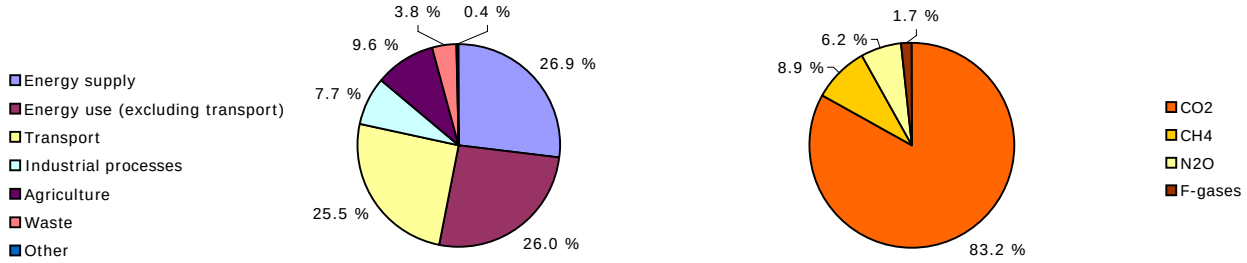
GHG trends and projections in Spain

European Environment Agency

Key GHG data [1]	1990	2007	2008	2009 [2]	Unit	Rank in EU-27 [3]	Rank in EU-15 [3]
Total greenhouse gas emissions (GHG)	285.1	438.7	405.7	372.4	Mt CO_2-eq.	5	5
GHG from international bunkers [4]	15.1	37.6	38.7	n.a.	Mt CO_2-eq.	3	3
GHG per capita	7.3	9.9	9.0	8.1	t CO_2-eq. / capita	19	12
GHG per GDP [5]	596	550	505	481	g CO_2-eq. / euro		
Share of GHG in total EU-27 emissions	5.1 %	8.7 %	8.2 %	8.1 %	%		
EU ETS verified emissions [6]		186.6	163.5	136.9	Mt CO_2-eq.	5	4
Share of EU ETS verified emissions in total GHG		42.5 %	40.3 %	36.8 %	%		
ETS verified emissions compared to annual allowances [7]		16.8 %	6.1 %	– 9.3 %	%		

Share of GHG emissions (excluding international bunkers) by main source and by gas in 2008 [1],[8]



Key GHG trends	1990–2008		2007–2008		1990–2009 [2]		2008–2009 [2]	
	Mt CO_2-eq.	%	Mt CO_2-eq.	%	Mt CO_2-eq.	%	Mt CO_2-eq.	%
Total GHG	120.6	42.3 %	– 32.9	– 7.5 %	87.3	30.6 %	– 33.3	– 8.2 %
GHG per capita	1.6	22.0 %	– 0.9	– 9.2 %	0.8	10.7 %	– 0.8	– 8.2 %
EU ETS verified emissions - all installations			– 23.1	– 12.4 %			– 26.5	– 16.2 %
EU ETS verified emissions - constant scope [9]			n.a.	n.a.			– 26.7	– 16.3 %

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

Overall, emissions have been marked by sustained growth in the period, except for the years 1993, 1996, 2006 and 2008, when reductions were recorded with respect to the preceding year. The growth during the 1990-1996 was more moderate than during the period 1996–2007. This variability over time seems to be correlated with the level of production of hydro-powered electricity as opposed to thermal power, although another series of additional factors such as the general expansion in fuel consumption and economic activity are at the core of the change in slope observed between the time periods 1990-1996 and 1996-2007.

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

The marked decline in 2008 is the result of a combination of two significant elements: the dramatic change in the distribution of fuels used in the electricity generation sector (coal consumption for thermal power production decreased by 34 % whereas gas consumption increased by 30 %) and the impact of the economic recession, which led to a notable decline in sectors such as transport and industry, which have a major contribution to total emissions. Road transport emissions decreased for the first time since 1993.

Source and additional information

Greenhouse gas emission data and EU ETS data www.eea.europa.eu/themes/climate/data-viewers

List and description of national policies and measures www.eea.europa.eu/themes/climate/pam

[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.

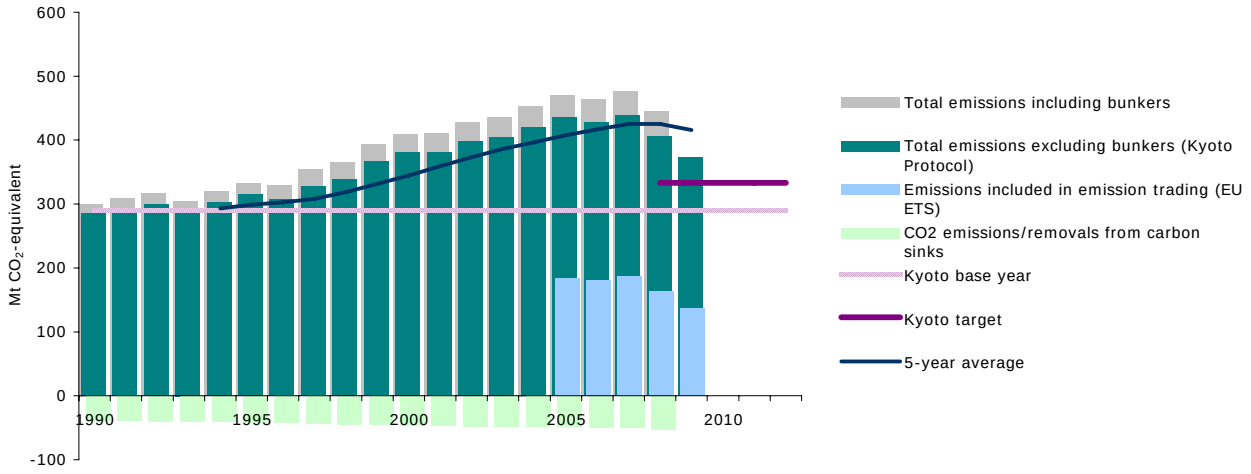
[6] All installations included. This includes new entrants and closures. Data from the community independent transaction log (CITL) released on 29 April 2009 for the reporting years 2005 and 2006, 11 May 2009 for the reporting year 2007 and data as of 17 May 2010 for the reporting year 2008 and 2009.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

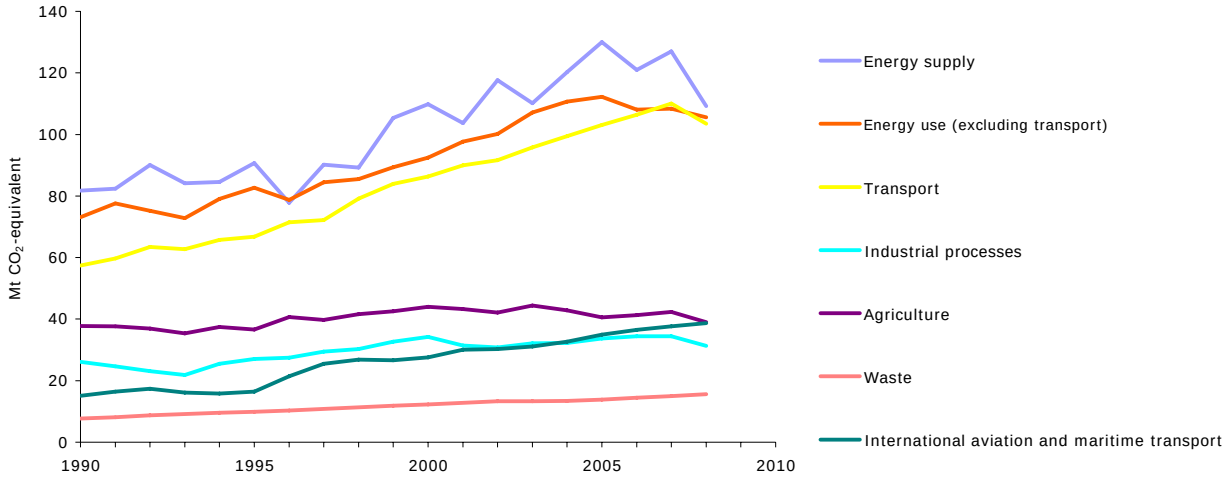
[8] LULUCF sector and emissions from international bunkers excluded. Due to independent rounding the sums do not necessarily add up.

[9] Constant scope: includes only those installations with verified emissions available for the two most recent years (2008 and 2009).

GHG trends 1990–2009 - total emissions and removals



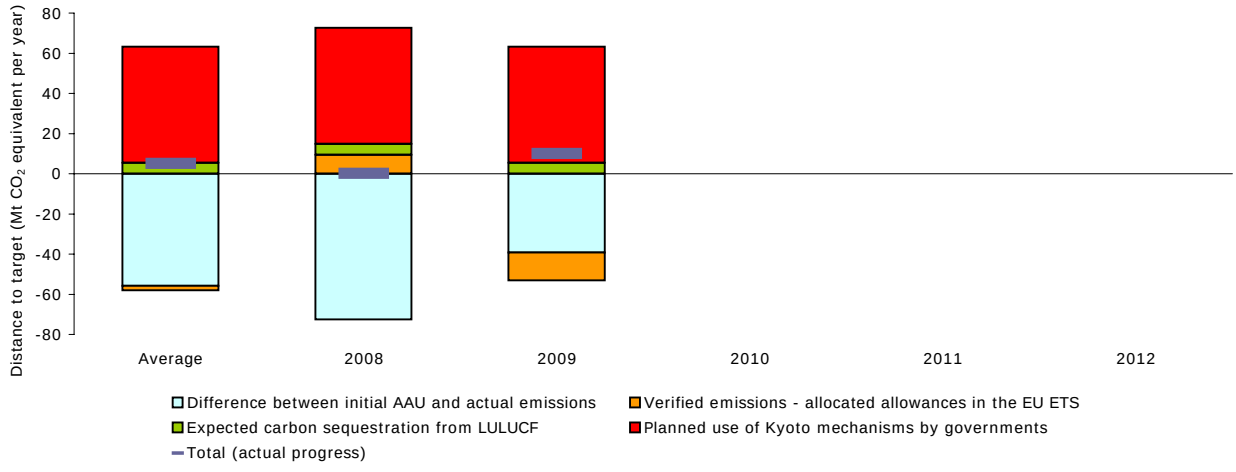
GHG trends 1990–2008 - emissions by sector



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

Progress towards Kyoto target

Average emissions in Spain in 2008–2009 were 34.3 % higher than the base-year level, significantly above the burden-sharing target of 15 % for the period 2008–2012. Operators of installations covered by the EU ETS had to surrender less allowances than were issued to the EU ETS, decreasing the countries assigned amount by 0.8 % of base-year level emissions. LULUCF activities are expected to decrease net emissions by 1.9 % of base-year level emissions. Spain intends to acquire allowances corresponding to 19.9 % 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 Spain stand currently below their target level, by a gap representing 1.8 % of the base-year emissions.



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