## GHG trends and projections in Italy

European Environment Agency



Key GHG data ( <sup>1</sup> )	1990	2008	2009	2010 (²)	Unit	Rank in EU-27 ( <sup>3</sup> )	Rank in EU-15 ( <sup>3</sup> )
Total greenhouse gas emissions (GHG)	519.2	541.7	491.1	493.6	Mt CO <sub>2</sub> -eq.	4	4
GHG from international bunkers ( <sup>4</sup> )	8.6	18.7	16.4	1.0	Mt CO <sub>2</sub> -eq.	7	7
GHG per capita	9.2	9.1	8.2	8.2	t CO2-eq. / capita	16	11
GHG per GDP (constant prices) (5)	510	426	407	404	g CO <sub>2</sub> -eq. / euro		
Share of GHG in total EU-27 emissions	9.3 %	10.9 %	10.6 %	10.4 %	%		
EU ETS verified emissions - all installations ( <sup>6</sup> )		220.7	184.9	191.5	Mt CO <sub>2</sub> -eq.	4	3
EU ETS verified emissions - constant scope (7)		220.6	184.5	189.6	Mt CO <sub>2</sub> -eq.		
Share of EU ETS verified emissions (all installations) in total GHG		40.7 %	37.6 %	38.8 %	%		
ETS verified emissions compared to annual allowances ( <sup>8</sup> )		4.0 %	- 11.5 %	- 4.3 %	%		

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	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	- 28.0	- 5.4 %	- 50.6	- 9.3 %	- 25.6	- 4.9 %	2.5	0.5 %	
GHG per capita	- 1.0	- 10.7 %	- 0.9	- 10.0 %	- 1.0	- 10.7 %	0.0	0.0 %	
EU ETS verified emissions - all installations ( <sup>6</sup> )			- 35.8	- 16.2 %			6.6	3.6 %	
EU ETS verified emissions - constant scope (7)			- 36.1	- 16.4 %			- 36.1	- 16.4 %	

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

After a long period of increasing emissions between 1994 and 2004, emissions have been regularly decreasing since. Energy-related emissions decreased by about 2.8 % from 1990 to 2009. Significant increases were observed in the transport and in the households and services sectors, while emissions from energy industries decreased mainly between 2007 and 2009. The decrease in emissions from industrial processes was attributed to the chemical industry (production of nitric acid and adipic acid) and metal production (pig iron and steel). Emissions from adipic acid productions were significantly reduced through abatement technology. Emissions of fluorinated gases also increased considerably (253 %). In the agricultural sector, reductions were observed in CH4 emissions from energy enteric fermentation and N20 emissions from agricultural soils. Improved disposal of solid waste on land reduced emissions in the waste sector.

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

Emissions continued to decrease for the fifth consecutive year. In particular, reductions were observed in emissions from energy industries, iron and steel industry, chemical industry, cement production and road transport. This latter notable decrease was possibly due to the economic recession. Emissions from households and services, on the other hand, increased, partly due to a colder winter. 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

(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 national estimate of 2010 emissions

 $(^{3})$  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.

(\*) LULUCF sector and emissions from international bunkers excluded. Due to independent rounding the sums may not necessarily add up.





Total emissions excluding bunkers (Kyoto

Projections (with existing measures)

Projections (with additional measures)

CO2 emissions/removals from carbon sinks

International aviation and maritime transport

Kyoto base year

Protocol)

Kyoto target



2010

2000

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; national projection data.

2005

# Progress towards Kyoto target

1995

0

1990

Average 2008–2010 emissions in Italy were 1.6 % lower than the base-year level, above the burden-sharing target of -6.5 % for the period 2008–2012. In the sectors not covered by the EU ETS, emissions were significantly higher than their respective target, by an amount equivalent to 6.5 % the country's baseyear emissions. LULUCF activities are expected to decrease net emissions by an annual amount equivalent to 2 % of base-year level emissions. Italy intends to use the flexible mechanisms at government level by acquiring an amount of Kyoto units equivalent to 2.9 % 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 Italy were standing above their target level, by a gap representing 1.7 % of the base-year emissions. Italy was therefore not on track towards its burden-sharing target by the end of 2010.

2015

2020



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

Emissions included in emission trading (EU ETS)