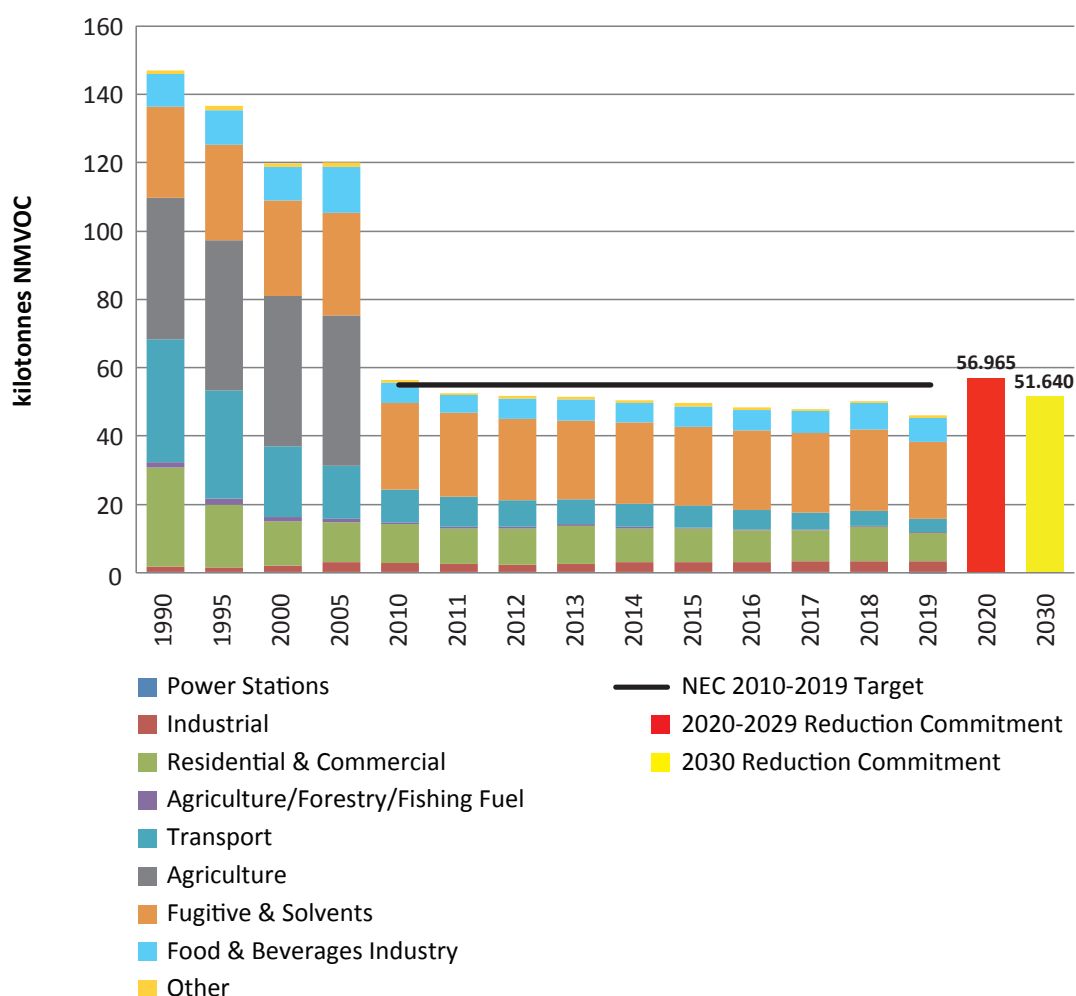
The EU National Emissions Ceilings (NEC) Directive has set a ceiling of 55 kilotonnes (kt) of NMVOC emissions in Ireland by 2010 and in each year up to and including 2019. This is equivalent to a 62.6 per cent reduction in emissions from the 147.0 kt 1990 baseline figure (Figure 6).

Figure 6: Trend in NMVOC emissions 1990-2030, current and future emission ceilings



Directive (EU) 2016/2284 has a flexibility mechanism that allows Member States to make an adjustment to their Inventory for compliance purposes. This is allowed where non-compliance with national emission reduction commitments arise from applying improved emission inventory methods, updated in accordance with scientific knowledge. Ireland has applied for such an adjustment for NMVOC emission estimates as improved inventory methods have resulted in non-compliance with national emission reduction commitments. Adjusted NMVOC emissions are shown below (Figure 7). Ireland exceeds the emission ceiling in 2010 and is compliant with the NMVOC emission ceiling from 2011 to 2019.

Figure 7: NMVOC emissions 1990-2030 after use of flexibility mechanism, current and future emission ceilings



Current and future trends in NMVOC emissions

The main sources of NMVOC emissions in Ireland are from manure management in agriculture, solvent use and the food and beverages industry. These sources produced 40.0 per cent, 19.7 per cent and 25.7 per cent, respectively of the annual total in 2019. Coal burning in the residential sector is another important but declining source as coal consumption decreases. Emissions from stationary combustion of fossil fuels across all sectors; power stations, industrial, residential, commercial and agriculture account for 10.4 per cent of national total NMVOC emissions in 2019. Transport emissions account for 3.5 per cent of national total emissions of NMVOC, mainly from exhaust and fugitive releases from gasoline vehicles.

Emissions in 2019, at 113.8 kt, are not compliant with the 2010 ceiling, with National total emissions since 2010 on average, 55.9 kt above the 2010 emission ceiling. The inclusion of NMVOC emissions from manure management and fertiliser use in Ireland's four previous submissions, and the inclusion of emissions from the food and beverages industry resulting from increased distillation activity have added 66.6 kt of NMVOC, effectively leading to national emissions that are between two and three times higher with the inclusion of these sources.

Total NMVOC emissions under the WAM scenario¹³ are projected to be 68.2 kt in 2020 (Table 7). The emission projections predict non-compliance with the 2020 ceiling by approximately 11.25 kt under the With Additional Measures scenario. Emissions in 2030 are projected to be 69.2 kt which is 17.59 kt above the emission reduction ceiling for 2030. Key drivers in emissions over the projected period include solvents and other product use, and emissions from food and beverages industry.

Table 7 also presents a scenario where the NMVOC emissions from source category 2.H (spirit production) are excluded, as this source was not included in the national inventory at the time the 2020 and 2030 reduction ceilings were established. Emissions in 2030 are projected to be 45.84 kt in this scenario, which is still 2.2 kt above the emission reduction ceiling for 2030. Thus, even considering a potential exclusion of spirit production from compliance assessment via the flexibility mechanism, additional measures will still be necessary to reduce NMVOC emissions in order to achieve compliance.

Table 7. Projected NMVOC emissions in 2020 and 2030

Projected NMVOC emissions	2020	2030
<i>(excluding emissions from agricultural categories 3B and 3D)</i>		
With Additional Measures (kt)	68.21	69.23
Ceiling (kt)	56.96	51.64
<i>(excluding emissions from agricultural categories 3B and 3D and source category 2.H (spirit production))</i>		
With Additional Measures (kt)	48.62	48.01
Ceiling (kt)	50.56	45.84

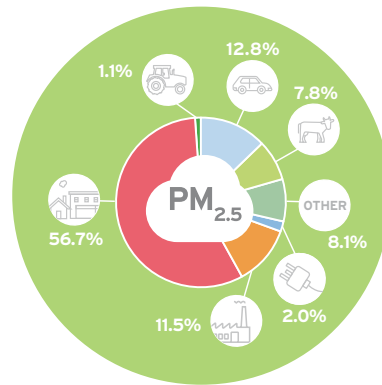
Historic NMVOC Emissions

Reductions corresponding to 22.6 per cent of NMVOC emissions have been achieved from 1990 to 2019. Technological controls for NMVOCs in motor vehicles, which have led to a significant reduction in emissions from road transport, have largely been responsible for the decrease in overall emissions along with reduced use of coal and peat as a source of heating in the residential sector. On the other hand, emissions from the agriculture sector have increased by 10.4 per cent since 1990 with expanded production. Emissions from the food and beverage industry, mainly spirit production have increased by 204.3 per cent over the same period. Indeed, there has been a doubling of emissions from this source in the last decade.

¹³ Article 4 (3) of the National Emission Ceiling Directive provides that emissions of NO_x and NMVOCs from categories 3B (manure management) and 3D (agricultural soils) are not accounted for the purpose of complying with 2020 and 2030 ceilings. The scenarios exclude emissions from these categories (3B and 3D) for the period 2020 to 2030 in this table.

3.5 Fine Particulate matter (PM_{2.5}) emissions

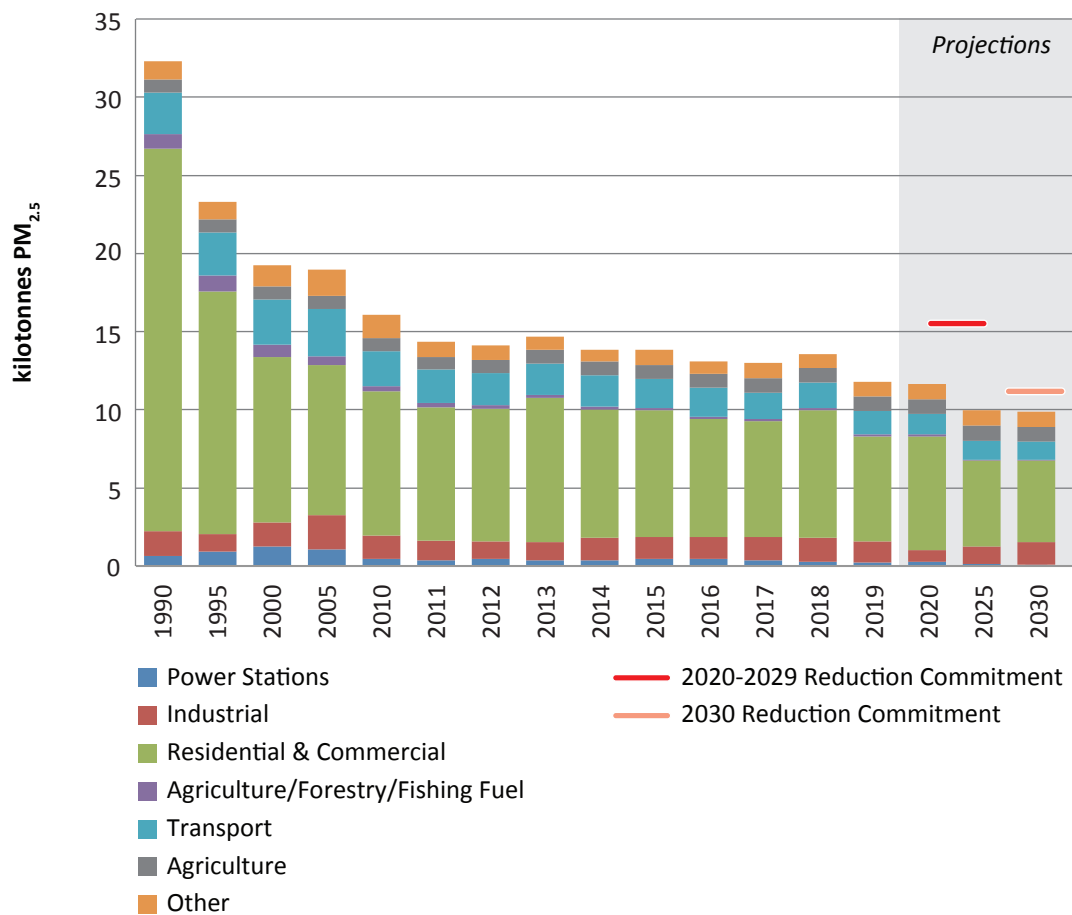
There are many sources of particulate matter (dust) including vehicle exhaust emissions, soil and road surfaces, construction works and industrial emissions. Particulate matter can be formed from reactions between different pollutant gases. Small particles can penetrate the lungs and cause damage. These are known as PM₁₀ (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. Fine particulate matter PM_{2.5} is responsible for significant negative impacts on human health.



National Emissions Ceiling

There is no emission ceiling for PM_{2.5} for 2018 as Directive 2001/81/EC did not set a ceiling for this pollutant. Directive 2016/2284 sets emission ceilings for PM_{2.5} for 2020 and 2030 (Figure 8).

Figure 8: Trend in PM_{2.5} emissions 1990-2030, and future emission ceilings



Current and future trends in PM_{2.5} Emissions

The main sources of PM_{2.5} emissions in Ireland are from combustion of fossil fuels residential & commercial sectors which together produced 56.7 per cent of the annual total in 2019. PM_{2.5} emissions in the Other sector account for 8.1 per cent of the total in 2019. These emissions arise from Manufacture of solid fuels (such as peat briquettes), 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. Transport contributed 1.5 kt (12.8 per cent share) to the national total in 2019. Emissions from Agriculture arise from housing and storage of manure and Inorganic nitrogen fertilisers, together accounting for 0.9 kt, 7.8 per cent of the national total in 2019.

Total PM_{2.5} emissions under the With Additional Measures scenario are projected to be 11.6 kt in 2020 and 9.9 kt in 2030 (Table 8). The emission projections predict compliance with both the 2020 and 2030 emission ceilings by a margin of 3.89 kt and 1.29 kt, respectively. Key contributors to emissions over the projected period include the combustion of fossil fuels in the residential, commercial and manufacturing industry sectors.

Table 8. Projected PM_{2.5} emissions

Projected PM _{2.5} emissions	2020	2030
With Additional Measures scenario (kt)	11.64	9.88
Ceiling (kt)	15.53	11.18

Historic PM_{2.5} Emissions

Total PM_{2.5} emissions in 2019, at 11.8 kt, show a reduction of 63.5 per cent on the 1990 level. Reduced use of coal and peat in the residential & commercial sectors, with increased use of gasoil, kerosene and natural gas has resulted in 72.6 per cent lower emissions between 1990 and 2019 in those combined sectors. Agriculture emissions have increased by 7.7 per cent from their 1990 level largely as a result of the increased cattle herd. Emissions from Transport sector, dominated by Road Transport have been decreasing since 2005, with a 43.7 per cent reduction between 1990 and 2019. 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), which has in turn been offset somewhat by increases in vehicle numbers over the time series.

4. Air Pollutants with no NEC Directive ceiling

The reporting obligations outlined in Article 8 and Annex I of the Directive (EU) 2016/2284 also include the mandatory reporting of emissions 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 of annual emissions of arsenic, chromium, copper, nickel, selenium, Zinc and total suspended particulates (TSP) is also undertaken. Emission ceilings are not set for any of the aforementioned pollutants in the Directive.

A brief overview of the pollutants involved and the trend in emissions of these pollutants over time is presented below. A summary table (Table 9) indicates 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
Road Transport	CO, Cu, Zn, BC	PM ₁₀ , Pb, Cr,
Power Stations	-	CO, Cd, As, Cr, Ni, Se,
Combustion in manufacturing industries	Cd,	CO, PM ₁₀ , Cd, Hg, Cr, Ni, Zn, BC
Industrial Processes	TSP	PM ₁₀ , Cd, Cu, Zn,
Residential Combustion	Pb, Hg, Se, PAH, BC Dioxins & Furans	CO, PM ₁₀ , Cd, Cr, Zn, PCB
Commercial Combustion	Ni	-
Agriculture	HCB, PM ₁₀	TSP
Industrial waste incineration	As, Cr,	-
Solid waste disposal (landfills)	-	Hg
Vehicle and building fires and waste burning	PCB	Dioxins & Furans

Carbon monoxide (CO) emissions continue to decline, driven by major reductions due to three-way catalysts in gasoline vehicles in Road Transport, the principal source of CO, and a large decrease in the use of solid fuels for space heating in the Residential sector. National total CO emissions have reduced by 81.6 per cent over the period 1990 to 2019.

Emissions of **coarse particulate matter** (PM₁₀) have reduced by 41.7 per cent since 1990. The main determinant of the trend in PM₁₀ emissions is the Agriculture sector with a 31.8 per cent share of the national total, and combustion in the Residential and Commercial/Institutional sectors combined with 24.7 per cent share of the total in 2019. Total suspended particulate emissions have decreased by 25.4 per cent, since 1990. Total suspended particulates emissions are driven by a wide range of minor sources. **Black Carbon** (BC) emissions have decreased by 62.7 per cent, between 1990 and 2019. The main driver of the BC trend is emissions from Transport where technological advances and changes to the age structure (towards newer vehicles) are the main drivers.

Over the period 1990–2019, total national **lead** (Pb) emissions have decreased by 97.2 per cent with the Pb emissions trend largely determined by the Road 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.

Total national emissions of **cadmium** (Cd) have decreased by 58.0 per cent. 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 60.3 per cent between 1990 and 2019. Emissions from Manufacturing Industries and Construction are the largest source of Hg. Emissions from the Residential and Commercial/Institutional sectors are also an important source of Hg.

Emissions of **arsenic** (As) are largely dominated by incineration of hazardous and clinical wastes and crematoria. In the past Public Electricity and Heat Production was the largest however both a reduction in coal and peat power generation and move towards cleaner fuels has reduced its contribution substantially.

Emissions of **chromium** (Cr) have decreased by 48.6 per cent between 1990 and 2019. Transport and Waste Incineration are the two main sources.

Total **copper** (Cu) emissions in Ireland were steadily increasing over the 1990–2008 period and have been steadily decreasing since. Total emissions in 2019 were 10.6 per cent lower than in their peak in 2007 but they are 76.1 per cent higher than in 1990.

National total emission estimates of **nickel** (Ni) were steadily increasing over the 1990–1999 period and have been generally decreasing from 1999 onwards. The main contributor to the trend is combustion of fuels in the Manufacturing Industries and Construction sector. Similar to other Heavy Metal emission estimates, the Residential and Commercial/Institutional sectors are important contributors to the total.

The main contributor to national **selenium** (Se) emissions has been fuel combustion in the Residential and Commercial/Institutional sectors which combined accounted for 69.4 per cent of selenium emissions in 2019.

National total emissions of **zinc** (Zn) have fallen by 62.7 per cent between 1990 and 2019. In the 1990–2001 period, the main determinant of the trend in zinc emissions was Metal Production. Since the closure of Ireland's only steel plant in 2001, fuel combustion in the Transport and Manufacturing Industries and Construction sectors are the largest sources.

Dioxin and **furan** emission levels decreased having reduced by 68.9 per cent between 1990 and 2019. The main contributors to national emissions are the combined Residential and Commercial/Institutional sectors, with a 69.5 per cent share of total emissions in 2019.

Hexachlorobenzene (HCB) emissions from secondary aluminium processing were the largest source of HCB emissions in Ireland up to 1996. Since then the use of pesticides in agriculture is the largest source accounting for 87.0 per cent of national emissions in 2019.

Emissions of **polychlorinated biphenyls** (PCBs) have decreased by 80.0 per cent between 1990 and 2019. Emissions from the Waste sector, specifically vehicle and building fires and other burning such as bonfires and household waste are the largest sources in 2019.

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. Declines in the use of coal and sod peat have led to reduced emissions from these sectors.

Appendix – Emissions of key NEC Directive Air Pollutants, 1990-2019

	SO ₂	NO _x	NMVOC	NH ₃	PM _{2.5}
			kilotonnes		
1990	183.642	176.632	147.045	109.612	32.314
1991	183.740	179.209	148.144	111.601	32.091
1992	171.367	186.030	144.150	114.393	28.032
1993	162.262	176.955	141.535	113.778	27.419
1994	177.371	175.386	138.154	114.834	25.076
1995	163.236	171.750	136.642	115.570	23.299
1996	150.091	175.578	137.714	119.859	23.693
1997	168.536	165.985	134.087	122.957	21.548
1998	178.621	169.961	135.394	127.481	22.644
1999	160.874	167.567	126.673	125.215	19.238
2000	143.901	165.921	119.841	119.661	19.282
2001	141.980	166.923	120.481	119.801	19.097
2002	106.402	158.834	120.773	120.286	18.265
2003	82.440	160.655	119.617	120.353	18.056
2004	73.124	164.131	119.274	117.735	18.213
2005	72.805	167.923	120.092	119.564	18.948
2006	60.740	163.622	120.196	121.219	18.351
2007	54.947	157.430	119.289	114.453	17.657
2008	45.631	147.886	116.042	116.543	17.617
2009	32.655	124.038	113.836	116.748	16.940
2010	26.671	117.448	110.730	114.810	16.059
2011	24.870	104.775	107.924	110.432	14.351
2012	23.504	108.244	109.130	117.077	14.129
2013	23.761	109.764	110.990	117.918	14.658
2014	17.591	108.199	108.013	114.238	13.848
2015	15.891	107.468	108.543	119.525	13.818
2016	14.444	110.176	109.798	124.819	13.094
2017	14.987	108.167	114.849	128.635	12.989
2018	14.622	107.954	115.093	135.214	13.561
2019	10.874	98.031	113.743	125.404	11.790

An Gníomhaireacht um Chaomhnú Comhshaoil

Tá an Gníomhaireacht um Chaomhnú Comhshaoil (GCC) freagrach as an gcomhshaoil a chaomhnú agus a fheabhsú mar shócmhainn luachmhar do mhuintir na hÉireann. Táimid tiomanta do dhaoine agus don chomhshaoil a chosaint ar thionchar díobhálach na radaíochta agus an truailithe.

Is féidir obair na Gníomhaireachta a roinnt ina trí phríomhréimse:

- Rialú:** Déanaimid córais éifeachtacha rialaithe agus comhlíonta comhshaoil a chur i bhfeidhm chun torthaí maithe comhshaoil a sholáthar agus chun díriú orthu siúd nach gcloíonn leis na córais sin.
- Eolas:** Soláthraímid sonraí, faisnéis agus measúnú comhshaoil atá ar ardchaighdeán, spriocdhírthe agus tráthúil chun bonn eolais a chur faoin gcinnteoireacht ar gach leibhéal.
- Tacaíocht:** Bímid ag saothrú i gcomhar le grúpaí eile chun tacú le comhshaoil atá glan, táirgiúil agus cosanta go maith, agus le hiompar a chuirfidh le comhshaoil inbhuanaithe.

Ár bhFreagrachtaí

CEADÚNÚ

Déanaimid na gníomhaíochtaí seo a leanas a rialú ionas nach ndéanann siad dochar do shláinte an phobail ná don chomhshaoil:

- saoráidí dramhaíola (m.sh. láithreáin líonta talún, loisceoirí, stáisiúin aistrithe dramhaíola);
- gníomhaíochtaí tionsclaíoch ar scála mór (m.sh. déantúsaíocht cógaisíochta, déantúsaíocht stroighne, stáisiúin chumhachta);
- an diantalmhaíocht (m.sh. muca, éanlaith);
- úsáid ghlanscartha agus scaoileadh rialaithe Orgánach Géinmhodhnaithe (OGanna);
- foinsí radaíochta ianúcháin (m.sh. trealamh x-gha agus radaiteiripe, foinsí tionsclaíoch);
- áiseanna móra stórála peitрил;
- sceitheadh fuíolluisce;
- gníomhaíochtaí dumpála ar farraige.

FORFHEIDHMIÚ NÁISIÚNTA I LEITH CÚRSAÍ COMHSHAOIL

- Clár náisiúnta iniúchtaí agus cigireachtaí a dhéanamh gach bliain ar shaoráidí a bhfuil ceadúnas ón nGníomhaireacht acu.
- Maoirseacht a dhéanamh ar fhreagrachtaí cosanta comhshaoil na n-údarás áitiúil.
- Caighdeán an uisce óil, arna sholáthar ag soláthraithe uisce phoiblí, a mhaoirsiú.
- Obair le húdarás áitiúla agus gníomhaireachtaí eile chun dul i ngleic le coireacht comhshaoil trí chomhordú a dhéanamh ar líonra forfheidhmiúcháin náisiúnta, díriú ar chiontóirí, agus maoirsiú a dhéanamh ar fheabhsúcháin.
- Cur i bhfeidhm rialachán ar nós na Rialachán um Dhramhthrealamh Leictreach agus Leictreonach (WEEE), um Shrian ar Shubstaintí Guaiseacha agus na Rialachán um rialú ar shubstaintí a ídionn an ciseal ózóin.
- An dlí a chur orthu siúd a bhriseann dlí an chomhshaoil agus a dhéanann dochar don chomhshaoil.

BAINISTÍOCHT UISCE

- Monatóireacht agus tuairisciú a dhéanamh ar cháilíocht aibhneacha, lochanna, uisce idirchreasa agus cósta na hÉireann, agus screamhuiscí; leibhéil uisce agus sruthanna aibhneacha a thomhas.
- Comhordú náisiúnta agus maoirsiú a dhéanamh ar an gCreat-Treoir Uisce.
- Monatóireacht agus tuairisciú a dhéanamh ar Cháilíocht an Uisce Snámha.

MONATÓIREACHT, ANAILÍS AGUS TUAIRISCIÚ AR AN GCOMHSHAOIL

- Monatóireacht a dhéanamh ar cháilíocht an aeir agus Treoir an AE maidir le hAer Glan don Eoraip (CAFÉ) a chur chun feidhme.
- Tuairisciú neamhspleách le cabhrú le cinnteoireacht an rialtais náisiúnta agus áitiúil (m.sh. tuairisciú tréimhsíúil ar Staid Chomhshaoil na hÉireann agus Tuarascálacha ar Tháscairí).
- Rialú Astaíochtaí na nGás Ceaptha Teasa in Éirinn.
- Fardail agus réamh-mheastacháin na hÉireann maidir le gás ceaptha teasa a ullmhú.
- An Treoir maidir le Trádáil Astaíochtaí a chur chun feidhme i gcomhair breis agus 100 de na táirgeoirí dé-ocsaíde carbóin is mó in Éirinn.

TAIGHDE AGUS FORBAIRT COMHSHAOIL

- Taighde comhshaoil a chistiú chun brúnna a shainaithint, bonn eolais a chur faoi bheartais, agus réitigh a sholáthar i réimsí na haeráide, an uisce agus na hinbhuanaitheachta.

MEASÚNÚ STRAITÉISEACH COMHSHAOIL

- Measúnacht a dhéanamh ar thionchar pleannanna agus clár beartaithe ar an gcomhshaoil in Éirinn (m.sh. mórfheananna forbartha).

COSAINN RAIDEOLAÍOCH

- Monatóireacht a dhéanamh ar leibhéil radaíochta, agus measúnacht a dhéanamh ar a oiread is atá muintir na hÉireann gan chosaint ar an radaíocht ianúcháin.
- Cabhrú le pleannanna náisiúnta a fhorbairt le haghaidh éigeandálaí ag eascairt as tairmí núicléacha.
- Monatóireacht a dhéanamh ar fhorbairtí thar lear a bhaineann le saoráidí núicléacha agus leis an tsábháilteacht raideolaíochta.
- Sainseirbhísí cosanta ar an radaíocht a sholáthar, nó maoirsiú a dhéanamh ar sholáthar na seirbhísí sin.

TREOIR, FAISNÉIS INROCHTANA AGUS OIDEACHAS

- Comhairle agus treoir a chur ar fáil d'earnáil na tionsclaíochta agus don phobal maidir le hábhair a bhaineann le caomhnú an chomhshaoil agus leis an gcosaint raideolaíoch.
- Faisnéis thráthúil ar an gcomhshaoil ar a bhfuil fáil éasca a chur ar fáil chun rannpháirtíocht an phobail a spreagadh sa chinnteoireacht i ndáil leis an gcomhshaoil (m.sh. Timpeall an Tí, Mapaí Radóin).
- Comhairle a chur ar fáil don Rialtas maidir le hábhair a bhaineann leis an tsábháilteacht raideolaíoch agus le cúrsaí práinnfhreagartha.
- Plean Náisiúnta Bainistíochta Dramhaíola Guaisí a fhorbairt chun dramhaíl ghuaiseach a chosc agus a bhainistiú.

MÚSCAILT FEASACHTA AGUS ATHRÚ IOMPRAÍOCHTA

- Feasacht comhshaoil níos fearr a ghiniúint agus dul i bhfeidhm ar athrú iompraíochta dearfach trí thacú le gnóthais, le pobail agus le teaghlaigh a bheith níos éifeachtúla ar acmhainní.
- Tástáil le haghaidh radóin a chur chun cinn i dtithe agus in ionaid oibre, agus gníomhartha leasúcháin a spreagadh nuair is gá.

BAINISTÍOCHT AGUS STRUCTÚR AN GCC

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

- An Oifig um Inbhuanaitheacht Comhshaoil
- An Oifig Forfheidhmithe i leith cúrsaí Comhshaoil
- An Oifig um Fhianaise agus Measúnú
- An Oifig um Chosaint Radaíochta agus Monatóireacht Comhshaoil
- An Oifig Cumarsáide agus Seirbhísí Corparáideacha

Tá Coiste Comhairleach ag an nGníomhaireacht le cabhrú léi. Tá dáréag comhaltaí air agus tagann siad le chéile go rialta le plé a dhéanamh ar ábhair inné agus le comhairle a chur ar an mBord.

