



An
Phríomh-Oifig
Staidrimh

Central
Statistics
Office

Standard SIMS Report: Environmental Indicators Ireland



Single Integrated Metadata Structure (SIMS) Report

For

Environmental Indicators Ireland

This documentation applies to the reporting period:
2023

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2. 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 ninth edition of Environmental Indicators Ireland.

A total of 69 indicators covering 10 domains have been selected for this publication. The indicators are updated from the 2022 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 10 domains cover the global context, environmental economy, air, greenhouse gases and climate change, water, land use, energy, transport, waste and biodiversity.

The CSO wishes to thank: BirdWatch Ireland; Department of Agriculture, Food and the Marine; Department of Transport; European Environment Agency; Environmental Protection Agency; Eurostat; Met Éireann; National Parks and Wildlife Service; Sustainable Energy Authority of Ireland; and United Nations for providing data and technical advice on the most appropriate indicators for Ireland.

3. Contact

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4. Metadata Update

4.1. Metadata last certified

13/10/2023

4.2. Metadata last posted

13/10/2023

4.3. Metadata last update

13/10/2023

5. Statistical Presentation

5.1. Data Description

The Environmental Indicator Ireland Report is a wide-ranging Report and consists of 69 Indicators across ten domains: the Global Context, Environmental Economy, Air, Greenhouse Gases and Climate Change, Water, Land Use, 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.



5.2. Classification System

Indicators	Topic	Classification
World and EU Tables and graphs	Country breakdowns/EU country breakdowns:	Selected world countries/regions from UN and EU27 classification
Indicator 2.2	Environmental Subsidies	Based on the nine CEPA (Classification of Environmental Protection Activities) and seven CReMA (Classification of Resource Management Activities) categories.
Indicator 2.5	CPI for Energy Products:	Harmonised Indices of Consumer Prices (COICOP/HICP) (2000)
Indicator 2.9	Domestic Building Energy Ratings:	BER Rating scheme on energy performance of dwellings. The ratings scheme runs from G to A1 (highest to lowest energy usage)
Indicator 3.1; 3.3; 3.5; 3.7 and 4.4	Air emissions/Greenhouse gases by sectors:	NACE Rev 2 classifications of economic activities

5.3. Sector Coverage

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

- Industry
- Agriculture, forestry and fishing
- Transport
- Power stations
- Residential and commercial
- Other

No further size class breakdown is used.

5.4. 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/>

5.5. Statistical Unit

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

5.6. Statistical Population

All world population/EU population

EU resident enterprises EU enterprises/Irish resident enterprises, EU households/Irish households per the subset of NACE classification consisting of:

- Industry
- Agriculture, forestry and fishing
- Transport
- Power stations



- Residential and commercial
- Other

5.7. Reference Area

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

5.8. Time Coverage

Every 2 years from 2012 to 2018 and annually from 2019 to 2023.

5.9. Base period

December 2006 is the base period for Indicator 2.5 CPI for energy products.

2000 is the base period for Indicator 3.2 EU: PM_{2.5} emissions.

2010 is the base period for Indicator 3.4 EU: Sulphur oxide emissions.

2010 is the base period for Indicator 3.6 EU: Nitrogen oxide emissions.

2010 is the base period for Indicator 3.8 EU: Ammonia emissions.

2010 is the base period for Indicator 3.10 EU: NMVOC emissions.

2005 is the base period for Indicator 4.2 EU: Greenhouse gas emissions

2000 is the base year for Indicator 10.4 Ireland: Common and Farmland Bird Index

The rest of the tables are not based on indices.

6. Unit of Measure

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

- Celsius (temperature)
- Euros (taxes & subsidies etc.)
- Tonnes, (fish landings, domestic material consumption, particulate matter emissions, gas emissions, fertiliser sales, energy production & consumption, fuel, waste etc.)
- Litres/m/day (water consumption)
- Gigawatt/hr (gas consumption)
- Litres (Fuel excise)
- Millimetres (rainfall)
- Mg/l (nitrates in groundwater)
- Hectares (land & forest)

7. Reference Period

2023

8. Institutional Mandate

8.1. Legal Acts and other agreements

Not applicable.

8.2. Data Sharing

Not applicable.



9. Confidentiality

9.1. 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/lgdp/csodatapolicies/statisticalconfidentiality/>

9.2. 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.

10. Release Policy

10.1. 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.

10.2. 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/>

10.3. 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/lgdp/csodatapolicies/csopolicyonpre-releaseaccess/>

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

11. Frequency of Dissemination

Annual

12. Accessibility and clarity



12.1. News release

Not applicable.

12.2. Publications

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

12.3. On-line database

Not available in PxStat.

12.3.1. AC 1. Data tables - consultations

Not applicable.

12.4. Micro-data Access

Not applicable.

12.5. Other

Not applicable.

12.5.1. AC2. Metadata consultations

Not calculated.

12.6. 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.

12.6.1. AC3 – Metadata completeness – rate

Not calculated.

12.7. Quality Documentation

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

13. Quality Management

13.1. 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.

13.2. Quality Assessment

Not applicable.

14. Relevance

14.1. User Needs

This report is carried out as a general national requirement rather than 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.

14.1.1. Main National Users

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

14.1.2. Principal External Users:

International users include Eurostat.

14.2. User Satisfaction

Not calculated.

14.3. Data Completeness

Not applicable.

14.3.1. Data Completeness rate

Not applicable.

15. Accuracy and reliability

15.1. 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.

15.2. Sampling Error

Not applicable.



15.2.1. A1. Sampling error indicator

Not applicable.

15.3. Non-sampling Error

Not applicable.

15.3.1. Coverage error

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

15.3.1.1. A2. Over coverage rate

Not applicable.

15.3.1.2. A3. Common units – proportion

Not applicable.

15.3.2. Measurement error

Not applicable.

15.3.3. Non-Response Error

Not applicable.

15.3.3.1. Unit non response rate

Not applicable.

15.3.3.2. Item non response rate

Not applicable.

15.3.4. 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.

15.3.5. Model assumption error

Not applicable.

16. Timeliness and punctuality

16.1. 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.



16.1.1. TP1. Time lag – First results

Provisional or preliminary results are not produced.

16.1.2. TP2. Time lag – Final results

The timeliness of the results varies for each indicator. Most of the indicators contain data for reference years 2020-2021 with some of the indicators being up to date for 2022. The timeliness of the indicator depends directly on the availability of the data from the data provider.

16.2. Punctuality

Data are published on an annual basis using the most up-to-date figures that are available. The 2023 Report should be published by End December 2023 in line with the scheduled release calendar.

16.2.1. TP3. Punctuality – Punctuality - delivery and publication

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

17. Comparability

17.1. 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.

17.1.1. CC1. Asymmetry for mirror flow statistics

Not applicable

17.2. 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.

17.2.1. Length of Comparable Time series

2012, 2014, 2016, 2018, 2019, 2020, 2021, 2022 and 2023 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.

17.3. Coherence – cross domain

Not applicable.

17.3.1. Coherence – Sub annual and annual statistics

Not applicable.

17.3.2. Coherence with National Accounts

Information provided in some indicators, such as environment taxes, are taken from and thus are coherent with National Accounts.



17.4. 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.

18. Cost and Burden

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

19. Data Revision

19.1. 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.

19.2. 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.

19.2.1. Data Revision – Average size

Not calculated.

20. Statistical processing

20.1. 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 Sustainable Energy Authority of Ireland; the Department of Agriculture, Food and the Marine; the Department of Transport; the European Environment Agency; Eurostat; and the United Nations.

20.1.1. Population and sampling frame

Not applicable.

20.1.2. Sampling design

Not applicable.

20.1.3. Survey size

Not applicable.

20.1.4. Survey technique

Not applicable.



20.2. Frequency of data collection

Annual.

20.3. Data Collection

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

20.3.1. Type of Survey/Process

Not applicable.

20.3.2. Questionnaire (including explanations)

Not applicable.

20.3.3. Survey Participation

Not applicable.

20.3.4. Data Capture

Not applicable.

20.4. 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.

20.5. 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.

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

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

20.5.1.1. A7. Imputation rate

Not calculated.

20.5.2. Grossing and Weighting

Not applicable.

20.6. Adjustment

Not applicable.

20.6.1. Seasonal Adjustment



Not applicable.

21. Comment

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

1.1	World Population	https://population.un.org/wpp
1.2	World Child Mortality	https://population.un.org/wpp
1.3	World Life Expectancy	https://population.un.org/wpp
1.4	World Temperatures	https://www.eea.europa.eu/
1.5	World Greenhouse Gas Emissions	https://di.unfccc.int/time_series
2.1	Ireland: Environment Taxes	https://www.cso.ie
2.2	Ireland: Environmental Subsidies	https://www.cso.ie
2.3	Ireland: Average effective carbon rate by type of fuel	https://www.cso.ie
2.4	Ireland: Environment taxes, environment subsidies and fossil fuel subsidies	https://www.cso.ie
2.5	Ireland: Consumer Price Index for Energy Products	https://www.cso.ie
2.6	Ireland: Domestic Material Consumption	https://www.cso.ie
2.7	Ireland: Fish landings by Irish vessels in Irish ports	https://www.cso.ie
2.8	Ireland: Domestic Building Energy Ratings	https://www.cso.ie
2.9	Ireland: Domestic Metred Public Water Consumption	https://www.cso.ie
2.10	Ireland: Networked Gas Consumption	https://www.cso.ie
2.11	Ireland: Metered electricity consumption by sector	https://www.cso.ie
2.12	Ireland: Fuel excise clearances	https://www.cso.ie
2.13	Ireland: Environment goods and services sector gross output	https://www.cso.ie
3.1	Ireland: Particulate matter (PM _{2.5}) emissions	https://www.epa.ie
3.2	EU: Particulate matter (PM _{2.5}) emissions	https://ec.europa.eu/eurostat
3.3	Ireland: Sulphur oxide emissions	https://www.epa.ie
3.4	EU: Sulphur oxide emissions	https://ec.europa.eu/eurostat
3.5	Ireland: Nitrogen oxides emissions	https://www.epa.ie
3.6	EU: Nitrogen oxides emissions	https://ec.europa.eu/eurostat
3.7	Ireland: Ammonia emissions	https://www.epa.ie
3.8	EU: Ammonia emissions	https://ec.europa.eu/eurostat
3.9	Ireland: NMVOC emissions	https://www.epa.ie
3.10	EU: NMVOC emissions	https://ec.europa.eu/eurostat
4.1	Ireland: Greenhouse gas emissions	https://www.epa.ie
4.2	EU: Greenhouse gas emissions	https://ec.europa.eu/eurostat
4.3	EU: Greenhouse gas emissions per capita	https://ec.europa.eu/eurostat
4.4	Ireland: Greenhouse gas emissions by sector	https://www.epa.ie
4.5	Ireland: Average annual temperature	https://www.met.ie
4.6	Ireland: Average annual rainfall	https://www.met.ie
5.1	Ireland: Bathing water quality	https://www.epa.ie



5.2	Ireland: Drinking water quality	https://www.epa.ie
5.3	Ireland: Urban wastewater treatment	https://www.epa.ie
5.4	Ireland: River water quality	https://www.epa.ie
5.5	Ireland: Nitrates in groundwater	https://www.epa.ie
6.1	Ireland: Land use categories	https://www.epa.ie
6.2	EU: Forest cover	https://ec.europa.eu/eurostat
6.3	Ireland: Organic agricultural land	https://www.gov.ie/agriculture
6.4	EU: Organic agricultural land	https://ec.europa.eu/eurostat
6.5	Ireland: Fertiliser sales	https://www.gov.ie/agriculture
6.6	EU: Fertiliser sales	https://ec.europa.eu/eurostat
6.7	Ireland: Cattle, sheep and pig numbers	https://www.cso.ie
6.8	EU: Cattle, sheep and pig numbers	https://ec.europa.eu/eurostat
6.9	Ireland: New dwellings completions	https://www.cso.ie
7.1	Ireland: Primary energy production	https://www.seai.ie
7.2	EU: Final energy consumption by fuel type	https://ec.europa.eu/eurostat
7.3	Ireland: Renewable energy production	https://www.seai.ie
7.4	Ireland: Electricity generation from renewable sources	https://www.seai.ie
7.5	EU: Electricity generation from renewable sources	https://ec.europa.eu/eurostat
7.6	Ireland: Transport energy consumption from renewable sources	https://www.seai.ie
7.7	Ireland: Net imports of fuel	https://www.seai.ie
8.1	Ireland: Vehicles under current licence	https://www.cso.ie
8.2	Ireland: Public Transport Passenger Journeys	https://www.cso.ie
8.3	EU: Rail passenger traffic	https://ec.europa.eu/eurostat
8.4	Ireland: International passengers through Irish air- and sea ports	https://www.cso.ie
8.5	Ireland: Means of travel to work	https://www.cso.ie
8.6	Ireland: New private cars licensed for the first time by fuel type	https://www.cso.ie
9.1	Ireland: Municipal waste generated	https://www.epa.ie
9.2	Ireland: Municipal waste sent to landfill	https://www.epa.ie
9.3	Ireland: Recovery of packaging waste	https://www.epa.ie
9.4	Ireland: Electrical waste collected	https://www.epa.ie
10.1	Ireland: Natura 2000 sites	https://www.ec.europa.eu/eurostat
10.2	EU: Special Protected areas under EU Birds Directive	https://www.eea.europa.eu
10.3	EU: Special Areas of Conservation under EU Habitats Directive	https://www.eea.europa.eu
10.4	Ireland: Common and farmland birds	https://www.birdwatchireland.ie

