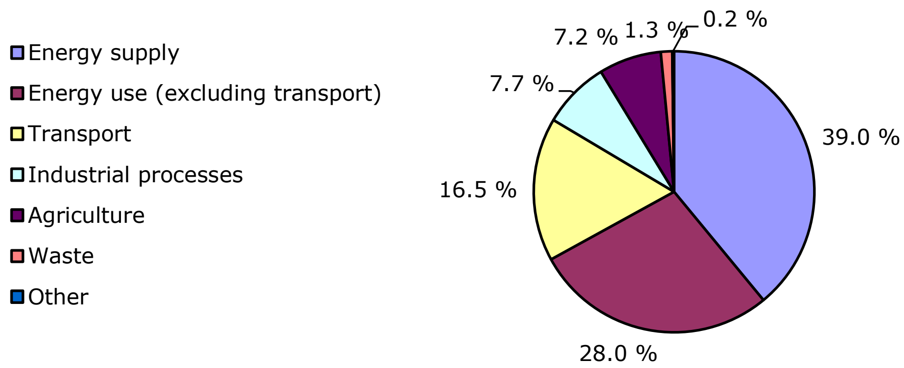
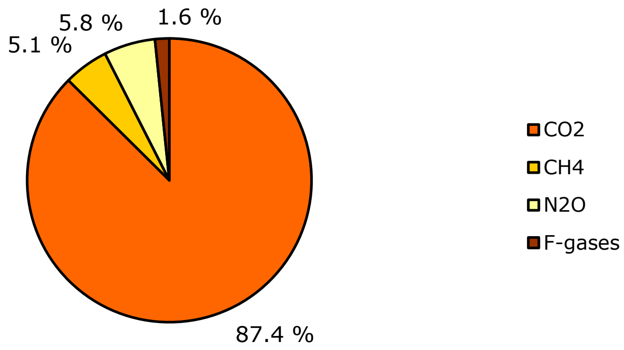
GHG trends and projections in Germany

European Environment Agency

Key GHG data ([1])	1990	2008	2009	2010	2011 ([2])	2012	1990–2011	2010–2011 ([2])
Average 2008–2012 target under the Kyoto Protocol (Mt CO_2-eq.)		973.6	973.6	973.6	973.6	973.6		
Total GHG emissions (Mt CO_2-eq.)	1 246.1	976.0	911.8	936.5	917.0	n.a.	-26.4%	-2.1%
GHG from international bunkers ([3]) (Mt CO_2-eq.)	20.1	35.4	33.9	33.8	34.4	n.a.	70.9%	1.9%
GHG per capita (t CO_2-eq. / capita)	15.8	11.9	11.1	11.4	11.2	n.a.	-28.8%	-2.0%
GHG per GDP (constant prices) ([4]) (g CO_2-eq. / euro)	641	405	399	395	376	n.a.	-41.3%	-4.9%
Share of GHG in total EU-27 emissions (%)	22.3 %	19.6 %	19.8 %	19.8 %	19.9 %	n.a.	-10.7%	0.4%
EU ETS allocated allowances (free + auctioning)		437.9	431.8	438.6	441.2	n.a.		0.6%
EU ETS verified emissions - all installations ([5]) (Mt CO_2-eq.)		472.7	428.3	454.9	450.4	n.a.		-1.0%
EU ETS verified emissions - constant scope ([6]) (Mt CO_2-eq.)		466.7	427.7	453.2	447.4	n.a.		-1.3%
Share of EU ETS verified emissions (all install.) in total GHG (%)		48.4 %	47.0 %	48.6 %	49.1 %	n.a.		1.1%
ETS verified emissions compared to annual allowances ([7]) (%)		108.0%	99.2%	103.7%	102.1%	n.a.		-1.6%
GHG emissions in the non-ETS sectors		503.2	483.5	481.7	466.6	n.a.		-3.1%
Equivalent annual target for non-ETS GHG emissions		535.7	541.8	535.0	532.5	n.a.		-0.5%

Share of GHG emissions (excluding international bunkers) by main source and by gas in 2010 ([1]) ([8])



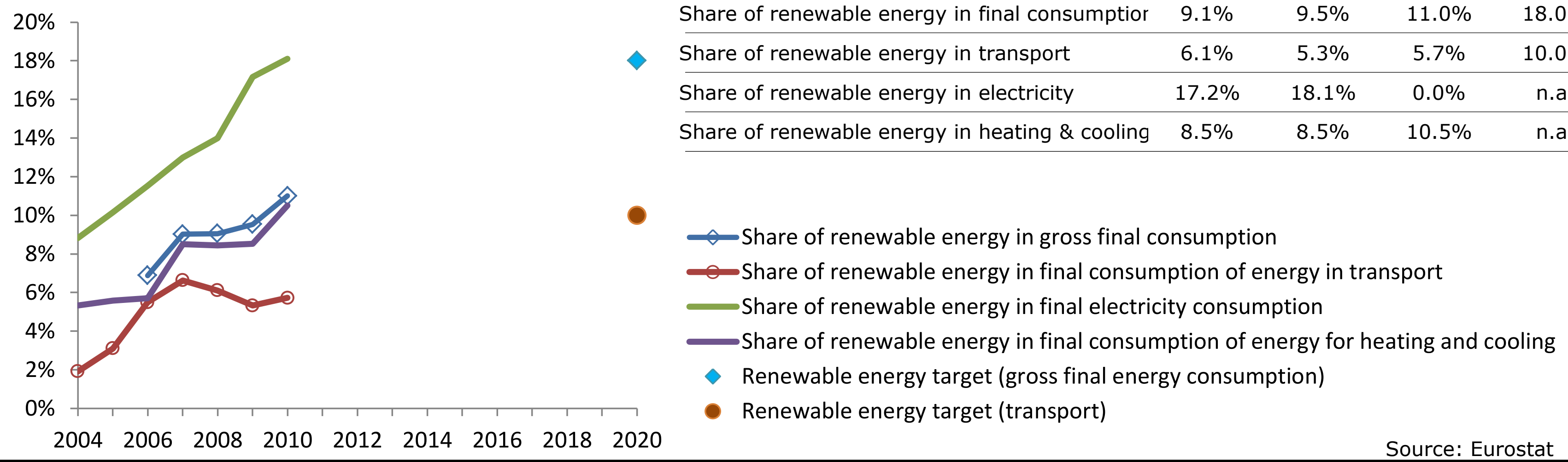


Assessment of short-term GHG trend (2009–2010)

Compared to 2009 emissions increased by 2.7% in 2010. Reasons for this trend were the fuel related emission increases in public electricity and heat production, manufacturing industries (especially iron and steel) and households. Additionally, process related emissions from iron and steel and ammonia production increased. This rise in emission was mainly caused by the recovery from the economic crisis and a colder winter compared to 2009. Significant emission cuts in the adipic acid production due to the implementation of emission reducing measures (two out of the existing three plants in Germany have installed a second additional off-gas treatment system) partly offset this trend.

Key data and trends on renewable energy

	2008	2009	2010	2020 target
Share of renewable energy in final consumptior	9.1%	9.5%	11.0%	18.0%
Share of renewable energy in transport	6.1%	5.3%	5.7%	10.0%
Share of renewable energy in electricity	17.2%	18.1%	0.0%	n.a.
Share of renewable energy in heating & cooling	8.5%	8.5%	10.5%	n.a.



Source: Eurostat

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 2011 emissions.

([3]) International bunkers: international aviation and international maritime transport.

([4]) Gross domestic product (GDP) in 2005 market prices - not suitable for a ranking or quantitative comparison between countries for the same year. GDP information for the year 1990 is not available for some countries. For this reason, the 'GHG per GDP' values presented in the '1990' column correspond to the following years: 1991 (EU-15, Bulgaria, Germany, Hungary and Malta), 1992 (Slovakia), 1993 (EU-27 and Estonia) and 1995 (Croatia). Source GDP: Annual macro-economic database (AMECO), European Commission, 2012.

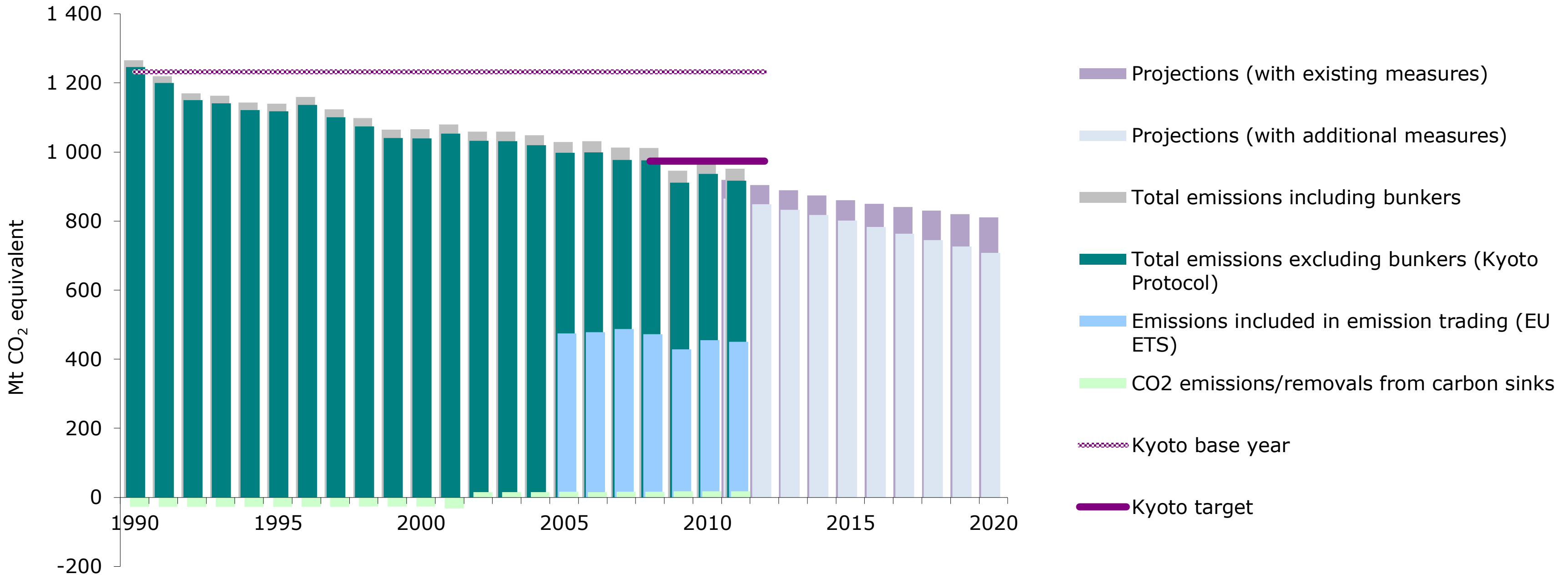
([5]) All installations included. This includes new entrants and closures. Data from the community independent transaction log (CITL) as of 31 July 2012. The CITL regularly receives new information (including delayed verified emissions data, new entrants and closures) so the figures shown may change over time.

([6]) Constant scope: includes only those installations with verified emissions available for 2008, 2009, 2010 and 2011.

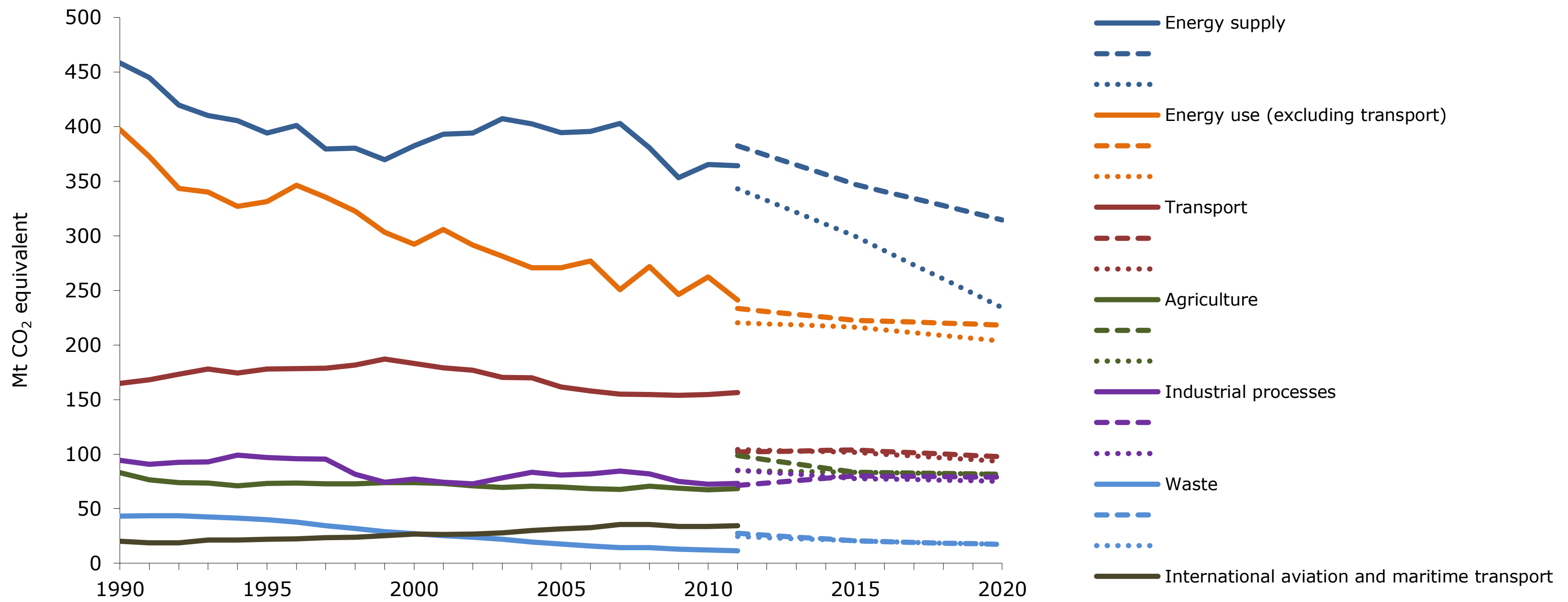
([7]) "+" and "-" mean that verified emissions exceeded allowances or were below allowances, respectively. Annual allowances include allocated allowances and allowances auctioned during the same year.

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

GHG trends and projections 1990–2020 — total emissions



GHG trends and projections 1990–2020 — emissions by sector

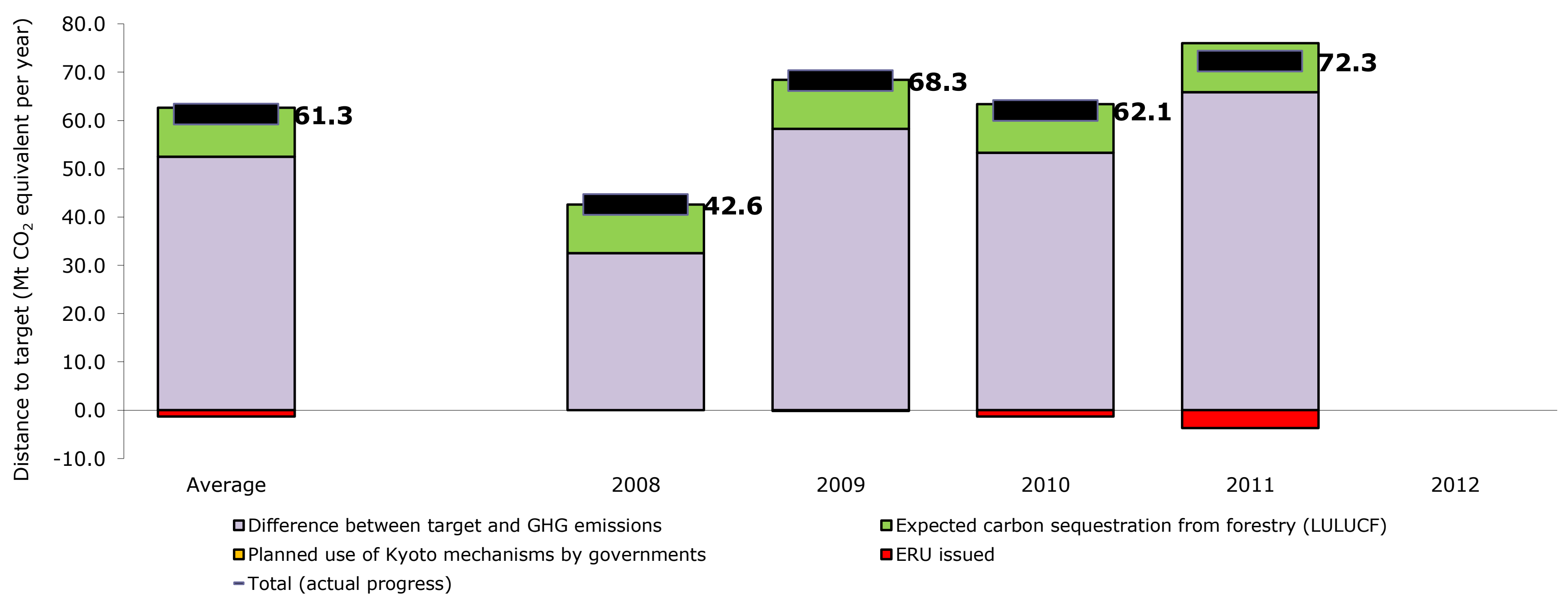


Note: GHG emission projections are represent either through dashed lines (with existing measures) or dotted lines (additional measures).

Source: National GHG inventory report, 2012; national proxy estimate of 2011 GHG emissions; national GHG projection data submitted in 2011.

Progress towards Kyoto target

Average 2008–2011 emissions in Germany were 24.1 % lower than the base-year level, below the burden-sharing target of -21 % 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 4.3 % of base-year emissions. LULUCF activities are expected to decrease net emissions by an annual amount equivalent to 0.8 % of base-year level emissions. Taking all these effects into account, average emissions in the sectors not covered by the EU ETS in Germany were standing below their target level, by a gap representing 5 % of the base-year emissions. Germany was therefore on track towards its burden-sharing target by the end of 2011.



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.