

Net greenhouse gas emissions of the Land use, Land use change and Forestry (LULUCF) sector (sdg_13_21)

ESMS Indicator Profile (ESMS-IP)
Compiling agency: Eurostat, the statistical office of the European Union

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Eurostat Quality Profile	
4.5. Source data	EEA (UNFCCC reporting and EU Greenhouse Gas Monitoring Mechanism)
5.1. Frequency of dissemination	Every year
5.2. Timeliness	T+2 years
6.1. Reference area	All EU MS
6.2. Comparability - geographical	All EU MS
6.3. Coverage - Time	> 10 years
6.4. Comparability - over time	> 4 data points

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1. Contact		Top
1.1. Contact organisation	Eurostat, the statistical office of the European Union	
1.2. Contact organisation unit	E2: Environmental statistics and accounts; sustainable development	
1.5. Contact mail address	e-mail contact : ESTAT-SDG-MONITORING@ec.europa.eu	

2. Metadata update		Top
2.1. Metadata last certified	21/03/2023	
2.2. Metadata last posted	24/04/2023	
2.3. Metadata last update	13/05/2024	

3. Relevance	Top
<p>The indicator is part of the EU Sustainable Development Goals (SDG) indicator set. It is used to monitor progress towards Goal 13 on climate action; which is embedded in the European Commission's Priorities under the European Green Deal. SDG 13 seeks to implement the commitment to the United Nations Framework Convention on Climate Change for achieving a climate neutral world by mid-century to limit global warming to well below 2°C and aiming at 1.5°C (compared to pre-industrial times). It also aims to strengthen countries' resilience and adaptive capacity to climate-related natural hazards and the resulting disasters.</p> <p>The European Climate Law sets out a framework for climate action and increases the EU's ambition for 2030, with a new goal to reduce net greenhouse gas (GHG) emissions by at least 55 % by that year (compared to 1990) and to achieve climate-neutrality by 2050. The European Commission has also put in place a package of new and revised EU climate and energy legislation — the so called Fit for 55 package — to increase its ambition on climate mitigation. The package comprises an interconnected set of measures in the area of energy, transport, taxation and climate policies, and includes strengthened and expanded carbon pricing, targets, standards and support measures. It also sets a target for natural carbon sinks of 310 million tonnes of CO₂ equivalents.</p>	

4. Statistical Indicator	Top
4.1. Data description	
<p>This indicator measures net carbon removals from the land use, land use change and forestry (LULUCF) sector, considering both emissions and removals from the sector. The indicator is expressed as CO₂ equivalents using the global warming potential (GWP) of each gas. Emissions and removals data, known as GHG inventories, are submitted annually by Member States to the EU and the United Nations Framework Convention on Climate Change (UNFCCC). The European Environment Agency (EEA) compiles the EU aggregate data and publishes data for the EU and all Member States. Eurostat republishes the EEA data.</p>	

Member States follow the guidelines from the Intergovernmental Panel on Climate Change (IPCC) for National Greenhouse Gas Inventories when estimating emissions and removals of greenhouse gases to ensure transparency, accuracy, comparability, completeness, and consistency in reported data.
4.2. Unit of measure
Thousand tonnes of CO ₂ equivalent, tonnes of CO ₂ equivalent per capita and tonnes of CO ₂ equivalent per square kilometre
4.3. Reference Period
Calendar year.
4.4. Accuracy - overall
Indicator from non-ESS source. The uncertainty of the estimates is calculated every year by greenhouse gas and by land use category. In 2023 the uncertainty on the level for the 2021 inventory calculated across all land use categories and harvest wood products including all three greenhouse gases was 39.9%. This is similar to the waste sector and higher than the other sectors: energy, industrial processes and product use and agriculture.
4.5. Source data
EEA (UNFCCC reporting and EU Greenhouse Gas Monitoring Mechanism) Data source: EEA, Reporting under United Nations Framework Convention on Climate Change (UNFCCC reporting) Data provider: European Environment Agency (EEA), based on data from covered countries.

5. Frequency and Timeliness of dissemination Top
5.1. Frequency of dissemination
Every year Indicator is updated annually.
5.2. Timeliness
T+2 years New data points are disseminated within two years after the reference year.

6. Coverage and comparability Top
6.1. Reference area
All EU MS Data are presented for all EU Member States plus Iceland, Norway and Switzerland.
6.2. Comparability - geographical
All EU MS Data are comparable between all EU Member States respectively other presented countries. Comparability between Member States is one of the core reporting principles that the greenhouse gas inventory must adhere to.
6.3. Coverage - Time
> 10 years Presented time series (including EU aggregates) starts in year 2000.
6.4. Comparability - over time

> 4 data points

Length of comparable time series without methodological break is longer than 4 data points. When Member States gain new scientific knowledge that cause a change of an estimate, then the Member State needs to recalculate the full time series back to 2000 using this knowledge, if applicable.

7. Accessibility and clarity[Top](#)**7.1. Dissemination format - Publications**

Analysis of indicator is presented in Eurostat's annual monitoring report on Sustainable development in the EU (progress towards SDGs in the EU context).

7.2. Dissemination format - online database

See table [sdg_13_21](#)

7.3. Dissemination format - other

Eurostat dedicated section on SDGs: <http://ec.europa.eu/eurostat/web/sdi/overview>

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[National emissions reported to the UNFCCC and to the EU Greenhouse Gas Monitoring Mechanism](#)

[European Environment Agency Datahub, Net greenhouse gas emissions of the Land use, Land use change and Forestry \(LULUCF\) sector](#)

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