



**An
Phríomh-Oifig
Staidrimh**

Central
Statistics
Office

Environmental Indicators Ireland – Economy, Emissions and Energy 2025



Single Integrated Metadata Structure (SIMS) Report

For

Environmental Indicators Ireland 2025 -Economy, Emissions and Energy

This documentation applies to the reporting period:

2025

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1. Introduction

The Environmental Indicators Ireland Report for Ireland was first published in 2012 originally on a biennial basis and from 2018 on an annual basis. This is the eleventh edition of Environmental Indicators Ireland. A total of 48 indicators covering six domains have been selected for this publication. The indicators are updated from the 2024 report to show the most recent data available. Many of the indicators are presented in a time-series format for Ireland, while the international context is shown by comparing Ireland with other countries and world regions for the latest year for which data are available.

The environment area is wide-ranging and the four domains cover the global context, greenhouse gases and climate change, water and land use..

The CSO wishes to thank: The Department of Agriculture, Food and the Marine; Department of Transport; Environmental Protection Agency and Eurostat for providing data and technical advice on the most appropriate indicators for Ireland.

2. Contact

Contact Organisation:	Central Statistics Office
Contact Organisation Unit:	Sustainability and Circular Economy Division
Contact Name:	Reamonn McKeever
Contact person function:	Statistician
Contact Mail address:	Central Statistics Office, Ardee Road, Rathmines, Dublin 6. D06FX52
Contact email address:	environment@cs0.ie
Contact Phone Number:	01-4984212

3. Metadata Update

3.1. Metadata last certified

08/12/2025

3.2. Metadata last posted

08/12/2025

3.3. Metadata last update

08/12/2025

4. Statistical Presentation

4.1. Data Description

The Environmental Indicators Ireland Report is a wide-ranging Report and consists of 48 Indicators across six domains: Environmental Economy, Air, Energy, Transport, Waste and Biodiversity.

Indicators are derived from administrative data rather than survey data. Many indicators refer to statistics compiled by the Environment and Climate Division of the CSO. National data are given in time series format going back ideally to the 1990's (and before in some cases) in order to show long-term trends. International data are typically for one year and show how Ireland's environmental performance compares with the World or other EU Member States. The methodology used in the compilation of the Environmental Indicator Report is outlined in more detail in the associated Background Notes on the CSO website.

4.2. Classification System



Indicators	Topic	Classification
Indicator 2.2	EU: PM2.5 emissions	EU country breakdowns
Indicator 2.4	EU: Sulphur oxide emissions	EU country breakdowns
Indicator 2.6	EU: Nitrogen oxide emissions	EU country breakdowns
Indicator 2.8	EU: Ammonia emissions	EU country breakdowns
Indicator 2.10	EU: NMVOC emissions	EU country breakdowns
Indicator 3.2	EU: Final energy consumption by fuel type	EU country breakdowns
Indicator 3.5	EU: Gross final energy consumption from renewable sources	EU country breakdowns
Indicator 4.3	EU: Rail passenger traffic	EU country breakdowns
Indicator 5.3	EU: Municipal waste generated per capita	EU country breakdowns
Indicator 6.1	EU: Special protection areas	EU country breakdowns
Indicator 6.2	EU: Special areas of conservation	EU country breakdowns

4.3. Sector Coverage

The sectors covered consist of a special aggregation of NACE classifications into:

- Industry
- Agriculture, forestry and fishing
- Services
- Households

4.4. Statistical Concepts and definitions

A full definition and description of all statistical variables disseminated can be found in the background notes that accompany the publication. These are publicly accessible from:

<https://www.cso.ie/en/methods/surveybackgroundnotes/environmentalindicatorsireland/>

4.5. Statistical Unit

The reporting units vary by indicator. There is no common standard applicable across different indicators.

4.6. Statistical Population

World, world regions, EU and Irish populations.

4.7. Reference Area

State, European Union Member States, other countries and world regions.

4.8. Time Coverage

Every two years from 2012 to 2018 and annually from 2019 to 2024. Every six months from 2025

4.9. Base period

The base period varies for different indicators

5. Unit of Measure



The following units of measure are used depending on the nature of the variables represented:

- Euros
- Tonnes of oil equivalent
- Tonnes

6. Reference Period

2025

7. Institutional Mandate

7.1. Legal Acts and other agreements

Not applicable.

7.2. Data Sharing

Not applicable.

8. Confidentiality

8.1. Confidentiality – policy

All information supplied to the CSO is treated as strictly confidential. The Statistics Act, 1993 sets stringent confidentiality standards: Information collected may be used only for statistical purposes, and no details that might be related to an identifiable person or business undertaking may be divulged to any other government department or body.

These national statistical confidentiality provisions are reinforced by the following EU legislation: Council Regulation (EC) No 223/2009 on European statistics for data collected for EU statistical purposes.

Further details are outlined in the CSO's Code of Practice on Statistical Confidentiality.

For more information on the CSO confidentiality policy please visit:

<https://www.cso.ie/en/aboutus/lqdp/csodatapolicies/statisticalconfidentiality/>

8.2. Confidentiality – data treatment

The Environmental Indicators Ireland publication is a compilation of aggregated data already published by other means and agencies and therefore no confidentiality treatment is needed.

9. Release Policy

9.1. Release Calendar

The date of dissemination of all statistics released by CSO can be found in the Release Calendar published in <https://www.cso.ie>. This calendar is regularly updated.

9.2. Release calendar access

The release calendar can be accessed via the CSO website, www.cso.ie, or directly from this link:

<https://www.cso.ie/en/csolatestnews/releasecalendar/>



9.3. User access

In accordance with Principle 6 of the European Statistics Code of Practice all users of CSO statistics have equal access via the CSO website at the same time of 11 am. Any privileged pre-release access to any outside user is limited, controlled and publicised. In the event that leaks occur, pre-release arrangements are revised so as to ensure impartiality.

The CSO recognises that in very limited circumstances a business need for pre-release access may be substantiated. Any form of pre-release access is a privilege and a strict CSO pre-release access policy is adhered to for these special requests. The full pre-release access policy can be accessed at

<https://www.cso.ie/en/aboutus/lqdp/csodatapolicies/csopre-releaseaccesspolicy/>

The various results are published nationally in statistical release format as well as on the CSO website www.cso.ie

10. Frequency of Dissemination

Annual

11. Accessibility and clarity

11.1. News release

Not applicable.

11.2. Publications

<https://www.cso.ie/en/statistics/indicators/environmentalindicatorsireland/>

11.3. On-line database

Not available in PxStat.

11.3.1. AC 1. Data tables - consultations

Not applicable.

11.4. Micro-data Access

Not applicable.

11.5. Other

Not applicable.

11.5.1. AC2. Metadata consultations

Not calculated.

11.6. Documentation on Methodology



Basic information on the methodology applied to compile this publication can be found in the background notes.

<https://www.cso.ie/en/methods/surveybackgroundnotes/environmentalindicatorsireland/>

For further information on methodology please consult the main sources referenced in the publication itself.

11.6.1. AC3 – Metadata completeness – rate

Not calculated.

11.7. Quality Documentation

For further information on quality documentation please consult the main sources referenced in the publication itself.

12. Quality Management

12.1. Quality Assurance

Quality Management Framework

The CSO avails of an office wide Quality Management Framework (QMF). This framework allows all CSO processes and outputs to meet the required standard as set out in the European Statistics Code of Practice (ESCoP). The QMF foundations are based on establishing the UNECE's Generic Statistical Business Process Model (GSBPM) as the operating statistical production model to achieve a standardised approach to quality management. All and any changes implemented to CSO processes and outputs require adherence to the QMF.

12.2. Quality Assessment

Not applicable.

13. Relevance

13.1. User Needs

This report is carried out as a general national requirement rather than for a specific client such as Eurostat. Data users sometime make requests for figures to be provided or explained and we respond courteously and efficiently to these.

13.1.1. Main National Users

National users include the environment sector, the government, the media, educational institutions and the public.

13.1.2. Principal External Users:

International users include Eurostat.

13.2. User Satisfaction

Not calculated.

13.3. Data Completeness



Not applicable.

13.3.1. Data Completeness rate

Not applicable.

14. Accuracy and reliability

14.1. Overall accuracy

Figures can be regarded as quite accurate and reliable given the internal quality checks conducted by our data sources. As this is a compilation of information published by other sources, quality indicators have been marked “not applicable” in this report. Please refer to those for the accuracy sub-concepts and information listed below. A list of those sources of information can be found in the “Comment” section at the end of this report.

14.2. Sampling Error

Not applicable.

14.2.1. A1. Sampling error indicator

Not applicable.

14.3. Non-sampling Error

Not applicable.

14.3.1. Coverage error

Not applicable. No register was used to identify sample data. Statistics are based on administrative rather than survey data.

14.3.1.1. A2. Over coverage rate

Not applicable.

14.3.1.2. A3. Common units – proportion

Not applicable.

14.3.2. Measurement error

Not applicable.

14.3.3. Non-Response Error

Not applicable.

14.3.3.1. Unit non response rate

Not applicable.

14.3.3.2. Item non response rate

Not applicable.



14.3.4. Processing error

In order to address processing errors, the data are checked by more than one person, compared with other data sources and clarified by contacting data sources to confirm if errors have occurred in the process.

14.3.5. Model assumption error

Not applicable.

15. Timeliness and punctuality

15.1. Timeliness

The compilation of this information occurs once the data for the different indicators is made publicly available by the source departments and agencies publishing the original aggregates.

15.1.1. TP1. Time lag – First results

Provisional or preliminary results are not produced.

15.1.2. TP2. Time lag – Final results

The timeliness of the results varies for each indicator. Most of the indicators contain data for reference years 2023 with some of the indicators being up to date for 2024. The timeliness of the indicator depends directly on the availability of the data from the data provider.

15.2. Punctuality

Data are published on an bi-annual basis using the most up-to-date figures that are available. The first 2025 Report should be published at the start of December 2025. The second 2025 Report should be published by the end of December 2025.

15.2.1. TP3. Punctuality – Punctuality - delivery and publication

0 days. Publication delivered at national level on time according to the release calendar.

16. Comparability

16.1. Comparability – Geographical

Some minor timing issues may arise in comparing Irish and Eurostat data for instance with air pollutant information. There are also slight methodological issues between Irish and EU data on forest and fertiliser indicators.

16.1.1. CC1. Asymmetry for mirror flow statistics

Not applicable

16.2. Comparability over time

Some data published in the Report are revised over time (e.g. Greenhouse Gas emissions), but most figures show a high degree of comparability over time as they are calculated using the same methodology from year to year.

16.2.1. Length of Comparable Time series



The Environmental Indicators Report was initially published on a biennial basis, but once its sister report on Sustainable Development Indicators was discontinued it has been published on an annual basis. From 2025 it will be published on a bi-annual basis.

Published in 2012, 2014, 2016, 2018, 2019, 2020, 2021, 2022, 2023, 2024 and 2025.

16.3. Coherence – cross domain

Not applicable.

16.3.1. Coherence – Sub annual and annual statistics

Not applicable.

16.3.2. Coherence with National Accounts

Not applicable

16.4. Coherence – internal

The information provided in this output is based on figures published elsewhere in CSO and other government departments, therefore there are no coherence issues to report.

17. Cost and Burden

Since this publication is based on data already published elsewhere no additional cost burden has been placed on respondents.

18. Data Revision

18.1. Data Revision Policy

Revisions refer to changes made to published statistical data when the information used in its production has been updated or corrected. This information includes all data used in compiling the statistic e.g. respondent data, administrative data, weights and factors, methodology, classifications, definitions, modifications to survey questionnaires, survey scope and data collection methods.

18.2. Data Revision Practice

Revisions are published on an annual basis when the whole report is updated. Generally, these revisions are quite minor as the quality of the data is good.

18.2.1. Data Revision – Average size

Not calculated.

19. Statistical processing

19.1. Source Data

The report is based on the collection of administrative rather than survey data. The main sources of administrative data are: The Central Statistics Office; the Environmental Protection Agency; Met Eireann;; the Department of Agriculture, Food and the Marine; Eurostat; and the United Nations.



19.1.1. Population and sampling frame

Not applicable.

19.1.2. Sampling design

Not applicable.

19.1.3. Survey size

Not applicable.

19.1.4. Survey technique

Not applicable.

19.2. Frequency of data collection

Annual.

19.3.Data Collection

The report is based on the collection of administrative rather than survey data.

19.3.1. Type of Survey/Process

Not applicable.

19.3.2. Questionnaire (including explanations)

Not applicable.

19.3.3. Survey Participation

Not applicable.

19.3.4. Data Capture

Not applicable.

19.4. Data Validation

Data are edited manually. Implausible or erroneous data are interrogated using checks over time, comparison with other data sources and through follow up calls and emails with data providers. No special IT tool is used to carry out these checks.

19.5.Data Compilation

The processes used to calculate indicators in the Report are set out in the Background Notes published on the CSO website

<https://www.cso.ie/en/methods/surveybackgroundnotes/environmentalindicatorsireland/>

Excel data are checked against output data used in the previous year and from other sources; missing data is imputed; and data sources are contacted via email and telephone to check that the data is accurate.



19.5.1. Imputation (for Non-Response or Incomplete Data Sets)

Imputation is based on carrying forward the latest available data in Excel.

19.5.1.1. A7. Imputation rate

Not calculated.

19.5.2. Grossing and Weighting

Not applicable.

19.6. Adjustment

Not applicable.

19.6.1. Seasonal Adjustment

Not applicable.

20. Comment

The table below gives an indication of the sources of information used for the compilation of this release.

1.1	Ireland: Environment Taxes	https://www.cso.ie
1.2	Ireland: Environmental Subsidies	https://www.cso.ie
1.3	Ireland: Average effective carbon rate by type of fuel	https://www.cso.ie
1.4	Ireland: Environment taxes, environment subsidies and fossil fuel subsidies	https://www.cso.ie
1.5	Ireland: Consumer Price Index for Energy Products	https://www.cso.ie
1.6	Ireland: Domestic Material Consumption	https://www.cso.ie
1.7	Ireland: Fish landings by Irish vessels in Irish ports	https://www.cso.ie
1.8	Ireland: Domestic Building Energy Ratings	https://www.cso.ie
1.9	Ireland: Domestic Metered Public Water Consumption	https://www.cso.ie
1.10	Ireland: Networked Gas Consumption	https://www.cso.ie
1.11	Ireland: Metered electricity consumption by sector	https://www.cso.ie
1.12	Ireland: Fuel excise clearances	https://www.cso.ie
1.13	Ireland: Environment goods and services sector gross output	https://www.cso.ie
1.14	Ireland: Forest wood removals	https://www.cso.ie
2.1	Ireland: Particulate matter (PM _{2.5}) emissions	https://www.epa.ie
2.2	EU: Particulate matter (PM _{2.5}) emissions	https://ec.europa.eu/eurostat
2.3	Ireland: Sulphur oxide emissions	https://www.epa.ie
2.4	EU: Sulphur oxide emissions	https://ec.europa.eu/eurostat
2.5	Ireland: Nitrogen oxides emissions	https://www.epa.ie
2.6	EU: Nitrogen oxides emissions	https://ec.europa.eu/eurostat
2.7	Ireland: Ammonia emissions	https://www.epa.ie



2.8	EU: Ammonia emissions	https://ec.europa.eu/eurostat
2.9	Ireland: NMVOC emissions	https://www.epa.ie
2.10	EU: NMVOC emissions	https://ec.europa.eu/eurostat
3.1	Ireland: Primary energy production	https://www.seai.ie
3.2	EU: Final energy consumption by fuel type	https://ec.europa.eu/eurostat
3.3	Ireland: Renewable energy production	https://www.seai.ie
3.4	Ireland: Electricity generation from renewable sources	https://www.seai.ie
3.5	EU: Electricity generation from renewable sources	https://ec.europa.eu/eurostat
3.6	Ireland: Transport energy consumption from renewable sources	https://www.seai.ie
3.7	Ireland: Net imports of fuel	https://www.seai.ie
3.8	Ireland: Median electricity and gas bills	https://www.cso.ie
4.1	Ireland: Vehicles under current licence	https://www.cso.ie
4.2	Ireland: Public Transport Passenger Journeys	https://www.cso.ie
4.3	EU: Rail passenger traffic	https://ec.europa.eu/eurostat
4.4	Ireland: International passengers through Irish air- and sea ports	https://www.cso.ie
4.5	Ireland: Means of travel to work	https://www.cso.ie
4.6	Ireland: New private cars licensed for the first time by fuel type	https://www.cso.ie
5.1	Ireland: Municipal waste generated	https://www.epa.ie
5.2	Ireland: Municipal waste sent to landfill	https://www.epa.ie
5.3	EU: Municipal waste generated per capita	https://www.ec.europa.eu/eurostat
5.4	Ireland: Recovery of packaging waste	https://www.epa.ie
5.5	Ireland: Electrical waste collected	https://www.epa.ie
5.6	Ireland: Purchase of second-hand clothes	https://www.cso.ie
6.1	EU: Special Protected areas under EU Birds Directive	https://www.eea.europa.eu
6.2	EU: Special Areas of Conservation under EU Habitats Directive	https://www.eea.europa.eu
6.3	Ireland: Common and farmland birds	https://www.birdwatchireland.ie
6.4	Ireland: Biodiversity status of selected species	https://www.biodiversityireland.ie