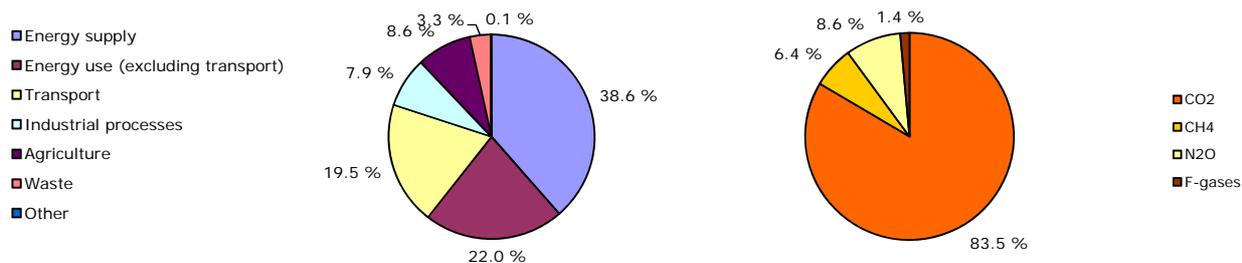


Key GHG data <sup>(1)</sup>	1990	2008	2009	2010 <sup>(2)</sup>	Unit	Rank in EU-27 <sup>(3)</sup>	Rank in EU-15 <sup>(3)</sup>
Total greenhouse gas emissions (GHG)	70.4	70.4	66.3	74.4	Mt CO <sub>2</sub> -eq.	15	11
GHG from international bunkers <sup>(4)</sup>	2.9	3.1	2.4	n.a.	Mt CO <sub>2</sub> -eq.	14	13
GHG per capita	14.1	13.3	12.5	13.9	t CO <sub>2</sub> -eq. / capita	5	3
GHG per GDP (constant prices) <sup>(5)</sup>	653	422	433	471	g CO <sub>2</sub> -eq. / euro		
Share of GHG in total EU-27 emissions	1.3 %	1.4 %	1.4 %	1.6 %	%		
EU ETS verified emissions - all installations <sup>(6)</sup>		36.2	34.3	41.3	Mt CO <sub>2</sub> -eq.	12	9
EU ETS verified emissions - constant scope <sup>(7)</sup>		36.1	34.2	40.4	Mt CO <sub>2</sub> -eq.		
Share of EU ETS verified emissions (all installations) in total GHG		51.4 %	51.7 %	55.5 %	%		
ETS verified emissions compared to annual allowances <sup>(8)</sup>		- 1.0 %	- 7.5 %	8.9 %	%		

#### Share of GHG emissions (excluding international bunkers) by main source and by gas in 2009 <sup>(1)</sup> <sup>(9)</sup>



Key GHG trends	1990–2009		2008–2009		1990–2010 <sup>(2)</sup>		2009–2010 <sup>(2)</sup>	
	Mt CO <sub>2</sub> -eq.	%	Mt CO <sub>2</sub> -eq.	%	Mt CO <sub>2</sub> -eq.	%	Mt CO <sub>2</sub> -eq.	%
Total GHG	- 4.0	- 5.7 %	- 4.1	- 5.8 %	4.1	5.8 %	8.1	12.2 %
GHG per capita	- 1.7	- 12.0 %	- 0.8	- 6.3 %	- 0.2	- 1.7 %	1.5	11.7 %
EU ETS verified emissions - all installations <sup>(6)</sup>			- 1.9	- 5.2 %			7.0	20.4 %
EU ETS verified emissions - constant scope <sup>(7)</sup>			- 1.9	- 5.3 %			- 1.9	- 5.3 %

#### Assessment of long-term GHG trend (1990–2009)

The fluctuations of total emissions over the period are mostly due to the important variations of energy-related CO<sub>2</sub> emissions, depending on the economic trend, the energy supply structure, electricity trade and climate conditions. Emissions from industrial processes have increased since 1993, but decreased in 2009 due to the economic downturn. In the early 1990s, several plants were closed down due to an earlier economic recession. Emissions in the agriculture and waste sectors have decreased since 1990. The decrease can largely be attributed to changes in waste legislation, in particular the implementation of the Landfill Directive (1999/31/EC), and changes in agricultural policy and farming subsidies.

#### Assessment of short-term GHG trend (2008–2009)

The contraction in industrial output due to the economic downturn cut energy consumption in 2009, mainly in energy-dominated manufacturing sectors, the forest industry and manufacture of basic metals. The economic recession also resulted in a considerable decrease of road transport emissions. Furthermore emissions from nitric acid production declined considerably due to the implementation of a new N<sub>2</sub>O abatement technology. These emission decreases were partly offset by emission increases from public electricity and heat production due to the scarcity of hydropower and due to increased use of coal. Lower prices of emission allowances compared with the previous year encouraged the use of coal in electricity and heat production instead of fuels with lower emission rates. The weather was also colder than in the year before, and this heightened the need for heating. On the other hand, the relatively colder weather compared to 2008 increased heating needs. The scarcity of hydropower and increased use of coal, encouraged by lower prices of carbon allowances compared with the previous year, resulted in emission increases from public electricity and heat production.

#### Source and additional information

Greenhouse gas emission data and EU ETS data

[www.eea.europa.eu/themes/climate/data-viewers](http://www.eea.europa.eu/themes/climate/data-viewers)

<sup>(1)</sup> 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.

<sup>(2)</sup> Based on EEA estimate of 2010 emissions.

<sup>(3)</sup> Comparison of 2009 values, 1 = highest value among EU countries.

<sup>(4)</sup> International bunkers: international aviation and international maritime transport.

<sup>(5)</sup> GDP in constant 2000 prices - not suitable for a ranking or quantitative comparison between countries for the same year. 1990 information not available for some countries, replaced by later years: 1991 (Bulgaria, Germany, Hungary and Malta), 1992 (Slovakia), 1993 (Estonia) and 1995 (Croatia). Source GDP: Eurostat, 2011; Ameco database, 2011.

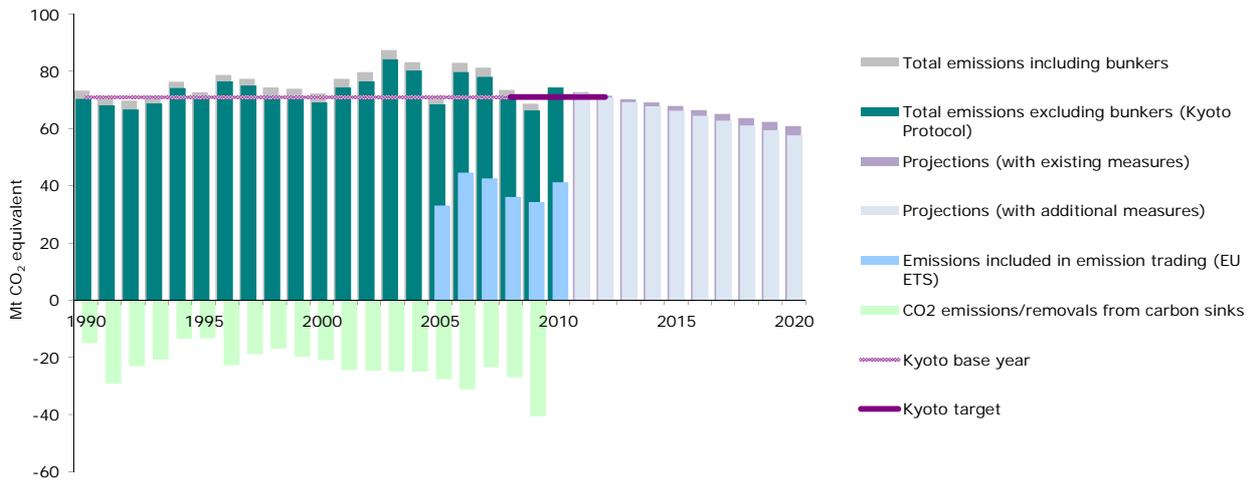
<sup>(6)</sup> All installations included. This includes new entrants and closures. Data from the community independent transaction log (CITL) as of 29 April 2009 for the reporting years 2005 and 2006, 11 May 2009 for the reporting year 2007, 17 May 2010 for the reporting year 2008 and 23 May for the reporting years 2009 and 2010. The CITL regularly receives new information (including delayed verified emissions data, new entrants and closures) so the figures shown may change over time.

<sup>(7)</sup> Constant scope: includes only those installations with verified emissions available for 2008, 2009 and 2010.

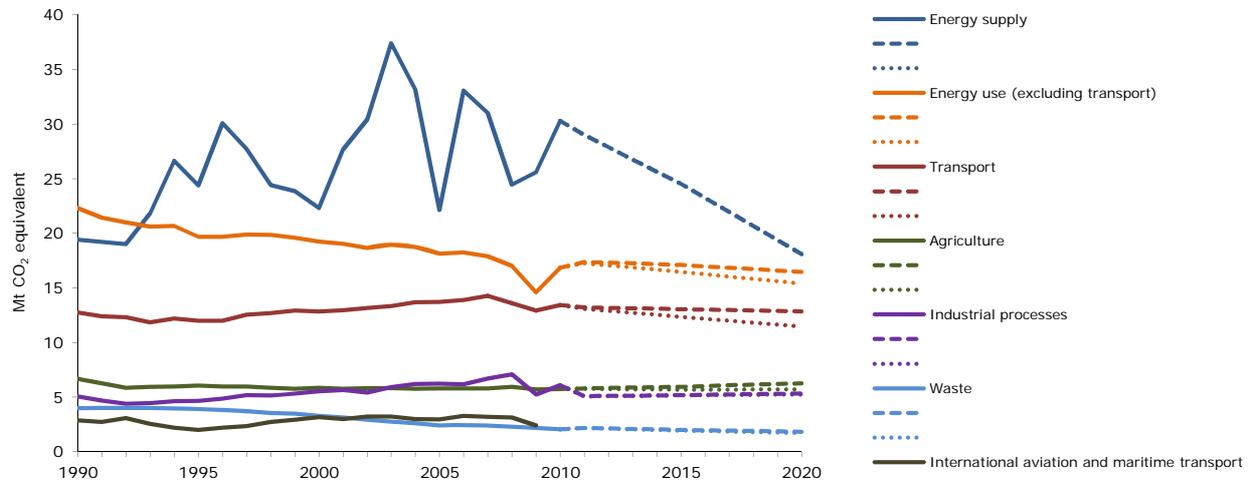
<sup>(8)</sup> "+" and "-" mean that verified emissions exceeded allowances or were below allowances, respectively. Annual allowances include allocated allowances and allowances auctioned during the same year.

<sup>(9)</sup> LULUCF sector and emissions from international bunkers excluded. Due to independent rounding the sums may not necessarily add up.

### GHG trends and projections 1990–2020 — total emissions



### GHG trends and projections 1990–2020 — emissions by sector

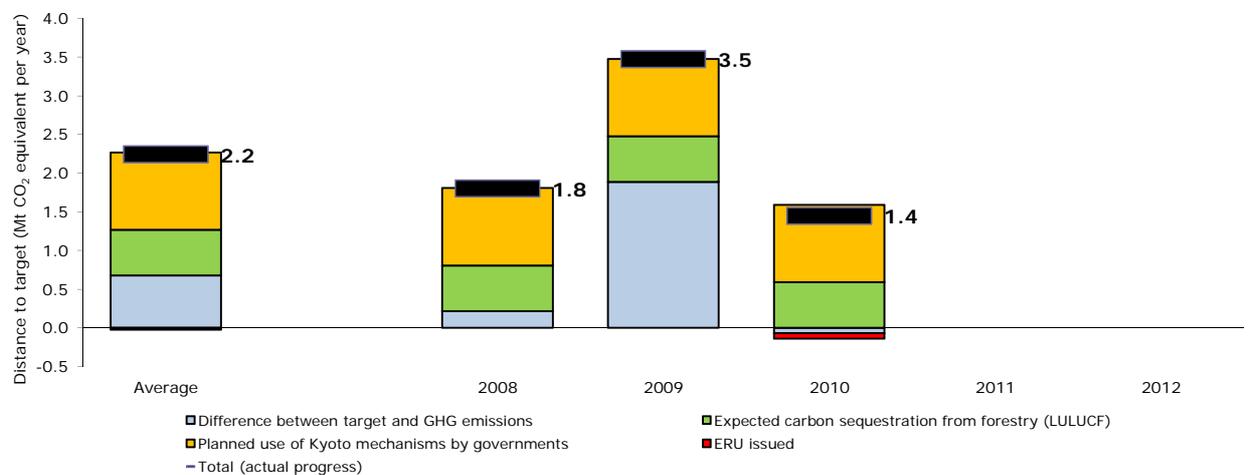


Note: GHG emission projections are represented either through dashed lines (with existing measures) or dotted lines (additional measures).

Source: National inventory, 2011; EEA proxy estimate; 2011; national projection data.

### Progress towards Kyoto target

Average 2008–2010 emissions in Finland were 0.8 % lower than the base-year level, below the burden-sharing target of 0 % for the period 2008–2012. In the sectors not covered by the EU ETS, emissions were lower than their respective target, by an amount equivalent to 1 % the country's base-year emissions. LULUCF activities are expected to decrease net emissions by an annual amount equivalent to 0.8 % of base-year level emissions. Finland intends to use the flexible mechanisms at government level by acquiring an amount of Kyoto units equivalent to 1.4 % of base-year emissions per year. Taking all these effects into account, average emissions in the sectors not covered by the EU ETS in Finland were standing below their target level, by a gap representing 3.2 % of the base-year emissions. Finland was therefore on track towards its burden-sharing target by the end of 2010.



Note: The difference between target and GHG emissions concerns the sectors not covered by the EU ETS. A positive value indicates emissions lower than the average target.