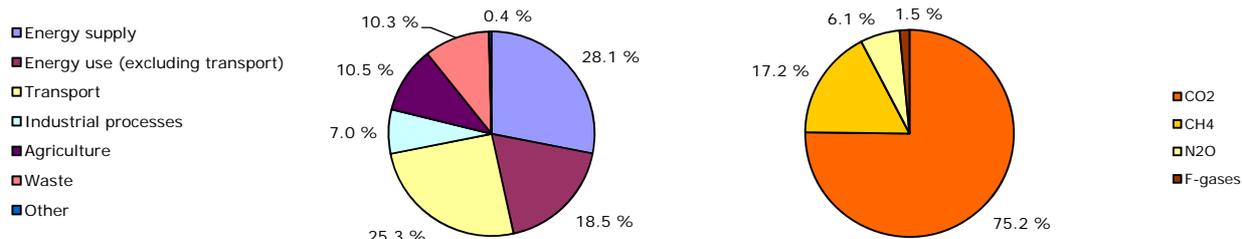


Key GHG data <sup>(1)</sup>	1990	2008	2009	2010 <sup>(2)</sup>	Unit	Rank in EU-27 <sup>(3)</sup>	Rank in EU-15 <sup>(3)</sup>
Total greenhouse gas emissions (GHG)	59.4	77.9	74.6	74.8	Mt CO <sub>2</sub> -eq.	13	10
GHG from international bunkers <sup>(4)</sup>	2.9	4.6	4.2	n.a.	Mt CO <sub>2</sub> -eq.	10	10
GHG per capita	5.9	7.3	7.0	7.0	t CO <sub>2</sub> -eq. / capita	21	14
GHG per GDP (constant prices) <sup>(5)</sup>	632	568	557	551	g CO <sub>2</sub> -eq. / euro		
Share of GHG in total EU-27 emissions	1.1 %	1.6 %	1.6 %	1.6 %	%		
EU ETS verified emissions - all installations <sup>(6)</sup>		29.9	28.3	24.2	Mt CO <sub>2</sub> -eq.	14	10
EU ETS verified emissions - constant scope <sup>(7)</sup>		29.9	27.8	22.7	Mt CO <sub>2</sub> -eq.		
Share of EU ETS verified emissions (all installations) in total GHG		38.4 %	37.9 %	32.3 %	%		
ETS verified emissions compared to annual allowances <sup>(8)</sup>		- 1.9 %	- 8.9 %	- 26.0 %	%		

#### 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	15.2	25.5 %	- 3.4	- 4.3 %	15.4	25.9 %	0.2	0.3 %
GHG per capita	1.1	18.1 %	- 0.3	- 4.4 %	1.1	18.3 %	0.0	0.2 %
EU ETS verified emissions - all installations <sup>(6)</sup>			- 1.7	- 5.6 %			- 4.1	- 14.5 %
EU ETS verified emissions - constant scope <sup>(7)</sup>			- 2.1	- 7.1 %			- 2.1	- 7.1 %

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

Emissions have been increasing in the 1990s, mainly driven by a strong economic growth. The greatest increases occurred in the transport sector (rapid growth in private car ownership) and the energy sector, due to a continued increase of electricity demand (driven in particular by the residential/commercial sector), which reflects the country's dependence on fossil fuels for electricity generation and transportation. Since 2000, emissions have stabilised and even been reduced in recent years. This is in part due to the introduction of natural gas (1997), the installation of combined cycle thermoelectric plants using natural gas (1999), the progressive installation of cogeneration units, the amelioration of energetic and technologic efficiency of industrial processes, the improvement in car efficiency and fuel quality improvement. In most recent years, wind power production strongly increased and accounted for about 15 % gross electricity production in 2009. Rising emissions from industrial processes up to 2008 were mostly due to the increase of cement production, road paving, limestone and dolomite use, lime production and, glass and ammonia production. The decrease in emissions from agriculture reflects the declining role of this sector in the national economy, and is associated for instance with the reduction of the livestock production (e.g. swine) and the decreased use of fertilizers. In the waste sector, emissions grew significantly in the 1990s, primarily because of rising waste generation and waste disposal on land.

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

As a result of the economic crisis, large decreases occurred in fuel-related emissions from manufacturing industries and process-related emissions in the cement and chemical industries. However, emissions from waste disposal on land continued to increase. The increase in renewables also contributed to lower GHG emissions in 2009.

#### 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)

(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) Based on EEA estimate of 2010 emissions.

(3) Comparison of 2009 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 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.

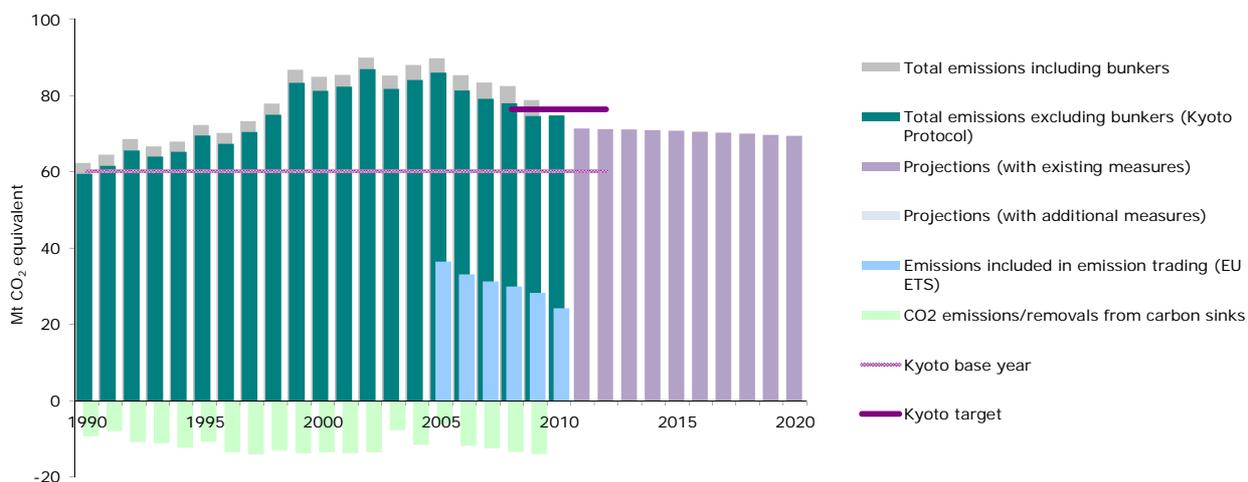
(6) All installations included. This includes new entrants and closures. Data from the community independent transaction log (CITL) as of 29 April 2009 for the reporting years 2005 and 2006, 11 May 2009 for the reporting year 2007, 17 May 2010 for the reporting year 2008 and 23 May for the reporting 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.

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

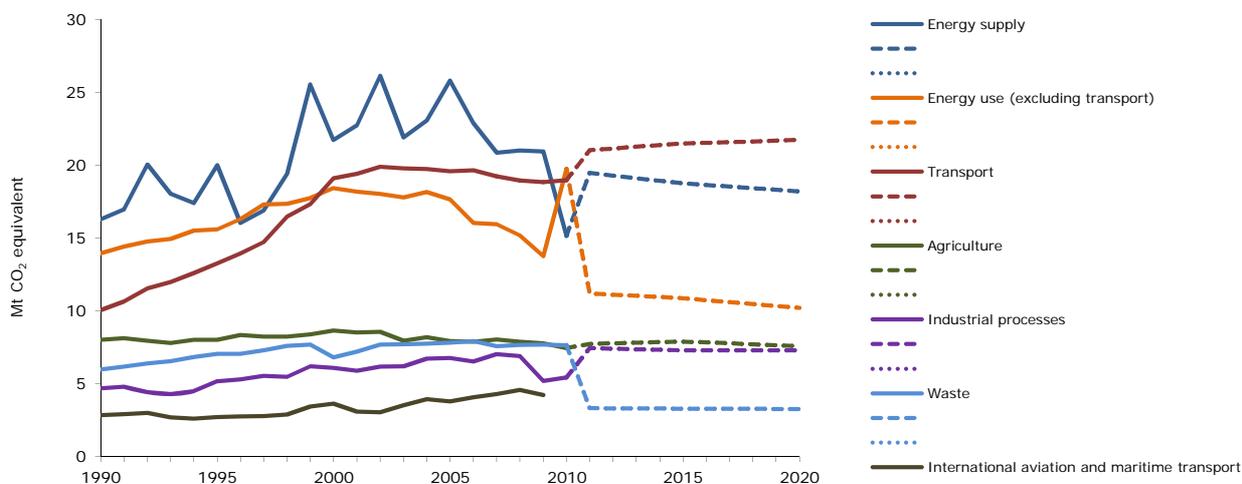
(8) "+" and "-" mean that verified emissions exceeded allowances or were below allowances, respectively. Annual allowances include allocated allowances and allowances auctioned during the same year.

(9) 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

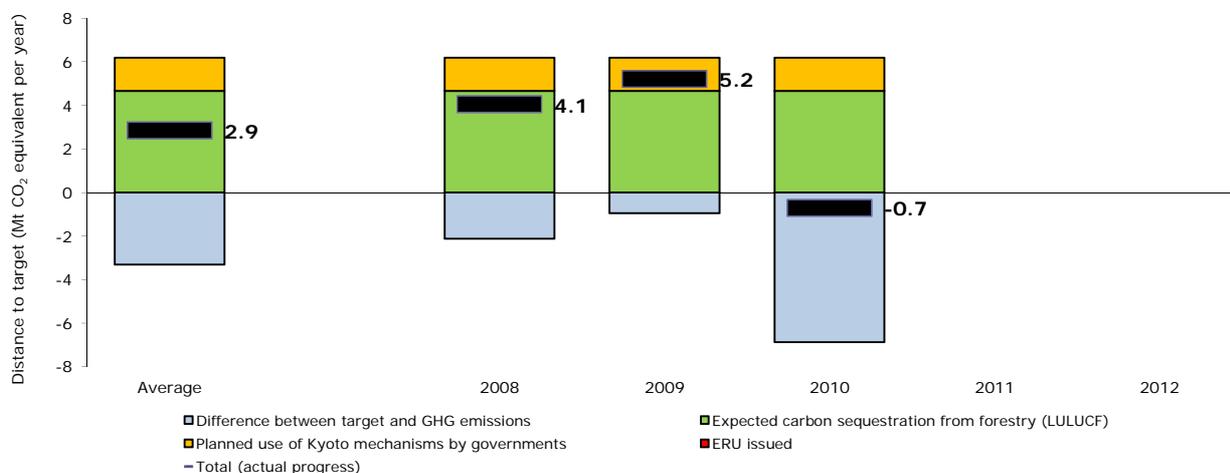


Note: GHG emission projections are represent either through dashed lines (with existing measures) or dotted lines (additional measures).

Source: National inventory, 2011; EEA proxy estimate; 2011; Primes-Gains projections, 2010.

### Progress towards Kyoto target

Average 2008–2010 emissions in Portugal were 26 % higher than the base-year level, below the Kyoto target of 27 % for the period 2008–2012. However, in the sectors not covered by the EU ETS, emissions were significantly higher than their respective target, by an amount equivalent to 5.5 % the country's base-year emissions. LULUCF activities are expected to decrease net emissions by an annual amount equivalent to 7.8 % of base-year level emissions. Portugal intends to use the flexible mechanisms at government level by acquiring an amount of Kyoto units equivalent to 2.5 % of base-year emissions per year. Taking all these effects in to account, average emissions in the sectors not covered by the EU ETS in Portugal were standing below their target level, by a gap representing 4.8 % of the base-year emissions. Portugal was therefore on track towards its Kyoto 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.