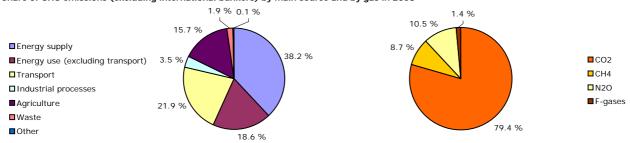
GHG trends and projections in Denmark	European Environment Agency						
Key GHG data <sup>(1)</sup>	1990	2007	2008	2009 <sup>(2)</sup>	Unit	Rank in EU-27 <sup>(3)</sup>	Rank in
Total greenhouse gas emissions (GHG)	68.9	66.8	63.8	62.1	Mt CO <sub>2</sub> -eq.	19	14
GHG from international bunkers (4)	4.9	6.3	5.9	n.a.	Mt CO <sub>2</sub> -eq.	10	10
GHG per capita	13.4	12.3	11.7	11.3	t CO2-eq. / capita	9	6
GHG per GDP (5)	513	344	332	339	g CO <sub>2</sub> -eq. / euro		
Share of GHG in total EU-27 emissions	1.2 %	1.3 %	1.3 %	1.3 %	%		
EU ETS verified emissions (6)		29.4	26.5	25.5	Mt CO <sub>2</sub> -eq.	17	12
Share of EU ETS verified emissions in total GHG		44.0 %	41.6 %	41.0 %	%		
FTS verified emissions compared to annual allowances (7)		5.4 %	10.7 %	6.5 %	%		

Share of GHG emissions (excluding international bunkers) by main source and by gas in 2008 <sup>(1),(8)</sup>



Key GHG trends	1990	1990-2008		2007–2008		1990–2009 <sup>(2)</sup>		2008–2009 <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	- 5.1	- 7.4 %	- 3.0	- 4.5 %	- 6.8	- 9.9 %	- 1.7	- 2.7 %	
GHG per capita	- 1.8	- 13.1 %	- 0.6	- 5.0 %	- 2.1	- 16.0 %	- 0.4	- 2.7 %	
EU ETS verified emissions - all installations			- 2.9	- 9.7 %			- 1.1	- 4.1 %	
EU ETS verified emissions - constant scope (9)			n.a.	n.a.			- 1.1	- 4.1 %	

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

The large fluctuations of total emissions reflect the inter-country electricity trade in the Nordic energy market. Thus, the high emissions in 1991, 1996, 2003 and 2006 reflect a large electricity export, while low emissions in 1990 and 2005 were due to large imports of electricity. Overall, CO2 energy-related emissions decreased by 10 % from 1990 to 2008. The increasing use of gas engines in decentralised cogeneration plants resulted in an increase of CH4 emissions, although emission reductions were also observed in later years due to the liberalisation of the electricity market. CO2 emission from the transport sector increased by 31 % from 1990 to 2008, mainly due to increasing road traffic. CO2 emission from cement production increased by 24 % from 1990 to 2008. The second largest source in emissions from industrial processes was N2O from the production of nitric acid, until that production ceased in 2004. Emissions of N2O and CH4 in the agriculture sector were reduced from 1990 to 2008. In the waste sector, emissions decreased as a combined result of improved waste management (reduced landfilled waste) and upgrade of wastewater treatment plants, despite higher industrial load to wastewater systems.

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

Emissions decreased for the second consecutive year. The annual decrease is related to the decrease in total electricity generation in conventional thermal power plants and increased imports of electricity, which resulted in lower emissions from public electricity and heat production. Transport emissions decreased for the first time since 2001.

#### Source and additional information

Greenhouse gas emission data and EU ETS data List and description of national policies and measures

www.eea.europa.eu/themes/climate/pam

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> 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.

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

<sup>(5)</sup> GDP in constant 2000 prices - not suitable for a quantitative comparison between countries for the same year.

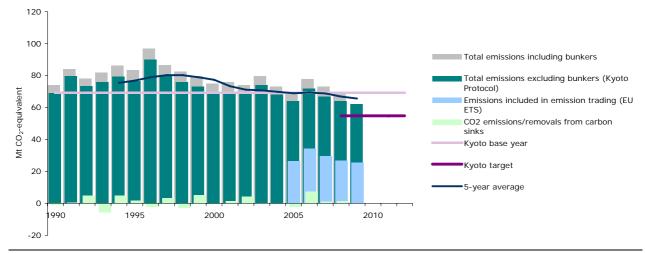
<sup>(6)</sup> All installations included. This includes new entrants and closures. Data from the community independent transaction log (CITL) released on 29 April 2009 for the reporting years 2005 and 2006, 11 May 2009 for the reporting year 2007 and data as of 17 May 2010 for the reporting year 2008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

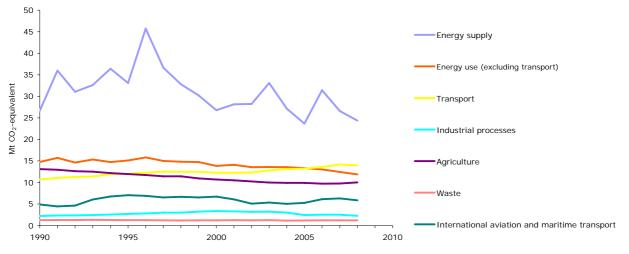
(8) LULUCF sector and emissions from international bunkers excluded. Due to independent rounding the sums do not necessarily add up.

(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



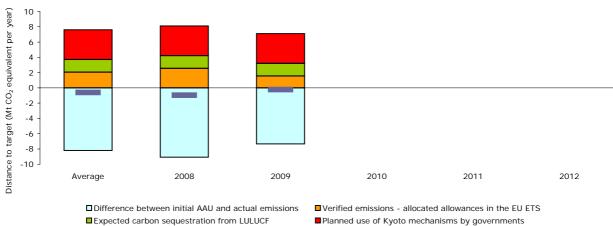
GHG trends 1990-2008 - emissions by sector



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

### Progress towards Kyoto target

Average emissions in Denmark in 2008–2009 were 9.2 % lower than the base-year level, significantly above the burden-sharing target of -21 % 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 3 % of base-year level emissions. LULUCF activities are expected to decrease net emissions by 2.4 % of base-year level emissions. Denmark intends to acquire allowances corresponding to 5.6 % 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 Denmark stand currently above their target level, by a gap representing 0.9 % of the base-year emissions. However, according to recent projections from Denmark, further emission reductions are projected until 2012 and will allow Denmark to meet its burden-sharing target.



Total (actual progress)

Trained use of Ryoto meenanisms by governi

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