

14 Direct greenhouse gas emissions from households

Indicator type **Core indicator**

Published

Versioning

First publication Latest update

Area and sub-area

Area and sub-area

Presentation

Tier

Indicator definition and description

Unit of measure

Coverage

Spatial aggregation

Reference period

Update frequency

Base period

Disaggregation (operational indicators)

Disaggregation (operational indicators)	Comments
<input type="text" value="Spatial"/>	<input type="text"/>
<input type="text" value="Temporal (by month, by season)"/>	<input type="text"/>

Other related -indicators (e.g.contextual, proxy, other core indicators)

ID	Subindicator	Type
<input type="text" value="09a"/>	<input type="text" value="Total greenhouse gas emissions from the national economy"/>	<input type="text" value="Core indicator"/>
<input type="text" value="12"/>	<input type="text" value="Total greenhouse gas emissions from production activities"/>	<input type="text" value="Core indicator"/>

Relevance

Policy context and rationale

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Related SDG indicator (SDG I.)	Indirect links to SDGs 7, 12 and 13.
Relation w SDG-I.	Not applicable
Related Sendai Framework I.	Not applicable
Policy references	

Document title	Link
Transforming our world: the 2030 Agenda for Sustainable Development (General Assembly of the United Nations, 2015)	https://sustainabledevelopment.un.org/post2015/transformingourworld
Paris Agreement (United Nations, 2015)	https://unfccc.int/process-and-meetings/the-paris-agreement/the-paris-agreement
United Nations Framework Convention on Climate Change (United Nations Climate Change, 1994)	https://unfccc.int/process-and-meetings/the-convention/what-is-the-united-nations-framework-convention-on-climate-change
European Union Climate Strategies and Targets (European Commission, 2008)	https://ec.europa.eu/clima/policies/strategies_en

Methodology

Methodology for indicator calculation	<p>The indicator is calculated as the sum of direct GHG emissions from households for 1) transport, 2) heating and 3) other purposes and can be derived from air emission accounts.</p> <p>Total GHG emissions are calculated as the sum of individual greenhouse gas emissions: carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), perfluorocarbons (PFCs), hydrofluorocarbons (HFCs), sulphur hexafluoride (SF₆) and nitrogen trifluoride (NF₃), measured in units of CO₂-equivalent, by using a common weighting factor, the so-called Global Warming Potentials (GWP). The enhanced transparency framework for action and support of the Paris Agreement (see Article 13), further set out in the modalities, procedures and guidelines (see part D. Metrics), establishes that each Party shall use the 100-year time-horizon GWP values from the IPCC Fifth Assessment Report. GWP values are listed in Table 8.A.1 in Appendix 8.A of Chapter 8 – “Anthropogenic and natural radiative forcing”</p> <p>The GWP values for the main direct GHGs are as follows: CO₂ = 1, CH₄ = 28, N₂O = 265, SF₆ = 23500, NF₃ = 16100. GWP values for HFCs and PFCs vary for individual species. These values are to be used for reporting on GHG emissions under the Paris Agreement.</p> <p>Reporting by Annex I Parties under the UNFCCC is still on the basis of GWP values of the Fourth IPCC AR (see Table 2.14 of the IPCC Fourth Assessment Report). These GWP values are: CO₂ = 1, CH₄ = 25, N₂O = 298, SF₆ = 22800, NF₃ = 17200.</p> <p>Note: most non-Annex I Parties still use the Revised 1996 IPCC Guidelines for reporting and therefore use a different set of GWPs (from the IPCC Second Assessment Report).</p> <p>The gases listed in the first paragraph are the so-called direct GHGs. There exist also precursor gases: carbon monoxide (CO), nitrogen oxides (NO_x), non-methane volatile organic compounds (NMVOCs), as well as sulphur oxides (SO_x). The emissions of precursor gases are not included in total emissions and are therefore not part of this indicator.</p>
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Methodology references

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Document title	Link
Modalities, procedures and guidelines for the transparency framework for action and support referred to in Article 13 of the Paris Agreement (UNFCCC, 2018)	https://unfccc.int/documents/184700
IPCC Fourth Assessment Report: The Physical Science Basis (Intergovernmental Panel on Climate Change (IPCC), 2007)	https://www.ipcc.ch/report/ar4/wg1/
IPCC 5th Assessment Report: Chapter 8 - Anthropogenic and natural radiative forcing (IPCC, 2013)	https://www.ipcc.ch/site/assets/uploads/2018/02/WG1AR5_Chapter08_FINAL.pdf
IPCC Fifth Assessment Report: Climate Change 2014 (Synthesis Report) (Intergovernmental Panel on Climate Change (IPCC), 2014)	https://www.ipcc.ch/report/ar5/syr/
Manual for air emission accounts (Eurostat, 2015)	https://ec.europa.eu/eurostat/web/products-manuals-and-guidelines/-/KS-GQ-15-009
Air emissions accounts and intensities, Reference Metadata in Euro SDMX Metadata Structure (ESMS) (Eurostat, 2018)	https://ec.europa.eu/eurostat/cache/metadata/en/en_v_ac_ainah_r2_esms.htm
System of Environmental Economic Accounting 2012 Central Framework (United Nations, European Commission, Food and Agriculture Organization of the United Nations, OECD, World Bank, 2014)	https://seea.un.org/content/seea-central-framework

Classification syst. The European standard statistical classification of products by activity (CPA), Classification of Individual Consumption by Purpose (COICOP)

Data sources

Main source Official statistics: SEEA and/or SNA

Explanation National SEEA air emission accounts

SEEA Accounts that can serve as data sources

SEEA Account	Comments
Air emission accounts	

UN-FDES 3.1.1: Emissions of greenhouse gases

International databases containing this indicator

Eurostat database	https://ec.europa.eu/eurostat/data/database
OECD Air Emissions Accounts	https://stats.oecd.org/Index.aspx?DataSetCode=AEA

Comments

Comments