



EUROSTAT QUALITY PROFILE

Indicator (definition)	Greenhouse gas emissions: Trends in anthropogenic (man-made) emissions of six greenhouse gases (GHG), weighted by their global warming potentials.
Eurostat Unit	E3, Environment statistics
Other Commission DGs	DG ENV; DG JRC
European Statistical System Working Group (WG)	WG on Environment Statistics, WG on Environmental Accounts
Date	22 May 2007

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

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:

The United Nations Framework Convention on Climate Change (UNFCCC) aims at stabilisation of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous man-made interference with the climate system. Such a level should be achieved within a time-frame sufficient to allow ecosystems to adapt naturally to climate change, to ensure that food production is not threatened and to enable economic development to proceed in a sustainable manner.

The Kyoto protocol encouraged appropriate reforms in relevant sectors aimed at promoting policies and measures that limit or reduce emissions of greenhouse gases not controlled by the Montreal Protocol (Kyoto Protocol, Article 2).

The countries shall individually or jointly, ensure that their aggregate anthropogenic carbon dioxide equivalent emissions of the greenhouse gases do not exceed their assigned amounts, calculated pursuant to their quantified emission limitation and reduction commitments, with a view to reducing their overall emissions of such gases by at least 5 per cent below 1990 levels in the commitment period 2008 to 2012 (Kyoto Protocol, Article 3).

The Brussels European Council (2003) invited Member States to accelerate progress towards meeting the Kyoto Protocol targets, including the reduction of greenhouse gas emissions, inviting the Environment Council to examine setting indicative targets in a cost-efficient manner and with minimum distortionary effects and achieving a final agreement on the emissions trading Directive.

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

The indicator does not include the impact of land use changes and forestry. The removal of GHG from the atmosphere by different sinks (forestry, oceanic uptake) is one of the most controversial issues in climate change studies. The missing carbon sink is as large as the oceanic uptake and the net emissions from changes in land use.

3. Data availability: details

(t₁: earliest reference year available; t₂: latest reference year available in May 2007)

	EU Member States	ACC/CC	USA and Japan	EFTA ¹
t ₁	1991	1991: BG,HR,RO, TR MK no data	1991	1991
t ₂	2004	2004	2004	2004

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



The nature of the basic data is annual emission estimates by sources and sinks. Accuracy of the data is ensured by annual Greenhouse gas inventories and regular review procedures carried out by independent experts. All Member States as parties of the United Nations Framework Convention on Climate Change (UNFCCC) prepare individual GHG inventories each year in accordance with UNFCCC reporting guidelines (UNFCCC Reporting Guidelines on Annual Inventories; FCCC/CP/2002/8) and submit those inventories to the Commission.

The main institutions involved in the checking of the data and compilation of the EC GHG inventory are the DG ENV (political level), European Environmental Agency (EEA) (technical level) and European Topic Centre on Air and Climate Change (ETC/ACC), Eurostat and the Joint Research Centre (JRC)(checking).

In case of missing data a special gap-filling procedure is applied. The gap-filling methodologies are described in the ETC/ACC Technical Paper 2004/2 (August 2004). Emissions reported for the most recent year are taken as approximated estimate for the missing year.

In order to improve the quality of the Inventory reports, the Member States take part in the review and comment on the draft EC Inventory report.

Restricted

(sources, errors,
methodology, etc.)



5. Comparability across countries

High



DG ENV, EEA ETC/ACC, Eurostat and JRC perform initial checks on the submitted data and the Member States send updates if necessary.

In general, the base year for CO₂, CH₄ and N₂O is 1990, and 1995 for the fluorinated gases (1990 for France and Finland). Some exceptions: Bulgaria (1988), Hungary (average 1985–87), Poland (1988), Romania (1989) and Slovenia (1986). Most of the new member States have difficulties in reporting all fluorinated gases. The gap-filling procedure is not applied due to the lack of any data. Those shortcomings are well documented in the Inventory reports.

Data gaps still exist for a few years/gases for Greece, Ireland, Luxembourg, Czech Republic, Hungary, Lithuania, Malta and Poland. Gap-filling has been applied for these countries to ensure comparability, except Cyprus (no data available).

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

¹ 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 structural indicators are missing.

High	<input checked="" type="checkbox"/>	Data is revised and updated for all years to ensure that the same methodology is applied for the whole time series.
Restricted	<input type="checkbox"/>	

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.)

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

Air accounts for NAMEA (National Accounting Matrix including Environmental Accounts) 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 NAMEA 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 NAMEA and UNFCCC totals in order to be discussed with the Member States.

Relevant European legislation:

The legal basis for the compilation of the EC inventory is the Decision 280/2004/EC (replacing the Council Decisions 99/296/EC and 93/389/EC) on the monitoring of greenhouse gas emissions in the EU.

Council Decision 2002/358/EC in which Member States agreed that some countries be allowed to increase their emissions, within limits, provided these are off-set by reductions on others and the EU Kyoto target of a reduction of 8% compared to 1990 is achieved by 2008-2012.

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