

EEA GHG data viewer

<https://www.eea.europa.eu/data-and-maps/data/data-viewers/greenhouse-gases-viewer>

EU Legal basis

The European Environment Agency (EEA) supports the European Commission with the compilation of the EU GHG inventory and the implementation of the initial quality checks (QA/QC) of the GHG inventories of Member States.

The data shown in the GHG data viewer is based on national GHG inventories reported to the EU according to Regulation (EU) 2018/1999 of the European Parliament and of the Council of 11 December 2018 (EU Governance Regulation) https://eur-lex.europa.eu/legal-content/EN/TXT/?toc=OJ:L:2018:328:TOC&uri=uriserv:OJ.L_.2018.328.01.0001.01.ENG

International reporting requirements

The GHG emissions data included in the GHG data viewer are consistent with the international requirements for GHG inventories reported to UNFCCC according to Decision 24/CP.19 (UNFCCC reporting guidelines) <https://unfccc.int/resource/docs/2013/cop19/eng/10a03.pdf> and its revision at COP27 at Sharm-El-Sheikh <https://unfccc.int/documents/622090>

According to the UNFCCC reporting guidelines, the methods used to estimate GHG emissions and removals shall be those of the 2006 IPCC Guidelines for national GHG inventories (IPCC Guidelines) <https://www.ipcc-nggip.iges.or.jp/public/2006gl/>

At COP26 in Glasgow, it was also agreed that Parties may use the 2019 Refinement to the 2006 IPCC Guidelines on a voluntary basis <https://unfccc.int/decisions?f%5B0%5D=symboldec%3A5cma3>

Global Warming Potentials

Consistent with the latest Decision on the UNFCCC Reporting Guidelines adopted at COP27 in Sharm-El-Sheik, the EU has decided to apply the 100-year global warming potentials values to calculate the carbon dioxide equivalence of anthropogenic GHG emissions by sources and removals by sinks as set out in table 8.A.1 of the contribution of

Working Group 1 to the Fifth Assessment Report of the IPCC from the current 2023 inventory submission¹.

Geographical coverage

The GHG data viewer includes emissions data from EU Member States reported under the EU Governance Regulation, and also reported in the EU's GHG inventory submission to UNFCCC. As members of the EEA, the inventories of Iceland, Norway, Liechtenstein, Switzerland, and Turkey are also included in the GHG data viewer.

EU-aggregates

There is only one EU aggregate: EU-27 ('EUX in the database, current European Union), which is based on the sum of the inventories of its 27 Member States.

Key data sources:

- EU GHG emission inventory reported under the UNFCCC and the Kyoto Protocol (<https://www.eea.europa.eu/themes/climate/eu-greenhouse-gas-inventory>);
- EU ETS data from the European Commission and available in the EEA ETS viewer (<https://www.eea.europa.eu/data-and-maps/dashboards/emissions-trading-viewer-1>);
- GDP from the European Commission's AMECO database (https://ec.europa.eu/info/business-economy-euro/indicators-statistics/economic-databases/macro-economic-database-ameco/ameco-database_en); and,
- Average population from Eurostat's population statistics (<https://ec.europa.eu/eurostat>).

GDP and population are used to estimate the indicators of emissions per GDP (in 2015 market prices) and emissions per capita (average population), respectively, as included in the GHG data viewer.

¹ IPCC. 2013. Climate Change 2013: The Physical Science Basis. Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change. TF Stocker, D Qin, G-K Plattner, et al. (eds.). Cambridge and New York: Cambridge University Press. Available at <http://www.ipcc.ch/report/ar5/wg1>

Sectoral breakdown

The GHG data viewer shows sectors according to the CRF classification used for reporting GHG inventories according to IPCC 2006 Guidelines, as well as a pre-defined sectoral aggregation that supports the analysis of GHG emission trends by EEA. The EEA pre-defined sectoral classification has been done according to the following mapping to the CRF inventory categories:

- Energy supply: CRF 1A1 (energy industries) + 1B (fugitives);
- Industry: CRF 1A2 (manufacturing industries and construction) + CRF 2 (industrial processes and product use);
- Domestic transport: CRF 1.A.3;
- Residential and commercial (buildings): CRF 1A4a (commercial) + CRF 1A4b (residential);
- Agriculture: CRF 3 (agriculture);
- Other combustion: CRF 1A4c (agriculture, forestry and fishing) + CRF 1A5 (other) + indirect CO₂ emissions (if reported in CRF table 6)
- Waste: CRF 5 (waste);
- LULUCF: CRF 4 (LULUCF);
- International aviation (CRF 1D1a);
- International navigation (CRF 1D1b);

National GHG totals

There are four national totals shown in the data viewer (see also table below):

- ‘Total emissions (UNFCCC)’: Total GHG emissions excluding LULUCF, as reported in the CRF tables to UNFCCC.
- ‘Total net emissions (UNFCCC)’: Total GHG emissions including LULUCF, as reported in the CRF tables to UNFCCC.
- ‘Total net emissions with international aviation (EU NDC)’: Total GHG emissions including LULUCF and including international aviation. This total has been included to track progress towards the EU’s 2030 target (NDC under the Paris Agreement).
- ‘Total net emissions with international transport (EEA)’: Total GHG emissions including LULUCF and including international aviation and international navigation. This total has been created to account for all net GHG emissions as reported to UNFCCC, noting that international transport is excluded from the current targets under the Kyoto Protocol.

	Energy, IPPU, agriculture, waste, indirect CO ₂	LULUCF	International aviation	International navigation
Total emissions (UNFCCC)	✓			
Total net emissions (UNFCCC)	✓	✓		
Total net emissions with international aviation (EU NDC)	✓	✓	✓	
Total net emissions with international transport (EEA)	✓	✓	✓	✓

Additional information

More detailed information, including activity data and emission factors, as well as methodological descriptions for EU key categories can be found in the EU's national inventory report and the underpinning CRF tables, available from the EEA website <https://www.eea.europa.eu/themes/climate/eu-greenhouse-gas-inventory> For EEA member countries not included in the EU's GHG inventory, additional information can be found on the UNFCCC website

<https://unfccc.int/process-and-meetings/transparency-and-reporting/reporting-and-review-under-the-convention/greenhouse-gas-inventories-annex-i-parties/national-inventory-submissions-2023>

Errata

Please note there is an error in CH₄ emissions from international aviation in Poland in 2021, as reported in Poland's GHG inventory under the EU Governance Regulation 15 March 2023. The correct CH₄ emissions corresponding to the CRF category 1.D.1.a are:

0.012138406334949 kt CH₄

and,

0.339875377378571 kt CH₄ in CO₂e

These emissions are below the significance threshold, and they will be corrected in the next GHG inventory submission in 2024.