NISRA
Northern Ireland Statistics and Research Agency

OFFICIAL STATISTICS
Accredited

Northern Ireland Environmental Statistics Report

May 2026

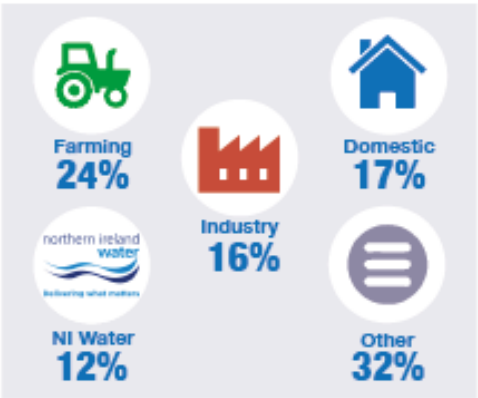
NIEA
www.daera-ni.gov.uk
Northern Ireland Environment Agency
Gníomhaireacht Comhshaoil Thuaisceart Éireann
Norlin Airlan Environment Agency

Department of
Agriculture, Environment and Rural Affairs
www.daera-ni.gov.uk

An Roinn
Talmhaíochta, Comhshaoil agus Gnóthaí Tuaithe

Depairtment o'
Fairmin, Environment an' Kintra Matthers

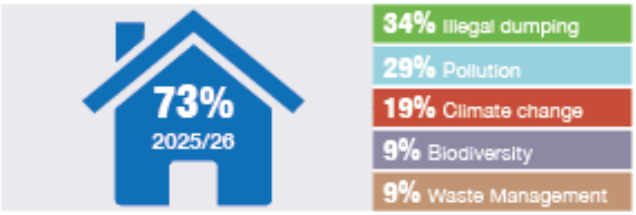
Northern Ireland Environmental Statistics Report



Source of substantiated water pollution incidents 2025

52%
of features within protected areas are in favourable condition in 2025/26.

Biodiversity

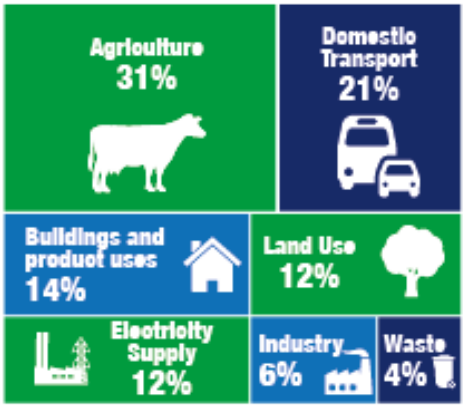


Households concerned about the environment 2025/26

Problems considered most important

Listed Buildings 2024/25

Urban traffic sites mean concentration of nitrogen dioxide (NO_2).



2023 NI Greenhouse Gas emissions 18.2 $MtCO_2e$

Household recycling rate 2024/25

Key Points

Public Attitudes and Access to Nature

- The level of public concern about environmental issues was high in 2025/26, with 73 per cent very or fairly concerned about the environment.
- In 2025/26 illegal dumping of waste and litter (34 per cent) was the greatest environmental concern for households in Northern Ireland followed by Pollution of air, water and soil (29 per cent).
- In April 2026, 48.0 per cent of households in Northern Ireland had accessible natural space within 400 metres.

Air & Climate

- Urban traffic nitrogen dioxide levels have decreased from 40.6µg/m^3 in 2012 to 26.3µg/m^3 in 2025.
- In 2023, Northern Ireland's greenhouse gas emissions were estimated to be 18.2 MtCO2e, a reduction of 31.5 per cent since 1990 baseline levels.

Water and Marine

- In 2025 soluble reactive phosphorus (SRP) was measured at 93 surveillance rivers across Northern Ireland giving an average concentration of 0.07 mg/l of phosphorus per litre of water.
- Of the twenty-five inshore coastal waterbodies delineated in Northern Ireland, 10 (40 per cent) have been assessed at good or better ecological status.
- In 2025, there were 1,780 water pollution incidents reported, of which 825 (46 per cent) were substantiated (confirmed) as having an impact on the water quality of the receiving waterway.

Biodiversity

- In 2025/26, 52 per cent of features within Marine and Terrestrial protected sites were in Favourable condition while 37 per cent were in Unfavourable condition.

Historic Environment

- Listed buildings are those of special architectural or historic interest. The number of listed buildings in 2024/25 was 9,157, an increase of 12 per cent compared to 2003/04.

Issue No: 18
Date of Publication: 28 May 2026
Theme: Agriculture and Environment
Reporting Period:
Varies depending on dataset

URL: https://www.daera-ni.gov.uk/articles/northern-ireland-environmental-statistics-report

Issued by:
Statistics and Analytical Services Branch
Department of Agriculture, Environment and Rural Affairs (DAERA), Clare House, Airport Road West, Sydenham Intake
Belfast BT3 9ED

Contact: Conor McCormack
Telephone: 028 90163343
Email: env.stats@daera-ni.gov.uk

Contents

Introduction 4
1 Public Attitudes and Access to Nature 5
Level of Concern for the Environment 7
Environmental Problems Considered Most Important 8
Actions Taken That Have a Positive Impact on the Environment 9
Amount Paid for the Last Carrier Bag Bought 10
Considered the Greatest Threat to Biodiversity 11
Considered important in helping to tackle climate change in Northern Ireland 12
Accessible Natural Space 13
2 Climate Change 15
Greenhouse Gas Emissions 16
Mean Annual Temperature 17
Warm and Frost Days per Year 18
Annual Rainfall 19
3 Air 20
Nitrogen Dioxide 21
Particulate Matter 24
Ammonia 26
4 Water and Marine 28
Groundwater Quality 29
River Quality - nitrate 31
River Quality – Soluble Reactive Phosphorus 32
Coastal Water Bodies in Good Ecological Status 33
Industrial Discharge Quality 35
Water Utility Discharge Quality 36
Water Pollution Incidents 37
Shellfish Water Protected Areas 40
Sea Temperature 42
5 Biodiversity and Land 44
Nature Conservation Designations 45
Condition of features 47
Wild Birds 54
Wild Birds by Habitat Type 57
Sustainable Land Management 59
Area of Woodland 61
6 Waste 62
Recycling (preparing for reuse, dry recycling and composting) 63
7 Historic Environment 64
Monuments 65
Listed Buildings 67
Buildings and Monuments at Risk 69
Accredited Official Statistics 70

Introduction

This compendium report provides information on a range of environmental indicators for seven main topics: Public attitudes and Access to Nature, Climate Change, Air, Water and Marine, Biodiversity and Land, Waste and finally Historic Environment. The indicators presented are based on the most recently available data at the time of publication with most providing data on trends over time and where applicable, performance against quantified targets. The indicators that are included were determined in agreement with key data providers, policy colleagues and other interested parties. The report also publishes updates to indicators that are included as wellbeing framework indicators in the current Programme for Government (PfG) 2024-2027.

This report provides some commentary on each of the indicators and describes any trends that they illustrate. All figures in the report, apart from those with maps only, have corresponding tables which can be found in the associated data tables available online.

This report is updated annually and each year the indicators are reviewed for their usefulness and relevance. Additional indicators will also be considered for future years. A major rationalisation of the report was completed in 2020 to concentrate on those statistics that are first released in this report and statistics that are produced for PfG monitoring. If you have any comments on the indicators currently published or suggestions for future reports, please send the details to the contact listed at the beginning of the report.

Reader Information

This document may be made available in alternative formats, please contact us to discuss your requirements. Definitions of key terms used in this publication are available in the User Guidance.

Purpose

This is an annual publication which provides information on a range of environmental indicators in Northern Ireland.

The data contained are used to measure progress towards achieving targets from various strategies including:

- Air Quality Directives
- Water Framework Directive
- Programme for Government PfG

Published statistics are used to update indicators in the Annual progress report (APR) of the NI Environmental Improvement Plan.

The data are also used by media, the general public and special interest groups to inform policy and lifestyle choices related to the environment.

Next Updates

- This report is published annually with the next update scheduled for May 2027.
- The scheduled dates for all upcoming publications are available from the GOV.UK statistics release calendar: https://www.gov.uk/search/research-and-statistics

1 Public Attitudes and Access to Nature

People and households use up significant levels of resources, such as water, energy and food, and can exert pressure on the environment. Our lifestyle choices also impact upon the state of the environment. This chapter looks at our interaction with and changing attitudes towards the environment and signposts the reader to information on Northern Ireland's changing population and environmental pressures. Physically connecting and engaging people with the natural environment through the provision of quality natural spaces brings additional benefits to society including improving health and well-being (exercise, social engagement and mental well-being).

Key points in this chapter:

- The level of public concern about environmental issues was high in 2025/26, with 73 per cent very or fairly concerned about the environment.
- In 2025/26 illegal dumping of waste and litter (34 per cent) was the greatest environmental concern for households in Northern Ireland followed by Pollution of air, water and soil (29 per cent).
- The most common actions taken by households for environmental reasons in 2025/26 were reusing, recycling and disposing of waste products appropriately (89 per cent), reducing food waste (66 per cent) and reducing consumption of household utilities (51 per cent).
- Pollution of air, land and water was considered to be the greatest threat to biodiversity for households (50 per cent) in Northern Ireland in 2025/26.
- In April 2026, 48.0 per cent of households in Northern Ireland had accessible natural space within 400 metres.

Other sources of information published elsewhere which illustrate the various pressures on the environment are provided below.

Both population and number of households in Northern Ireland show increasing trends. The number of households has tended to increase at a faster rate than the population resulting in a declining number of people per household. NISRA provide information on population projections as well as an annual update of their mid-year estimates. NISRA population statistics

Prior to and since the Covid-19 pandemic, air passenger numbers have generally increased in Northern Ireland with the advent of low-fare airlines a major factor in this. The Civil Aviation Authority produces air traffic statistics including the number of passengers departing from individual UK airports.

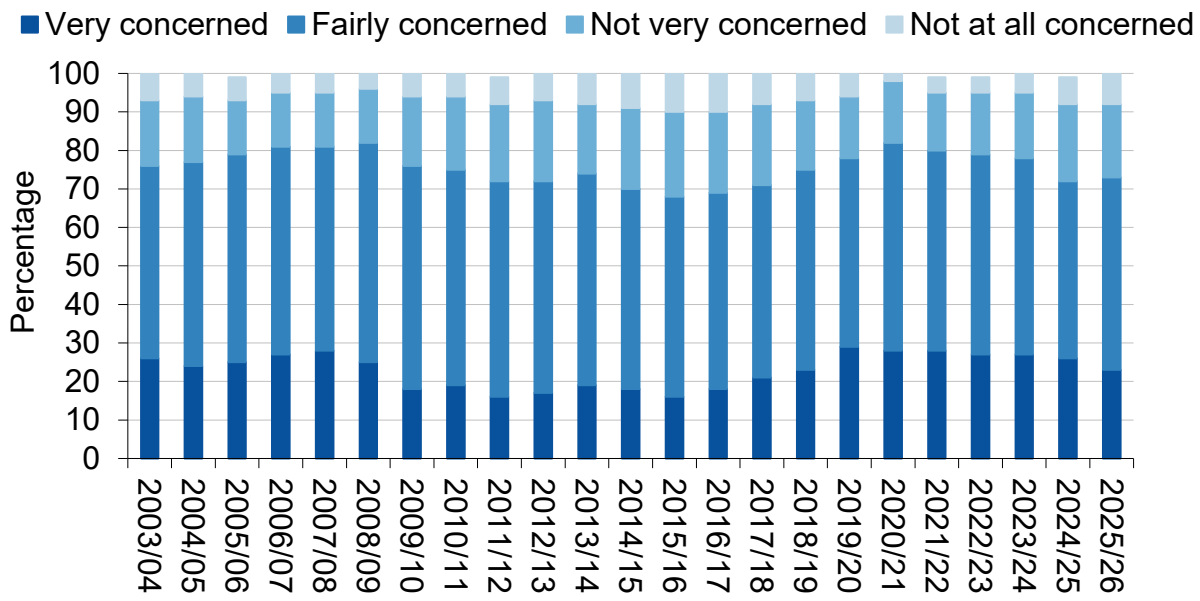
Car travel continues to dominate the way we do most of our day-to-day travelling. Information on how and why people travel in Northern Ireland including the number of journeys per person, average distance travelled can be sourced from the Department of Infrastructure's Northern Ireland Travel Survey section.

The number of carrier bags dispensed by retailers under the 5 pence carrier bag levy in Northern Ireland declined over its lifetime. Historical bag dispensed information can be found online. The latest statistics on bags dispensed under the current 25 pence levy can be found in the carrier bag levy annual report.

Data tables and further information for this chapter can be found online.

Level of Concern for the Environment

Figure 1.1 Level of concern for the environment, 2003/04 – 2025/26



Source: Continuous Household Survey, NISRA

Note: Provisional data. Finalised information published in August 2026.

Caution should be used when comparing data from 2020/21 onwards to previous years due to the impact of the Covid-19 pandemic.

Due to changes in the data collection methodology in response to the Covid-19 pandemic and a significant change in the sample and number of responses, caution should be used when comparing data from 2020/21 onwards to previous years.

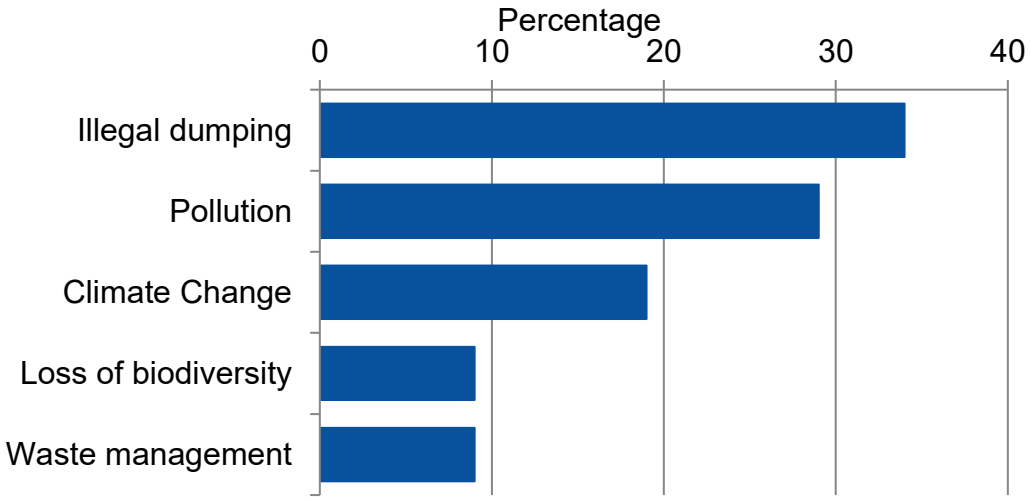
Northern Ireland households were asked to provide their views on environmental issues in NISRA's Continuous Household Survey (CHS)[1].

In 2025/26, the proportion of respondents very or fairly concerned about the environment was 73 per cent. This is similar to the percentage of respondents concerned about the environment in 2024/25.

[1] https://www.nisra.gov.uk/publications/chs-survey-documents

Environmental Problems Considered Most Important

Figure 1.2 Environmental problems considered most important, 2025/26

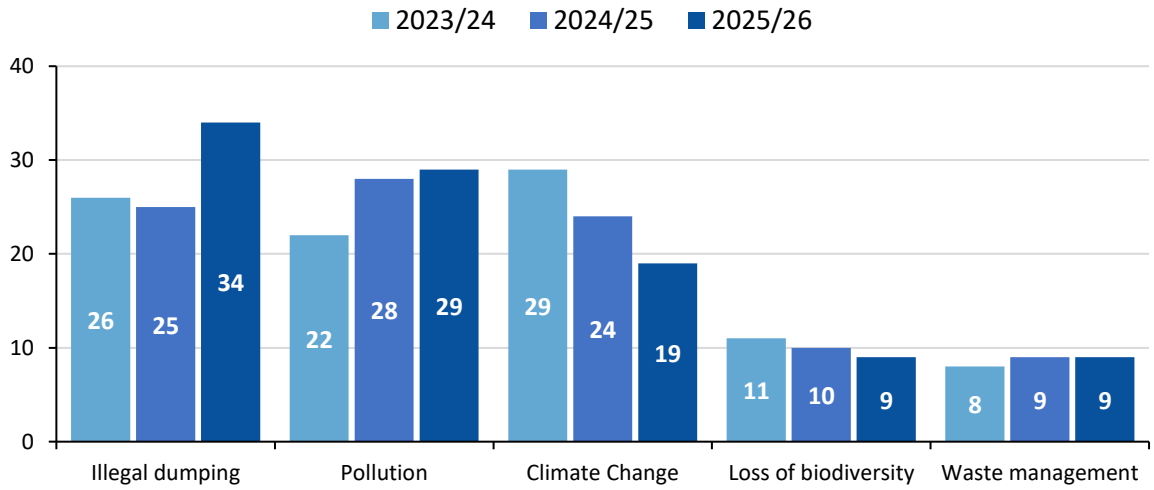


Source: Continuous Household Survey, NISRA

Note: Provisional data. Finalised information published in August 2026.

Households were asked to consider the list of environmental problems shown in figure 1.2 and state which, if any, they thought was the most important issue to them. Results show that in 2025/26, the most commonly selected environmental problems were illegal dumping of waste and litter (34 per cent), pollution of air, water and soil (29 per cent) and climate change and ozone layer depletion (19 per cent). In comparison with 2024/25, illegal dumping of waste and litter showed a significant increase from last year (25 per cent) while in contrast climate change and ozone layer depletion showed a significant decrease (24 per cent in 2024/25), see figure 1.2a below.

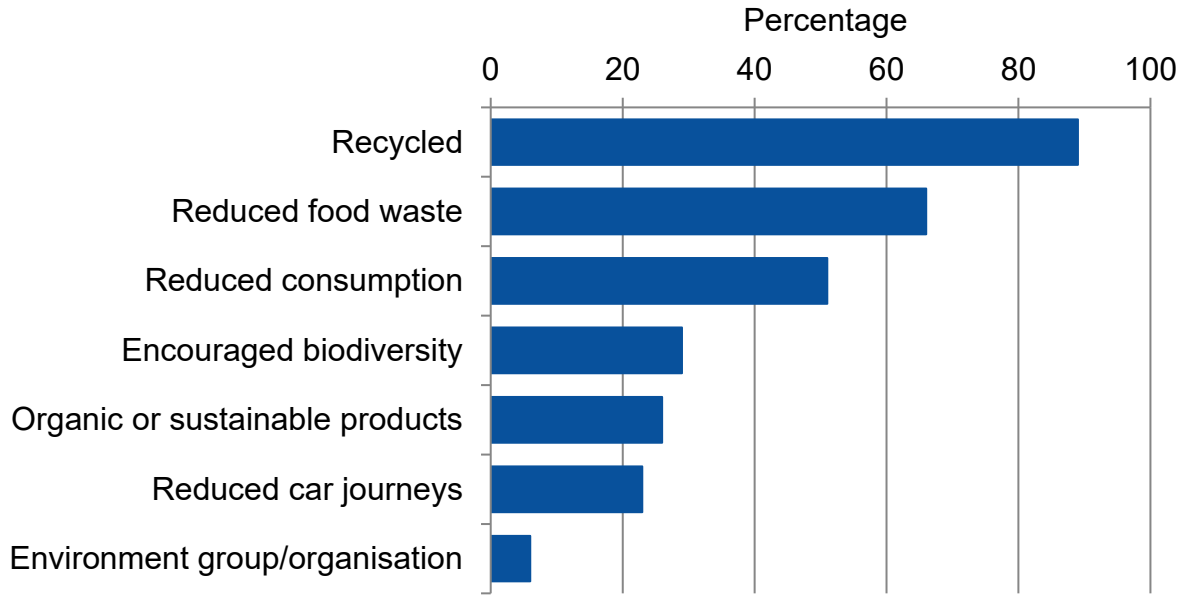
Figure 1.2a Environmental problems considered most important, 2023/24 - 2025/26



Source: Continuous Household Survey, NISRA
Note: Provisional data. Finalised information published in August 2026.

Actions Taken That Have a Positive Impact on the Environment

Figure 1.3 Actions taken that have a positive impact on the environment, 2025/26



Source: Continuous Household Survey, NISRA

Note: Provisional data. Finalised information published in August 2026.

Base does not equal 100% - Multiple responses permitted

The Continuous Household Survey asked respondents what actions they had taken in the last 12 months that had a positive impact on the environment.

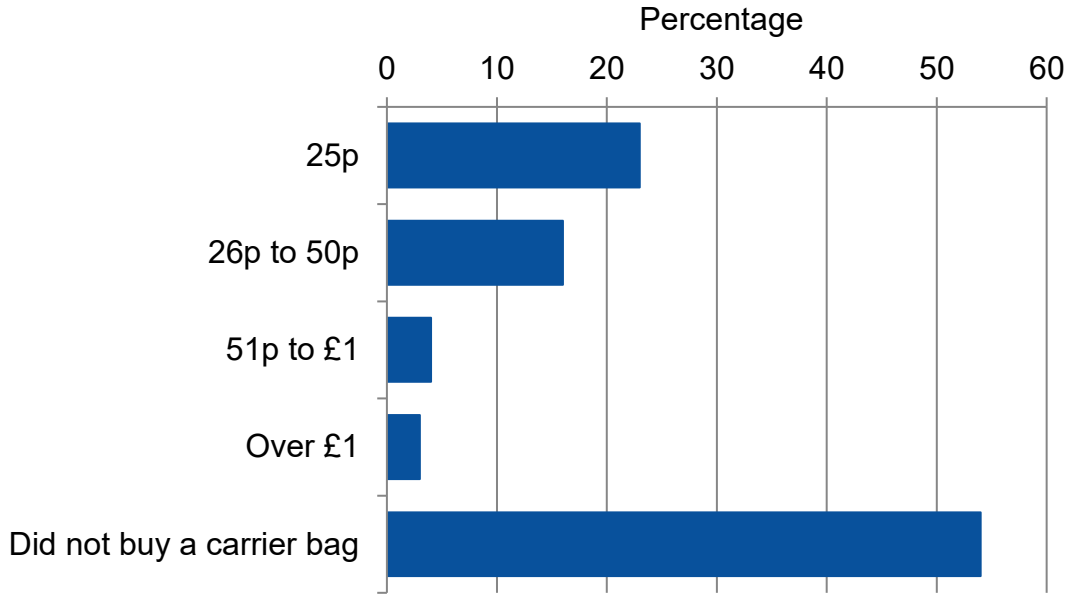
Results indicate that in 2025/26, the top three actions taken by households were: reused, recycled and disposed of waste products appropriately (89 per cent); reduced food waste (66 per cent) and reduced consumption of household utilities (51 per cent).

Whilst the top three categories remain the same as in 2024/25 there has been a decrease in the proportion selecting reduced food waste from the 69 per cent recorded in 2024/25. The proportion of respondents that selected reduced consumption of household utilities has also decreased from 59 per cent in 2024/25 to 51 per cent in 2025/26.

Tables and charts providing previous year's results are available in the accompanying data tables.

Amount Paid for the Last Carrier Bag Bought

Figure 1.4 Amount paid for the last carrier bag bought, 2025/26



Source: Continuous Household Survey, NISRA

Note: Provisional data. Finalised information published in August 2026.

Household respondents were asked how much they paid for the last carrier bag they bought.

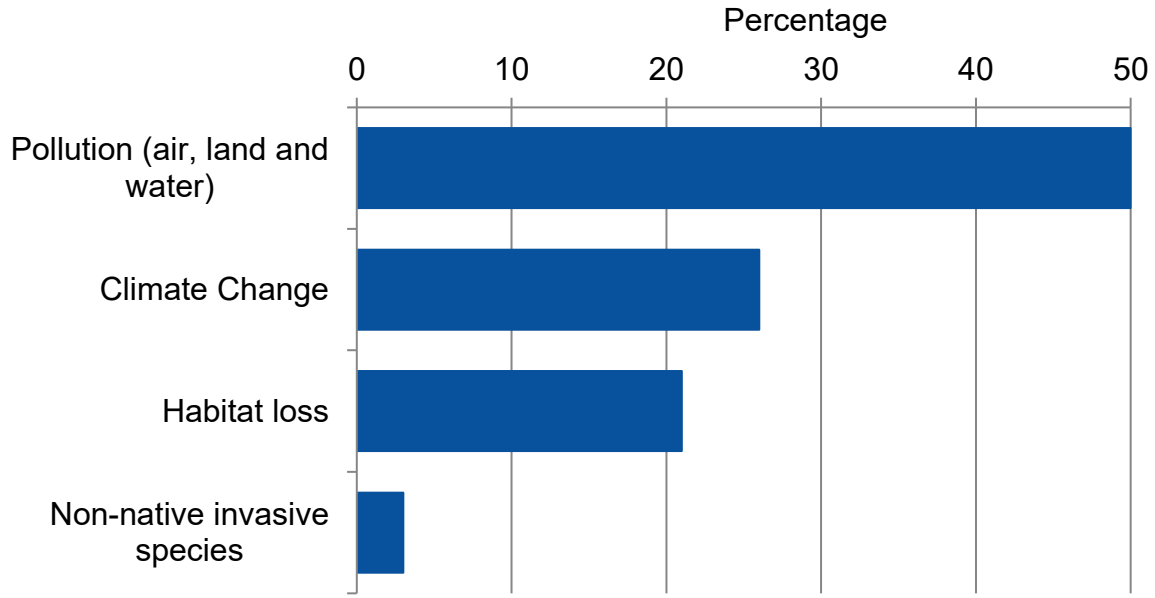
Note that the question responses changed in 2022/23 following a revision to the carrier bag levy. From 1st April 2022, the Carrier Bags Charge Regulations were extended so that the levy is 25p and applies to all new carrier bags with a retail price of £5 or less. This is regardless of the material used and whether they are single use or reusable.

Approximately 54 per cent of respondents said that they did not buy a carrier bag, whilst 23 per cent bought bags costing 25 pence. A further 16 per cent paid 26p – 50p the last time they bought a bag.

Tables and charts providing previous year's results are available in the accompanying data tables.

Considered the Greatest Threat to Biodiversity

Figure 1.5 Considered the greatest threat to biodiversity, 2025/26



Source: Continuous Household Survey, NISRA

Note: Provisional data. Finalised information published in August 2026.

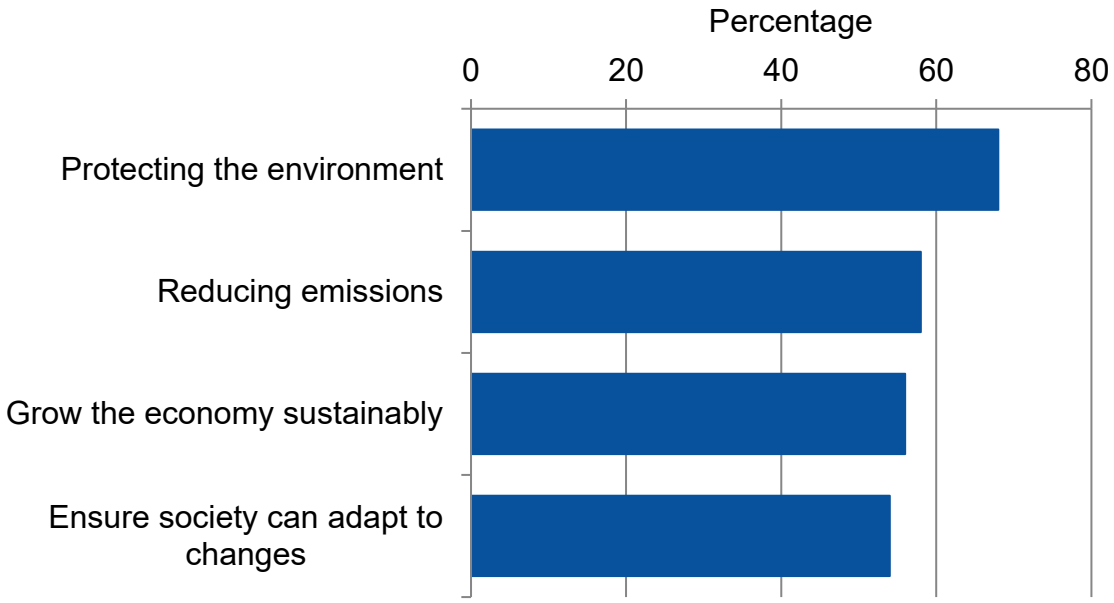
Household respondents were asked what they considered to be the greatest threat to biodiversity. Biodiversity encompasses the whole variety of life on Earth. It includes all species of plants, fungi and animals, i.e. the entire natural world.

In 2025/26, half of respondents selected pollution of air, land and water (50 per cent), followed by climate change (26 per cent) and habitat loss by human activity (21 per cent).

Tables and charts providing previous year's results are available in the accompanying data tables.

Considered important in helping to tackle climate change in Northern Ireland

Figure 1.6 Considered important in helping to tackle climate change, 2025/26



Source: Continuous Household Survey, NISRA

Note: Provisional data. Finalised information published in August 2026.

Base does not equal 100% - Multiple responses permitted

Household respondents were provided with some background information about the NI Executive's Green Growth Strategy and how it was developed to help plan future actions to tackle the climate crisis and deliver sustainable prosperity.

Households were asked, which of the following do you consider important in helping to tackle climate change in Northern Ireland with four answer categories as follows: protecting the environment e.g. actions to protect and enhance natural areas, ensure society can adapt to changes brought about by climate change, grow the economy in an environmentally sustainable way, and reducing emissions. Multiple-response answers were permitted so respondents could select as many answers as deemed appropriate.

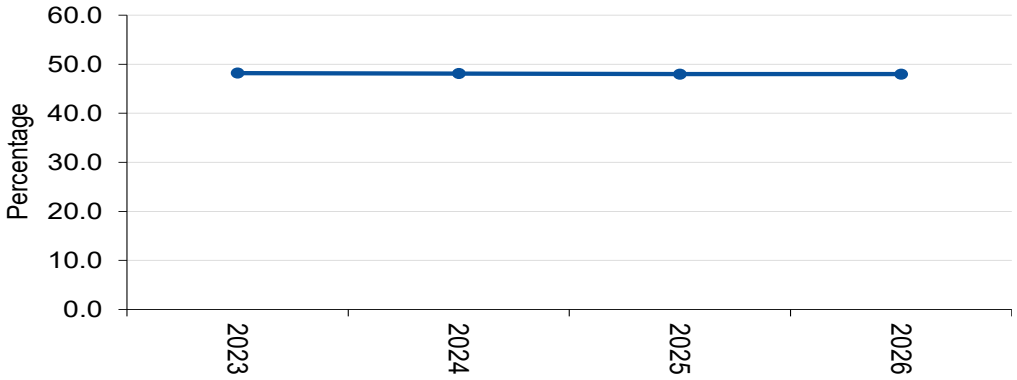
Most answer categories were popular with over two thirds selecting protecting the environment (68 per cent), followed by reducing emissions (58 per cent), grow the economy in an environmentally sustainable way (56 per cent) and ensure society can adapt to changes brought about by climate change (54 per cent).

Final 2025/26 results will be published in August providing further analysis including disaggregation by age and sex at the following link Environment Statistics from the Continuous Household Survey.

Disaggregation by Local Government District for concern about the environment, environmental problems considered most important, actions taken and biodiversity will also be updated on the data portal in August.

Accessible Natural Space

Figure 1.7 Percentage of households within 400m of accessible quality greenspace, 2023-2026



Source: GreenspaceNI Map, Outscape

The GreenspaceNI map encompasses natural spaces, spanning two hectares or more, accessible to the public with permission from the landowners, including urban and rural parks, forests, beaches, and off-road trails. GreenspaceNI Map | Greenspaces & Trails in Northern Ireland.
The Environmental Improvement Plan for Northern Ireland includes a target: Annual increase in percentage of households that have publicly accessible quality natural space >2ha within 400m and at least one site >20ha in size within 2km. This is also a Programme for Government (PfG) Wellbeing Framework Indicator PfG Wellbeing Framework - Cleaner Environment. The annual analysis of the GreenspaceNI data shows that since the baseline of April 2023, the percentage of households within 400m has decreased by 0.2 from 48.2 per cent to 48.0 per cent.
Target 12 in the Global Biodiversity Framework (GBF), to which the UK is a signatory, is Enhance Green Spaces and Urban Planning for Human Well-Being and Biodiversity. This includes to “Significantly increase the area and quality and connectivity of, access to, and benefits from green and blue spaces in urban and densely populated areas sustainably”.

Table 1.7a Percentage of households within 400m of accessible quality greenspace by Settlement band, April 2026

	Settlement Type	Band	Percentage within 400m			
			2023	2024	2025	2026
Urban	Belfast	A	70.9	70.9	70.8	70.7
	Derry	B	85.7	85.5	85.2	85.1
	Large Town	C	60.3	60.3	60.2	60.2
	Medium Town	D	56.3	56.2	56.0	55.9
	Small Town	E	50.7	50.5	50.3	49.9
	Urban Total		**63.3**	**63.2**	**63.1**	**63.0**
Rural	Intermediate Settlement	F	39.8	39.7	39.7	39.7
	Village	G	34.1	34.0	33.9	34.6
	Open Countryside and Small Village	H	12.7	12.7	12.7	12.9
	Rural Total		**19.7**	**19.6**	**19.6**	**19.8**

The NISRA Rural-Urban Classification (2015) is used to calculate the breakdown across urban and rural areas. This defines urban areas as settlements with a population of 5,000 or more with rural areas defined as settlements of less than 5,000 and open countryside. The table above shows that access broadly decreases with settlement size with rural settlements having the lowest access to nature. The analysis shows that access for the urban population has decreased from 63.3 per cent in 2023 to 63.0 per cent in 2026.

Data from the 2025 People in the Outdoors Monitor for Northern Ireland (POMNI) demonstrates that regular outdoor engagement correlates with greater concern for the environment and more pro-environmental behaviours. The survey results include:

- 80 per cent of adults would like to spend more time outdoors in the natural environment
- 92 per cent of visits are either motivated by or deliver health and wellbeing benefits

Access to, and participation in, outdoor recreation within natural spaces is not equal across society. While the research shows a strong appetite for spending time outdoors, it also highlights barriers which prevent participation for some, particularly those living in deprived areas, disabled people and those experiencing loneliness. In addition to lack of local access, many respondents said they face barriers such as poor health, lack of transport, concerns about going alone, limited facilities or information, or feeling that outdoor spaces are “not for people like me”.

This accessible natural space indicator is designed so:

- Progress to increase accessible natural space where it is lacking can be measured and monitored; and
- It can be used to inform planning (e.g. housing, infrastructure and transport, and integrating good green infrastructure that connects people to nature and enables active travel), gap analysis in current provision, resource allocation, site suitability assessments and demographic analysis (e.g. health and deprivation etc).

The data is accessible and visually engaging and published on GreenspaceNI Map | Greenspaces & Trails in Northern Ireland and PfG Wellbeing Framework - Outdoor recreation. The Greenspace NI map can be analysed for local areas. Annually it will monitor where new areas of accessible natural space and trails have been created or new links to these, increasing the percentage of the population with access. It will also show where access has been lost.

The GreenSpaceNI Map along with table and chart relating to this indicator are included in the data tables that accompany this report.

2 Climate Change

Climate change is one of the most serious threats we face today, not only to our environment, but to our economic prosperity and global security and has the power to affect us no matter where we live. The overwhelming scientific evidence from the Intergovernmental Panel on Climate Change (IPPC) has highlighted the dramatic changes to our climate and their causes.

Northern Ireland faces changes to its climate over the next century. Projections suggest that we may face hotter, drier summers and warmer, wetter winters as a result of climate change. This chapter will report on greenhouse gas emissions and present a time series of temperature and rainfall data calculated using Armagh Observatory temperature records.

Key points in this chapter:

- In 2023, Northern Ireland's greenhouse gas emissions were estimated to be 18.2 $MtCO_2e$, a reduction of 31.5 per cent since 1990 baseline levels. The largest sectors in terms of emissions in 2023 were agriculture (30.8 per cent), domestic transport (21.5 per cent) and buildings and product uses (13.8 per cent).

- Climate records suggest that the mean annual temperature has been steadily increasing since the end of the 19th century. The number of days per year where the temperature exceeded 20^{o}C has also been increasing in the same timescale.

Other sources of information published elsewhere provide further details of greenhouse gas emissions and efforts to reduce the quantities emitted in Northern Ireland.

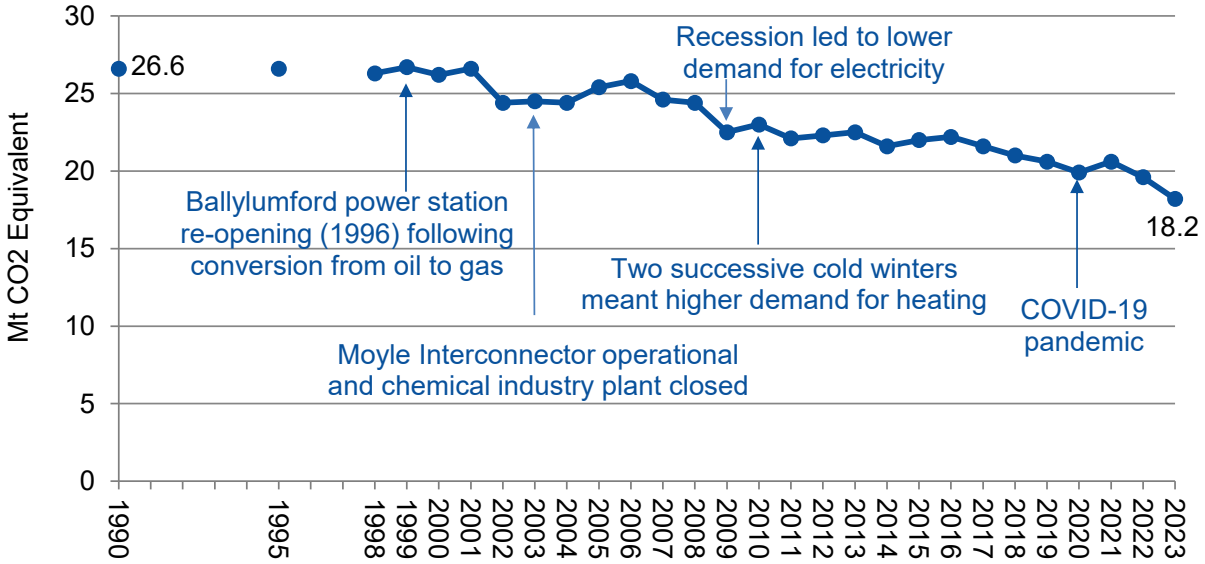
For the 12 month period January 2025 to December 2025, 47 per cent of total metered electricity consumption in Northern Ireland was generated from metered renewable sources located in Northern Ireland.

The overall number of renewable energy applications received in 2024/25 was 97, a decrease from 126 in 2023/24, well below the peak of 820 in 2011/12.

Data tables and further information for this chapter can be found online.

Greenhouse Gas Emissions

Figure 2.1 Total greenhouse gas emissions in Northern Ireland, 1990 – 2023



Source: Aether and Ricardo Energy & Environment
Note: The base year for UK greenhouse gas emissions is 1990 for carbon dioxide, methane and nitrous oxide, and 1995 for fluorinated gases.

Greenhouse gas emissions for England, Scotland, Wales and Northern Ireland are published annually, detailing estimates of greenhouse gas emissions since 1990. The estimates are consistent with the United Nations Framework Convention on Climate Change reporting guidelines. The NI Climate Change Act (2022) commits NI to reducing emissions by 100 per cent by 2050 from 1990 baseline levels[2]. The base year is 1990 for carbon dioxide, methane and nitrous oxide, and 1995 for the fluorinated gases. The indicator is used as a wellbeing framework indicator in the latest Programme for Government (PfG) 2024-2027.

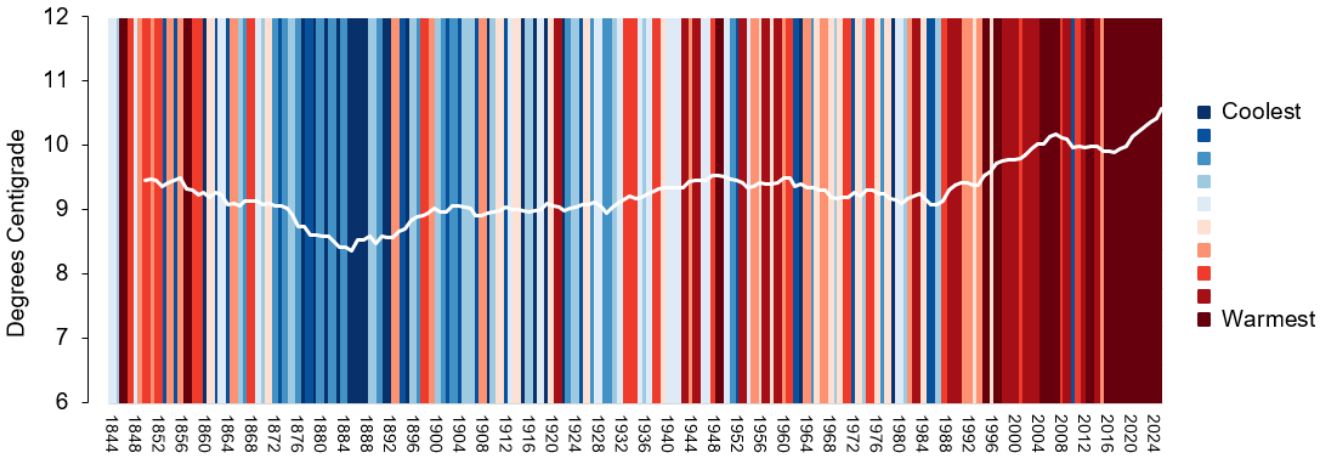
In 2023, Northern Ireland contributed 4.7 per cent of all UK greenhouse gas emissions, higher than its population share of 2.8 per cent. Since the base year, Northern Ireland's total greenhouse gas emissions have decreased by 31.5 per cent from 26.6 to 18.2 million tonnes of carbon dioxide equivalent ($MtCO_2e$).

The largest sectors in terms of emissions in 2023 were Agriculture (30.8 per cent), Domestic transport (21.5 per cent), Buildings and product uses (13.8 per cent), Land use change (11.8 per cent) and Electricity supply (11.7 per cent). The largest decreases, in terms of tonnes of carbon dioxide equivalent, were in the industry and electricity supply sectors. These were driven by improvements in energy efficiency, fuel switching from oil and coal power-stations and an increase in generation from renewable sources. The 1990-2024 statistical bulletin on greenhouse gas emissions will be published in June 2026.

[2] Given the small differences involved, all references to '1990', within figures, refer to 'base year' estimates as provided by the Greenhouse Gas Inventory.

Mean Annual Temperature

Figure 2.2 Mean annual temperature, 1844 – 2025



Source: Armagh Observatory

The mean annual temperature for Northern Ireland has been calculated from the Armagh Observatory temperature records.

The ten-year moving average trend line shows that the mean annual temperature reached a low towards the end of the 19th century and has been steadily increasing since.

By the end of the 20th century, the ten-year moving average temperature had risen to its highest levels since the temperature records began.

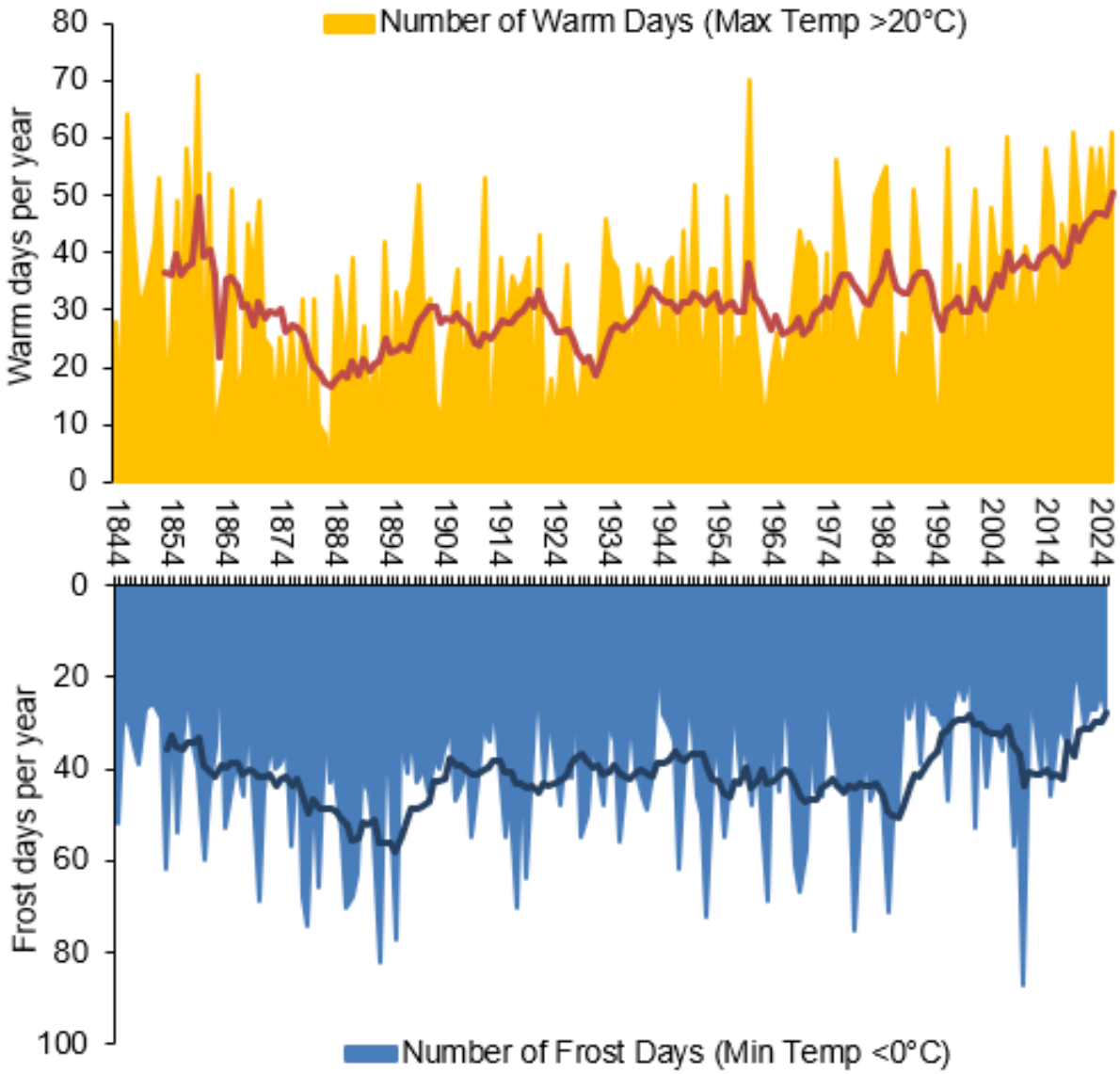
The lowest mean annual temperature (7.35°C) was recorded in 1879.

This is the tenth consecutive year since 2016 that the mean annual temperature has exceeded 10 degrees with the mean annual temperature for 2025 recorded as 11.01°C.

With high temperature records now being made with increasing frequency, it is an indication of a changing climate.

Warm and Frost Days per Year

Figure 2.3 Number of warm and frost days per year, 1844 – 2025



Source: Armagh Observatory

The number of days per year where temperatures were recorded exceeding 20°C or falling below 0°C has been calculated from the Armagh Observatory temperature records.

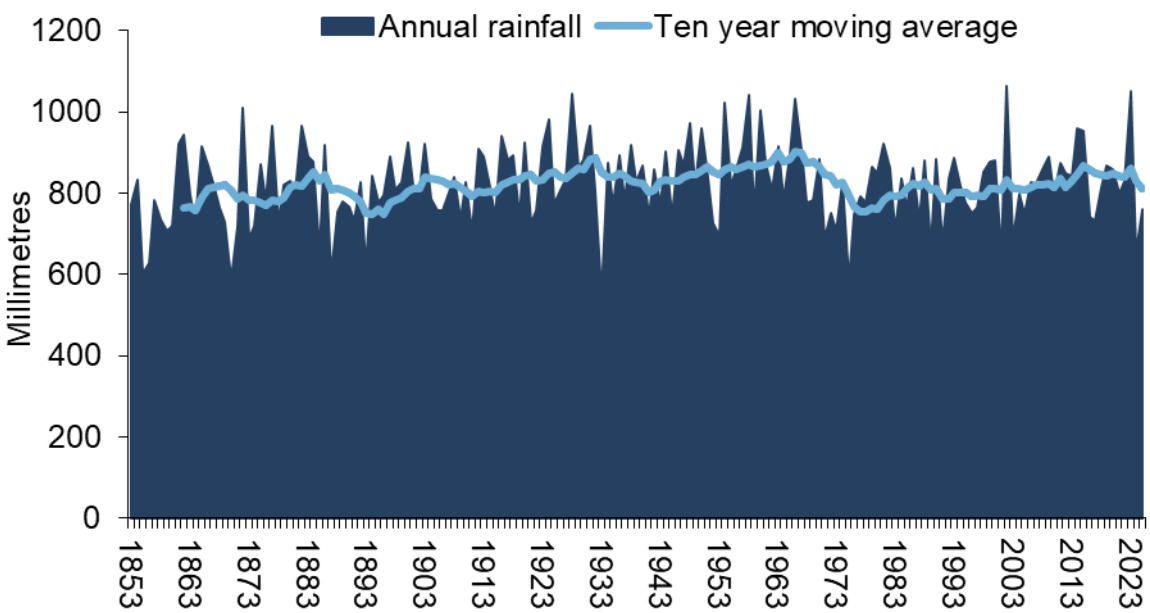
The ten-year moving average trend line shows that the number of warm days per year reached a low towards the end of the 19th century and has been steadily increasing since. The number of frost days per year reached a high at the end of the 19th century.

The lowest number of recorded frost days per year was 16 days, in 1863 and 1943, whilst the highest number of warm days was recorded in 1859 at 71 days.

In comparison for 2025, there were 27 frost days recorded and 61 days exceeding 20°C.

Annual Rainfall

Figure 2.4 Annual rainfall, 1853 – 2025



Source: Armagh Observatory

The amount of annual rainfall from 1853 to 2025 has been calculated from the Armagh Observatory temperature records.

Since 1853 the ten-year moving average has remained between 748 millimetres and 901 millimetres of rain per year.

2025 had 762 millimetres of annual rainfall. This was an increase from 654 millimetres recorded in 2024.

The lowest level of annual rainfall was recorded in 1933 at 550 millimetres while the highest level of annual rainfall was recorded in 2002 at 1,065 millimetres.

Over the last ten years, 2023 recorded the highest level of annual rainfall at 1,052 millimetres.

3 Air

The air that we breathe is vital to our health and wellbeing. Good air quality is essential for human health, the climate, habitats, and the built environment. Pollutants from human activity are present in our atmosphere which may adversely impact upon our health and natural environment. This chapter will report on the quality of our air.

In 2025 there were 23 air quality monitoring stations in operation Northern Ireland. Levels of carbon monoxide, nitrogen oxides, sulphur dioxide, particulate matter, ozone, benzene, and polycyclic aromatic hydrocarbons are monitored at many of these stations and are measured against UK Air Quality Strategy objectives and The Air Quality Standards Regulations (Northern Ireland) 2010.

Weather conditions can be a contributing factor to some periods of poor air quality and subsequent elevated levels of air pollutants. This is true of hot, sunny weather which can lead to higher levels of ozone, and winter weather where temperature inversions can lead to increased levels of pollutants, especially particulate matter, at ground level.

Key points in this chapter:

- Urban traffic nitrogen dioxide levels have decreased from a high annual average of 40.6µg/m^3 in 2012 to 26.3µg/m^3 in 2025.

- In 2025, the mean nitrogen dioxide level for the ten sites used to produce an indicator for PfG reporting was 27.2µg/m^3. This was higher than the level reported in 2024. Downpatrick monitoring station exceeded the UK Strategy Objective and The Air Quality Standards Regulations Limit Value of 40 µg/m^3 for the annual mean concentration of nitrogen dioxide.

- In 2025 there was no breach of the UK Strategy Objectives or The Air Quality Standards Regulations Limit Values of 40 µg/m^3 for the annual mean concentration of PM_{10}. The annual mean concentration of PM_{10} across urban areas was 13.1 µg/m^3 and the mean for the Lough Navar rural background monitoring site was 7.3 µg/m^3.

- In 2025 there was no breach of the UK Strategy Objective of 20 µg/m^3 for the annual mean concentration of $PM_{2.5}$. The annual mean concentration of $PM_{2.5}$ across urban areas was 7.3 µg/m^3 while the mean for the Lough Navar rural background monitoring site was 4.5 µg/m^3.

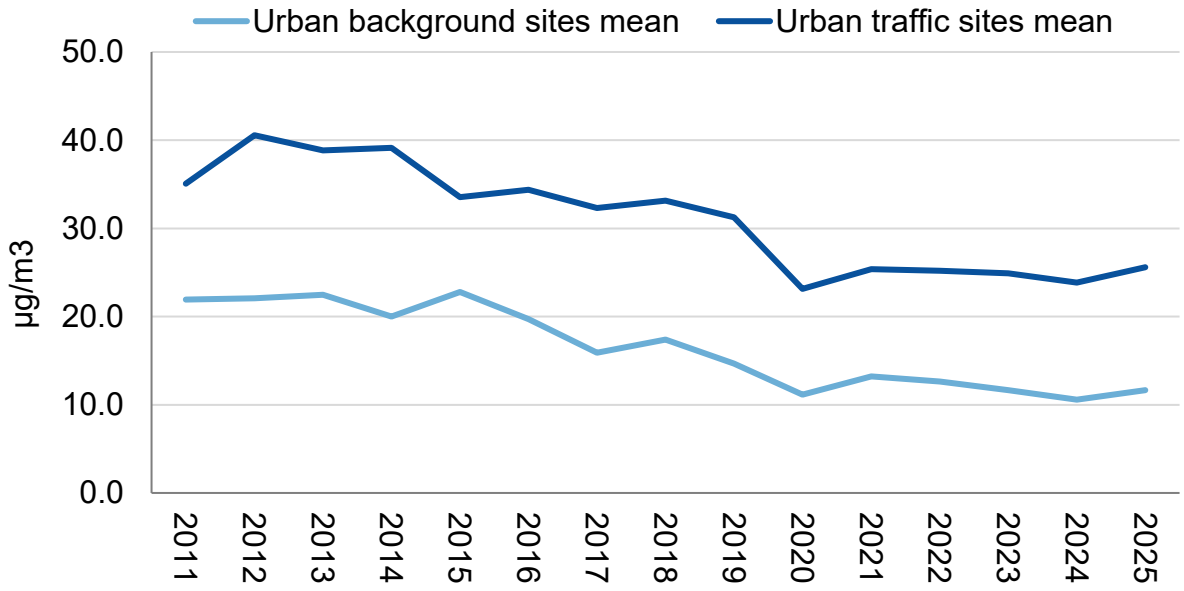
A comprehensive summary of air pollution in Northern Ireland is available from DAERA via the annually published report.

The Air Pollutant Inventory for England, Scotland, Wales and Northern Ireland is published annually and contain information on a range of priority pollutants.

Data tables and further information for this chapter can be found online.

Nitrogen Dioxide

Figure 3.1a Annual mean concentration of nitrogen dioxide (NO_2), 2011 – 2025



Source: DAERA

Nitrogen dioxide (NO_2) is part of a group of gaseous air pollutants produced as a result of domestic and industrial combustion, road transport, other forms of transport and energy generation. NO_2 can exacerbate symptoms of heart and lung conditions, thereby reducing quality of life for affected individuals. NO_2 can also adversely affect plant life and biodiversity in sensitive habitats.

In 2025, nitrogen dioxide was monitored using automatic techniques at 16 sites across Northern Ireland. The UK Air Quality Strategy sets objectives for an hourly mean limit of 200µg/m^3 and no more than 18 exceedances of this hourly limit are allowed per year at each monitoring site. There were no hourly exceedances recorded in 2025. In addition, there is an annual mean limit of 40µg/m^3 which was exceeded by Downpatrick monitoring station in 2025.

Figures for 2025 are provisional as the final data ratification was not completed before these statistics were produced, see the Environmental Statistics Report user guidance document for further details of validation and ratification process.

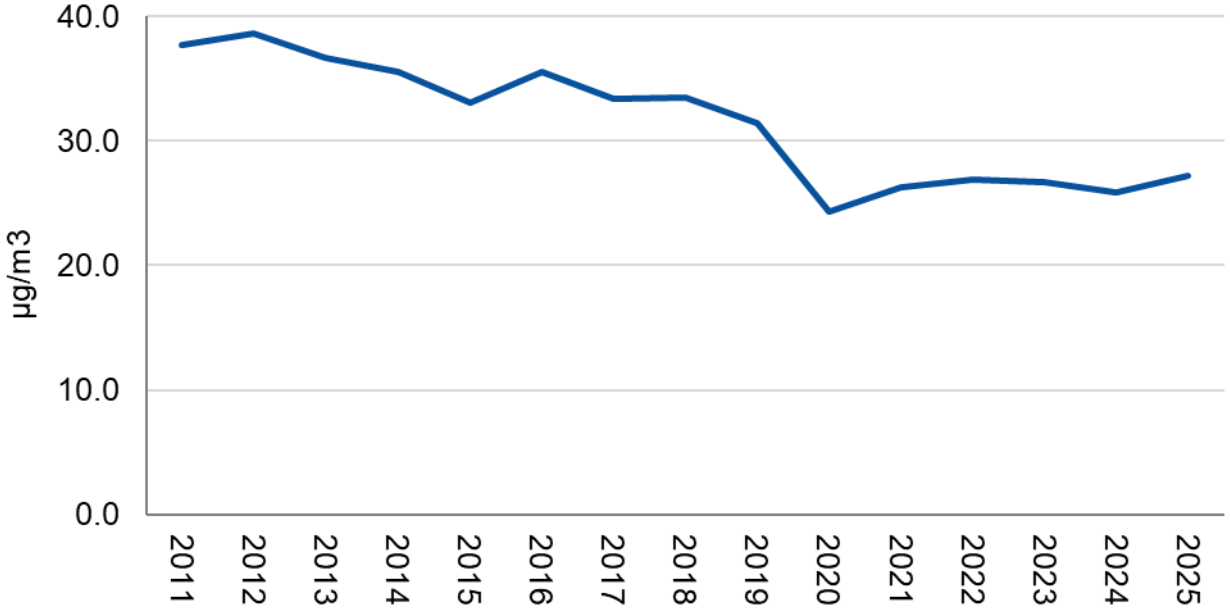
The average annual mean concentration of NO_2 across Northern Ireland's urban background sites remained relatively stable between 2011 and 2015, varying between 20.0 and 22.8µg/m^3. Since 2015 the average annual mean concentration of NO_2 generally reduced to a low in 2020. From 2021 levels recorded across Northern Ireland's urban background sites have declined to 10.6µg/m^3 in 2024. In the most recent year levels have slightly increased to 11.7 µg/m^3.

Urban traffic nitrogen dioxide levels have decreased from a high of 40.6µg/m^3 in 2012 to a low of 24.2µg/m^3 in 2020. Levels declined from 2021 to 2024 with an increase to 26.3µg/m^3 recorded in 2025.

The dip in emissions recorded in 2020 for both indicators coincide with restrictions implemented in response to the Covid-19 pandemic.

Please note that the time-series has been revised in May 2026 to include Ballykeel monitoring station in the calculation of background sites and removed from the calculation of traffic sites. It is therefore not comparable to previously published time-series information.

Figure 3.1b Annual mean concentration of nitrogen dioxide (NO_2), 2011 – 2025, 10 sites



Source: DAERA

This indicator is used as a wellbeing framework indicator in the latest Programme for Government (PfG) 2024-2027. The ten sites included to produce the average statistic shown above are:

- Armagh Lonsdale Road,
- Belfast Newtownards Road,
- Belfast Ormeau Road*,
- Belfast Stockman's Lane,
- Belfast Westlink Roden Street,
- Castlereagh Dundonald,
- Derry Dale's Corner,
- Downpatrick Roadside,
- Newtownabbey Antrim Road,
- North Down Holywood A2.

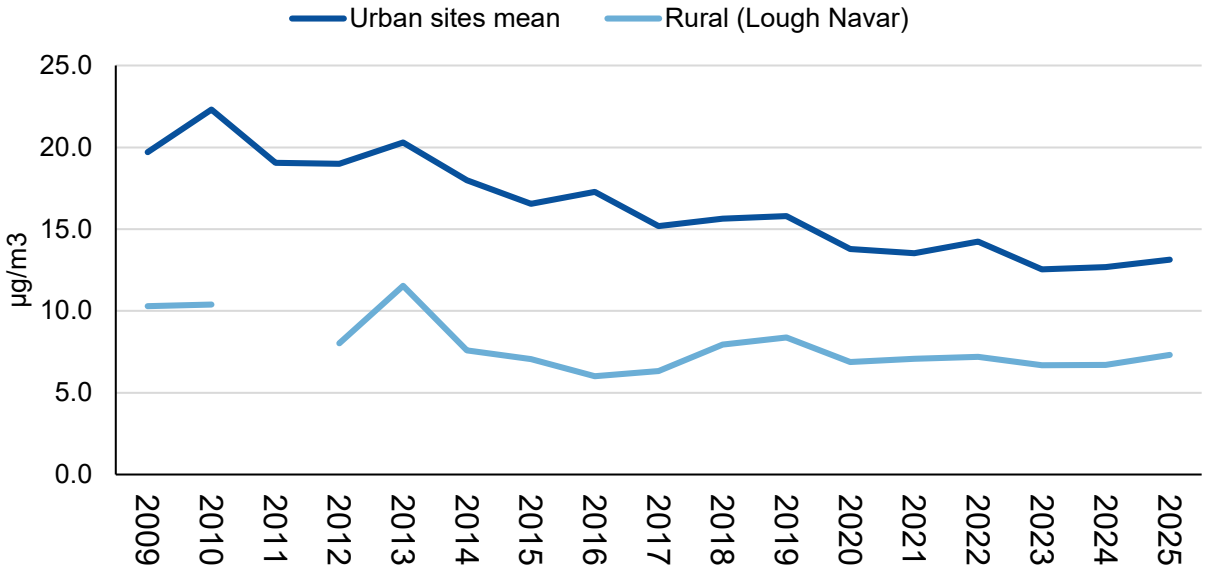
*Site closed on 13 May 2025 due to development close to monitoring station. DAERA are working with Belfast City Council to relocate to a new site.

In 2025, the mean nitrogen dioxide level for the ten sites identified above was 27.2µg/m^3.

NO_2 levels have shown a gradual reducing trend from 2011 to 2019. Emission dipped in 2020 to 24.3µg/m^3 coinciding with restrictions implemented in response to the Covid-19 pandemic. From 2021 to 2024, emission levels have remained at a similar concentration with levels increasing to 27.2µg/m^3 in 2025.

Particulate Matter

Figure 3.2 Annual mean concentration of particulate matter (PM10), 2009 – 2025



Source: DAERA
Note: There is no value for Lough Navar for 2011 due to low data capture.

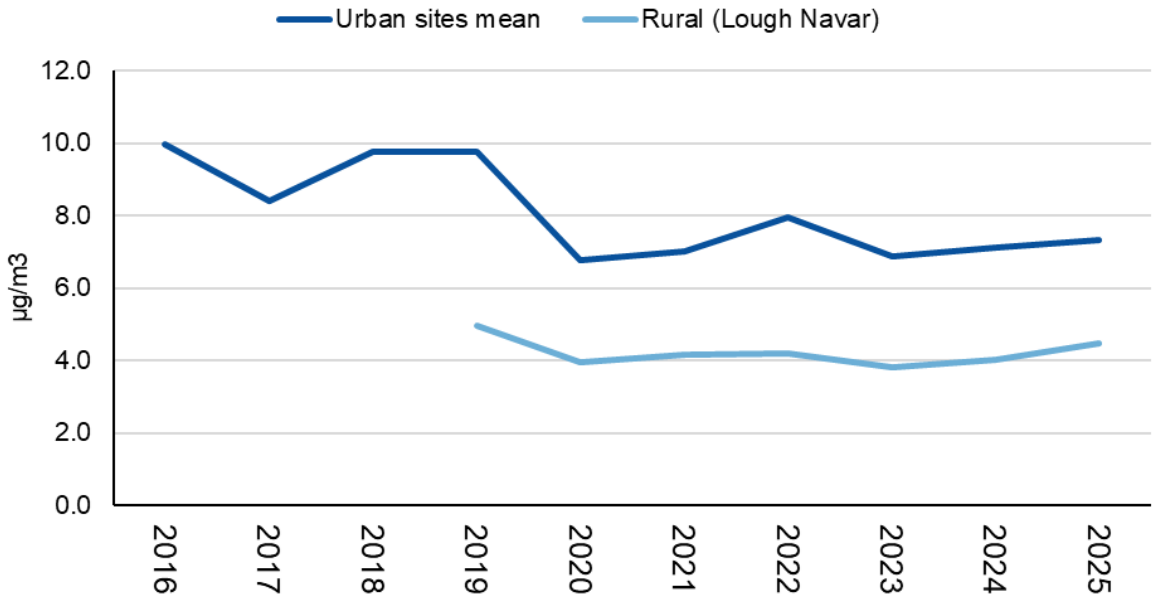
Particulate matter in the atmosphere with a diameter of less than or equal to 10 microns (PM_{10}) arises from both man-made and natural sources. Road transport and fossil fuel combustion produce the majority of airborne particulate matter found in the air in urban locations. The potential impact on human health of PM_{10} is well established and it can act directly as a respiratory irritant in the airways.

The Air Quality Standards Regulations (Northern Ireland) 2010 sets an annual mean limit value of 40 µg/m^3 for PM_{10}. It also sets a daily mean limit (24-hour mean) of 50 µg/m^3 which is not to be exceeded more than 35 times a year. Figures for 2024 are provisional as the final data ratification was not completed before these statistics were produced, see the Environmental Statistics Report user guidance document for further details of validation and ratification process.

Additional PM_{10} monitoring at Castlederg and Dungiven stations were added in 2025 and have been included in the 2025 Urban sites average. In 2025, at all 15 sites where PM_{10} is monitored, there was no breach of the UK Strategy Objective or The Air Quality Standards Regulations Limit Values of 40 µg/m^3 for the annual mean concentration of this pollutant.

The annual mean concentration of PM_{10} across urban areas in Northern Ireland in 2025 was 13.1 µg/m^3 and the annual mean for the Lough Navar rural background monitoring site was 7.3 µg/m^3. In the period since 2009, the annual mean concentration of PM_{10} at the rural Lough Navar site has been no higher than 11.5 µg/m^3 while the annual mean concentration across Northern Ireland's urban monitoring sites has reached a maximum of 22.3 µg/m^3 (in 2010) but has shown a gradual decline since.

Figure 3.3 Annual mean concentration of particulate matter (PM2.5), 2016 – 2025



Source: DAERA

Note: $PM_{2.5}$ monitoring began in Lough Navar in 2018 with insufficient data capture to produce a figure for that year.

Particulate matter in the atmosphere with a diameter of less than or equal to 2.5 microns ($PM_{2.5}$) arises from both man-made and natural sources. $PM_{2.5}$ is a key pollutant produced from domestic solid fuel burning and road transport. Fine particles can be carried deep into the lungs where they can cause inflammation and a worsening of symptoms in people with heart and lung diseases. Because of the small size of these particles, they may cross from the lungs into the bloodstream, where they can have more indirect systemic effects, such as increasing the risk of cardiovascular disease and stroke. In addition, they may carry surface-absorbed carcinogenic compounds into the lungs.

The UK Air Quality Strategy sets objectives for an annual mean objective of 20 µg/m^3 for $PM_{2.5}$. In 2025, at all 11 sites where $PM_{2.5}$ is monitored, there was no breach of this Objective

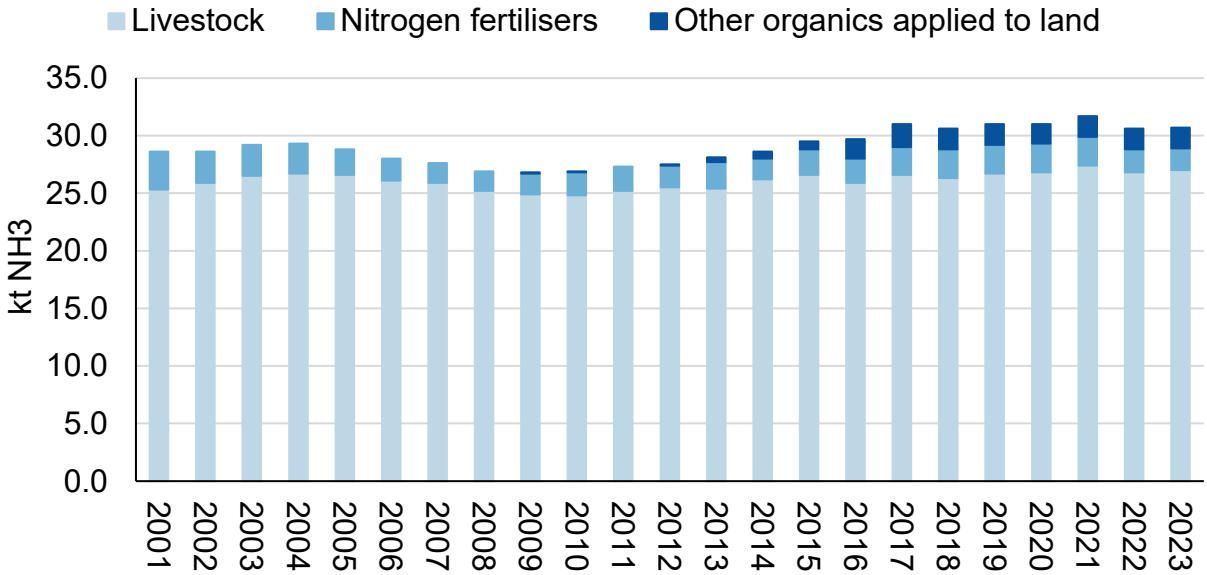
Figures for 2025 are provisional as the final data ratification was not completed before these statistics were produced, see the Environmental Statistics Report user guidance document for further details of validation and ratification process.

The number of monitoring stations measuring $PM_{2.5}$ in urban sites have expanded from two in 2019 to 11 in the latest year. Details for each year are provided in the accompanying data tables.

In the period since 2019, the annual mean concentration of $PM_{2.5}$ at the rural Lough Navar site has been no higher than 5.0 µg/m^3 with an annual mean concentration of 4.5 µg/m^3 recorded in 2025. The annual mean concentration across Northern Ireland's urban monitoring sites fell from 9.8 µg/m^3 in 2019 to 6.8 µg/m^3 in 2020. Since 2021 the annual mean concentration of $PM_{2.5}$ has remained quite stable with 7.3 µg/m^3 recorded in the latest year.

Ammonia

Figure 3.4 Annual ammonia emissions from agriculture, 2001 – 2023



Source: Rothamsted Research, North Wyke

Ammonia is an air pollutant which arises mainly from agricultural practices. The agriculture sector accounted for the majority of ammonia emissions in Northern Ireland in 2023. Other sources include transport, commercial and domestic combustion and industrial processes.

In 2023, of the total ammonia emissions from agriculture, 87.7 per cent were produced from livestock, 6.3 per cent from the application of mineral fertilisers containing nitrogen and 6.0 per cent from the application of other organic materials to land (sewage sludge and digestate). Estimates of total ammonia emissions from agriculture are based on numbers of cattle, sheep, pigs, poultry, agricultural horses, goats and deer together with associated information on livestock and manure management practices and the use of nitrogen-containing inorganic and organic fertilisers, and the application of the relevant emission factors.

Emissions from livestock in Northern Ireland (arising from housing and yards, grazing and manure storage and application to land) have increased by 1.5 per cent since 2005 (from 26.6 kt to 27.0 kt in 2023). This compares with a 15.7 per cent decrease in emissions from livestock for the UK as a whole over the same period. Cattle numbers in 2023 (excluding dairy cows) have decreased slightly in NI, relative to 2005, with a 4.2 per cent decrease over the period, in comparison to a 13.1 per cent decrease for the UK total. Dairy cow numbers have increased by 11.2 per cent in NI, relative to an 8.1 per cent decrease for the UK total. Pig numbers have increased over this period in NI, from 405 to 682 thousand head, in contrast to decreasing or relatively stable populations for the UK as a whole. In common with the UK total, poultry numbers have increased over the same period in NI, from 17.6 to 25.6 million head.

The ammonia emissions from nitrogen fertilisers have decreased by 11.2 per cent since 2005 (from 2.2 kt in 2005 to 1.9 kt in 2023). Although there has been a 44 per cent decrease in total fertiliser nitrogen use over this period overall, there has been an increase in the use of Urea fertilisers which are associated with greater ammonia losses than other nitrogen fertilisers.

Note that due to farm survey timing issues, the NI estimates of emissions from nitrogen fertiliser use in 2023 are provisional and will be updated in the next annual commentary.

Overall, ammonia emissions from agriculture have increased by 7.0 per cent, from 28.8 kt in 2005 to 30.8 kt in 2023.

4 Water and Marine

Water is an essential natural resource and plays a vital role in maintaining biodiversity, our health and social welfare and our economic development. Our rivers, lakes, estuaries, seas and groundwater provide water to sustain many of our core social and economic activities while also providing drinking water for our population.

The majority of Northern Ireland's 650 km of coastline is protected for its special interest and several of our coastal species and habitats are recognised as internationally important. The marine life in the seas surrounding Northern Ireland is rich and varied and includes marine mammals such as harbour seals, whales, dolphins, seabirds, waterfowl and other species that migrate here.

This chapter looks at the quality of Northern Ireland's inland and coastal waters, including levels of compliance with waste water standards, pollution incidents and Irish Sea temperatures.

Key points in this chapter:

- Of the twenty-five inshore coastal waterbodies delineated in Northern Ireland, 10 (40 per cent) have been assessed at good or better ecological status.

- In 2025 soluble reactive phosphorus (SRP) was measured at 93 surveillance rivers across Northern Ireland giving an average concentration of 0.07 mg/l of phosphorus per litre of water. This was 0.023 mg/l more than the lowest figure reported in this time series, 0.047 mg/l in 2012.

- Water pollution incidents are investigated by Northern Ireland Environment Agency (NIEA). In 2025 there were 1,780 incidents reported to NIEA or discovered by NIEA during inspections, of which 825 (46 per cent) were substantiated (confirmed) as having an impact on the water quality of the receiving waterway. A total of 84 incidents were considered to be of High or Medium Severity.

- Three out of nine designated shellfish water protected areas (SWPAs) complied with the Water Framework Directive Guideline E. Coli standard in Shellfish Flesh in 2025.

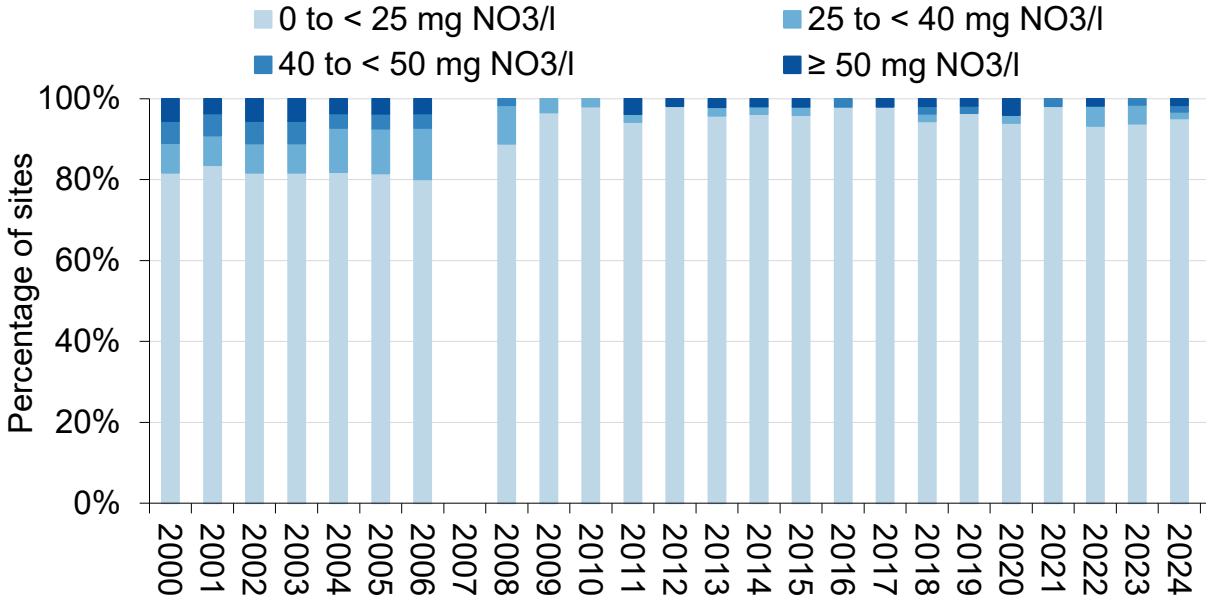
Statistics related to drinking water quality, bathing water quality, blue flag beaches, marine water quality and beach litter are available online.

Whilst statistics on the state of the water environment are published annually in this report, NI Water Classification Statistics are not updated each year due to the timescales of monitoring. The Water Classification Statistics Report 2024 provides the most recent assessment for all surface water bodies (rivers, lakes and transitional & coastal). Due to a long lag time, groundwater body classifications are not updated mid-cycle. The 2021 groundwater body status, which is included the Northern Ireland Water Framework Statistics report 2021, remains current.

Data tables and further information for this chapter can be found online.

Groundwater Quality

Figure 4.1 Annual mean nitrate concentrations (in groundwater), 2000 – 2024



Source: NIEA
Note: no figures for 2007 as a major review of the network was undertaken during that period.

The Northern Ireland regional groundwater monitoring of nitrate concentrations was initiated in 2000 and is ongoing (Figure 4.1). The Water (Amendment) (Northern Ireland) (EU Exit) Regulations 2019 ensures that the Water Framework Directive (as transposed) maintains the Groundwater Daughter Directive (2006/118/EC) groundwater quality standard of 50 mg NO_3/l.

In the period 2000 to 2006, 91 per cent of sites had an annual mean concentration of less than 40 mg NO_3/l, in which 82 per cent of these sites had concentrations of less than 25 mg NO_3/l.

The regional network of monitoring sites was reviewed in 2007/2008. The nitrate groundwater monitoring programme resumed in 2008. The figures both pre and post review are broadly comparable.

In 2024, nitrate concentrations were monitored at 63 groundwater sites across Northern Ireland giving an average concentration of 5.41 mg NO_3/l. At 60 of the 63 groundwater monitoring stations (95 per cent) in 2024, groundwater nitrate concentrations were consistently below 25 mg NO_3/l.

The 3 sites (5 per cent) that reported over 25 mg NO_3/l in 2024 can be described as the following:

- Monitoring point which averaged above 50 mg NO_3/l, had one sample (of the 4 taken in the year) with a value of 199 NO_3/l. The other 3 samples were below the limit of detection. The history of this site has had consistent NO_3/l values less than 2 mg NO_3/l.

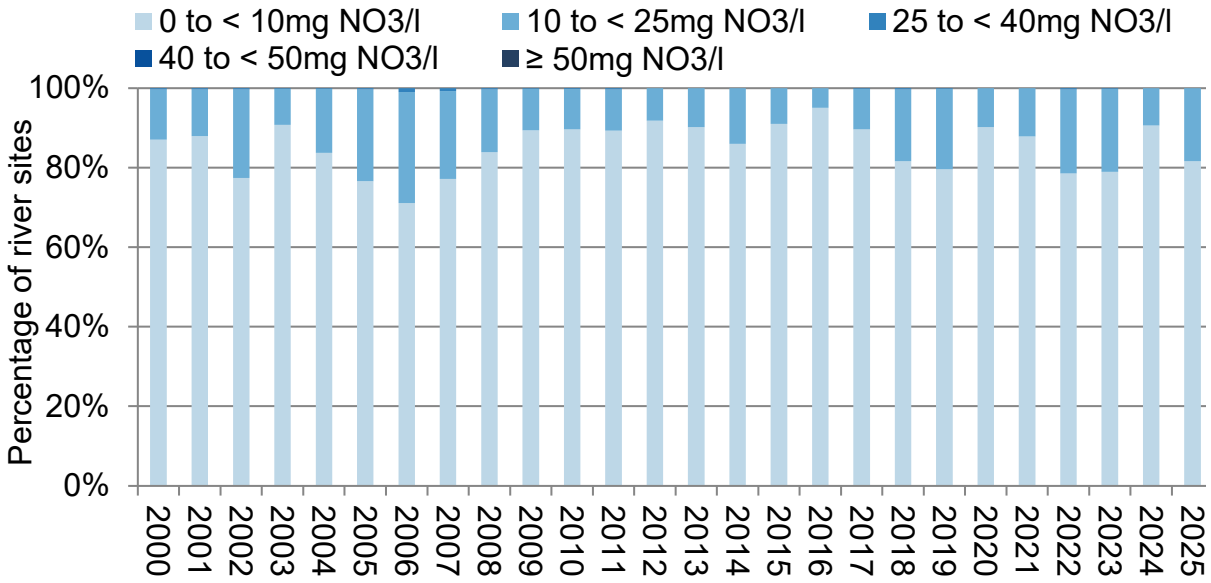
- Monitoring point with an average value between 40 and <50 mg NO_3/l, was added to the network in 2018, had an average value of 45.30 mg NO_3/l in 2021, an average value of 51.79 mg NO_3/l in 2022, 43.38 mg NO_3/l in 2023 and 43.38 NO_3/l in 2024.

- Monitoring point with an average value between 25 and <40 mg NO_3/l has been on the network since 2008 which had an average value of 24.05 mg NO_3/l in 2021, 21.47 mg NO_3/l in 2022 25.56 mg NO_3/l in 2023 and an average value of 26.34 in 2024. This sites annual average fluctuates above and below the 25 mg NO_3/l threshold.

NIEA relies on third parties to assist in providing monitoring points which can be withdrawn / decommissioned. NIEA continues to work towards expanding the groundwater monitoring network across Northern Ireland.

River Quality - nitrate

Figure 4.2 Annual mean nitrate concentrations (in rivers), 2000 – 2025



Source: NIEA

Note: Due to restrictions imposed as a result of the Covid-19 pandemic, river monitoring was affected with samples not taken in April and May and a limited number taken in March and December of 2020. Due to staff resourcing issues, fewer samples were collected at some river monitoring stations between June and December 2023.

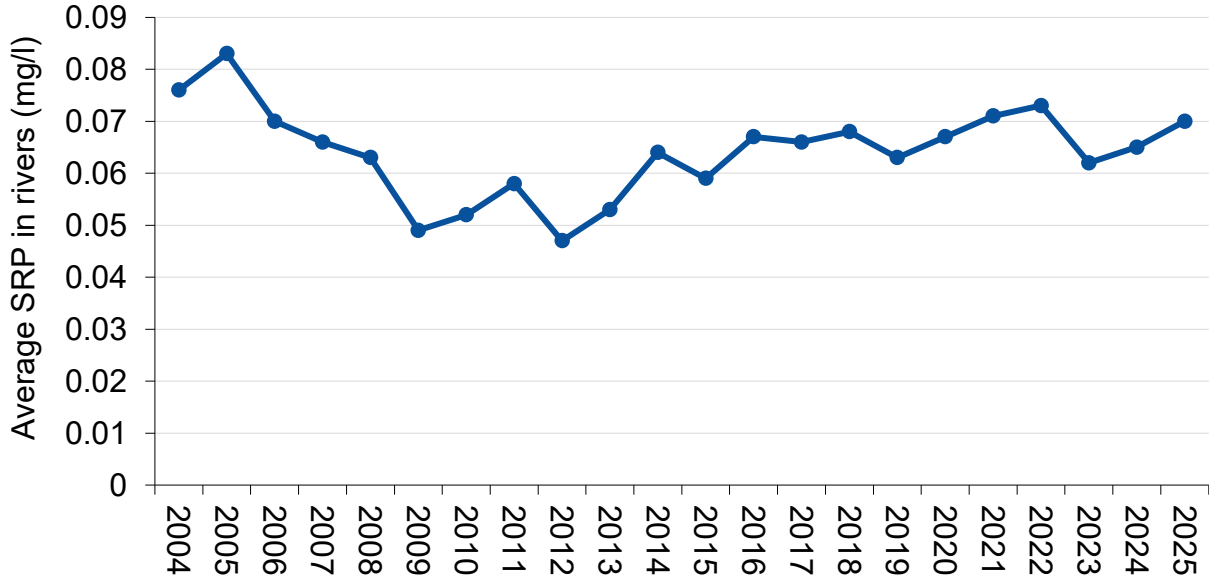
The Nitrates Directive (91/676/EEC) (the Directive) is currently implemented in Northern Ireland through the 2019-2022 Nutrients Action Programme (NAP) contained in the Nutrient Action Programme Regulations (Northern Ireland) 2019 and subsequent amending regulations. Northern Ireland must monitor surface waters for nitrate pollution against a mandatory standard of 50 mg NO_3/l. In addition, a guide standard for surface waters is operational where 90 per cent of samples should be less than 25 mg NO_3/l.

In the period 2000 to 2011, over 99 per cent of monitored river sites recorded annual mean nitrate concentrations below 25 mg NO_3/l. This improved to 100 per cent across all monitored sites during 2012–2016. In 2022 and 2023, 99.6 per cent and 99.8 per cent of sites respectively had an annual mean concentration of less than 25 mg NO_3/l; however, both years showed an increase in the proportion of sites with annual mean concentrations in the 10–<25 mg/l range, suggesting observationally that levels were rising. In 2024 and 2025, all sites again reported annual mean concentrations below 25 mg NO_3/l, though in 2025 there was a further increase in the proportion of sites within the 10–<25 mg/l category.

It is still a cause for concern that there are signs of an upward trend in the levels of nitrate in rivers. The most recent long term seasonal trend analysis carried out over the 31-year period, 1992-2023 showed that the monthly trends in average nitrate concentrations in rivers in Northern Ireland were predominantly decreasing or stable. However, the percentage of monitoring sites showing an increasing trend in the most recent 2020-2023 Nutrients Action Programme Implementation Report is 23.6 per cent compared to 9.3 per cent of sites in the 2015-2019 report period.

River Quality – Soluble Reactive Phosphorus

Figure 4.3 Soluble Reactive Phosphorus (SRP) in rivers, 2004 – 2025



Source: DAERA

Note: Due to restrictions imposed as a result of the Covid-19 pandemic, river monitoring was affected with samples not taken in April and May and limited numbers taken in March and December of 2020. Reduced sampling in summer 2023 due to staffing resource pressures.

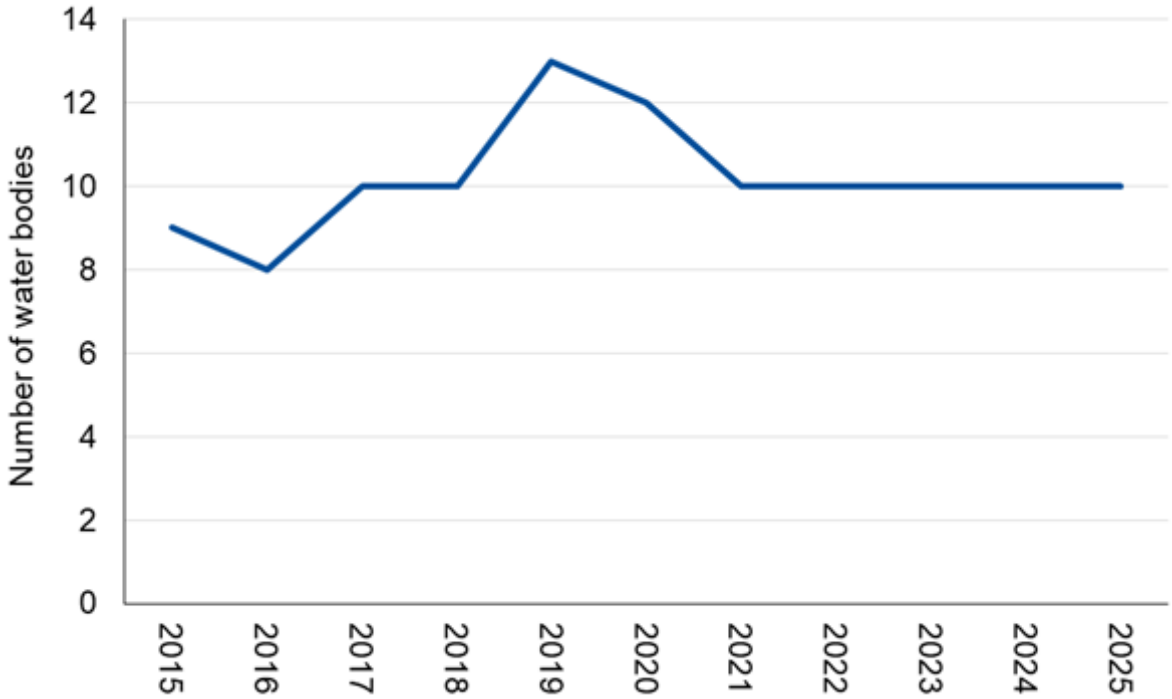
Soluble Reactive Phosphorus (SRP) is a plant nutrient, which, when present in rivers in elevated concentrations, can lead to accelerated growth of algae and other plants. The impact on the composition and abundance of plant species can have adverse implications for other aspects of water quality, such as oxygen levels, and for the characteristics of river habitats. These various changes can cause undesirable disturbances to populations of water animals, such as invertebrates and fish.

The introduction of The Phosphorus (Use in Agriculture) Regulations (Northern Ireland) were subsumed into the 2019 Nutrient Action Programme Regulations and has contributed to a reduction in phosphorus from agricultural activities, in conjunction with ongoing improvements in domestic wastewater treatment through investment by Northern Ireland Water. However, from the low of 0.047 mg/l reported in 2012, levels of soluble reactive phosphorus in the 93 Surveillance Rivers have increased to 0.07 mg/l in 2025.

This indicator is used as a wellbeing framework indicator in the latest Programme for Government (PfG) 2024-2027.

Coastal Water Bodies in Good Ecological Status

Figure 4.4 Number of coastal water bodies at good ecological status 2015 - 2025



Source: DAERA Marine and Fisheries Division
Note: Indicator amended to ecological status in May 2026 with timeseries revised.

Twenty-five transitional and coastal waterbodies have been delineated in Northern Ireland. These lie within one nautical mile of the shoreline and include all estuaries and sea loughs. Some 10 water bodies (40 per cent) have been assessed at good or better ecological status. Note that this indicator has been amended to measure ecological status as opposed to ecological condition and cannot be compared to previously published results in the Environmental Statistics Report.

This revised indicator is based on monitoring data for a variety of biotic (e.g. flora and fauna) and abiotic (e.g. dissolved oxygen, nutrients, specific pollutants) components. No improvement has been observed since 2021. Five water bodies (20 per cent) failed to meet good status due to a single quality element, while the remaining ten water bodies did not achieve good status due to two or more failing parameters.

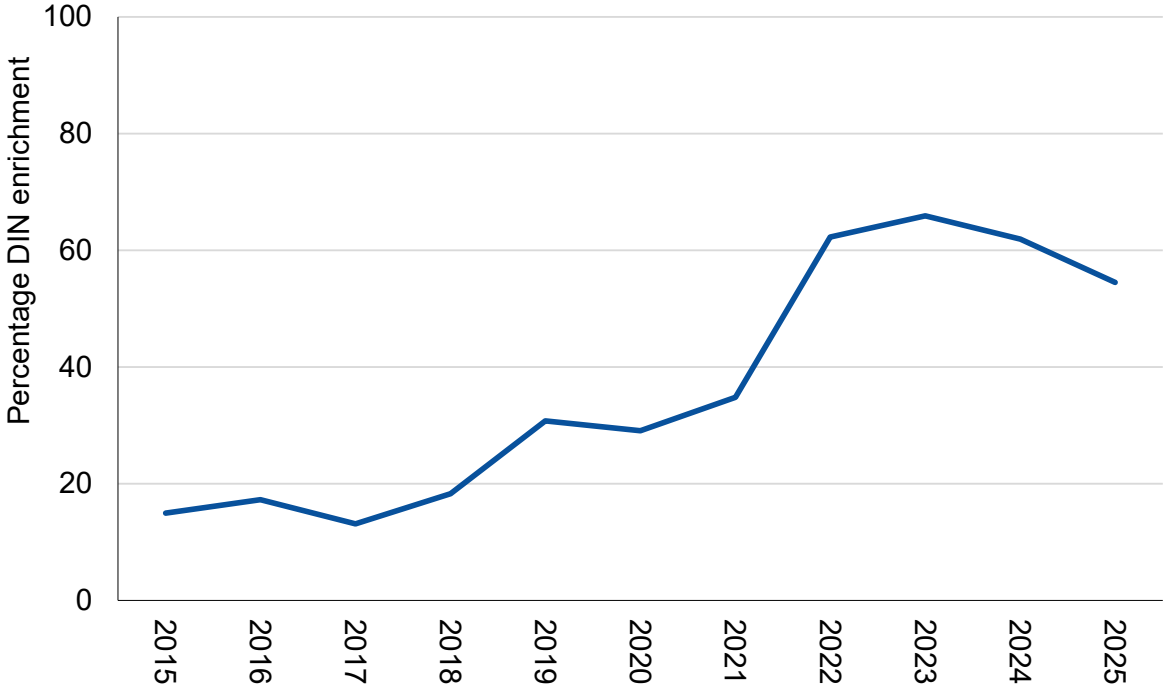
Excessive levels of nutrients were responsible for 40 per cent of water bodies not achieving good ecological status. High nutrient levels can lead to local imbalances of marine plant growth such as phytoplankton (planktonic blooms), seaweeds and seagrass with deleterious secondary effects, a process known as eutrophication. Local impacts can include smothering of other marine plants and animals, and in severe cases, can lead to reduced dissolved oxygen concentrations, which can result in fish kills.

Specific pollutants such as the pesticide permethrin are also elements responsible for water bodies failing to achieve good ecological status. All of the water bodies that failed

to achieve good status were either transitional (estuarine) waters or coastal sea loughs suggesting catchment-based point and diffuse inputs to these waters.

This indicator is used as a wellbeing framework indicator in the latest Programme for Government (PfG) 2024-2027.

Figure 4.4a Dissolved Inorganic Nitrogen (DIN) enrichment in Northern Ireland transitional and coastal waters 2015-2025



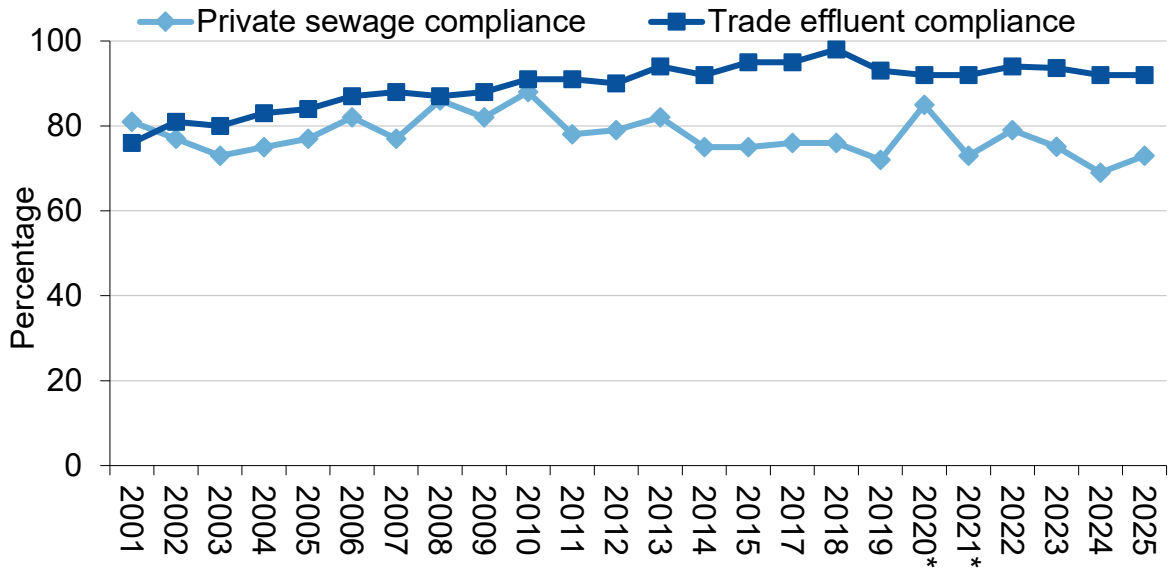
Source: DAERA Marine and Fisheries Division

Figure 4.4a provides further information on the trend in Dissolved Inorganic Nitrogen (DIN) enrichment in the 25 transitional and coastal waters from 2015 to 2025. This enrichment indicator has been developed to provide a general indication of overall nutrient trends, whether nutrient values are increasing (worsening) or declining (improving). An enrichment value close to zero indicates that DIN values are, on average, close to the good threshold; values above zero indicate excess nutrients overall. Further methodological details can be found in the Environmental Statistics Report user guidance document.

Nutrient trends in transitional and coastal waters were examined using the dissolved inorganic nitrogen (DIN) enrichment indicator. Enrichment values appeared relatively stable over the period 2015 to 2017; values then steadily increased from approximately 13 per cent in 2017 to 66 per cent in 2023. Enrichment values have shown a recent decline from 66 per cent in 2023 to 54 per cent in 2025. The decrease in DIN enrichment was approximately 7 percentage points from 2024 to 2025. While this represents a reduction, it should be noted that the current enrichment factor is still extremely high (over 50 per cent).

Industrial Discharge Quality

Figure 4.5 Trends in annual private and trade discharge consent compliance, 2001 – 2025



Source: NIEA

** * Caution should be used when comparing 2020 and 2021 with other years due to a lower sampling rate.*

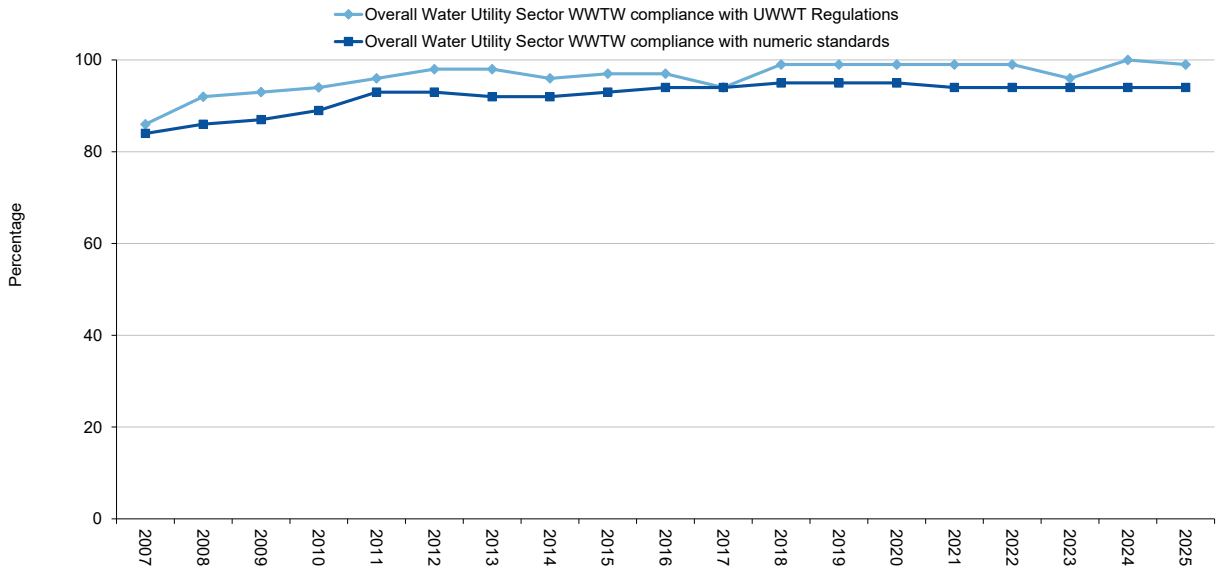
The monitoring of effluent discharges gives an indication of levels of pollution to the water environment and improvements in controls.

For the 2025 sampling year 62 per cent of programmed samples were taken during the calendar year, a total of 2,466 samples.

Sample frequency is determined by volume and nature of the discharge, with higher volumes and more complex effluents, receiving more frequent assessment.

Water Utility Discharge Quality

Figure 4.6 Summary of compliance of Water Utility Waste Water Treatment Works (WWTW), 2007 – 2025



Source: NIEA

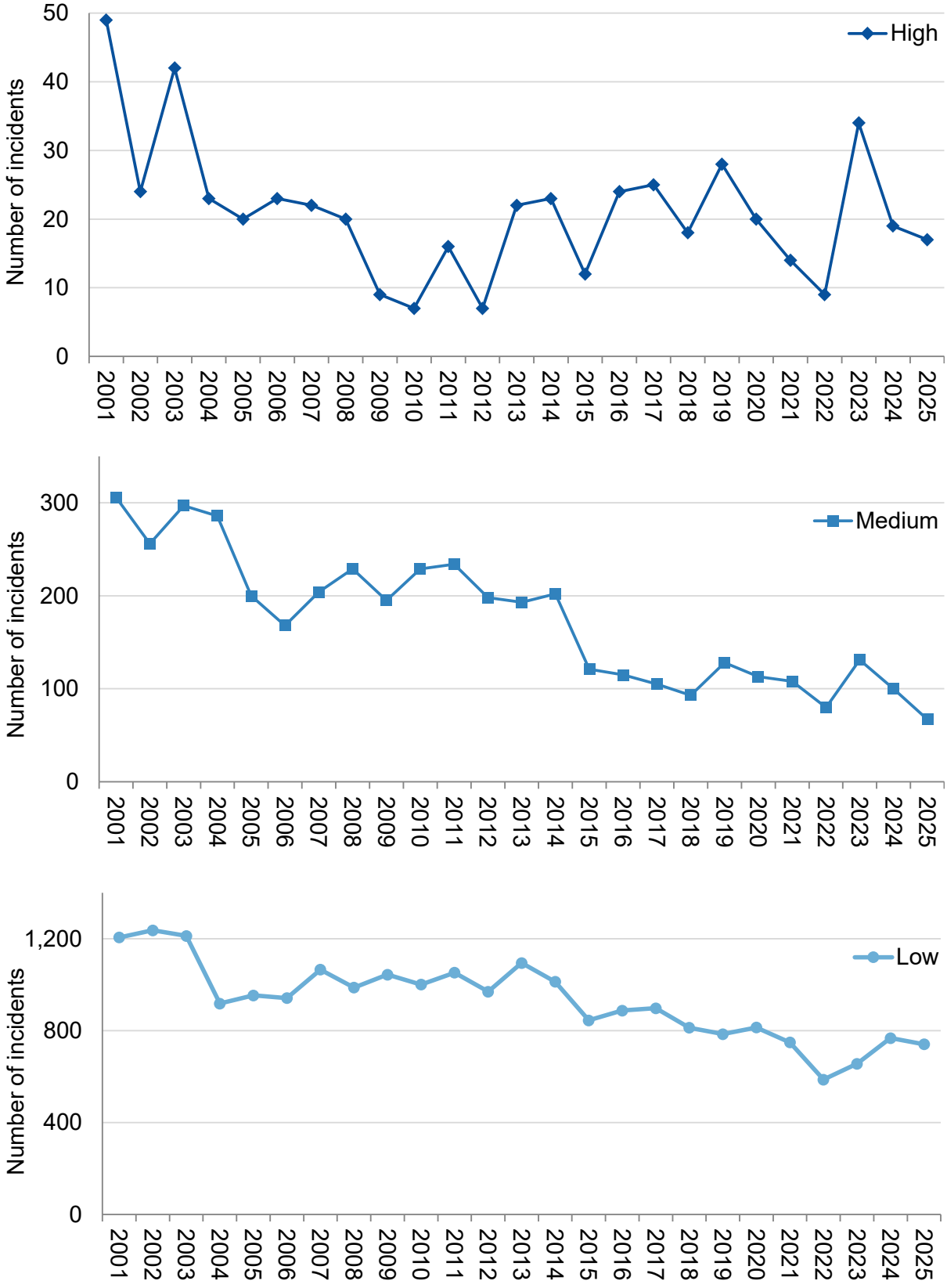
Compliance of WwTW with the Standards in Water Order Consents (WOC)
Compliance of Wastewater Treatment Works (WwTW) with numeric conditions of Water Order consents was introduced in 2007. It is a key performance indicator for the water utility sector and has improved since 2007 with compliance now at 94 per cent.

Northern Ireland Water (NIW) compliance is assessed against numeric standards set for discharges serving a population equivalent greater than 249. The number of WwTW has dropped from 244 in 2007, to 239 in 2025. Numeric compliance is also assessed for five WwTW operated under Public Private Partnership (PPP) contracts which continued to achieve 100 per cent compliance. One of the previous PPP WwTW, Kinnegar WwTW, came to the end of its contract period in 2025 and has now become a NIW asset. Of the 239 WwTW assessed, 224 complied with the numeric conditions of their Water Order Consents.

Compliance of WwTW with the Urban Waste Water Treatment Regulations
Numeric compliance is assessed against the requirements of the Urban Waste Water Treatment (UWWT) Regulations (Northern Ireland) 2007 for 78 WwTW under the Regulations in 2025. Compliance has improved since 2007 and recorded 99 per cent in 2025.

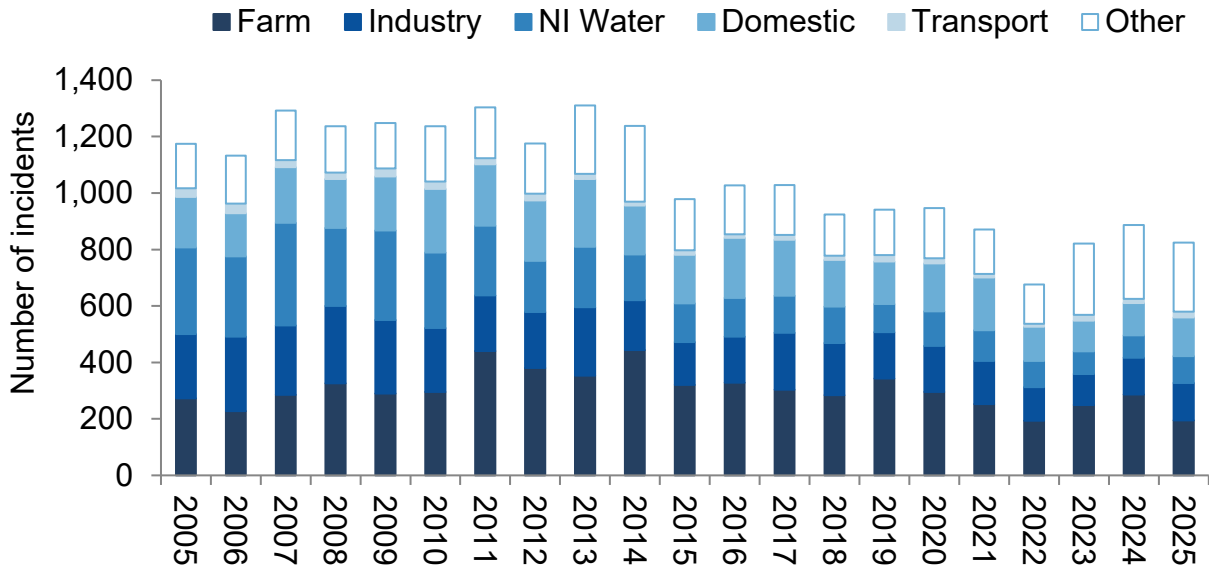
Water Pollution Incidents

Figure 4.7a Severity of substantiated water pollution incidents, 2001 – 2025



Source: NIEA

Figure 4.7b Source of Substantiated Water Pollution Incidents, 2005 – 2025



Source: NIEA

In 2025, there were 1,780 incidents either reported to NIEA or discovered by NIEA staff during inspections or proactive work, of which 825 (46 per cent) were substantiated (confirmed) as having an impact on the water quality of the receiving waterway.

The total number of reported and discovered incidents decreased by 5.6 per cent compared with last reported year (1,886) and the number of substantiated incidents in 2025 (825) decreased by 7.0 per cent compared to 2024 (887). The total number of substantiated incidents in 2025 was 27 per cent lower than the long-term average for the period 2001-2025 (1,125).

In 2025, Other (30 per cent), accounted for the largest proportion of substantiated incidents investigated by NIEA, followed by Farm (24 per cent), Domestic (17 per cent), Industry (16 per cent), NI Water (12 per cent) and Transport (2 per cent).

Substantiated pollution incidents are classified according to their environmental impact severity. A total of 84 High and Medium Severity incidents (10 per cent of total substantiated reports) were investigated during 2025. This was a decrease of 29 per cent when compared to the number of High and Medium Severity incidents in 2024 (119).

Incidents relating to confirmed occurrences of potentially toxic blue green algae are included within the “Other” category. Potentially Toxic Blue Green Algal blooms result from longer term diffuse inputs to our waterways. As these inputs largely derive from diffuse agricultural and wastewater sources, no single discharger can be identified as the source.

There were 10 confirmed High and Medium Severity incidents relating to potentially toxic blue green algae in 2025, a decrease of 63 per cent compared to 2024 (27 confirmed High and Medium Severity incidents). Overall, there was a slight increase in the total number of confirmed incidents related to potentially toxic blue green algae in 2025 compared to 2024.

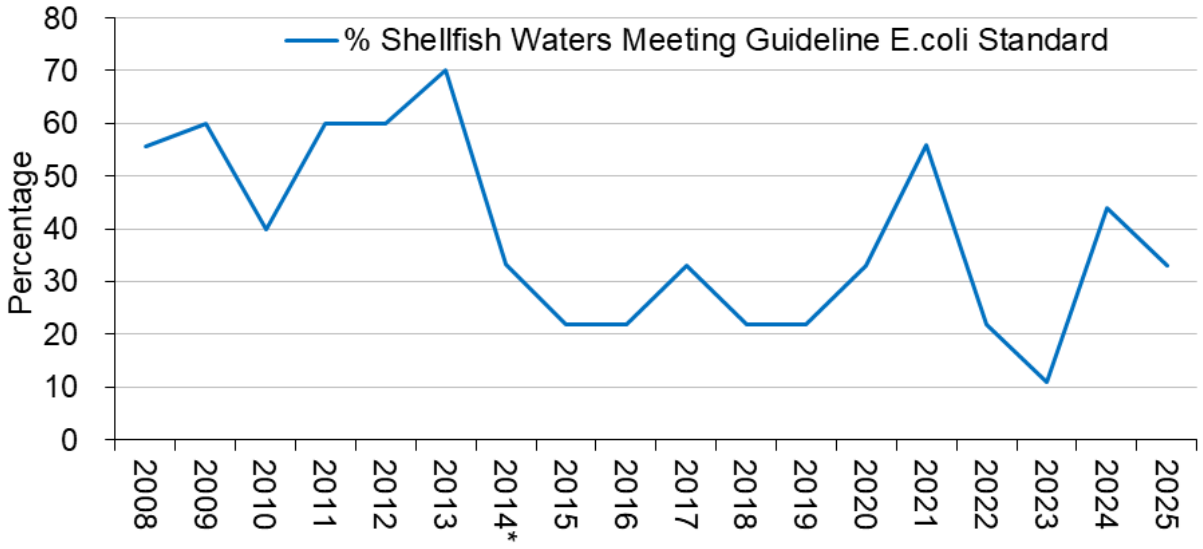
Figure 4.7c Severity of Confirmed Incidents Relating to Potentially Toxic Blue Green Algae in 2024 and 2025

Severity Rating	2024	2025
High	3	3
Medium	24	7
Low	85	109
Total Incidents	**112**	**119**

Information on blue-green algae, including confirmed locations, is available on the DAERA website Blue-Green Algae | Department of Agriculture, Environment and Rural Affairs.

Shellfish Water Protected Areas

Figure 4.8a Shellfish waters directive compliance, 2008 - 2025



Source: DAERA Marine and Fisheries Division
Note: From 2008-2013, compliance was measured against guideline E. Coli standard in flesh.
**In January 2014, the Shellfish Waters Directive was subsumed into the Water Environment (Water Framework Directive) Regulations (Northern Ireland). The Water Environment Regulations Guideline E.coli standard is slightly tighter than the previous standard in the Shellfish Waters Directive.*
** No data for Marlfield from 2014 onward.*

Designated Shellfish Water Protected Areas (SWPAs) are areas designated for the protection of shellfish growth and production. Good water quality is important to produce high quality shellfish. In Northern Ireland there are currently ten Shellfish Water Protected Areas which were previously designated under the Shellfish Waters Directive and are currently managed under the Water Environment (Water Framework Directive) Regulations (Northern Ireland) 2017. These SWPAs are located within Lough Foyle (Longfield Bank and Balls Point), Larne Lough, Belfast Lough, Strangford Lough (Skate Rock, Reagh Bay/Paddy's Point and Marlfield Bay), Killough Harbour, Dundrum Bay and Carlingford Lough. Further information regarding areas sampled can be found at https://www.daera-ni.gov.uk/publications/shellfish-action-plans-2019

In January 2014, the Shellfish Waters Directive was subsumed into the Water Environment (Water Framework Directive) Regulations (Northern Ireland), resulting in more stringent *E. coli* standards and a noticeable "drop" in the percentage compliance of designated shellfish waters. In 2025, three out of nine (33 per cent) of designated shellfish waters complied with the guideline *E.coli* standard, a decrease from 2024, when four out of nine (44 per cent) of designated shellfish waters achieved compliance. No data was available for Marlfield in Strangford Lough which has not seen any shellfish harvesting for several years. The Department will consider the de-designation of this site if harvesting is not recommenced.

Comprehensive monitoring programmes are in place to assess the status of Shellfish Water Protected Areas under the Water Environment (Water Framework Directive) Regulations (Northern Ireland) 2017 and classification under the EU Hygiene Regulations (854/2004). A suite of determinants are assessed to determine ecological

status and the overall objective under Water Environment Regulations (Table 4.8c included in the data tables).

DAERA Environment Marine and Fisheries Division continue to manage Shellfish Water Protected Areas to ensure that there is no deterioration in water quality; also that steady progress is made towards compliance with guideline standards. Compliance with guideline standards are determined by measuring *E.coli* and other prescribed contaminants in shellfish flesh. Relevant shellfish waters contaminants are monitored under Water Framework Directive Annex VIII and Annex X specific pollutants and priority hazardous substances.

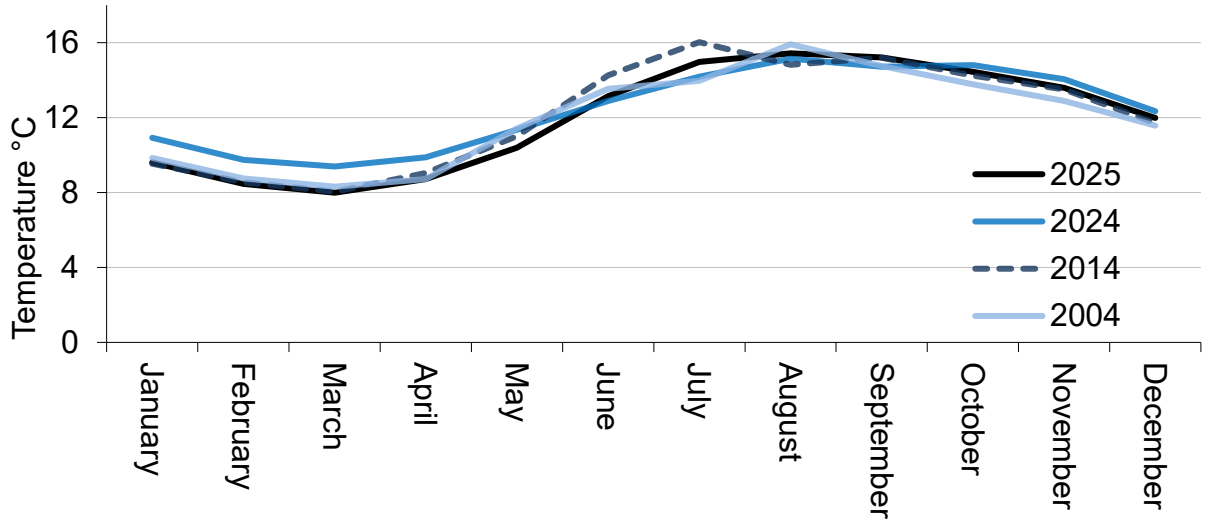
Shellfish beds are classified by the Food Standards Agency in Northern Ireland (FSA in NI) to determine the levels of post-harvest treatment that is required before shellfish can be placed on the market for consumption. Monthly monitoring of shellfish flesh is conducted to ensure that the classification that has been awarded by the FSA in NI remains appropriate, ensuring that levels of marine biotoxins and chemical contaminants within the shellfish flesh do not exceed regulatory limits or cause a risk to public health.

DAERA Environment Marine and Fisheries Division work closely with the FSA in NI in managing shellfisheries from both an environmental and public health perspective.

A full list of shellfish waters and the compliance standard met for each year from 2008 to 2025 is included in the data tables that accompany this report.

Sea Temperature

Figure 4.9a Average monthly sea surface temperature by year, Irish Sea, 2004, 2014, 2024 and 2025.



Source: AFBI, 2025

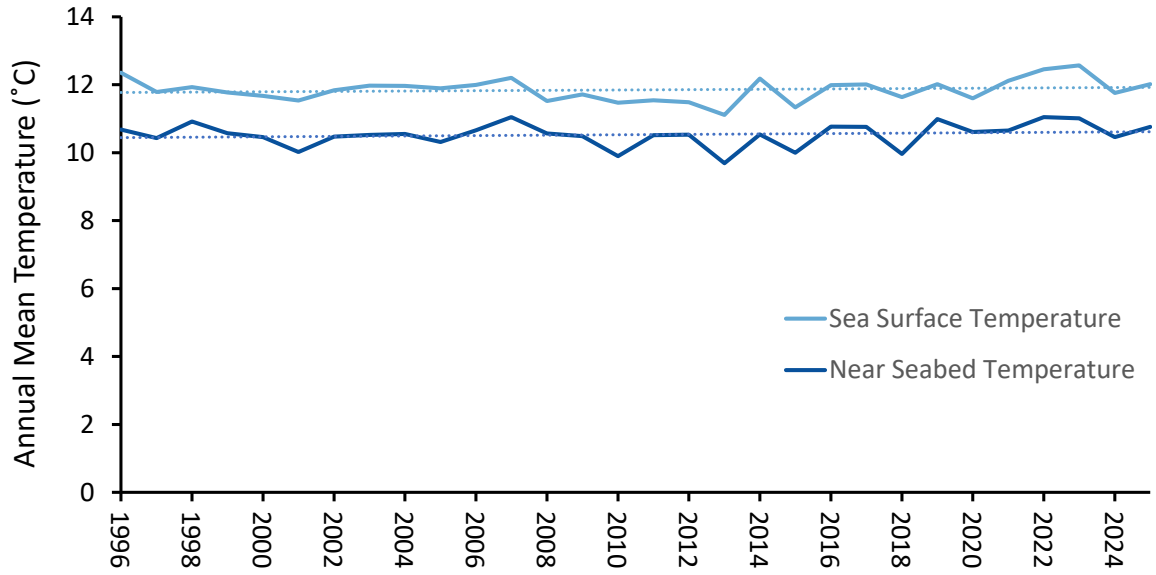
As part of a long-term research programme investigating how the physical environment affects the Irish Sea's marine ecosystem, the Agri-Food and Biosciences Institute maintain an instrumented mooring in the western Irish Sea measuring the nutrients essential for a healthy ecosystem, temperature, salinity, chlorophyll, turbidity and met-ocean parameters such as meteorology and wave height.

The temperature of the sea is recorded by thermistors at different depths every three hours, and from these measurements daily mean values are calculated. The time-series now contains 30 years of data and a detailed analysis of the data to investigate inter-annual variability in the seasonal development (onset, duration, breakdown) of water column stratification and the frequency of marine heatwave events is currently underway.

Monitoring is essential to understand the health and functioning of the western Irish Sea, as the seasonally-stratified gyre in this area is a regionally important oceanographic feature that determines our Irish Sea fisheries.

The lowest water temperature is usually recorded in February and the warmest in August. During the autumn and winter months there is generally little difference in the temperature of the water close to the surface and near the seabed as the water column is mixed. Warming of the surface layers during spring and summer causes the water column to stratify, isolating the bottom water from the surface, meaning the bottom water does not warm up as much or mix with the surface water. During the summer the temperature differences between surface and bottom water layers can be as much as 7 or 8 °C, and there are differences in ecologically-significant parameters such as dissolved oxygen and nutrient concentrations. Changes in the temperature and structure of the area will affect the broader ecosystem which in turn affects the fisheries.

Figure 4.9b Annual Sea surface and near seabed temperature Irish Sea, 1996 – 2025



Source: AFBI, 2025

Over the full time-series annual mean temperatures have increased by approximately 0.1^{o}C per decade at the sea surface and 0.079˚C per decade close to the seafloor. Since 2014 the sea surface has warmed at a faster rate, almost 1^{o}C per decade. This coincides with the highest ever recorded temperature in the western Irish Sea, where the daily mean sea surface temperature reached 19.7^{o}C on the 22nd July 2021, following seven days of record-breaking temperatures.

5 Biodiversity and Land

Biodiversity describes the vast range of living organisms on earth. Biological diversity has been defined as:

> "The variability among living organisms from all sources including, inter alia, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part; this includes diversity within species, between species and of ecosystems".
> *Convention on Biological Diversity, 1992*

The state of our biodiversity reflects the state of our air, water and land environments. Land and landscape management have the greatest visual impact on our environment and our appreciation of it. Whether the land is used for agriculture, housing or forestry its value is immense and perhaps most importantly, it is a limited resource. This chapter includes statistics on the extent of nature conservation designations in Northern Ireland, the condition of some of these designations, bird populations, forest and woodland plantings and the role of agri-environment schemes on our land.

Key points in this chapter:

- By March 2026, 111,159 hectares across 394 sites were declared Areas of Special Scientific Interest (ASSI). 246,300 hectares across 58 sites were declared Special Areas of Conservation (SACs) and 114,600 hectares across 16 sites as Special Protection Areas (SPAs). 77,700 hectares across 20 sites were declared Ramsar sites (areas of wetland and waterfowl conservation), and 26,178 hectares across 5 sites as Marine Conservation Zones (MCZs).

- In 2025/26, 52 per cent of features within Marine and Terrestrial protected sites were in Favourable condition while 37 per cent were in Unfavourable condition. Some 2 per cent were in Unfavourable-Recovering condition with less than 1 per cent Destroyed.

- The wild bird population indicator using 56 bird species shows that wild bird abundance in Northern Ireland is at a similar level to that in the mid-1990s when the Breeding Bird Survey started. Bird populations peaked in 2005 and have been in general decline since, driven principally by bird species found in farmland habitats.

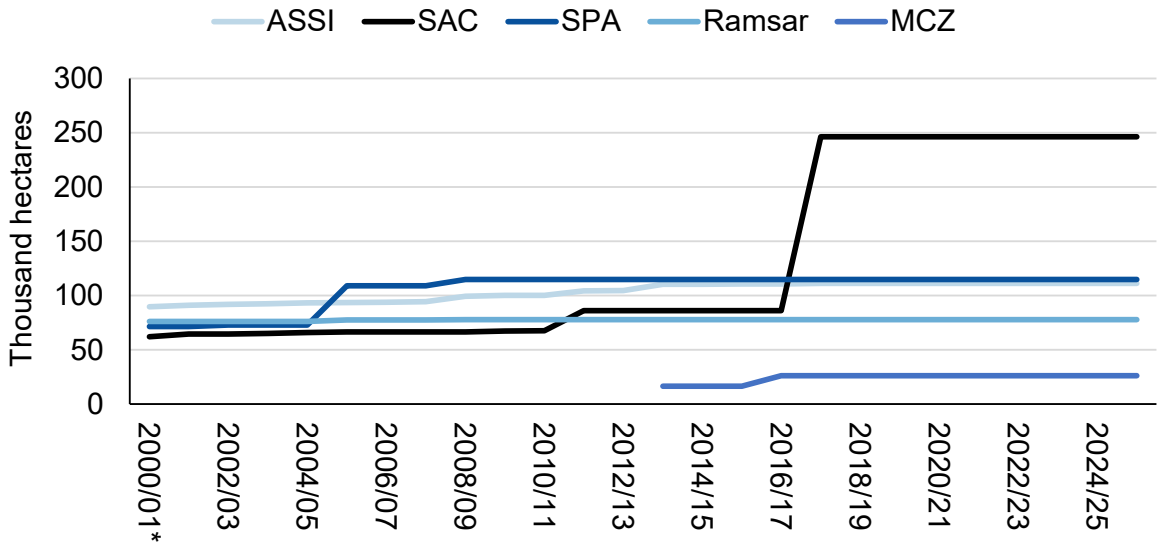
- In 2025/26, 333 hectares of new woodland was planted, including 36 hectares planted on land recently acquired by Forest Service and 268 hectares of new woodland supported with Forestry Grant Schemes.

- Agri-environment schemes encourage farmers and landowners to manage their land to benefit the environment. At the end of 2025, 61,000 hectares of land in Northern Ireland were under agri-environment scheme agreement.

The number of Green Flag Award winning sites in Northern Ireland has increased over the last 10 years. Data tables and further information for this chapter can be found online.

Nature Conservation Designations

Figure 5.1(a) Area of nature conservation designations, 2000/01 – 2025/26



Source: NIEA
** These figures include all conservation designations up to and including 2000/01.*

Identifying and protecting areas of special nature and Earth Science (geological) interest has been a cornerstone of nature conservation on land and sea in Northern Ireland over the last 50 years. Areas which are particularly important for certain species, habitats or Earth Science features have been formally designated in accordance with a number of pieces of national and international legislation, into one or more of the designations displayed in Figure 5.1(a). These protected areas aim to retain and enhance the nature conservation value of their features of interest and bring associated wider ecosystem benefits. The on-going protection and management of this network of sites ensures that important natural and cultural assets are available to be enjoyed by this and future generations.

By 31st March 2026, a total of 111,159 hectares across 394 sites were declared Areas of Special Scientific Interest (ASSI). 246,300 hectares across 58 sites were declared Special Areas of Conservation (SACs) and 114,600 hectares across 16 sites as Special Protection Areas (SPAs). 77,700 hectares across 20 sites were declared as Ramsar sites (areas of wetland and waterfowl conservation), and 26,178 hectares across 5 sites as Marine Conservation Zones (MCZs). These sites (Figure 5.1b & c) capture the most important and, in some cases, threatened and declining species and habitats, on land and at sea, including terrestrial habitats, freshwater rivers, lakes coastal and marine ecosystems.

Figure 5.1(b) Areas of Special Scientific Interest (ASSI) and Marine Conservation Zones (MCZ), designated between 1976 and 2026

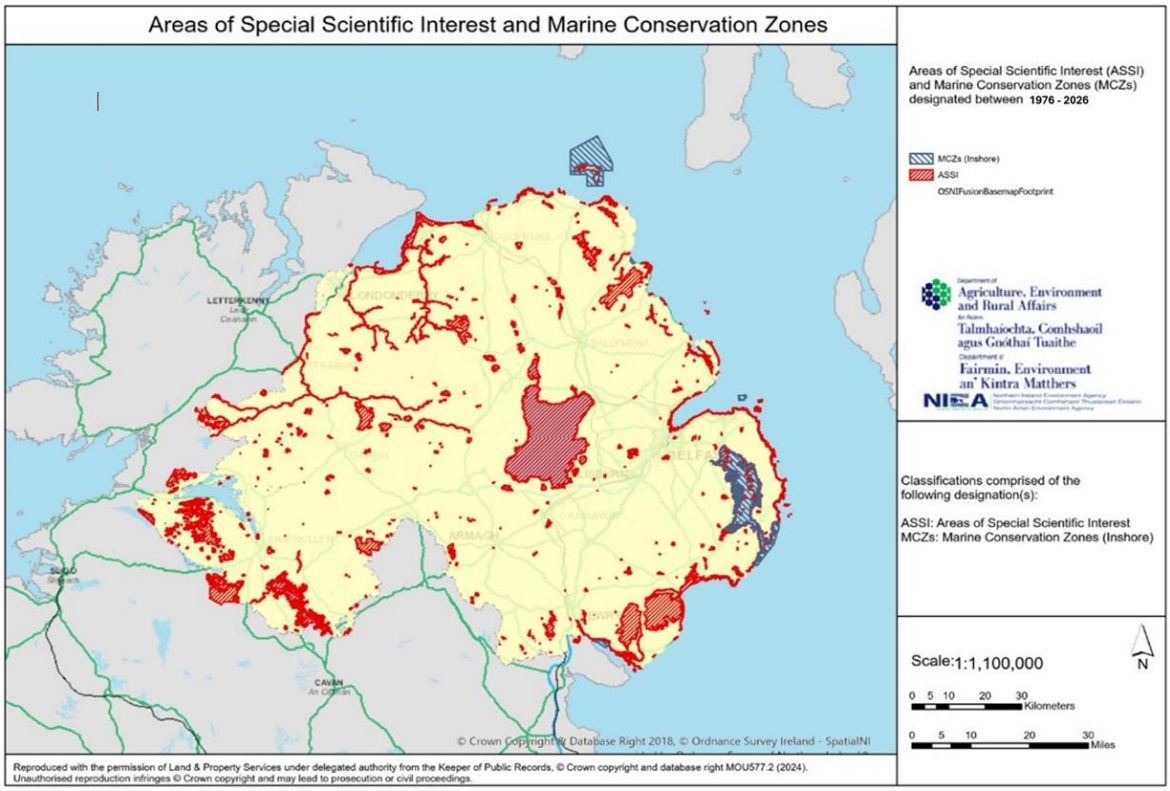
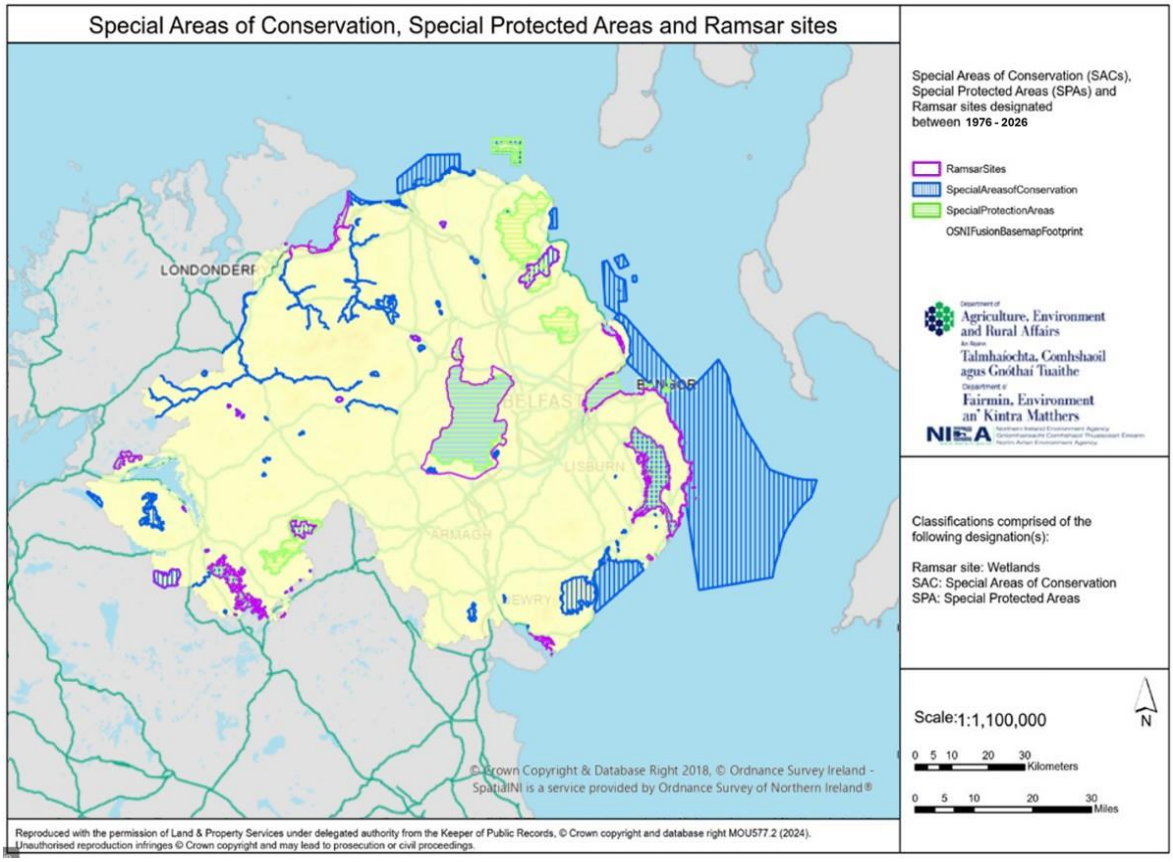
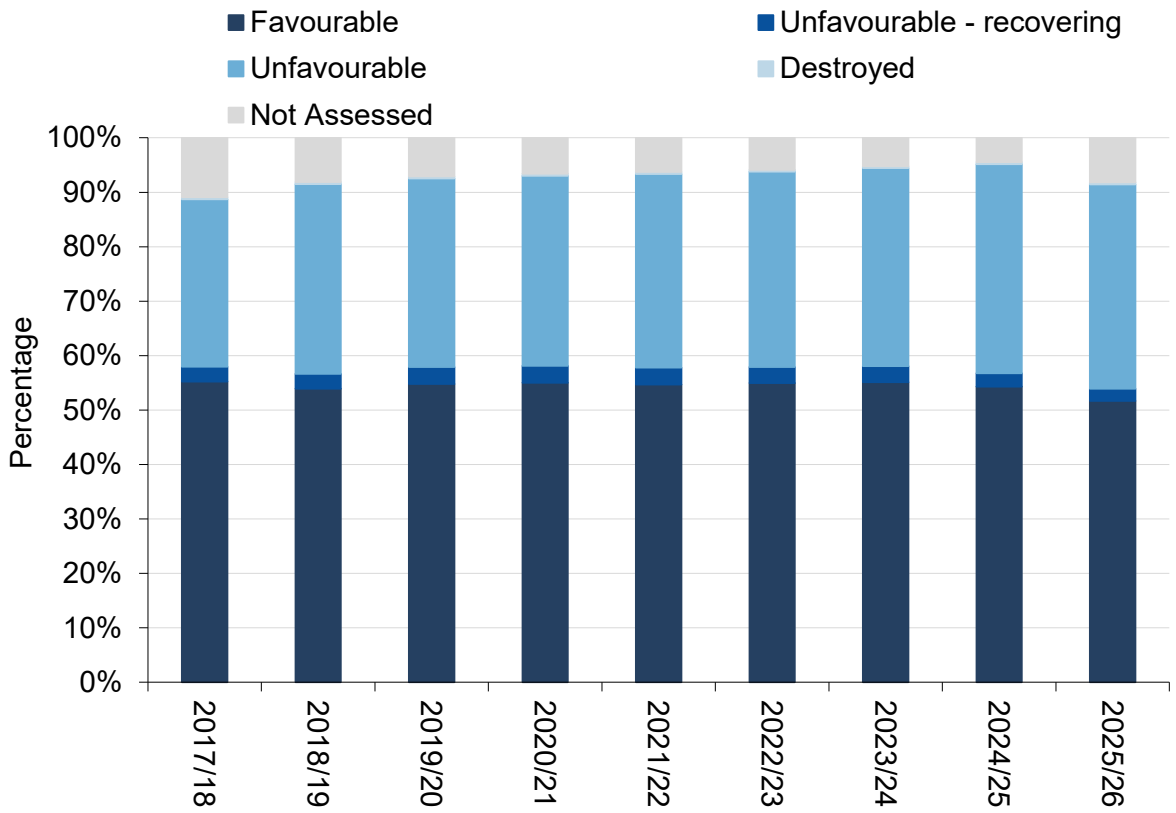


Figure 5.1(c) Special Areas of Conservation (SACs), Special Protection Areas (SPAs) and Ramsar sites, designated between 1976 and 2026



Condition of features

Figure 5.2a Condition of Features within Marine and Terrestrial protected sites, 2017/18 – 2025/26



Source: NIEA

Protected sites have been designated based on specific qualifying features of interest, which include many types of habitats, species and Earth science features. A site will have at least one feature of interest. Some sites have multiple features. To comply with the parent legislation, regular monitoring of and reporting on the features is required, to assess their condition.

The monitoring process involves an evaluation of the condition of the qualifying features in each protected site. This is known as Condition Assessment Monitoring and follows the UK Common Standards Monitoring (CSM) approach to ensure NI monitoring is focussed, and consistent with methods used throughout the UK. Further information on CSM can be found at JNCC (2004)[3].

It is important to note, that the majority of sites are multi-feature, and inevitably many features may be classified as unfavourable because of just one failing attribute. In reality, overall the sites remain diverse, natural and special places. It is also important to point out that because a feature is unfavourable, it doesn't necessarily mean the area is being poorly managed. In some cases, pressures outside the site boundary negatively impact feature condition, e.g. air or water quality.

[3] JNCC (2004). *JNCC Common Standards Monitoring: Introduction to the Guidance Manual*, *February 2004*. https://data.jncc.gov.uk/data/f6fef832-93f0-4733-bf1d-535d28e5007e/CSM-Introduction-2004.pdf

The metric in this report shows condition categories favourable, unfavourable and destroyed as well as the unfavourable recovering sub-category which shows positive movement towards favourable condition. The aim of protected sites management is to achieve favourable condition for the site's features. This is enshrined in a range of international commitments including the Convention on Biological Diversity and local strategies.

The most up-to-date figures for the 2025/26 reporting period highlight that 52 per cent of all features, both terrestrial and marine, are in favourable condition, 37 per cent are in unfavourable condition, 2 per cent are unfavourable-recovering and less than 1 per cent are destroyed. A total of 8 per cent of features have not had a formal condition assessment therefore a condition cannot be determined for these features. The proportion of features in favourable condition is used as a wellbeing framework indicator in the latest Programme for Government (PfG) 2024-2027.

When split into habitats, species and Earth Science features assessed, 36 per cent of habitats and 53 per cent of species features are in favourable condition, compared to 92 per cent of Earth Science features in favourable condition. This reflects the relative stability of geological features compared to the increasing pressures on the natural environment, contributing to the comparatively lower percentages for habitats and species features.

There is considerable variation in the proportion of features in favourable condition across the different habitat and species feature categories; a more detailed breakdown of the proportion of individual natural feature types in favourable condition within these categories can be viewed in Table 5.2b.

It should be noted that whilst some features have been clearly split between terrestrial and marine environments; bird, invertebrate and Earth Science feature results shown in Table 5.2b are combined terrestrial and marine statistics.

Published summary monitoring results and further refined breakdowns can also be viewed at https://www.daera-ni.gov.uk/articles/protected-areas-protected-areas-monitoring-results

Table 5.2b Condition of features within Terrestrial and Marine protected sites by type of feature, year ended March 2026

Feature Type	Number of Features	Number of Features in Favourable Condition	Proportion Favourable %
Habitats			
Bogs	53	7	13%
Coastal	52	20	38%
Fen, marsh & swamp	89	26	29%
Freshwater	58	17	29%
Grasslands	103	65	63%
Heathlands	42	5	12%
Inland Rock	16	11	69%
Marine	46	40	87%
Woodlands	80	2	3%
Habitats Total	**539**	**193**	**36%**
Species			
Birds	369	235	64%
Fish	9	4	44%
Fungi	15	10	67%
Invertebrates	155	79	51%
Marine Mammals	7	4	57%
Non-Vascular Plants	42	20	48%
Terrestrial Mammals	11	10	91%
Vascular Plants	208	67	32%
Species Total	**816**	**429**	**53%**
Earth Science			
Earth Science	204	188	92%
Earth Science Total	**204**	**188**	**92%**
Total	**1,559**	**810**	**52%**

In 2022/23 NIEA commenced a programme of more detailed Common Standards Monitoring for terrestrial species features, which has continued into 2025/26. Reporting on some species feature assemblages or groups is now more closely aligned to the niche habitat requirements of those species groups. Vascular plant features have largely been split from assemblages into single features. These changes are in line with Common Standards Monitoring recommendations[4] and guidelines for the selection Sites of Special Scientific Interest (SSSI)[5] which are adapted to Northern Ireland's ASSIs. This has resulted in the number of reported features increasing. This change is noticeable from 2022/23 figures, and in the coming years as NIEA continues to refine how particular species groups are monitored to achieve greater consistency and relevance for informing management action. Change on the back of revised feature numbers has been particularly notable in this Environmental Statistics reporting year, with feature refining work since 2022/23 adding almost 150 additional features to the network and accounting for a significant proportion of the change in favourable proportion.

[4] Common Standards Monitoring guidance | JNCC - Adviser to Government on Nature Conservation
[5] https://jncc.gov.uk/our-work/guidelines-for-selection-of-sssis/

Currently, site integrity monitoring for Marine Protected Areas is carried out on a monthly basis where site use, pressures and threats are recorded. Each site is surveyed by land four times per year, and by sea twice per year. Strangford Lough is the exception which is surveyed six times per year by land and three times per year by sea. Protected feature assessment is carried out annually through the Aquatic Monitoring and Assessment Programme (AMAP), where subtidal and intertidal features are surveyed for latest condition assessment. These surveys use a range of methodologies comprising of drones, ROV/ underwater camera, acoustic mapping, quadrats, sediment cores and infaunal community analysis.

Restoring features that are currently in unfavourable condition to favourable condition can take a long time. DAERA will continue work to bring the protected sites network features into favourable condition through protection and effective management.

On Land

NIEA is continuing to work with landowners and other stakeholders to ensure that management of protected areas is in place.

In 2025/26, the area of terrestrial protected sites under management in Northern Ireland was recorded as at least 26,476 hectares.

A range of initiatives and delivery mechanisms, which include potential funding, have been identified to help achieve favourable condition for terrestrial sites in 2025/26, including:

- Continuation of the Environmental Farming Scheme Higher Level agreements which commenced in early 2018.
- Transition from the Environmental Farming Scheme concluding in 2026, to the new Farming with Nature Scheme which is currently under development.
- The Management of Sensitive Site (MoSS) programme delivers bespoke and targeted management, in partnership with landowners, to work towards favourable condition of ASSI features.
- Continuation of creation of suite of Conservation Management Plans for SAC and SPA sites.
- Working with local authorities to protect priority habitats and species advising on development control and new area plans.
- Working with DAERA's grant-aid budget and external EU and Heritage Lottery Fund (HLF) funding to manage designated sites and priority habitats and species. 2023 saw the role out of a new Environment Fund cycle which incorporates various environmental improvement projects many of which are focused on protected sites. During 2025-26, 48 Letters of Offer were issued to applicants totalling c£8.7m under the Multi-year Strategic Strand of the Environment Fund (EF). A further 11 Letters of Offer were issued under the Challenge Fund Strand of the EF totalling c£1.54m along with close to £0.34m to support 16 projects under the Water Quality Improvement Strand.
- A Peatland Challenge Fund Competition for 2024/27 was launched in May 2024, under the EF grant programme, with financial support for this fund from the Irish Government's Shared Island Fund Initiative.

- In 2023, the Centre of Environmental Data and Recording (CEDaR) gained approval for 10 year funding to continue and expand as Northern Ireland's environmental records centre. Legislative species survey works are now embedded within CEDaR for the next 10 years, which will increase our understanding of numerous features of protected sites and inform appropriate management.

At Sea

Northern Ireland must deliver against international obligations which focus on nature positive conservation and management actions, including the Convention on Biological Diversity Global Biodiversity Framework targets. Targets 2 and 3 are particularly relevant to the application and management of protected areas, as they centre on restoration of degraded habitats, and effective conservation of areas of particular importance for biodiversity and ecosystem function.

Northern Ireland has already exceeded the aim to designate 30 per cent of its marine area for protection by 2030 (known as "30x30"), with 38 per cent of our waters falling within the existing Marine Protected Area (MPA) network. Some additional designations are still required to achieve the target of being ecologically coherent, as required by the UK Marine Strategy and international obligations.

DAERA has been working on a range of measures with stakeholders to further develop effective management for MPAs including:

- The Environmental Improvement Plan for Northern Ireland was published in September 2024 and provides the overarching context behind the marine nature recovery strategies and action plans. It is intended that all work will be in full alignment with the Marine Plan for Northern Ireland, once adopted.
- In December 2024 DAERA published its Report on the Northern Ireland Inshore MPA Network 2019 – 2024, detailing the current MPA network status, management approaches, and future recommendations.
- Northern Ireland's first Blue Carbon Action Plan 2025-2030 was published in Spring 2025.
- The MPA Strategy for the Northern Ireland Inshore Region 2025-2030 was published in February 2026. In addition, the Department also published revised principles for the creation of a network of Marine Protected Areas, as required under Section 20(9)(a) and (b) of the Marine Act (Northern Ireland) 2013.
- Both the Blue Carbon Action Plan and the Revised MPA Strategy were co-designed with stakeholders.
- Building on the approach that was taken in the developmental stage, the Department established the Marine Nature Recovery Oversight Group in August 2025 entering a new phase of implementation through co-delivery. This group will oversee the implementation of actions outlined in both the Blue Carbon Action Plan and the MPA Strategy.
- Additionally, there will be coordinated engagement among this group, site management groups for Rathlin and Strangford, and the two Advisory Groups supporting the Seabird and Elasmobranch Conservation Strategies.

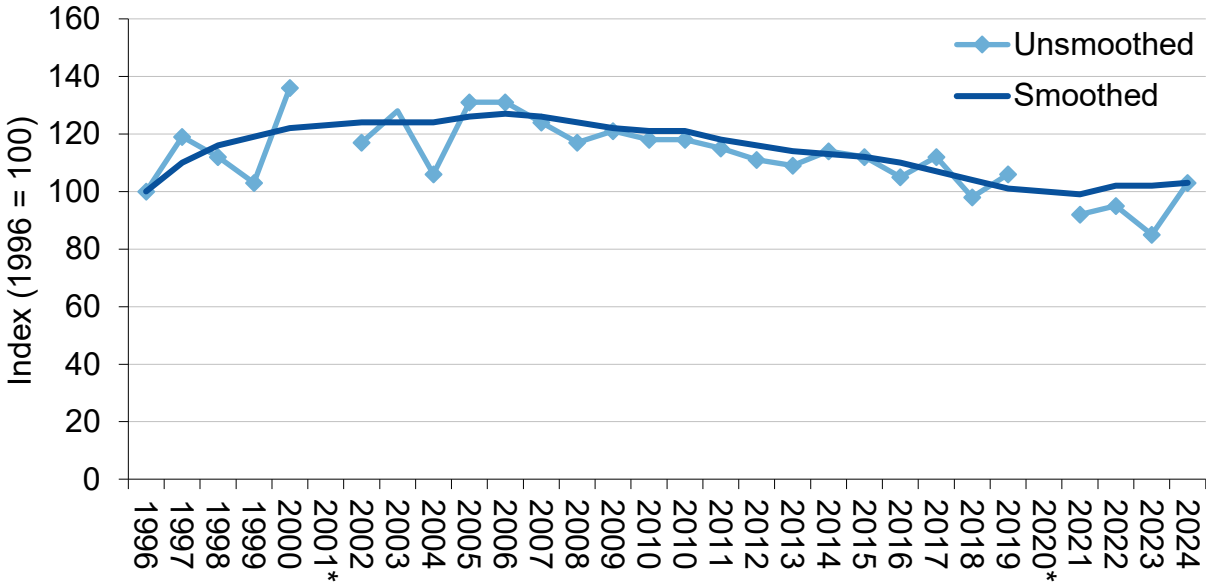
Collectively, the oversight provided by these groups will support the achievement of targets set within the EIP.

- The Seabird Conservation Strategy and the Elasmobranch Conservation Strategy were consulted on in Winter 2024 and are currently being finalised for publication. Alongside the Blue Carbon Action Plan and the MPA Strategy they form part of a suite of policies delivering for marine nature recovery.
- Regulations to manage fishing activities in select MPAs were introduced on 01 January 2023. Specifically, nine inshore MPAs now have a prohibition on mobile, bottom contacting fishing gear and restrictions on static gears such as pots and creels.
- Regulations were also introduced to provide protection for sites that have been identified as suitable for King scallop stock enhancement measures. The regulations prohibit fishing for sea-fish by demersal mobile fishing gear or diving for scallops within four scallop reseeding sites in the Northern Ireland inshore area.
- The Department intends to launch a public consultation on proposed fisheries management measures for the three MPAs in the Northern Ireland offshore region. These are South Rigg MCZ, Queenie Corner MCZ and Pisces Reef Complex SAC, where seven of the nine designated features are currently in unfavourable condition due to bottom trawling. At present, JNCC are responsible for the monitoring of the offshore MPAs and their condition assessment (Offshore MPAs | Advisor to Government on Nature Conservation | JNCC).
- The INTERREG VA MarPAMM project delivered four MPA management plans; on review, DAERA found that all but two actions are already covered by statutory monitoring. The Department will now pursue the two outstanding actions: a pot marking scheme for recreational fishing and a pilot REM to improve bycatch mitigation.
- Just under €25M of PEACEPLUS funding has been awarded to three projects addressing climate change and conserving the marine and coastal environment of Northern Ireland and the border counties of Ireland through the development of climate change adaptation plans, habitat restoration, joint species strategies and action plans and monitoring tools.
- In response to the management of personal watercraft in MPAs, DAERA has launched a campaign to educate stakeholders in avoiding wildlife disturbance, through the publication of guidance documents and advisory notices as well as further evidence gathering to investigate the impact of various sources of disturbance on marine wildlife, before creating byelaws for the protection of designated species if necessary.
- DAERA has a statutory obligation under the Fisheries Act 2020 and the Joint Fisheries Statement to prepare and publish 4 Fisheries Management Plans (FMPs). These are the Irish Sea Pelagic FMP, Irish Sea Demersal FMP, the Northern Ireland Non Quota Shellfish FMP and the Northern Ireland Intertidal Hand Gathering of Shellfish FMP.
    - FMPs will set out policies designed to restore one or more stocks of sea fish to, or maintain them at, sustainable levels. FMPs will also consider wider fisheries management issues covering environmental, social and economic concerns.

- DAERA has established working groups representative of key stakeholders (including environmental NGOs) to assist with developing these FMPs ahead of public consultation.

Wild Birds

Figure 5.3a Change to wild bird populations in Northern Ireland, 1996 – 2024, 56 species



Data Source: British Trust for Ornithology
Note: No unsmoothed index values for 2001 or 2020 due to foot-and-mouth outbreak and Covid-19 impacts on data collection.

Northern Ireland's wild bird population is monitored as part of the UK (BTO/JNCC/RSPB) Breeding Bird Survey, which is undertaken annually at almost 4,000 sites (1km grid squares) across the UK (139 were covered in Northern Ireland during 2024 representing higher coverage than 2023). The Breeding Bird Survey is not designed to cover marine species and hence only terrestrial and freshwater species, or populations of those species (e.g. Cormorant), are included in the indicator.

Due to the nature of the data analysis, the number of species for which trends are available can vary year-on-year. Previously, the Northern Ireland Wild Bird Indicator has been based on those species which are recorded in at least 30 Breeding Bird Survey squares, on average, since 1994. In 2024, information on trends was available for 38 of the most common species. The approach to assessing the robustness of species trends in indicators and a shift of the time period assessed that was implemented into wild bird indicator production for Northern Ireland when calculated in 2024 allows the inclusion of data for species which occur in between 10 and 30 squares (i.e. below the standard threshold for reporting in BBS, other than those which are subject to large year to year fluctuations or whose habitat is not adequately represented in the dataset). As a result, the new indicator is again based on 56 species. Feral Pigeon was not added to the indicator due to the lack of a long-term trend, however its population is largely of domesticated and hence non-native origin.

The Breeding Bird Survey began in 1994 but there was very limited coverage in Northern Ireland initially. The indicator trend therefore starts from 1996. There is no unsmoothed index values for 2001 due to the impact that the foot and mouth outbreak had on the collection of data, or for 2020 when most observers were not able to travel

to their squares due to COVID-19 restrictions. However, the smoothed indices include values for these two years based on the model predictions.

The indicator shows that overall, wild bird abundance in Northern Ireland is at a similar level to that in the mid-1990s when the Breeding Bird Survey started. Following an initial increase, a steady, shallow decline has been occurring since the mid-2000s, but the smoothed index value in 2024 is still 3 per cent higher than in 1996. The divergence between the unsmoothed index showing a decline and the smoothed index showing a slight increase in the most recent years of the time-period is due to the year-to-year instability of trends for some species with small sample sizes. Kestrel, Cormorant and Grey Wagtail showed the highest fluctuation between 2021 and 2023 and could have caused this discrepancy. Removing these species from the trend would improve its robustness but also reduce its representativeness by excluding declining bird species which still have breeding populations in Northern Ireland. Discussions are ongoing for reviewing the criteria for which species are included in the indicator.

The smoothed trend appears to have been driven principally by the ongoing decline of farmland bird numbers, i.e. those most associated with agricultural land and the high increase in the trend for woodland birds, the two most species-rich groups (see figure 5.3b). Between year changes varied considerably in size and direction between species. It should be noted that the Breeding Bird Survey sampling approach represents habitats largely in the proportions that they occur, and hence, tends to produce robust trends for species that are sufficiently common and widespread. Breeding Bird Survey methods are not ideal for estimating numbers of some scarcer or seldom detected groups of birds, such as the rarer birds of prey, waders and other habitat specialists, and these are consequently under-represented in the index.

In the Breeding Bird Survey report, trends are reported for 39 species in Northern Ireland. Only short (Raven) or short and medium trends (Feral Pigeon and Sedge Warbler) are reported for three species while the remaining 36 have short, medium, and long-term trends reported. Of the 36 species for which long-term trends are reported annually, some substantial increases by individual species have been recorded since the survey began. In the last BBS report, trend data for the more widespread species were available for three time periods: long-term (1995-2023), medium-term (2013-2023) and for shorter periods (2023-2024). Between 1995 and 2023, 16 of the 36 species have shown a statistically significant increasing trend while only one, Greenfinch, exhibits significant long-term declines, with the remainder showing no statistically significant changes. The long-term increases of almost 11-fold in Buzzard and almost 20-fold in Blackcap are particularly dramatic. Buzzards have undoubtedly benefitted from a reduction in persecution and decreased use of persistent pesticides since the 1970s, while the increase of the Blackcap in Northern Ireland is likely to be linked to a combination of climate change, earlier laying and a general increase and north-westerly spread of the breeding population across the UK.

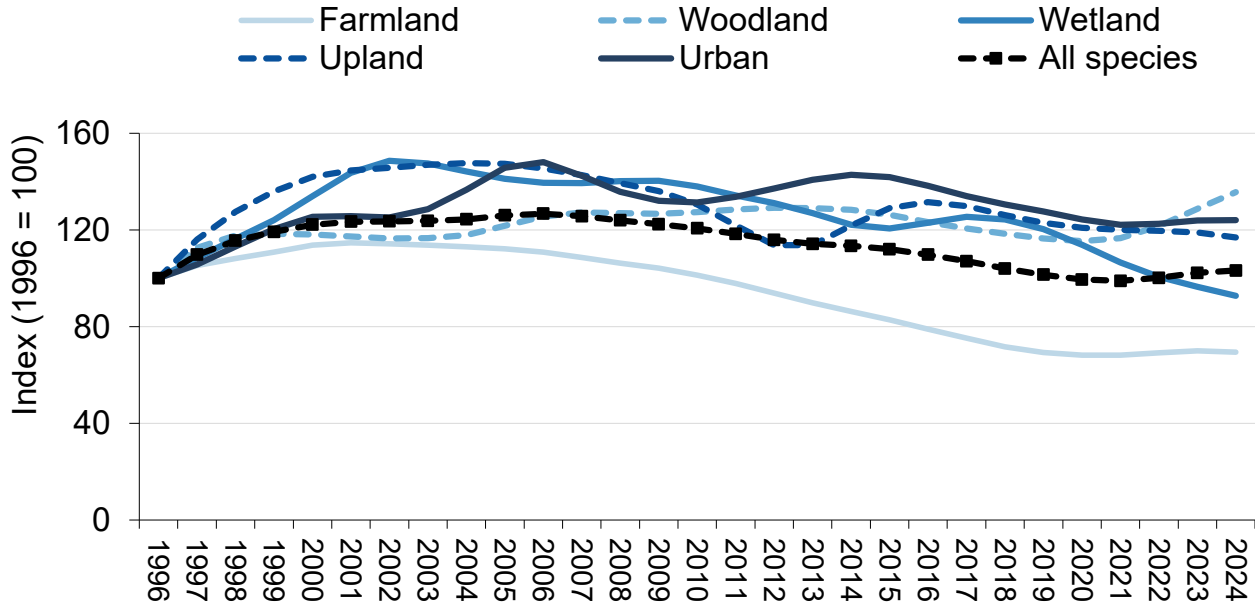
Greenfinch declines are likely to be linked to the spread of Trichomonosis, a disease carried by a protozoan parasite, which was first detected via BBS surveys in 2007 and continues to affect the species to varying degrees across the UK[6,7]

[6] Harris et al. 2020. The Breeding Bird Survey 2019. British Trust for Ornithology, Thetford.
[7] Heywood et al. 2025. The Breeding Bird Survey 2024. *BTO Research Report 787* British Trust for Ornithology, Thetford.

The analysis of data for the medium-term changes indicates that numbers of Woodpigeon, Robin, Wren, Blackbird, Blackcap, Skylark, Song Thrush and Goldcrest have significantly increased with trends increasing between 20 per cent and 80 per cent (in increasing order) during the last ten years, while numbers of Great Tit, Swallow, Jackdaw, Starling, Magpie, Chaffinch, Reed Bunting, Pied Wagtail, Coal Tit, Redpoll, and Greenfinch have declined (in order of greatest decline) with trends between -12 per cent and -71 per cent. Numbers of Blackbird, Hooded Crow, and Woodpigeon have increased by less than 20 per cent over the last 10 years

Wild Birds by Habitat Type

Figure 5.3b Wild bird populations in Northern Ireland by habitat type, 1996 – 2024



Source: British Trust for Ornithology
Note: No unsmoothed index values for 2001 or 2020 due to foot-and-mouth outbreak and Covid-19 impacts on data collection.

The inclusion of 56 species in the indicator has allowed trends for species associated with particular habitats to be aggregated in the calculations. Trends are available for five habitat-specific groups of birds: Farmland, Woodland, Wetland, Upland and Urban. The species composition of these groups is shown in Table 5.3c of the data tables, the trends are shown above, providing an indication of the relative health of bird populations in those habitats. Figure 5.3b shows the smoothed indicator trend for each habitat, a standard approach to reporting which reduces the influence of large year to year fluctuations in numbers detected and highlights the underlying trend.

Farmland is the major habitat in Northern Ireland, here represented by 17 species, and the indicator associated with that habitat shows a marked decline over this 28 year period (1996-2024) of 31 per cent. Of those 17 species, 13 species (76 per cent) are in decline, three of them by more than 50 per cent (Kestrel, Lapwing and Greenfinch in decreasing order) and three species by around 40 per cent (Reed Bunting, Grasshopper Warbler, and Yellowhammer). Three species (18 per cent) particularly Goldfinch (more than 500 per cent) but also Woodpigeon and Jackdaw are increasing (126 and 45 per cent respectively), while one species has remained stable (0 per cent change, Linnet). Except for Reed Bunting, Magpie, Whitethroat, Grasshopper Warbler and Linnet, these patterns largely reflect the situation more broadly in the UK as a whole. Farmland birds in Northern Ireland have been exposed to similar pressures arising from agricultural intensification including increasing use of chemical pesticides and fertilisers, greater livestock densities and the loss of hedgerows but have been particularly affected by the decline of mixed farming, especially through the reduction of arable production, a switch from haymaking to multiple-cut silage and the drainage of wet meadows.

The **wetland** species suite, six in total, is both limited (there is a lack of robust trends for a number of widespread species) and diverse taxonomically. This indicator of wetlands and waterways shows a gradual rise and then gradual fall and in 2024 is seven per cent lower than in 1996. Four species have declined, Sedge Warbler by almost 50 per cent, Cormorant, Snipe and Moorhen by 35 per cent, 31 per cent, and 18 per cent respectively, with all three trends based on a small sample. Numbers of Mallard have increased by 180 per cent and Grey Heron have increased by 20 per cent. The increase in Mallard may, however, be influenced by the rearing and release of birds for wildfowling. This indicator lacks species trends for many widespread species associated with water, such as Coot, grebes, swans as well as most ducks and most waders, which are not detected on sufficient sites to calculate a trend.

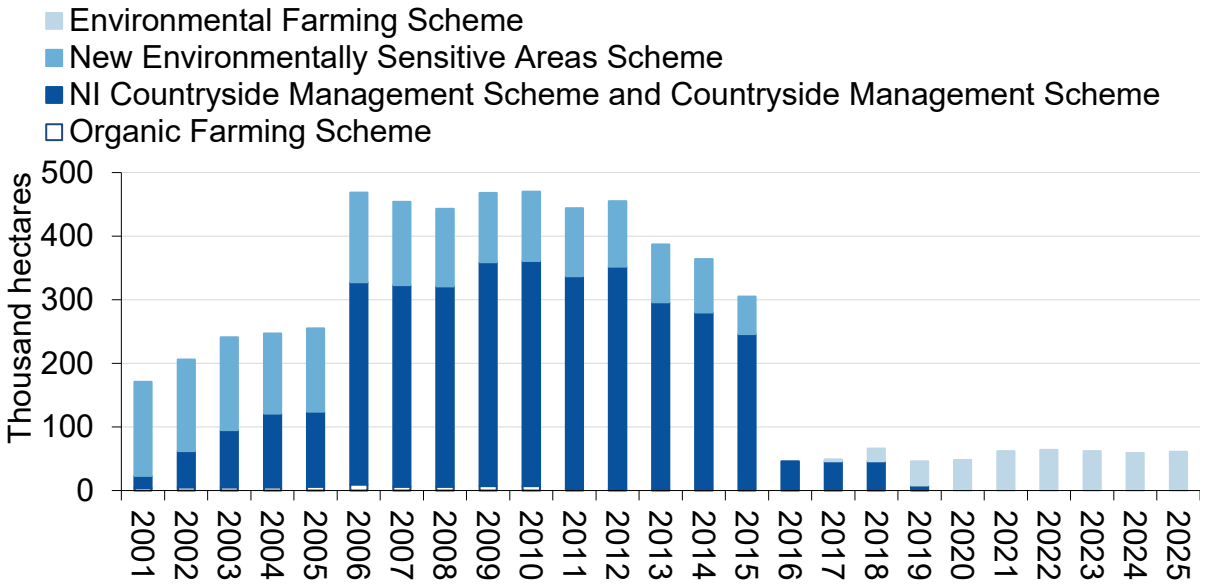
Woodland is a relatively scarce habitat in Northern Ireland and many of the 20 'woodland' species whose population trends comprise this indicator are likely to largely occupy woody structures in farmland (treelines, hedgerows) as well as occupying wooded areas in built-up areas such as gardens. The indicator is increasing, and the species patterns reflect this. Of the 20 constituent species, four (20 per cent) are in decline, particularly Spotted Flycatcher and Sparrowhawk (both of which had a sample size in 2024 of less than 15 squares and a decline of over 50 per cent). Populations of two species (10 per cent) are stable (Chaffinch and Coal Tit) and 14 species are increasing, particularly Blackcap whose numbers have increased almost 13-fold as well as Long-tailed Tit and Song Thrush whose numbers have increased by more than 100 per cent. Several woodland species are likely to have benefitted from the increase in commercial forestry and planting of amenity woodland since the start of the Breeding Bird Survey, particularly where this habitat had been scarcer.

Although the **upland** bird indicator shows an increase of 17 per cent between 1996 and 2024, with three species in decline, two stable and the other three increasing. The species declining most strongly is Curlew (78 per cent), with Wheatear and Grey Wagtail declining by nearly 50 per cent. Cuckoo and Meadow Pipit are stable (3 per cent decline and 5 per increase respectively) while Hooded Crow, Raven, and Buzzard show a very marked increase (145 per cent, 230 per cent and nearly 544 per cent respectively), and hence strongly influences the trajectory of this sub-indicator. This reflects the diverse pressures on this group of species. As for all indicators, species inclusion is a complex issue. In the current upland indicator, species associated with upland streams (such as Grey Wagtail) and species found in both upland and lowland habitats such as Curlew or Hooded Crow have been included.

There are only five species considered to be strongly associated with **urban** habitats, and one of these (Pied Wagtail) is found in a wide range of habitats rather than being a true urban specialist. The urban bird indicator shows an increase of 24 per cent between 1996 and 2024, driven by increases in three of the five species, especially House Martin, followed by Collared Dove and House Sparrow respectively. These increases contrast with the declines in these species across the rest of the UK (Heywood et al. 2025). One species, Pied Wagtail, remains stable while Swift shows a decline, of 47 per cent.

Sustainable Land Management

Figure 5.4 Northern Ireland agri-environment schemes, area under agreements, 2001 – 2025



Source: DAERA

Agri-environment schemes delivered by The Department of Agriculture, Environment & Rural Affairs (DAERA) are voluntary and support farmers and landowners to manage their land to benefit the environment.

In 2017 DAERA launched the Environmental Farming Scheme (EFS) (https://www.daera-ni.gov.uk/topics/rural-development/environmental-farming-scheme-efs). This is a voluntary scheme under the NI Rural Development Programme 2014-2020, which is part financed by the EU. It offers participants a 5-year agreement to deliver a range of environmental measures. The EFS has been designed to address specific environmental needs, primarily related to biodiversity, climate change and water quality. It is targeted and prioritised to deliver maximum environmental benefit and value for money.

The EFS has three levels:-

- A Higher Level, primarily for environmentally designated sites - Special Area of Conservation [SAC], Special Protection Area [SPA], RAMSAR, biological Areas of Special Scientific Interest [ASSI] and for priority habitats and species;
- A Wider Level to deliver benefits across the countryside, outside of environmentally designated areas; and
- A Group Level to facilitate co-operative action by Wider or Higher level farmers in specific areas such as environmentally designated areas, priority habitats, or river catchments.

Businesses can undertake to setup and manage a range of environmental measures in their EFS agreement. The first EFS agreements commenced on 1 July 2017, followed by Higher Level agreements on 1st January 2018. The first four tranches of agreements completed their five years on 31 December 2022, 2023, 2024 and 2025 respectively.

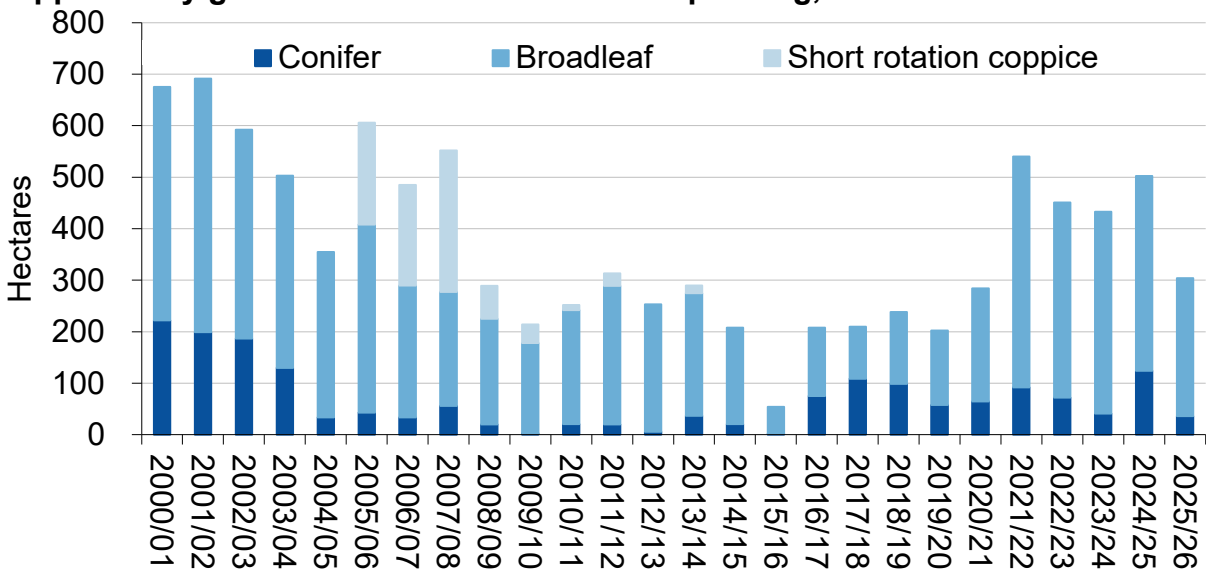
By the end of 2025 there are five active tranches of the scheme with over 1,980 agreements covering 61,000 hectares of land.

EFS Higher level agreements contain a site-specific remedial management plan, with the aim of maintaining and enhancing the biodiversity value of the habitat. For example, 2,200 hectares of breeding wader bird sites and 28,000 hectares of Moorland habitat (which includes blanket bog) are under appropriate management. The scheme has also supported the installation of 820 bird boxes and 260 bat boxes across all eight tranches of the scheme.

Under the EFS Wider Level by 2025 support was agreed for the completion of 2,500km of water quality measures (e.g. creation of riparian buffers and watercourse bank stabilisation). Agreements were in place for scheme options which cover Organic conversion and management across 3,220 hectares of farmland. There is support being provided for climate change actions through agreements on Agro-forestry, tree corridor planting, with 1,000km of hedgerows planted or enhanced since the start of the scheme.

Area of Woodland

Figure 5.5 Area of new forest and woodland plantings by private landowners supported by grant aid and NI Forest Service planting, 2000/01 – 2025/26



Source: Northern Ireland Forest Service

In Northern Ireland, over 52 per cent of forests and woodlands are managed by Forest Service. https://www.forestresearch.gov.uk/tools-and-resources/statistics/forestry-statistics/

Grant support to encourage afforestation and sustainable management of non-Forest Service woodlands is provided via Forestry Grant Schemes. The total area of new woodland planted by private landowners supported by grant aid and NI Forest Service in the 2025/26 year is 304 hectares. This includes 36 hectares planted on land recently acquired by Forest Service and 268 hectares of new woodland supported with Forestry Grant Schemes.

In addition, 29 hectares of new woodland has been created, and validated, without grant aid that has not been included in the figures above.

6 Waste

Waste is produced by households, by industrial processes, by the construction and demolition industry, through commercial activities and agricultural practices and by public services and utilities. Waste can affect the environment through its visual impact or by emissions to the air, groundwater and surface water as well as the contamination of land.

This chapter reports on the amount of waste collected by local authorities which is sent for preparing for reuse, recycling, composting.

Key points in this chapter:

- In 2024/25, Northern Ireland's household waste recycling rate was 51.0 per cent, similar to the household waste recycling rate recorded in 2023/24.

- The recycling rate for all waste collected by local authorities, both household and non-household waste, was 50.4 per cent in 2024/25.

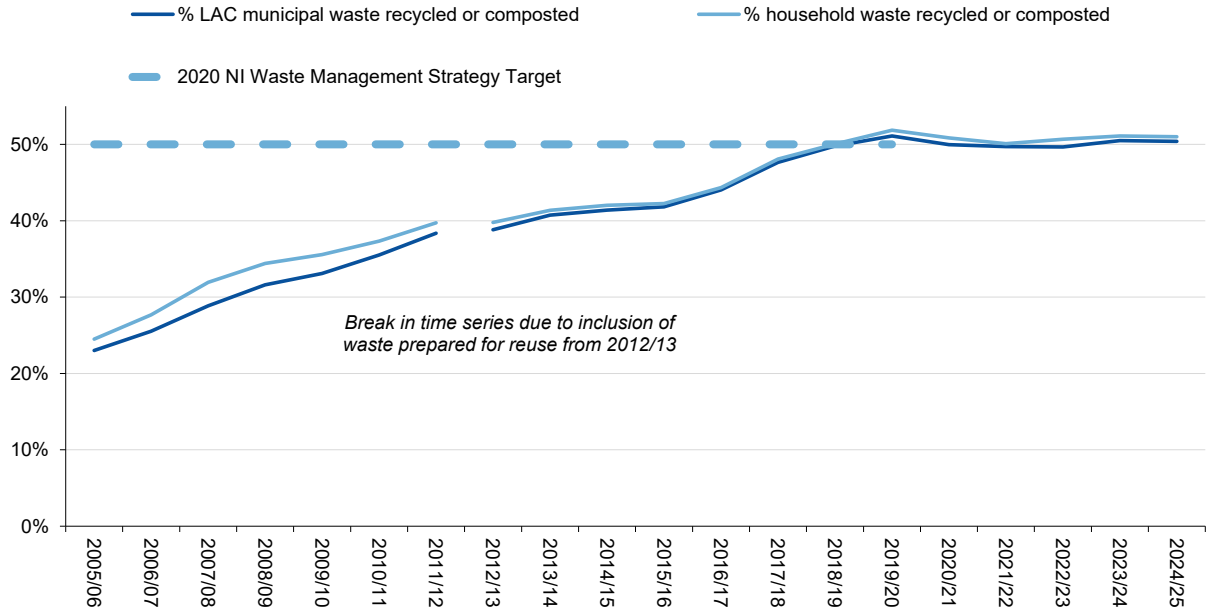
Other statistics related to waste collected by local authorities in Northern Ireland are available.

The Local Authority Municipal Waste Management Statistics show that the amount of waste sent for energy recovery via incineration has grown exponentially since 2006-07, whilst the proportion of waste sent to landfill has dropped from 74.0 per cent to 14.0 per cent in 2024/25.

Data tables and further information for this chapter can be found online.

Recycling (preparing for reuse, dry recycling and composting)

Figure 6.1 Waste sent for preparing for reuse, dry recycling and composting, 2005/06 – 2024/25



Source: DAERA

Note: reuse was included with recycling and composting from 2012/13 onwards. The impact was small, adding 0.2 percentage points to the NI rate.

Reuse, dry recycling and composting (referred to as 'recycling' for the rest of this section) is based on materials collected for recycling at the kerbside, civic amenity sites, bring sites and those collected by a third party, such as charities/voluntary groups. Recycling of waste is becoming much more common in Northern Ireland. The revised Northern Ireland Waste Management Strategy (Delivering Resource Efficiency, 2013) proposed to achieve a 50 per cent recycling rate by 2020 for local authority collected household waste.

In 2024/25, the tonnage of local authority collected (LAC) municipal waste sent for preparing for reuse, dry recycling and composting was 509,578 tonnes. The LAC recycling rate was 50.4 per cent which was similar to the recycling rate recorded in 2023/24.

The household waste recycling rate was 51.0 per cent in 2024/25, similar to the household waste recycling rate recorded in 2023/24. The proportion of household waste sent for preparing for reuse was 0.3 per cent, dry recycling made up 23.5 per cent and composting was 27.2 per cent.

The household waste recycling rate is used as a wellbeing framework indicator in the latest Programme for Government (PfG) 2024-2027.

7 Historic Environment

The historic environment is everything that has been created by people over time. Northern Ireland has a rich heritage of archaeological sites, monuments, buildings, historic landscapes and maritime features that form this environment and represent the aspirations and achievements of past societies, providing evidence of settlement, agricultural, industrial and ritual activity from 9,000 years ago to the present day.

This chapter looks at the numbers of designated heritage assets in Northern Ireland, including those which are at risk.

Key points in this chapter:

- In 2024/25, there were a total of 2,082 scheduled historic monuments protected under Article 3 of the Historic Monuments and Archaeological Objects (NI) Order 1995. Overall, there has been a 38 per cent increase in the number of scheduled monuments since 2001/02.

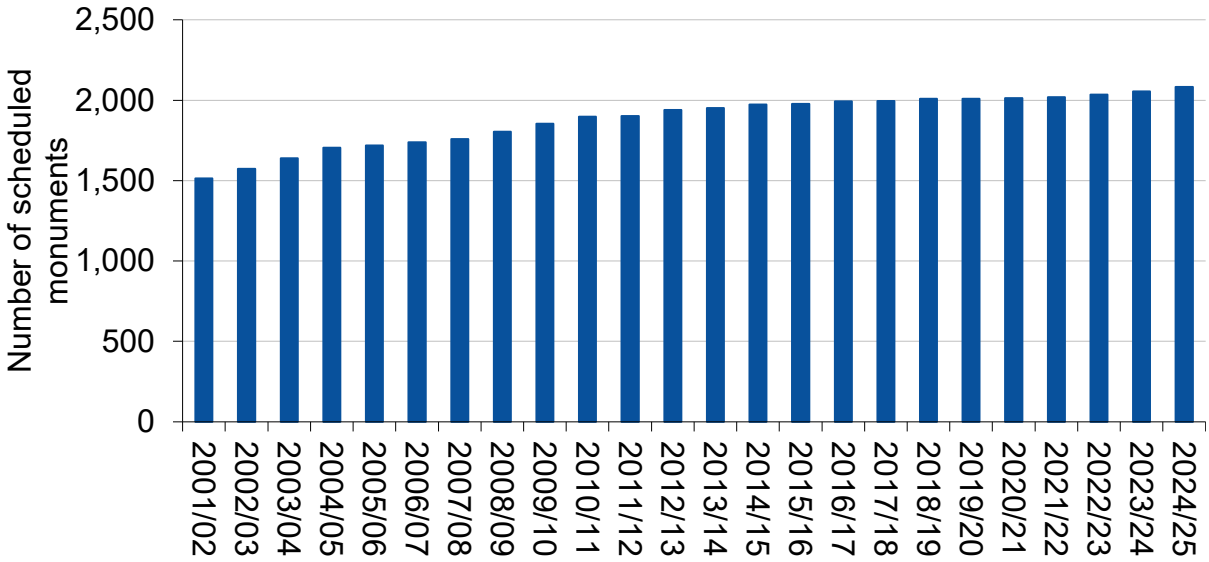
- Listed buildings are those of special architectural or historic interest and provide an indication of the extent of this historical architectural resource. They are protected under Section 80 of the Planning Act (NI) 2011. There has been a modest increase in the number of buildings listed in recent years, with a total of 9,157 statutory listings in 2024/25, compared with 8,191 in 2003/04.

- Buildings that are classified as ‘at risk’ in Northern Ireland are recorded on the online Heritage at Risk in Northern Ireland (HARNI) register. In 2024/25, there were 1,148 historic buildings and structures on this database, just over double the 527 structures recorded in 2018/19.

Data tables and further information for this chapter can be found online.

Monuments

Figure 7.1a Total number of scheduled historic monuments, 2001/02 – 2024/25



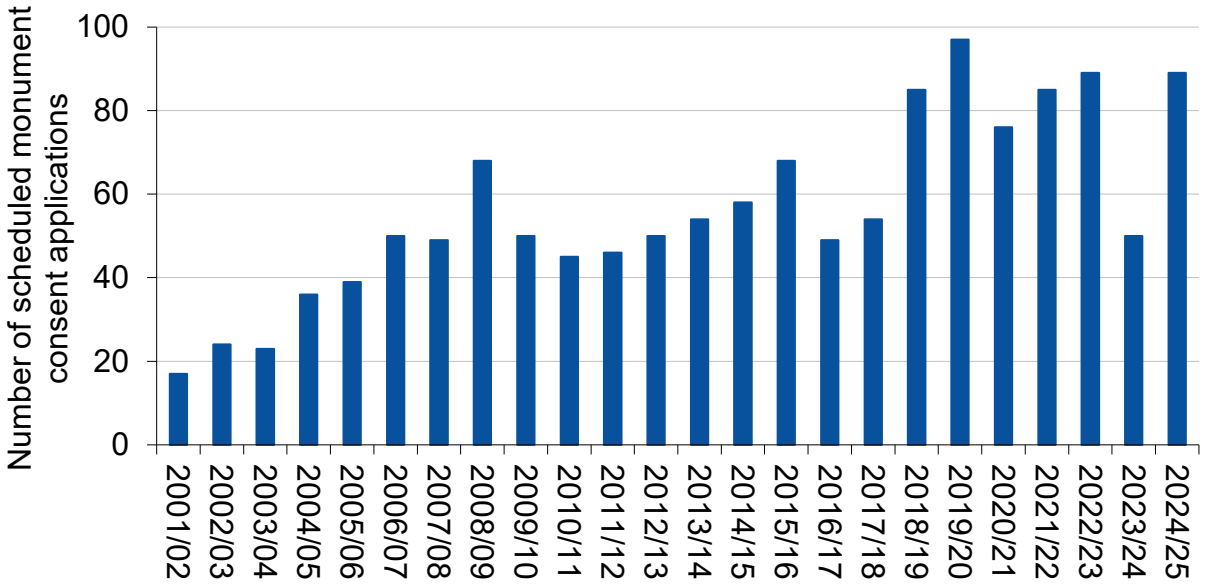
Source: DfC Historic Environment Division

Scheduled historic monuments comprise a selection of the most important of our archaeological sites. They include a range of site types, such as megalithic tombs, prehistoric and early Christian ritual and settlement earthworks, to church and castle ruins and features of industrial, defence or maritime heritage importance. These sites are generally in private ownership, and the purpose of scheduling is to give recognition to their significance through statutory designation and to work to improve or stabilise their condition through advice and guidance. Monuments are monitored for condition and risk by field monument wardens. From April 2015, a risk-based inspection regime has been employed ensuring that the most vulnerable monuments receive increased inspections aimed toward improving their condition.

There were 28 monuments newly scheduled during 2024/25. The recorded numbers of scheduled monuments have increased since 2001/02 reflecting ongoing survey, designation, and assessment. The figures provide an indication of this aspect of the rich cultural and built heritage of Northern Ireland, which is an important contributor to the Northern Ireland economy, through attracting tourism and filming. Overall, there has been a 38 per cent increase in the number of scheduled monuments rising from 1,513 in 2001/02 to 2,082 in 2024/25.

The trend is a general increase as new sites are selected for scheduling each year, against criteria established in policy (Criteria for the Scheduling of Historic Monuments and the Listing of Buildings of Special Architectural or Historic Interest, with associated procedures | Department for Communities (communities-ni.gov.uk)) and to better reflect and protect the array of cultural heritage across Northern Ireland. Amendments to existing entries in the schedule are also occasionally made on the basis of new evidence. Scheduled monuments are managed by their owners under Historic Environment Division guidance.

Figure 7.1b Number of scheduled monument consent applications received, 2001/02 – 2024/25

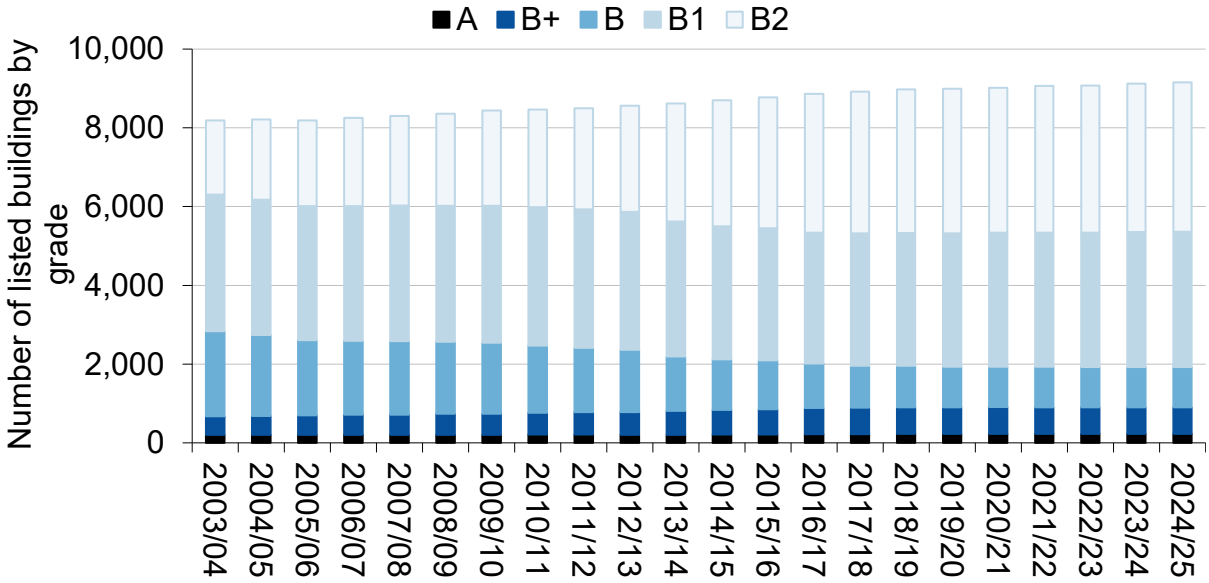


Source: DfC Historic Environment Division

Scheduled Monument Consent must be sought and granted for proposed works which may alter or disturb the fabric of a Scheduled historic monument, its ground surface or setting. Many Scheduled historic monuments are located in rural areas, and these owners tend to come from within the agricultural sector. Prior to 2004/05, applications for Consent ran at numbers below 30 per year. From 2006/07 to 2017/18, applications ranged from 45 to 68. Application numbers increased in 2018/19 and reached 97 in 2019/20, the highest number presented in the time series above. The number of applications for Consent in 2024/25 was 89. An increase in government and local council projects, such as trails and site infrastructure, to aid well-being and tourism activities, is one reason for the increase in numbers in recent years.

Listed Buildings

Figure 7.2 Number of listed buildings by grade, 2003/04 – 2024/25



Source: DfC Historic Environment Division

Listed buildings are those of special architectural or historic interest and represent our most important historic buildings.

All of Northern Ireland was surveyed between 1970 and 1995 and suitable buildings were protected by listing. Such structures can range from large stately homes to small gate screens, but all must meet the test of Section 80 of the Planning Act (Northern Ireland) 2011 that they must be of 'special architectural or historic interest'.

The number of listed buildings in 2024/25 was 9,157, an increase of 12 per cent compared to 2003/04 (8,191). Some listings include multiple buildings; therefore, the total number of buildings protected in this way is slightly higher.

A second, area-based survey of all historic buildings (the Second Survey) has been underway since 1997 and is largely responsible for the increase. However, it should be noted that a significant number of buildings have also been found to no longer meet the legislative test as part of this process and have therefore been removed.

Budget to carry out the survey significantly reduced in 2014/15 and the increase in subsequent years is due to the processing of existing records.

The number of grade B buildings is expected to continue to reduce over time. Most of these buildings are churches which were ineligible for grant aid in 1986 when the B category was split into grade B1 and B2 for grant purposes. Grade B buildings are being allocated to either the B1 or B2 category as part of the Second Survey.

More detail on the grading of listing buildings can be found on page 17 of 'Criteria for the Scheduling of Historic Monuments and the Listing of Buildings of Special Architectural or Historic Interest, with associated procedures' (May 2019): Criteria for the Scheduling of

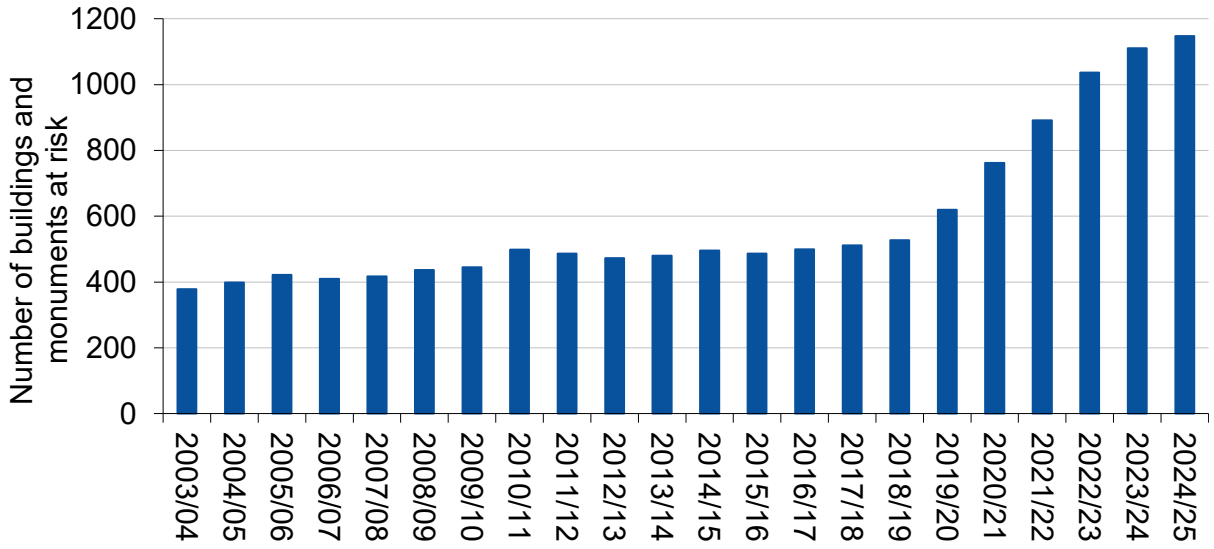
Historic Monuments and the Listing of Buildings of Special Architectural or Historic Interest, with associated procedures | Department for Communities (communities-ni.gov.uk)

Records of all listed buildings are published on the Northern Ireland Buildings Database at: Buildings Database | Department for Communities (communities-ni.gov.uk).

You can also see where listed buildings are located in your area and link to the buildings database via the Historic Environment Map Viewer at: Historic Environment Map Viewer | Department for Communities (communities-ni.gov.uk)

Buildings and Monuments at Risk

Figure 7.3 Number of buildings and monuments at risk, 2003/04 – 2024/25



Source: DfC Historic Environment Division

A listed building or structure is at risk when its condition and management is deemed to be poor and unsustainable, placing the building or structure under threat of deterioration and/or demolition.

Such listed buildings, structures and some scheduled monuments are recorded on an on-line database: the Heritage at Risk in Northern Ireland (HARNI) register.

The HARNI register provides an indicator of changes in the number of heritage assets judged to be at risk. The register is compiled using available information and is not based upon a systematic survey. In 2024/25, there were 1,148 buildings and structures on the HARNI database, over double the 527 structures recorded in 2018/19. It is not clear if this reflects a sudden change due to the COVID-19 pandemic and other recent economic changes or a longer-term trend resulting from improved survey work.

The number of buildings on the register can be expected to rise as more detailed information is made available through surveys.

Between 2004/05 and 2024/25, 380 buildings and monuments were removed from the list because they were conserved.

Accredited Official Statistics

Accredited Official Statistics are official statistics that have been independently reviewed by the Office for Statistics Regulation (OSR) and confirmed to comply with the standards of trustworthiness, quality and value in the Code of Practice for Statistics. Producers of accredited official statistics[8]. are legally required to ensure they maintain compliance with the Code.

These accredited official statistics were independently reviewed by the Office for Statistics Regulation in September 2013. They comply with the standards of trustworthiness, quality and value in the Code of Practice for Statistics and should be labelled National Statistics (or 'accredited official statistics').

No official compliance checks have been completed since, however, we have continued to comply with the Code of Practice since designation and have made the following improvements:

- Added more value by consulting on the report in 2017 [https://www.daera-ni.gov.uk/consultations/consultation-ni-environmental-statistics-report] and attending and presenting at the DAERA statistics user group meeting [DAERAstats-user-group].

- Ongoing quality assurance of the indicators contained within the report by reviewing methods and indicators annually.

- Improved statistical output by creating infographics to accompany the report and tables.

- Sought and implemented recommendations from GSS good practice team to improve the publication.

- In 2020, consulted with senior managers and internal users to streamline the content to concentrate on first released statistics and statistics that are used for PfG monitoring.

Our Statistics Charter provides further details of how we apply the principles and practices of the Code in the production and publication of our official statistics.

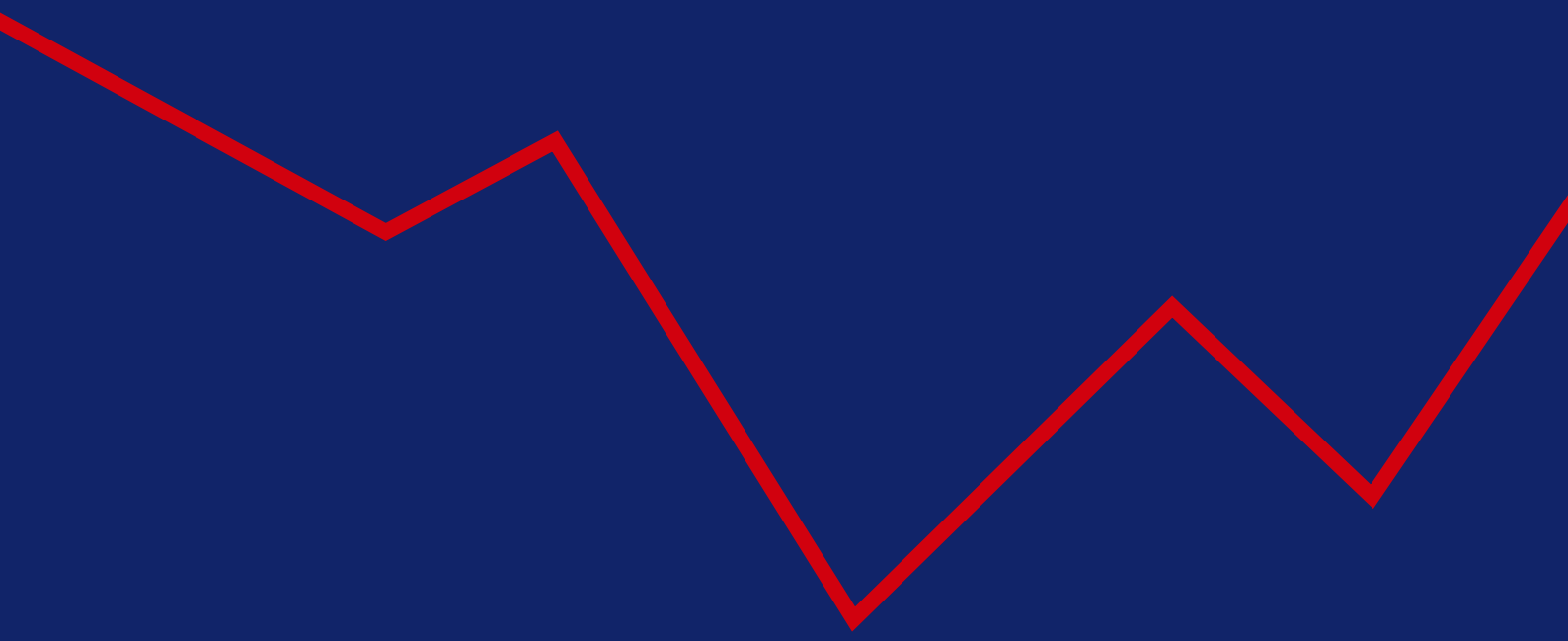
Our statistical practice is regulated by OSR. They set the standards of trustworthiness, quality and value in the Code of Practice for Statistics that all producers of official statistics should adhere to.

You are welcome to contact us directly with any comments about how we meet these standards.

Alternatively, you can contact OSR by emailing regulation@statistics.gov.uk or via the OSR website.

[8] Accredited Official Statistics are called National Statistics in the Statistics and Registration Service Act 2007

Policy, Economics and Statistics Division
Department of Agriculture, Environment and Rural Affairs
Clare House
303 Airport Road West
Sydenham Intake
BELFAST BT3 9ED



Department of
Agriculture, Environment and Rural Affairs

An Roinn
Talmhaíochta, Comhshaoil agus Gnóthaí Tuaithe

Depairtment o'
Fairmin, Environment an' Kintra Matthers

www.daera-ni.gov.uk

INVESTORS IN PEOPLE®
We invest in people Standard

26.27.032