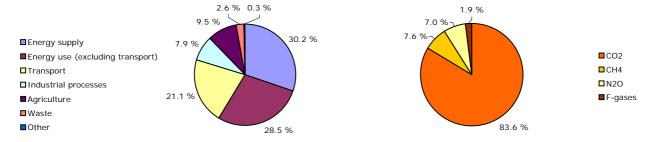
### GHG trends and projections in the EU-15



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| Key GHG data <sup>(1)</sup>                              | 1990    | 2007    | 2008    | 2009 (2) | Unit                            | Rank in<br>EU-27 <sup>(3)</sup> | Rank in<br>EU-15 <sup>(3)</sup> |
|--|---------|---------|---------|----------|---------------------------------|---------------------------------|---------------------------------|
| Total greenhouse gas emissions (GHG)                     | 4 244.7 | 4 046.2 | 3 970.5 | 3 696.5  | Mt CO <sub>2</sub> -eq.         | n.a.                            | n.a.                            |
| GHG from international bunkers (4)                       | 165.2   | 300.9   | 296.0   | n.a.     | Mt CO <sub>2</sub> -eq.         | n.a.                            | n.a.                            |
| GHG per capita   | 11.6    | 10.3    | 10.1    | 9.3      | t CO <sub>2</sub> -eq. / capita | n.a.                            | n.a.                            |
| GHG per GDP <sup>(5)</sup>                               | 606     | 402     | 392     | 381      | g CO <sub>2</sub> -eq. / euro   |                                 |                                 |
| Share of GHG in total EU-27 emissions                    | 76.2 %  | 80.3 %  | 80.4 %  | 80.4 %   | %                               |                                 |                                 |
| EU ETS verified emissions (6)                            |         | 1 666.5 | 1 621.9 | 1 436.1  | Mt CO <sub>2</sub> -eq.         | n.a.                            | n.a.                            |
| Share of EU ETS verified emissions in total GHG          |         | 41.2 %  | 40.9 %  | 38.9 %   | %                               |                                 |                                 |
| ETS verified emissions compared to annual allowances (7) |         | 2.1 %   | 11.2 %  | - 1.9 %  | %                               |                                 |                                 |

Share of GHG emissions (excluding international bunkers) by main source and by gas in 2008  $\,^{(1),(8)}$ 



|  | 1990–2008                  |          | 2007–2008                  |         | 1990–2009 <sup>(2)</sup>   |          | 2008–2009 (2)              |          |
|--|----------------------------|----------|----------------------------|---------|----------------------------|----------|----------------------------|----------|
| Key GHG trends                                 | Mt<br>CO <sub>2</sub> -eq. | %        | Mt<br>CO <sub>2</sub> -eq. | %       | Mt<br>CO <sub>2</sub> -eq. | %        | Mt<br>CO <sub>2</sub> -eq. | %        |
| Total GHG                                      | - 274.2                    | - 6.5 %  | - 75.7                     | - 1.9 % | - 548.2                    | - 12.9 % | - 274.0                    | - 6.9 %  |
| GHG per capita                                 | - 1.6                      | - 13.4 % | - 0.3                      | - 2.5 % | - 2.3                      | - 19.8 % | - 0.7                      | - 6.9 %  |
| EU ETS verified emissions - all installations  |                            |          | - 44.5                     | - 2.7 % |                            |          | - 185.8                    | - 11.5 % |
| EU ETS verified emissions - constant scope (9) |                            |          | n.a.                       | n.a.    |                            |          | - 182.1                    | - 11.3 % |

#### Assessment of long-term GHG trend (1990-2008)

Emissions have been declining steadily since 2003. Decreases in emissions between 1990 and 2008 were observed in all sectors except transport. The emission reductions that took place in (former Eastern) Germany in the early 1990s account for a significant part of the reductions observed at EU-15 level. Important emission reductions also took place in France and the United Kingdom during that period, in particular in energy industries, manufacturing industries and other energy sectors. In the United Kingdom this reduction in emissions was due to a switch from solid fuels to gaseous fuels. Improvements in energy efficiency and increased use of renewable sources have also contributed to lower emissions. This overall decrease was partly offset by the important emission increases in Spain and, to a lesser extent, Italy. Since 1990, international transport emissions have grown very rapidly and have reached about 6 % of total greenhouse gas emissions in the EU. Hydrofluorocarbons (HFCs) were tho only group of gases which increased between 1990 and 2008 due to increased production of cooling devices.

# Assessment of short-term GHG trend (2007–2008)

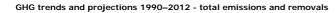
All the main sectors reduced their greenhouse gas emissions in 2008 except households and services. Final energy consumption in households increased significantly, mainly due to an increased use of fuel for heating purposes, partly due to lower winter temperatures than in 2007 and to refilling of fuel stocks (fuel purchases were avoided in 2007 because of the high prices, particularly in Germany). Emissions from energy industries declined by around 5 %, largely due to a reduced use of coal for heat and power generation in the EU, partly caused by a fall in the relative price of gas and high carbon prices. Road transport emissions fell by almost 3 % in the context of very high international oil prices. Emissions from international aviation and maritime transport fell for the first time since 1992. Gasoline emissions continued their downward trend, whereas diesel emissions fell for the first time since 1990. Diesel price inflation outpaced the rapidly increasing gasoline prices. Along with the start of economic recession in the second half of 2008, this may have triggered a fall in freight transport demand, particularly in Spain.

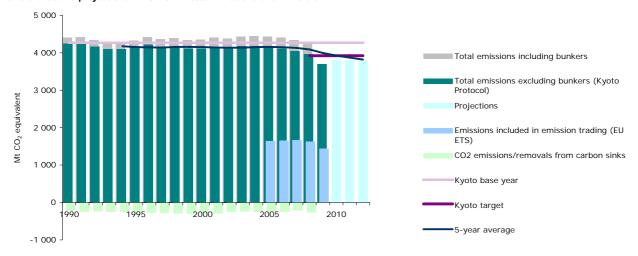
## Source and additional information

Greenhouse gas emission data and EU ETS data <a href="www.eea.europa.eu/themes/climate/data-viewers">www.eea.europa.eu/themes/climate/data-viewers</a>

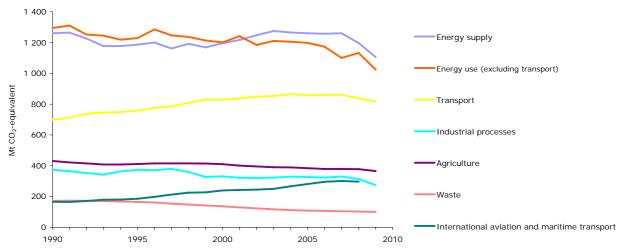
List and description of national policies and measures <a href="www.eea.europa.eu/themes/climate/pam">www.eea.europa.eu/themes/climate/pam</a>

- (1) Total greenhouse gas emissions (GHG), GHG per capita, GHG per GDP and shares of GHG do not include emissions and removals from LULUCF (carbon sinks) and emissions from international bunkers.
- (2) Preliminary estimates reported by the country for total greenhouse gas emissions. EEA estimates in the case of EU-27, EU-15 and Slovakia.
- $^{(3)}$  Comparison of 2008 values, 1 = highest value among EU countries.
- $^{(4)}$  International bunkers: international aviation and international maritime transport.
- $^{(5)}$  GDP in constant 2000 prices not suitable for a quantitative comparison between countries for the same year.
- (6) All installations included. This includes new entrants and closures. Data from the community independent transaction log (CITL) released on 29 April 2009 for the reporting years 2005 and 2006, 11 May 2009 for the reporting year 2007 and data as of 17 May 2010 for the reporting year 2008 and 2009. The CITL regularly receives new information (including delayed verified emissions data, new entrants and closures) so the figures shown may change over time.
- (7) "+" and "-" mean that verified emissions exceeded allowances or were below allowances, respectively. Annual allowances include allocated allowances and allowances auctioned during the same year.
- (8) LULUCF sector and emissions from international bunkers excluded. Due to independent rounding the sums do not necessarily add up.
- (9) Constant scope: includes only those installations with verified emissions available for the two most recent years (2008 and 2009)





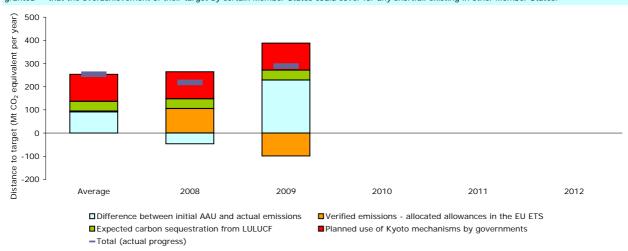
#### GHG trends 1990-2008 - emissions by sector



Note: updated sectoral projections, taking the effects of the economic crisis, will be presented in 2011

## **Progress towards Kyoto target**

Average emissions in EU15 in 2008–2009 were 10.1 % lower than the base-year level, below the burden-sharing target of -8 % for the period 2008–2012. Operators of installations covered by the EU ETS had to surrender more allowances than were issued to the EU ETS, increasing the countries assigned amount by 0.1 % of base-year level emissions. LULUCF activities are expected to decrease net emissions by 1 % of base-year level emissions per year. EU15 intends to acquire allowances corresponding to 2.7 % of base-year level emissions per year through the use of flexible mechanisms at government level. Taking all these effects in to account, emissions in the sectors not covered by the EU ETS in EU15 stand currently below their target level, by a gap representing 5.9 % of the base-year emissions. Furthermore, projections published by the European Commission show that over the full commitment period 2008–2012, EU-15 aggregated emissions will stay well below its Kyoto target with the current policies in place. These results rely on the assumption — which cannot be taken for granted — that the overachievement of their target by certain Member States could cover for any shortfall existing in other Member States.



Note: A positive value indicates emissions lower than the average target.