



## EUROSTAT QUALITY PROFILE

<b>Indicator (definition)</b>	<b>Greenhouse gas emissions, base year 1990:</b> Trends in anthropogenic (man-made) emissions of six greenhouse gases (GHG), weighted by their global warming potentials. The indicator does not include emissions and removals related to land use, land-use change and forestry (LULUCF); nor does it include emissions from international aviation and international maritime transport. CO2 emissions from biomass with energy recovery are reported as a Memorandum item according to UNFCCC Guidelines and not included in national greenhouse gas totals.
<b>Eurostat Unit</b>	The European Environment Agency (EEA), assisted by its European Topic Centre on Air and Climate Change, is responsible for the compilation of the EU greenhouse gas inventory and for the implementation of the QA/QC Programme under the EU inventory system. Eurostat's energy statistics unit is responsible for the IPCC reference approach for CO2 emissions from the combustion of fossil fuels. This mandatory task aims at maximising the consistency of the energy data submitted via the joint energy questionnaires (energy statistics regulation) and the activity data submitted in the inventories (UNFCCC/Kyoto Protocol).
<b>Other Commission DGs</b>	DG Climate Action; DG Joint Research Centre
<b>European Statistical System Working Group (WG)</b>	None. This work is not coordinated in the European Statistical System (ESS). The European Environment Agency is responsible for the annual compilation of the EU inventory and for the implementation of the EU QA/QC Procedures within the EU Inventory System.
<b>Date</b>	August 2010

**1. Overall assessment of accuracy and comparability** (Description of quality grades under the following link: [http://circa.europa.eu/Public/irc/dsis/structind/library?l=/general\\_information/quality\\_profiles/annex\\_enpdf/EN\\_1.0\\_&a=d](http://circa.europa.eu/Public/irc/dsis/structind/library?l=/general_information/quality_profiles/annex_enpdf/EN_1.0_&a=d)

A     B     C     Indicator to be Developed

Data is collected from reliable sources applying high standards with regard to the methodology.+  
Shortcomings with regard to comparability across countries are well documented.

**2. Objective and relevance of the indicator:**

There is a wide scientific consensus that emissions of greenhouse gases are responsible for global warming, with potentially dramatic economic, social and environmental consequences at global level.

The ‘Climate Action and Renewable Energy’ package adopted by the Council on 6 April 2009 underlined the objective of limiting the rise in global average temperature to no more than two degrees Celsius above pre-industrial levels. To achieve this goal Member States agreed to reduce total EU greenhouse gas emissions by 20 % compared to 1990 by 2020. Minimising overall reduction costs to meet the 20% objective implies a 21 % reduction in emissions from sectors covered by the EU ETS compared to 2005 by 2020, on the one hand. This is to be achieved via a single EU-wide cap on ETS emissions. On the other hand, it also implies a reduction of 10 % in emissions for sectors outside the EU ETS. All Member States have agreed country-specific greenhouse gas emission limits in 2020 compared to 2005 for sectors outside the EU ETS (Council Decision 2009/406/EC).

The Europe 2020 strategy reiterates the significance of the ‘Climate Action and Renewable energy’ package and includes the greenhouse gas emissions indicator among the headline indicators measuring the success of the strategy.

The European Union, as a party to the United Nations Framework Convention on Climate change (UNFCCC), reports annually on the greenhouse gas emissions within the area covered by its Member States. The Annual European Union greenhouse gas inventory and inventory report, officially submitted to the UNFCCC Secretariat, is prepared on behalf of the European Commission (DG CLIMA) by the European Environment Agency’s European Topic Centre for Air and Climate Change (ETC/ACC) supported by the Joint Research Centre and Eurostat.

**Restriction of the indicator’s relevance and other characteristics which may lead to restrictions in using it in monitoring and reporting**

There are no restrictions to the use of this indicator

It is noteworthy however that careful treatment and interpretation of data is necessary when comparing *air emissions accounts* of Eurostat and the *greenhouse gas emission inventory* compiled by EEA. This is due to the fact that the methodology of the UNFCCC for preparing GHG inventories is based on different principles than that of the ESS for accounting air emissions. One of the major differences is that the *air emissions accounts* of ESS cover emissions stemming from national economic activities, i.e. those generated by economic activities of resident units rather than emissions from all sources located on the national territory. Therefore, most air emissions totals for *air emissions accounts* of the ESS differ from totals in UNFCCC air emissions inventories that do not apply national accounts concepts.

In order to show the exact components that make up discrepancies in two reporting systems Eurostat has prepared a table bridging air emission accounts and UNFCCC totals in order to be discussed with the Member States.

**3. Data availability: details**

**(t<sub>1</sub>: earliest reference year available; t<sub>2</sub>: latest reference year available in May 2010)**

	EU Member States	Candidate and Accessing Countries	USA and Japan	EFTA <sup>1</sup>
t <sub>1</sub>	1991	1991: MK no data	no data	1991
t <sub>2</sub>	2008	2008	no data	2008

*Comments (including information on time series):* Emissions reduction targets are shown as figures for 2010 on the Eurostat Structural indicators website.

**4. Overall accuracy**

High  According with the IPCC Guidelines, greenhouse gas estimates should be

<sup>1</sup> While being a member of the EFTA, Liechtenstein has complete or partial exemptions from several statistical requirements due to its size. Thus, Liechtenstein is excluded from this overview as most of the data for other structural indicators are missing. Liechtenstein reports greenhouse gas emissions data to the EEA on an annual basis, which is then publicly available from the EEA GHG data viewer - together with the three other EFTA countries, EU-27 Member States, Turkey and Croatia.

accurate in the sense that they are systematically neither over nor under true emissions or removals, as far as can be judged, and that uncertainties are reduced as far as practicable. Moreover, appropriate methodologies should be used, in accordance with the IPCC good practice guidance, to promote accuracy in inventories. The main institutions involved in the compilation of the EU greenhouse gas inventory are the EU Member States, the European Commission Directorate General for Climate Action (DG CLIMA), the European Environment Agency (EEA) and its European Topic Centre on Air and Climate Change (ETC/ACC), Eurostat, and the Joint Research Centre (JRC). The Climate Change Committee, made up of all EU Member States, assists the European Commission in its tasks under Council Decision No 280/2004/EC. Within the EU inventory system, the EEA and its ETC ACC are responsible for the annual compilation of the EU inventory and for the implementation of the EU QA/QC Programme. The European Commission has overall responsibility – official submission to the UNFCCC on behalf of the EU by 15 April every year. Eurostat is responsible for the IPCC reference approach for CO<sub>2</sub> emissions from energy combustion. The JRC is responsible for the chapters related to agriculture and LULUCF.

Restricted   
(sources, errors,  
methodology, etc.)

#### 5. Comparability across countries

High  Comparability means that estimates of emissions and removals reported by Annex I Parties in inventories should be comparable among Annex I Parties. For this purpose, Annex I Parties should use the methodologies and formats agreed by the COP for estimating and reporting inventories. The allocation of different source/sink categories should follow the split of the Revised 1996 IPCC Guidelines for National Greenhouse Gas Inventories, and the IPCC Good Practice Guidance for Land Use, Land-Use Change and Forestry, at the level of its summary and sectoral tables; Differences in the methodologies, background activity data or emission factors used in the Member States are documented in the inventory reports.

Restricted

#### 6. Comparability over time

High  The same methodologies are used for the base and all subsequent years. Data is revised and updated for all years to ensure that the same methodology is applied for the whole time series.

Restricted

#### 7. Development perspective for improving the quality of this indicator (including as far as possible an indication of the burden on Member States and respondents.)

The annual review process under the UNFCCC and the Kyoto Protocol guarantees the continuous improvement of the quality of greenhouse gas estimates. In addition, an annual internal review mechanism has been established within the EU to improve the quality of the EU's official submission to the UNFCCC.

#### 8. Contribution to quality of the set/potential to qualify for an integrated policy analysis

This "output" indicator is one of the headline indicators in the sets of structural and sustainable development as well as one of the main targets in the Europe 2020 strategy.

#### Relevant European legislation:

Decision 406/2009/EC of the European Parliament and of the Council of 23 April 2009 on the effort of member States to reduce their greenhouse gas emissions to meet the Community's greenhouse gas emission reduction commitments up to 2020

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