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COMMISSION STAFF WORKING DOCUMENT

TECHNICAL INFORMATION TO THE CLIMATE ACTION PROGRESS REPORT

Accompanying the document

Report from the Commission to the European Parliament and the Council

Climate action progress report, including the report on the functioning of the European carbon market and the report on the review of Directive 2009/31/EC on the geological storage of carbon dioxide
(required under Article 21 of Regulation (EU) No 525/2013 of the European Parliament and of the Council of 21 May 2013 on a mechanism for monitoring and reporting greenhouse gas emissions and for reporting other information at national and Union level relevant to climate change and repealing Decision No 280/2004/EC, under Article 10(5) and Article 21(2) of the Directive 2003/87/EC of the European Parliament and of the Council of 13 October 2003 establishing a scheme for greenhouse gas emissions allowance trading within the Community and amending Council Directive 96/61/EC and under Article 38 of Directive 2009/31/EC of the European Parliament and of the Council on the geological storage of carbon dioxide)

{COM(2015) 576 final}

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1. TECHNICAL REFERENCES TO MAIN DATA & FIGURES

Source of data:

Emissions up to 2013 are based on data from the official 2015 inventory submissions by the Member States. They have been compiled according to the 2006 IPCC guidelines, and the new global warming potentials from the IPCC Fourth Assessment Report (AR4). Over the time series, the new estimates lead to an increase on average of approximately 1.2% in the annual CO2 equivalent emissions as compared to those previously calculated on the basis of the 1996 IPCC guidelines.

The review of 2013 GHG emissions under the Effort Sharing Decision has been delayed due to significant delays in the development of Common Reporting Format (CRF) software by the UNFCCC Secretariat.

Emissions estimates for the year 2014 are based on approximated inventory data provided in 2015 by the Member States or estimated by the EEA[1] on behalf of the Commission, where needed.

Projected emissions are based on Member States' submissions of 2015 which were quality-checked, gap-filled and adjusted where necessary by the EEA on behalf of the Commission. For the gap filling and ETS/non-ETS split estimation, data from the 2013 EU Reference Scenario based on the PRIMES and GAINS models have been used (http://ec.europa.eu/clima/policies/strategies/2030/docs/eu_trends_2050_en.pdf).[2]

Notes related to Figures presented in the Climate Action Progress Report:

Figure 1: the scope of the emissions presented is as under the Climate and Energy Package but excluding international aviation. The targets for the first and second commitment periods under the Kyoto Protocol are indicative. The target for the first commitment has been calculated using the methodology in 1996 IPCC guidelines, and global warming potentials from the IPCC Second Assessment Report (AR2). The figure does not take into account the possible use of carbon sinks and flexibility mechanisms for compliance with the Kyoto targets. The quantification of the EU 2030 target is also indicative.

Figure 3: The 2014 gap is the difference between 2014 estimates in the non-ETS sector and the 2014 targets as a percentage of ESD base-year emissions (2005). The 2020 gap is the difference between projected non-ETS emissions and targets in 2020 as a percentage of base year emissions.

Figure 4: The methodology used is explained in the SWD, section 8.

[1] See "Approximated EU GHG inventory: proxy GHG estimates for 2014" report of the European Environment Agency http://www.eea.europa.eu/publications/approximated-eu-ghg-inventory-2014

[2] For more information, see Trends and Projections in Europe 2015 : http://www.eea.europa.eu/publications/trends-and-projections-in-europe-2015

Figure 5: This figure represents the amount of auctioning revenues as reported by Member States for the year 2014. Some amounts can differ from the revenues actually collected during the same year in particular due to the fact that the revenues collected one year can be committed and disbursed during the following ones.

2. OVERVIEW OF CLIMATE TARGETS

Table 1: Overview of climate targets.

	International commitments		EU domestic legislation	
	Kyoto Protocol		Climate and Energy Package	
			EU ETS	ESD
Target year of period	First commitment period (2008-2012)	Second commitment period (2013-2020)	2013-2020	2013-2020
Emission reduction target	-8%	-20%	-21% compared to 2005 for ETS emissions	Annual targets by MS. In 2020 -10% compared to 2005 for non-ETS emissions
Further targets			Renewable Energy Directive: 20% share of renewable energy of gross final energy consumption; Energy Efficiency Directive : Increase energy efficiency by 20 %	
Base year	1990 KP Flexibility rules (Art 3(5)) regarding F-gases and Economies in Transition	1990, but subject to flexibility rules. 1995 or 2000 may be used as its base year for NF3	1990 for overall emission reduction target; 2005 for renewable energy and energy efficiency target; as well as for targets broken down into ETS and non-ETS emissions	
LULUCF	Included ARD and other activities if elected	Included ARD and forest management, other activities if elected (new accounting rules)	Excluded	
Aviation	Domestic aviation included. International aviation excluded.	Domestic aviation included. International aviation excluded.	Domestic and international (partly, in discussion) aviation included in EU ETS	Aviation generally excluded, some domestic aviation included (operators below ETS de minimum thresholds)

	International commitments		EU domestic legislation	
	Kyoto Protocol		Climate and Energy Package	
			EU ETS	ESD
Target year of period	First commitment period (2008-2012)	Second commitment period (2013-2020)	2013-2020	2013-2020
Use of international credits	Use of KP flexible mechanisms subject to KP rules	Use of KP flexible mechanisms subject to KP rules	Upper limit for credit use for period 2008-2020 at a maximum of 50 % of the reduction effort below 2005 levels	[3]Annual use of carbon credits is limited to up to 3 % of each Member State's ESD emissions in 2005
Carry-over of units (1)from preceeding periods	Not applicable	Subject to KP rules including those agreed in the Doha Amendment	EU ETS allowances can be banked into subsequent ETS trading periods since the second trading period	No carry over from previous period
Gases covered	CO2, CH4, N2O, HFCs, PFCs, SF6,	CO2, CH4, N2O, HFCs, PFCs, SF6, NF3	CO2, CH4, N2O, HFCs, PFCs, SF6	
Sectors included	Energy, IPPU, agriculture, waste, LULUCF	Energy, IPPU, agriculture, waste, LULUCF	Power & heat generation, energy-intensive industry sectors, aviation	Transport (except aviation), buildings, non-ETS industry, agriculture (except forestry) and waste
GWPs used	IPCC SAR	IPCC AR4	IPCC AR4	
Applicable to number of MS	15 (additional KP targets for single MS)	28 and Iceland	28 (2)	

Source: European Commission

Note: (1) For the CP2 it refers to carry over from CP1. For the ETS it refers to carry-over from previous trading period under the scheme itself

(2) Iceland, Liechtenstein and Norway are also covered under the EU-ETS.

[3] Member States that do not use their 3 % limit for the use of international credits in any specific year can transfer the unused part of their limit to another Member State or bank it for their own use until 2020. Member States fulfilling additional criteria (Austria, Belgium, Cyprus, Denmark, Finland, Ireland, Italy, Luxembourg, Portugal, Slovenia, Spain and Sweden) may use credits from projects in Least Developed Countries (LDCs) and Small Island Developing States (SIDS) up to an additional 1 % of their verified emissions in 2005. These credits are not bankable and transferable. Approximately 750 Mt of international credits can be used during the period from 2013 to 2020 in the ESD.

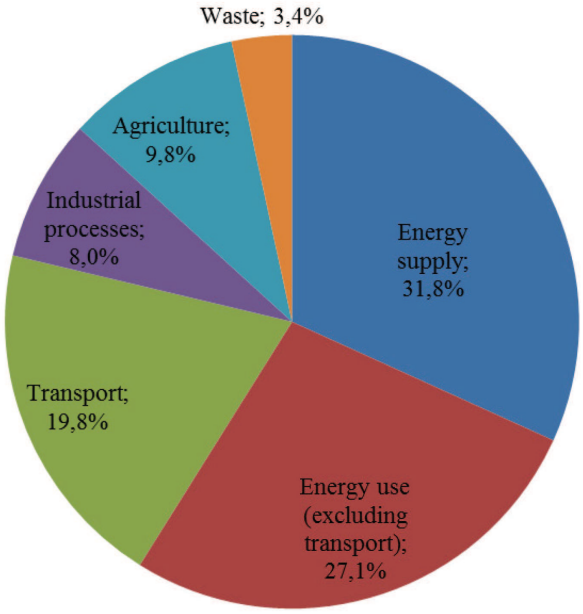
3. EU WIDE TRENDS (INVENTORY) AND PROJECTIONS (WEM) PER SECTOR

3.1. EMISSION TRENDS IN THE MAIN SECTORS.

3.1.1. CHANGE IN SECTORIAL EMISSIONS

In 2013, energy-related activities, such as energy production and final use including transport were responsible for 79 % of emissions in the EU. Agriculture was responsible for 10 % of total emissions, followed by the sector Industrial Processes with 8 % and Waste with 3 %:

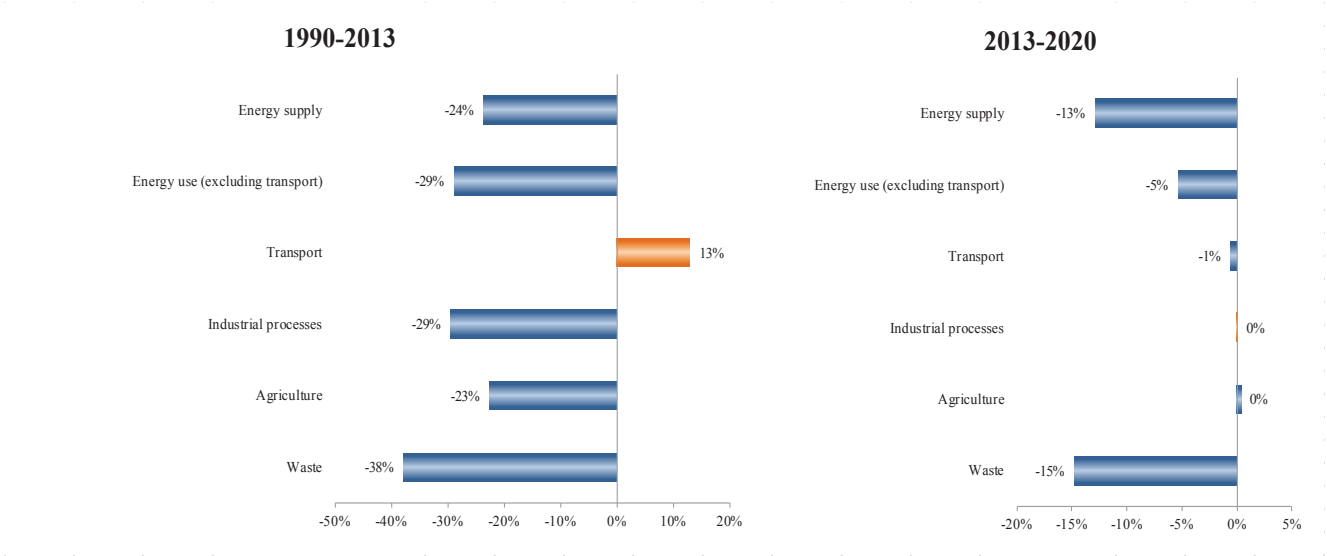
Figure 1: Share of emissions by sector in the EU-28; 2013



Source: EEA, EU greenhouse gas inventory, 2015 inventory data

Since 1990, emissions in energy, agriculture, industrial processes and waste have been decreasing while emissions in the transport sector significantly increased (13%). However, total transport emissions have also been decreasing since 2007.

Figure 2: Change in EU-28 GHG emissions by sector and share of sectors in total GHG emissions.



Source: EEA, 2015 EU greenhouse gas inventory

According to projections based on existing measures, emissions from energy supply will further decrease between 2013 and 2020. Emissions from energy use and, to a lesser extent, from transport are also projected to decrease. Emissions from waste will continue to decrease considerably, and to a lesser extent, emissions from agriculture are projected to nearly remain stable from 2013 until 2020 (slightly increase of 0,4%). Finally, and according to national projections, emissions in the industrial sector will stabilise in the next decade (slight increase of +0.1%).

a) Energy supply and use, excluding transport

Energy supply concerns the production of energy, such as electricity or fuels like gasoline, coal, etc. In terms of emissions, energy supply comprises mainly the emissions from **public electricity and** heat **production** (thermal power plants), which together with the other supply-side sources, namely petroleum refining and manufacture of solid fuels (coal), are responsible for the bulk of all energy-related emissions. Energy use concerns the emissions from manufacturing industries and construction, residential and service sectors.

Table 2: GHG emissions from energy supply and use, excluding transport (1990-2013)

	Share in 1990 total emissions	Share in 2013 total emissions	Change 1990-2013	Change 2005-2013
EU	62.9 %	58.9 %	-26.2 %	-16.1 %

Total emissions from energy, excluding transport, fell by further than a quarter over the period 1990-2013. The two biggest contributors to emissions from energy (fossil fuel combustion) were energy supply and use, together accounting for about 63 % of the EU total emissions (excluding LULUCF). There is a slight contraction of the share of these emissions of about four percentage points compared to 1990.

Despite increasing production of electricity, energy supply emissions showed a -23.6 % decline since their 1990 levels. These emission cuts were due to improvements in the energy efficiency in the transformation of primary fuels into electricity, heat and oil products as well as strong improvements in the carbon intensity of energy production, namely switching to cleaner fuels, such as a switch from

coal to natural gas, but also a strong uptake of renewables (specially the introduction of wind and biomass energy in the energy production system)[4] (see section 7). Regarding the latter, the share of renewables in gross final energy consumption in the EU reached 15 %[5] in 2013.

b) Transport

Table 3: GHG emissions from transport (1990-2013)

	Share in 1990 total emissions	Share in 2013 total emissions	Change 1990-2013	Change 2005-2013
EU	13.8 %	19.8 %	12.9 %	-8.9 %

Transport is the only sector that increased emissions in the EU over the period 1990-2013: an increase of approximately 13 %, yet with a downward trend since 2007. The share of transport in total emissions was 19.8 % in 2013, marking an increase of 6 percentage points since 1990.

The biggest emission source within transport was by far **road transport**. Emissions from inland transport peaked in 2007. They are now driven down by the increasing use of biofuel and the increasing efficiency of cars (see section 6).

c) Agriculture

Emissions from **agriculture** in the EU have also shown a steady decline since 1990 levels, with an overall decrease of nearly a quarter (23 %). The most prevalent greenhouse gas emitted from agriculture are methane (CH_4) and nitrous oxide (N_2O), with respectively 25 and 298 times the global warming potential of carbon dioxide.[6]

Table 4: GHG emissions from agriculture (1990-2013)

	Share in 1990 total emissions	Share in 2013 total emissions	Change 1990-2013	Change 2005-2013
EU	10.0 %	9.8 %	-22.6 %	-3.1 %

In 2013, agriculture emissions amounted to 9.8% of the EU total (without LULUCF). This share has slightly decreased since 1990 (10% in 1990).

d) Industrial processes

Industrial Processes cover non-energy (i.e. non-combustion) emissions that stem from chemical processes where greenhouse gases are released. The most prevalent gas is CO_2 but so called

[4] See analysis carried out on behalf of the European Commission DG Clima (http://ec.europa.eu/clima/) [to be published in December 2015].
[5] Source: Eurostat; Share of renewables in gross final energy consumption 2013.
[6] According to the new UNFCCC reporting guidelines and IPCC 2006-Guidelines.

fluorinated gases (F-gases) have a significant share too. In 2013, the share of industrial processes emissions in the EU total was 8 % of the EU total (excluding LULUCF), showing a small shrinkage compared to its share in 1990.

Table 5: GHG emissions from industrial processes (1990-2013)

	Share in 1990 total emissions	Share in 2013 total emissions	Change 1990-2013	Change 2005-2013
EU	9 %	8 %	-29.5 %	-19.7 %

Overall emissions from industrial processes have shown one of the largest reductions since 1990 levels, compared to other sectors, where around 30% of emissions have been cut. Factors which have contributed to drive this decrease are industrial emissions policy and gains of energy efficiency in industrial processes.

On the other hand, emissions from the **consumption of halocarbons and SF_6** grew considerably since 1990 levels. Most of this growth was in F-gases used in refrigeration and air conditioning. . F-gases have generally several thousand times the global warming potential of CO_2 and are the only group of greenhouse gases that have risen in the EU since 1990[7], in contrast to all the others that have generally been reduced.

e) Waste management

Table 6: GHG emissions from waste management (1990-2013)

	Share in 1990 total emissions	Share in 2013 total emissions	Change 1990-2013	Change 2005-2013
EU	4.3 %	3.4 %	-37.8 %	-26.2 %

The last emissions sector with a share of 3.4% of the EU total in 2013 is waste.

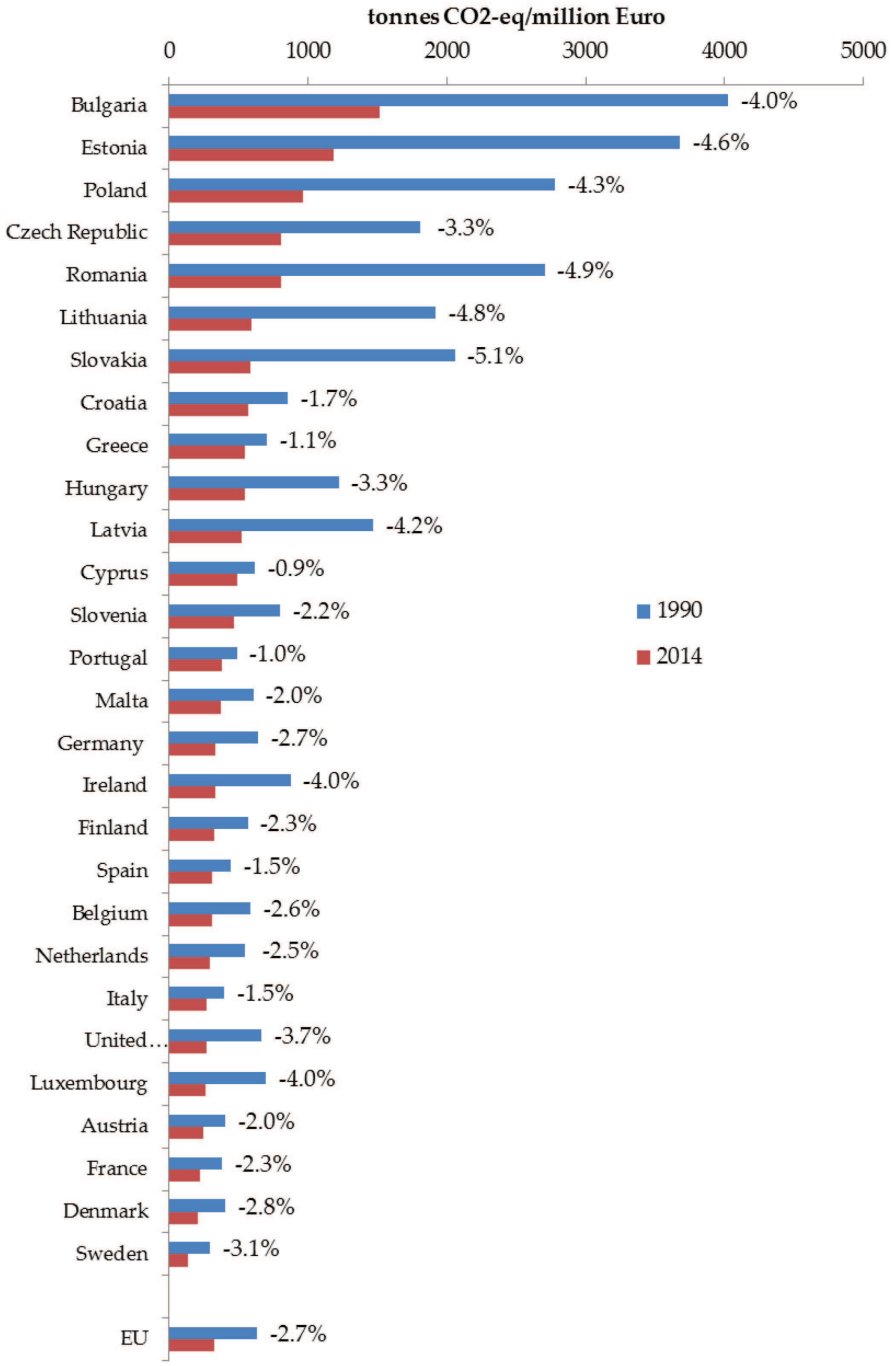
Waste is also one of the sectors with largest emissions reductions of more than a third (-37.8 %) since 1990 levels. The most prevalent gas was methane. A main driving force of CH_4 emissions from managed waste disposal on land is the amount of biodegradable waste going to landfills. In addition, CH_4 emissions from landfills are influenced by the amount of CH_4 recovered and utilised (combustion of biogas for electricity and/or heat generation) or flared. The share of CH_4 recovery has increased significantly in EU since 1990. The emission reductions are also partly due to the implementation of the Landfill Directive[8] or similar legislation in the Member States.

[7] Of all F-gases, over the period 1990-2012 perfluorocarbons (PFCs) and sulphur hexafluoride (SF_6) have been decreased, yet this decline has been offset by a much larger increase in hydrofluorocarbons (HFCs).
[8] Council Directive 1999/31/EC of 26 April 1999 on the landfill of waste

3.1.2. CONVERGENCE IN GHG EMISSIONS INTENSITY AND EMISSIONS PER CAPITA

All Member States have experienced a reduction in GHG emissions intensity with the average annual reduction rate ranging from 0.9 % to 5.1 %. This has led to a convergence of performances between Member States (Figure 3).

Figure 3: GHG emissions intensity in the EU-28, 2014/1990. Percentages reflect annual average reduction

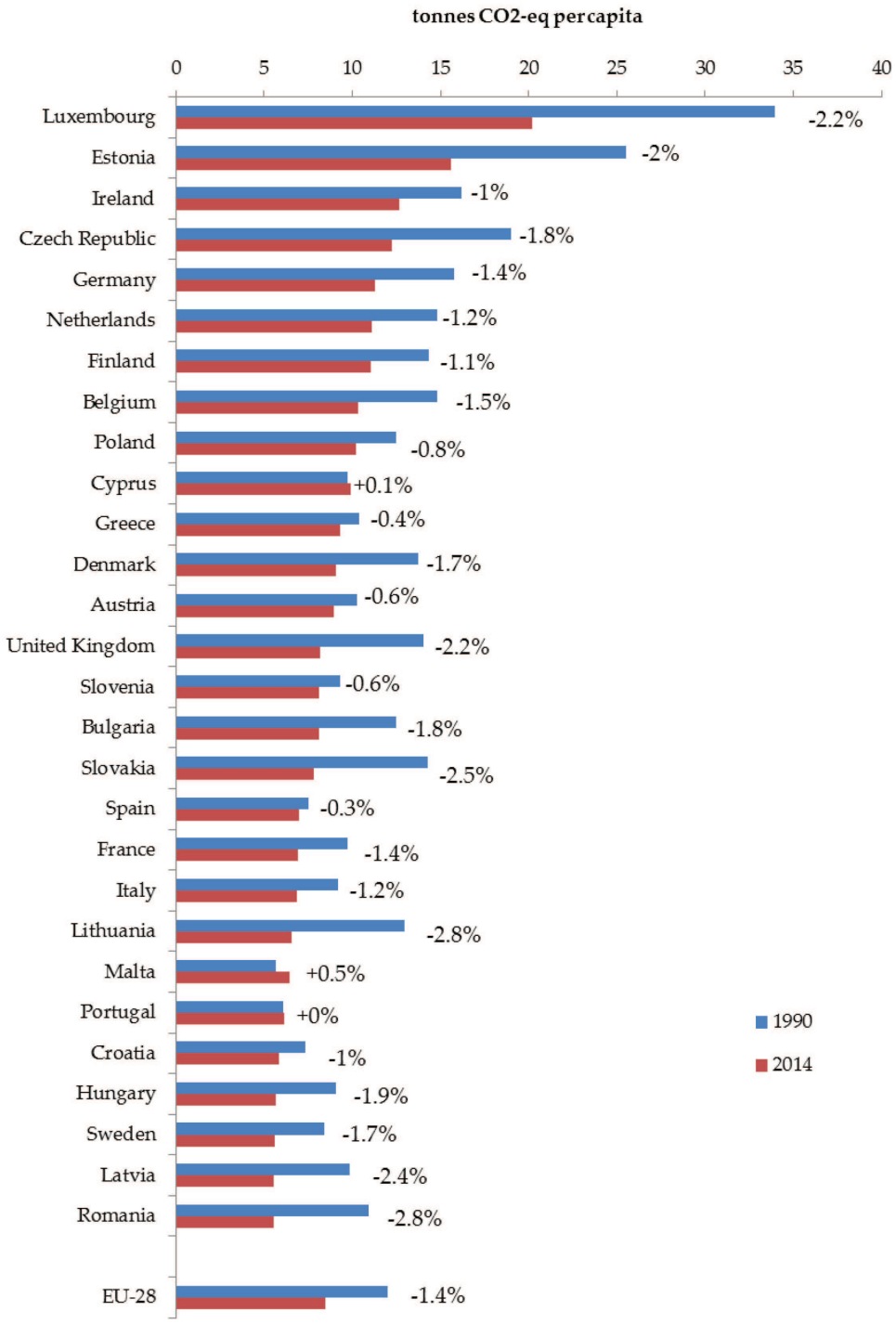


Source: Commission, EEA

Note: approximated 2014 data.

In all Member States except Cyprus, Malta and Portugal, per capita emissions have been decreasing and converging since 1990.

Figure 4: GHG emissions per capita in the EU, 2014/1990. Percentages reflect annual average reduction



Source: Commission, EEA.

Note: approximated 2014 data.

3.2. PROJECTIONS

This section presents projections of greenhouse gas emissions (GHG emissions) for the "with existing measures scenario" (WEM), differentiated by sector and by gas and aggregated to EU-28 level. Projections are presented for 2015, 2020, 2025 and 2030. All emissions and projections are displayed in CO2 equivalents and excluding emissions or removals from LULUCF. Projections of emissions related to fuel sold to ships and aircrafts engaged in international transport are not included in the totals reported in this section, unless noted otherwise.

The WEM projection of the European Union represents a business-as-usual scenario aggregated from 28 national WEM projections where only policies and measures that have been adopted or already implemented in the Member State are considered, as far as covered by national projections. With regard to EU policy coverage the WEM projection is thus a conservative scenario. For Member States that did not submit new projections in 2015, the EUCLIMIT Reference scenario 2013 was used for gap-filling purposes.

When additional measures are taken into account, projections submitted by Member States lead to a reduction of emissions by 30% in 2030 compared to 1990. These projections are consistent with the results of the Reference Scenario[9] published by the Commission based on the PRIMES and GAINS model (-32% in 2030 compared to 1990 on the basis of current policies).

3.2.1. PROJECTIONS OF EU GHG EMISSIONS –SUMMARY-

The next table summarises historic and projected greenhouse gas emissions as totals, per sector and per gas.

[9] http://ec.europa.eu/clima/policies/strategies/2030/docs/eu_trends_2050_en.pdf

Table 7: Historic and projected GHG emissions per sector and gas

	1990	1995	2000	2005	2010	2012	2015	2020	2025	2030
History										
Mt CO_2equivalent										
Total GHG emissions (excl. LULUCF; excl. International aviation)	**5626**	**5253**	**5122**	**5178**	**4751**	**4544**				
By sector										
Energy (w/o) transport	3542	3220	3086	3131	2847	2711				
Transport	783	838	918	971	936	893				
Industry	479	455	407	416	345	331				
Agriculture	617	533	521	493	475	469				
LULUCF	-258	-291	-302	-304	-312	-304				
Waste	206	207	190	166	147	141				
By gas										
CH4	607	552	501	449	413	403				
CO2	4437	4169	4136	4262	3908	3717				
N2O	533	474	430	402	350	341				
F-Gases	60	70	67	77	91	95				
Memo items										
Memo item: international aviation	*70*	*87*	*116*	*132*	*132*	*132*				
Memo item: international marine bunkers	*110*	*111*	*134*	*166*	*156*	*156*				
With existing measures' scenario										
Mt CO_2equivalent										
Total GHG emissions (excl. LULUCF; excl. International aviation)							**4445**	**4228**	**4108**	**4034**
By sector										
Energy (w/o) transport							2594	2400	2299	2224
Transport							895	885	878	889
Industry							364	363	356	348
Agriculture							445	449	453	458
LULUCF							-247	-243	-248	-250
Waste							146	132	121	115
By gas										
CH4							457	440	427	418
CO2							3607	3414	3316	3259
N2O							268	270	272	275
F-Gases							109	103	90	80
Memo items										
Memo item: international aviation							139	153	165	176
Memo item: international marine bunkers							151	153	154	155

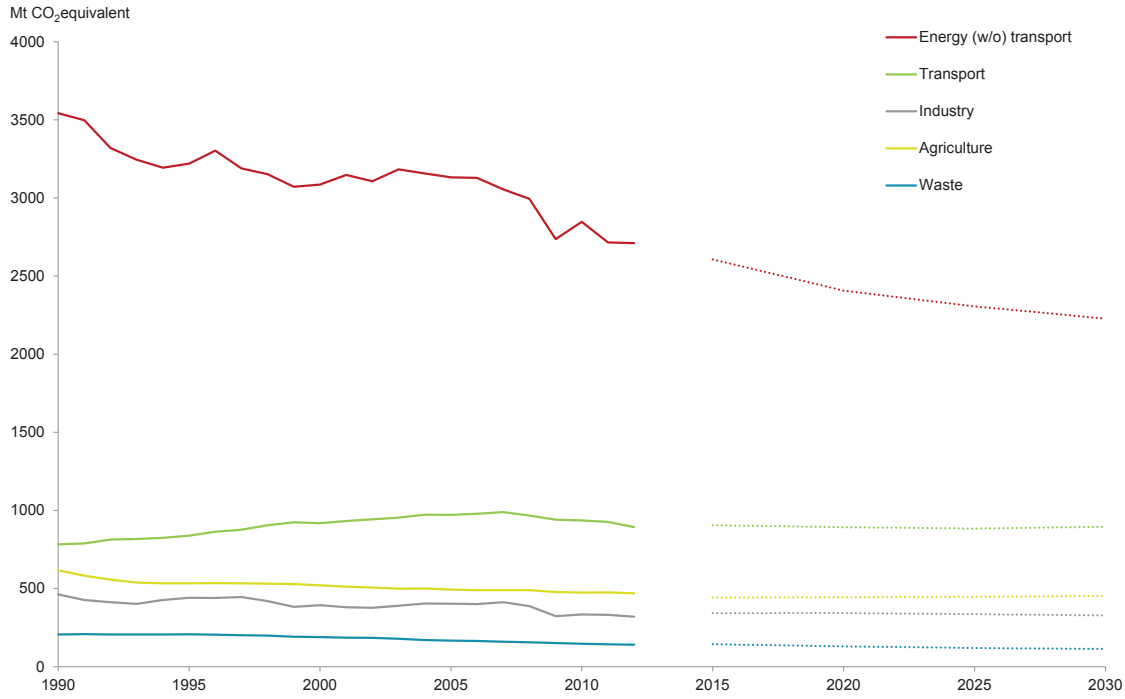
3.2.2. TOTAL AGGREGATE GHG EMISSION PROJECTIONS PER SECTOR

From a sectoral perspective, the largest share of emission reductions comes from the energy sector (supply and use, excluding transport) which is the sector which contributes the most to emissions. These emissions are projected to decrease by approximately 33 % (vs. 1990) in 2020.

Transport is the only sector where emissions are expected to increase between 1990 and 2020. They will be 13 % higher in 2020 than in 1990 and stay at about this level until 2030.

The industry sector is projected to decrease its GHG emissions by approximately 29 % in 2020 (vs. 1990).

Figure 5: EU-28 GHG emissions per sector in the WEM scenario



Note: The trajectories displayed here are not stacked, i.e. each trajectory refers to the values shown on the y-axis. Values up to 2012 are from the latest available greenhouse gas inventory. Projected values, starting in 2015, stem from Member States submissions under Article 14, MMR. For gap-filled countries, the share of gases has been calculated applying the average share of EU-28 of specific gases to total GHG emissions

3.3. COMPARISON OF EU-28 GHG TOTAL EMISSIONS AND PROJECTIONS UNDER THE KYOTO PROTOCOL AND UNDER THE CLIMATE AND ENERGY PACKAGE

The EU 20 % reduction commitment by 2020 under the Climate and Energy package covers EU CO_2 emissions to the extent aviation is covered under the EU ETS. Since 2012 emissions that means all flights from international flights departing from, to and within the EU. The Kyoto Protocol includes GHG emissions from domestic aviation only (inventory category).

The table below presents the quantitative differences between the scopes of the Kyoto Protocol and of the Climate and Energy Package. Reductions achieved by the EU-28, in 2013, when the emissions from international aviation are also taken into account, amount to -20 % compared to 1990 levels. When excluding international aviation, the reduction amounts to -21%.

Table 8: Emissions (MtCO2-eq.) covered by the Kyoto Protocol

	1990	2005	2013	2020
Total GHG emissions	5,689	5,229	4,481	
Of which domestic aviation	15	20	16	
Projections as compilation of MS data, WEM scenario				4,228
-20% compared to Kyoto base year[(1)]				4,641

Table 9: Emissions (MtCO2-eq.) covered by the Climate and Energy Package

	1990	2005	2013	2020
Total GHG emissions	5,758	5,361	4,616	
of which domestic aviation	15	20	16	
of which international aviation	70	132	134	
Projections as compilation of MS data, WEM scenario				4,382
-20 % compared to 1990				4,607

Note: (1) The Kyoto base year emissions is different from 1990 emissions level and it is estimated at 5,798 Mt CO_2 eq.

4. MEMBER STATES PROGRESSES TOWARDS EFFORT SHARING DECISION TARGETS

Table 10: Gap between emissions estimates and ESD targets in 2014 and between projected emissions (with existing measures) and ESD targets in 2020 .

	2014			*2020*		
Country	***2014 ESD target compared to 2005***	***2014 approximated non-ETS data compared to 2005***	***Relative gap 2014 vs. ESD 2014 target***	***2020 national target (ESD target) compared to 2005***	***Projected 2020 non-ETS emissions compared to 2005 (with existing measures)***	***Gap between projected 2020 non-ETS emissions versus 2020 ESD targets***
			Percentage points (% of 2005 emissions)			***Percentage points (% of 2005 emissions)***
Austria	-10%	-17%	-7%	-16%	-12%	4%
Belgium	-3%	-10%	-7%	-15%	-9%	6%
Bulgaria	13%	1%	-12%	20%	-5%	-25%
Croatia	5%	-14%	-19%	11%	-9%	-20%
Cyprus	-5%	-36%	-31%	-5%	-54%	-49%
Czech Republic	2%	0%	-2%	9%	-8%	-17%
Denmark	-6%	-15%	-9%	-20%	-20%	0%
Estonia	8%	-5%	-14%	11%	-2%	-13%
Finland	-7%	-8%	0%	-16%	-16%	0%
France	-7%	-16%	-9%	-14%	-17%	-3%
Germany	-6%	-10%	-4%	-14%	-15%	-1%
Greece	-7%	-28%	-21%	-4%	-31%	-27%
Hungary	-3%	-30%	-27%	10%	-30%	-40%
Ireland	-6%	-13%	-7%	-20%	-10%	10%
Italy	-10%	-22%	-13%	-13%	-18%	-5%
Latvia	11%	3%	-7%	17%	7%	-10%
Lithuania	-1%	-7%	-6%	15%	-3%	-18%

	2014			*2020*		
Country	***2014 ESD target compared to 2005***	***2014 approximated non-ETS data compared to 2005***	***Relative gap 2014 vs. ESD 2014 target***	***2020 national target (ESD target) compared to 2005***	***Projected 2020 non-ETS emissions compared to 2005 (with existing measures)***	***Gap between projected 2020 non-ETS emissions versus 2020 ESD targets***
			Percentage points (% of 2005 emissions)			***Percentage points (% of 2005 emissions)***
Luxembourg	-8%	-10%	-2%	-20%	1%	21%
Malta	6%	-2%	-8%	5%	-16%	-21%
Netherlands	-5%	-23%	-18%	-16%	-21%	-5%
Poland	10%	8%	-2%	14%	6%	-8%
Portugal	-2%	-23%	-20%	1%	-25%	-26%
Romania	4%	-9%	-14%	19%	4%	-15%
Slovakia	4%	-9%	-12%	13%	-4%	-17%
Slovenia	3%	-12%	-14%	4%	-8%	-12%
Spain	-5%	-17%	-12%	-10%	-12%	-2%
Sweden	-8%	-24%	-16%	-17%	-28%	-11%
United Kingdom	-9%	-16%	-7%	-16%	-19%	-3%

Table 11: Historic (2013-2014proxy) and projected (2015-2020) gaps between emissions estimates and annual limits under the Effort Sharing Decision

		2013(1)		*2014 (2)*		*2015(3)*		*2016(3)*		*2017(3)*		*2018(3)*		*2019(3)*		*2020(3)*	
Country	**Mt CO2 eq.**	***Emiss /limit***	***gap to limit***	***Emiss /limit***	***gap to limit***	***Emiss /limit***	***gap to limit***	***Emiss /limit***	***gap to limit***	***Emiss /limit***	***gap to limit***	***Emiss /limit***	***gap to limit***	***Emiss /limit***	***gap to limit***	***Emiss /limit***	***gap to limit***
Austria	emissions	49.7	2.9	48.1	4.0	51.5	0.0	51.5	-0.5	51.4	-1.0	51.3	-1.5	51.3	-1.9	51.0	-2.2
	limit	52.6		52.1		51.5		51.0		50.4		49.9		49.3		48.8	
Belgium	emissions	74.2	4.2	71.7	5.2	73.5	1.8	73.2	0.6	73.0	-0.7	72.7	-2.0	72.5	-3.3	72.2	-4.5
	limit	78.4		76.9		75.3		73.8		72.3		70.7		69.2		67.7	
Bulgaria	emissions	23.1	3.8	24.3	2.9	23.5	4.0	23.3	4.4	23.2	4.8	23.0	5.3	22.8	5.7	22.7	6.1
	limit	26.9		27.2		27.5		27.7		28.0		28.3		28.5		28.8	
Croatia	emissions	15.6	4.0	16.2	3.6	16.8	3.2	16.8	3.3	16.9	3.4	17.0	3.5	17.1	3.6	17.2	3.7
	limit	19.6		19.8		20.0		20.2		20.4		20.6		20.8		21.0	
Cyprus	emissions	4.3	1.6	4.0	1.9	2.9	3.0	2.9	3.0	2.9	3.0	2.9	3.0	2.9	3.1	2.9	3.1
	limit	5.9		5.9		5.9		5.9		5.9		5.9		5.9		5.9	
Czech Republic	emissions	61.7	0.8	62.0	1.2	61.2	2.8	60.4	4.3	59.6	5.8	58.8	7.4	58.0	8.9	57.2	10.5
	limit	62.5		63.2		64.0		64.7		65.4		66.2		66.9		67.7	
Denmark	emissions	33.3	3.5	32.4	3.6	31.9	3.1	31.6	2.6	31.4	1.9	31.0	1.3	31.1	0.3	30.3	0.2
	limit	36.8		35.9		35.0		34.1		33.2		32.3		31.4		30.5	
Estonia	emissions	5.8	0.5	5.5	0.8	5.6	0.7	5.6	0.7	5.6	0.7	5.7	0.8	5.7	0.8	5.7	0.8
	limit	6.3		6.3		6.3		6.4		6.4		6.4		6.4		6.5	
Finland	emissions	31.4	0.4	31.1	0.2	29.9	0.9	29.8	0.5	29.4	0.4	29.2	0.2	28.8	0.1	28.4	0.0
	limit	31.8		31.3		30.8		30.3		29.8		29.3		28.8		28.4	
France	emissions	371.7	22.4	349.9	39.6	359.2	25.2	356.5	22.9	353.8	20.5	351.2	18.2	348.5	15.9	345.8	13.5
	limit	394.1		389.5		384.4		379.4		374.4		369.3		364.3		359.3	
Germany	emissions	467.5	5.0	446.7	19.1	444.6	14.5	440.0	12.4	435.4	10.3	430.9	8.2	426.3	6.1	421.7	4.0

		2013(1)		2014 (2)		2015(3)		2016(3)		2017(3)		2018(3)		2019(3)		2020(3)	
Country	**Mt CO2 eq.**	***Emiss /limit***	***gap to limit***	***Emiss /limit***	***gap to limit***	***Emiss /limit***	***gap to limit***	***Emiss /limit***	***gap to limit***	***Emiss /limit***	***gap to limit***	***Emiss /limit***	***gap to limit***	***Emiss /limit***	***gap to limit***	***Emiss /limit***	***gap to limit***
	limit	472.5		465.8		459.1		452.4		445.7		439.0		432.3		425.6	
	emissions	46.0	12.9	45.9	13.4	47.1	12.5	46.4	13.5	45.7	14.5	45.1	15.5	44.4	16.5	43.7	17.5
Greece	limit	59.0		59.3		59.6		59.9		60.3		60.6		60.9		61.2	
	emissions	38.3	12.1	37.3	14.2	40.0	12.7	39.4	14.3	38.8	16.0	38.3	17.7	37.7	19.4	37.2	21.1
Hungary	limit	50.4		51.5		52.6		53.8		54.9		56.0		57.1		58.2	
	emissions	43.1	3.8	42.3	3.4	42.3	2.3	42.8	0.7	42.7	-0.4	43.2	-2.0	43.6	-3.5	43.9	-4.9
Ireland	limit	46.9		45.8		44.6		43.5		42.4		41.2		40.1		39.0	
	emissions	270.8	37.4	262.7	43.5	272.0	32.2	272.8	29.4	273.7	26.6	274.5	23.8	275.4	21.0	276.2	18.2
Italy	limit	308.2		306.2		304.2		302.3		300.3		298.3		296.4		294.4	
	emissions	8.4	0.9	8.7	0.6	8.6	0.9	8.7	0.9	8.8	0.9	8.9	0.8	9.0	0.8	9.1	0.8
Latvia	limit	9.3		9.4		9.4		9.5		9.6		9.7		9.8		9.9	
	emissions	12.5	0.5	12.5	0.8	12.7	1.0	12.7	1.3	12.8	1.6	12.9	1.9	12.9	2.2	13.0	2.5
Lithuania	limit	12.9		13.3		13.7		14.0		14.4		14.7		15.1		15.5	
	emissions	9.3	0.2	9.2	0.2	9.7	-0.6	9.8	-0.9	9.9	-1.2	10.0	-1.5	10.2	-1.8	10.3	-2.1
Luxembourg	limit	9.5		9.3		9.1		8.9		8.7		8.5		8.3		8.1	
	emissions	1.1	0.1	1.1	0.1	0.9	0.2	0.9	0.2	0.9	0.2	0.9	0.2	0.9	0.2	0.9	0.2
Malta	limit	1.2		1.2		1.2		1.2		1.2		1.2		1.2		1.2	
	emissions	109.2	13.7	98.0	22.7	108.1	10.3	106.7	9.4	105.4	8.5	104.0	7.6	102.6	6.7	101.2	5.8
Netherlands	limit	122.9		120.7		118.4		116.1		113.9		111.6		109.3		107.0	
	emissions	189.0	4.6	190.9	4.0	188.2	8.0	188.3	9.0	188.5	10.1	188.7	11.2	188.8	12.3	189.0	13.4
Poland	limit	193.6		194.9		196.1		197.4		198.6		199.9		201.1		202.3	
	emissions	40.3	9.0	39.2	10.4	40.2	9.7	39.8	10.4	39.4	11.1	38.9	11.8	38.5	12.4	38.1	13.1
Portugal	limit	49.3		49.6		49.9		50.1		50.4		50.7		51.0		51.2	
	emissions	68.4	7.3	67.3	10.2	70.2	9.1	71.6	9.5	72.9	10.0	74.3	10.4	75.7	10.9	77.0	11.3
Romania	limit	75.6		77.5		79.3		81.1		82.9		84.7		86.6		88.4	

		2013(1)		*2014* (2)		*2015*(3)		*2016*(3)		*2017*(3)		*2018*(3)		*2019*(3)		*2020*(3)	
Country	**Mt CO2 eq.**	***Emiss /limit***	***gap to limit***	***Emiss /limit***	***gap to limit***	***Emiss /limit***	***gap to limit***	***Emiss /limit***	***gap to limit***	***Emiss /limit***	***gap to limit***	***Emiss /limit***	***gap to limit***	***Emiss /limit***	***gap to limit***	***Emiss /limit***	***gap to limit***
Slovakia	emissions	21.8	2.2	21.5	2.9	22.4	2.4	22.4	2.7	22.5	3.0	22.5	3.3	22.6	3.6	22.6	3.9
	limit	24.0		24.4		24.7		25.1		25.5		25.8		26.2		26.5	
Slovenia	emissions	10.8	1.5	10.6	1.7	11.2	1.2	11.2	1.2	11.1	1.3	11.1	1.4	11.1	1.4	11.0	1.5
	limit	12.3		12.4		12.4		12.4		12.4		12.5		12.5		12.5	
Spain	emissions	196.6	31.0	198.1	27.6	199.0	24.8	201.1	20.7	202.9	17.0	204.8	13.2	206.8	9.2	208.4	5.8
	limit	227.6		225.6		223.7		221.8		219.9		218.0		216.1		214.2	
Sweden	emissions	35.1	6.6	34.0	7.0	34.1	6.3	33.7	6.0	33.3	5.8	32.9	5.6	32.5	5.3	32.1	5.1
	limit	41.7		41.0		40.4		39.8		39.1		38.5		37.8		37.2	
United Kingdom	emissions	345.1	13.6	326.3	27.9	345.7	4.0	337.8	7.4	333.1	7.6	327.9	8.2	323.3	8.3	315.6	11.5
	limit	358.7		354.2		349.7		345.2		340.7		336.1		331.6		327.1	

Source: EEA, European Commission**.**

(1) 2013 non-ETS emissions from 2015 GHG inventory data.

(2) 2014 emissions data are approximated data (Art. 8 of the MMR)

(3) 2015-2020 non-ETS projected emissions from MS with existing measures

5. EU ETS AUCTIONING REVENUES

Table 12: total reported revenues from the auctioning of ETS allowances in 2014 and amount used or planned to be used on climate & energy -related purposes (millions of euros)

Country	*Total revenues from the auctioning of allowances* (millions of euros)	*Share used or planned to be used for climate & energy related purposes (%)*	*Total used or planned to be used for domestic and international climate & energy related purposes (million euros)*	*Of which domestic climate & energy related purposes (million euros)*	*Of which support to third countries (million euros)*	*Not used for climate & energy related purposes (million euros)*	*No use reported (9) (million euros)*
DE	750.0	113%	844.1	841.5	2.7		
IT	408.6	47% (up to 50% foreseen) (4)	192.8	88.2	104.6	204.3	11.5
UK	401.5	100%	401.5	328.6	72.9	0.0	
ES	330.1	112%	370.2	370.2	0.0		
FR	215.3	100%	215.3	215.3	0.0	0.0	
NL	131.1	100%	131.1	131.1	0.0	0.0	
EL	131.1	100%	131.1	131.1	0.0	0.0	
RO	97.9	69%	67.3	67.3	0.0	30.6	
BE (1)	97.1	0%	0.0	0.0	0.0		97.1
PL	78.0	50%	39.0	39.0	0.0	39.0	
PT	67.1	97%	64.8	62.0	3.0	2.2	
FI	63.5	49%	31.1	0.0	31.1	32.4	
SK	57.6	26% (up to 100% foreseen) (5)	15.1	15.1	0.0	0.0	42.6
HU	56.5	23% (up to 50% foreseen) (7)	13.1	13.1	0.0	28.2	15.1
CZ	55.7	51%	28.2	28.2	0.0	27.6	
AT	53.6	102%	54.8	46.5	8.3		
DK	48.1	100%	48.1	24.045	24.05	0.0	

Country	*Total revenues from the auctioning of allowances* (millions of euros)	*Share used or planned to be used for climate & energy related purposes (%)*	*Total used or planned to be used for domestic and international climate & energy related purposes (million euros)*	*Of which domestic climate & energy related purposes (million euros)*	*Of which support to third countries (million euros)*	*Not used for climate & energy related purposes (million euros)*	*No use reported (9) (million euros)*
BG	36.4	99%	36.2	36.2	0.0	0.2	
IE	36.0	100%	36.0	2.4	33.5	0.0	
SE	33.6	56% (up to 100% foreseen) (6)	18.9	0.0	18.9		14.7
LT	17.3	233%	40.3	40.3	0.0		
SI	16.6	55%	9.1	9.1	0.0	7.5	
LV	10.2	1% (up to 100% foreseen) (8)	0.1	0.1	0.0		10.1
EE	7.4	49%	3.6	3.2	0.4	3.8	
MT	3.9	145%	5.7	5.7	0.0	0.0	
CY	0.7	55%	0.4	0.4	0.0	0.3	
LU	5.2	56%	2.9(2)	n.p	n.p	2.3	
HR (3)	0.0	-	-	-	-	-	
Total	3210.2	87%	2800.9	2498.6	299.5	376.7	191.1

Source: Reporting submitted by MS under Monitoring Mechanism Regulation (EU) n 525/2013

Notes:

(1) BE details on the use of auctioning revenues not provided

(2)LU split of use of revenues for climate and energy pursposes between domestic and international use has not been officially reported in article 17 MMR. However LU confirmed that the revenue of 2.9 M EUR is used in equal amounts for domestic and international purposes.

(3)HR began with the auctioning on 8 January 2015 hence no revenues in 2014.

(4)IT: On the basis of Legislative Decree n. 30/2013, any revenue not yet used will be earmarked for climate and energy related purposes until the 50% threshold is reached.

(5)SK has so far used less than 50 % due to the pending implementation of a financial legal instrument or of other decisions needed to invest 100% of the revenues generated in climate and energy purposes.

(6)SE plans to spend 100% of their auctioning revenues for climate and energy purposes. The figure of 14.7MEUR corresponds to the revenues generated in the year 2014 but to be spent in 2015 on climate and energy purposes.

(7)HU: The share of 23% is foreseen to increase up to 50% by the end of the year 2015. The commitment of at least 50% of the revenues generated from the auctioning of the allowances for the purposes specified in Directive 2003/87/EC is ensured by Hungarian Regulations (e.g. Government decree 368/2011. (XII. 31.)).

(8)LV is currenlty working on a finantial instrument envisaged for different measures in accordance with national legistlation (so-called Emission allowances auction instrument), which will be funded directly from auctioning revenues. The Law on Pollution (http://likumi.lv/doc.php?id=6075) Article 32.2 part 44 provides that all (100%) revenues derived from the auctions of EU emission allowances will be provided for climate-related measures.

(9)Except for the case of BE where details on the use of auctioning revenues were not provided, the column called "no use reported" represents the use of revenues not officially reported for the year 2014 but foreseen by the MS concerned to be used for climate and energy purposes.

13: Reported split of auctioning revenues used or planned to be used at domestic level per type of use (millions of euros) 2014

Country	*Total reported auctioning revenues used or planned to be used for domestic climate & energy related purposes*	*of which mitigation (no specific use provided or use other than transport, energy efficiency, renewable, management of the ETS and research)*	*of which sustainable Transport*	*of which energy efficiency (excl. Transport)*	*of which renewable energy*	*of which adaptation*	*of which management of ETS*	*of which research*
DE	841.5	825.3	0.0	0.0	0.0	0.0	16.1	0.0
IT	88.2	0.0	0.0	85.3	0.0	0.0	2.9	0.0
UK	328.6	0.0	0.0	0.0	192.9	0.0	0.5	135.1
ES	370.2	38.2	11.3	0.0	320.8	0.0	0.0	0.0
FR	215.3	0.0	0.0	215.3	0.0	0.0	0.0	0.0
NL	131.1	n.p	n.p	n.p	n.p	n.p	n.p	n.p
EL	131.1	0.0	0.0	0.0	131.1	0.0	0.0	0.0
RO	67.3	0.0	67.3	0.0	0.0	0.0	0.0	0.0
BE(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PL	39.0	0.0	0.0	30.8	1.6	6.7	0.0	0.0
PT	62.0	4.9	0.0	0.0	49.2	0.0	1.0	6.8
FI	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SK	15.1	0.0	0.0	15.0	0.0	0.0	0.1	0.0
HU	13.1	0.0	0.0	13.1	0.0	0.0	0.0	0.0
CZ	28.2	0.0	0.0	26.4	0.0	0.0	0.0	1.7
AT	46.5	0.0	0.0	24.2	22.4	0.0	0.0	0.0
DK	24.0	0.0	0.0	0.0	0.0	0.0	0.0	24.0
BG	36.2	0.0	0.0	0.0	36.2	0.0	0.0	0.0
IE	2.4	0.0	0.0	0.0	0.7	0.0	1.1	0.6

Country	*Total reported auctioning revenues used or planned to be used for domestic climate & energy related purposes*	*of which mitigation (no specific use provided or use other than transport, energy efficiency, renewable, management of the ETS and research)*	*of which sustainable Transport*	*of which energy efficiency (excl. Transport)*	*of which renewable energy*	*of which adaptation*	*of which management of ETS*	*of which research*
SE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LT	40.3	0.0	0.0	28.9	10.9	0.0	0.5	0.0
SI	9.1	0.0	2.5	6.6	0.0	0.0	0.0	0.0
LV	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0
EE	3.2	0.0	0.0	0.0	3.2	0.0	0.0	0.0
MT	5.7	0.0	0.0	0.1	5.3	0.0	0.0	0.2
CY	0.4	0.2	0.0	0.0	0.0	0.0	0.1	0.1
LU (2)	n.p	n.p	n.p	n.p	n.p	n.p	n.p	n.p
HR (3)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

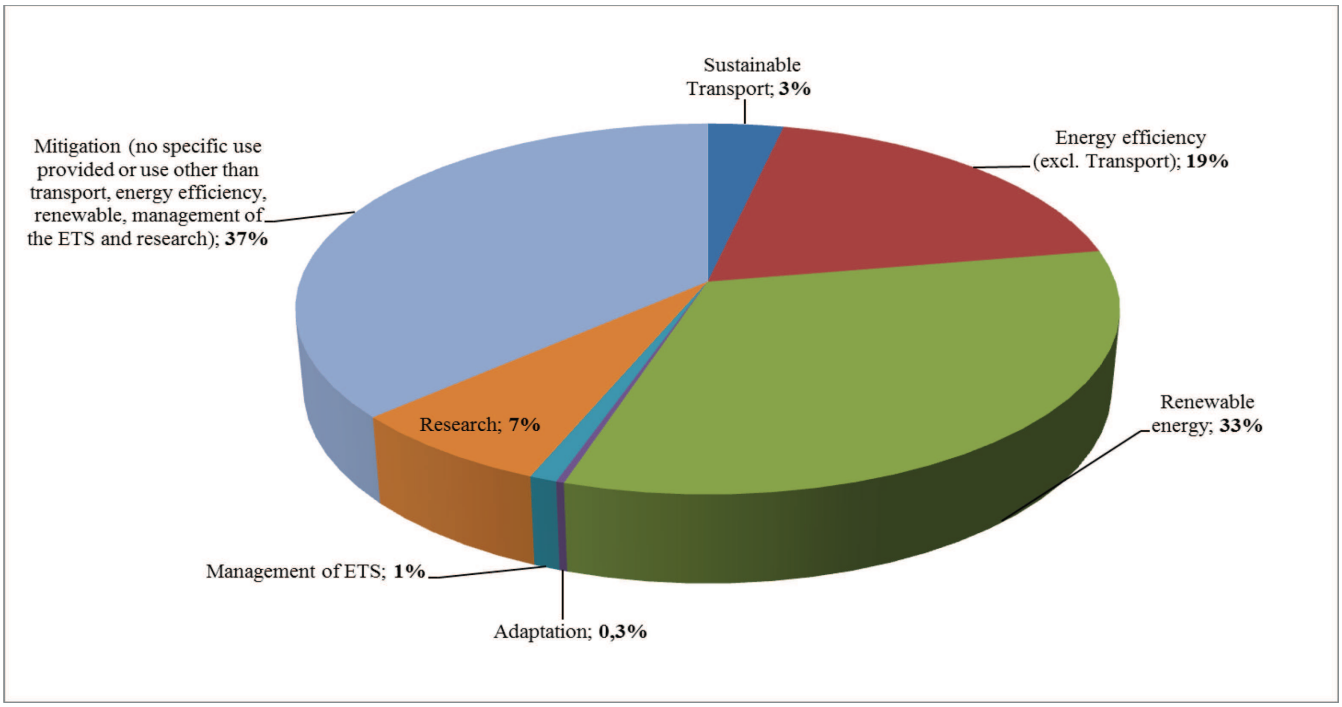
Source: Reporting submitted by MS under Monitoring Mechanism Regulation (EU) n 525/2013

(1) BE: details on the use of auctioning revenues could not be provided due to the absence of an agreement between federal and regional authorities on the use of auctionning revenues.

(2) LU: split not reported pursuant to article 17 MMR provided.

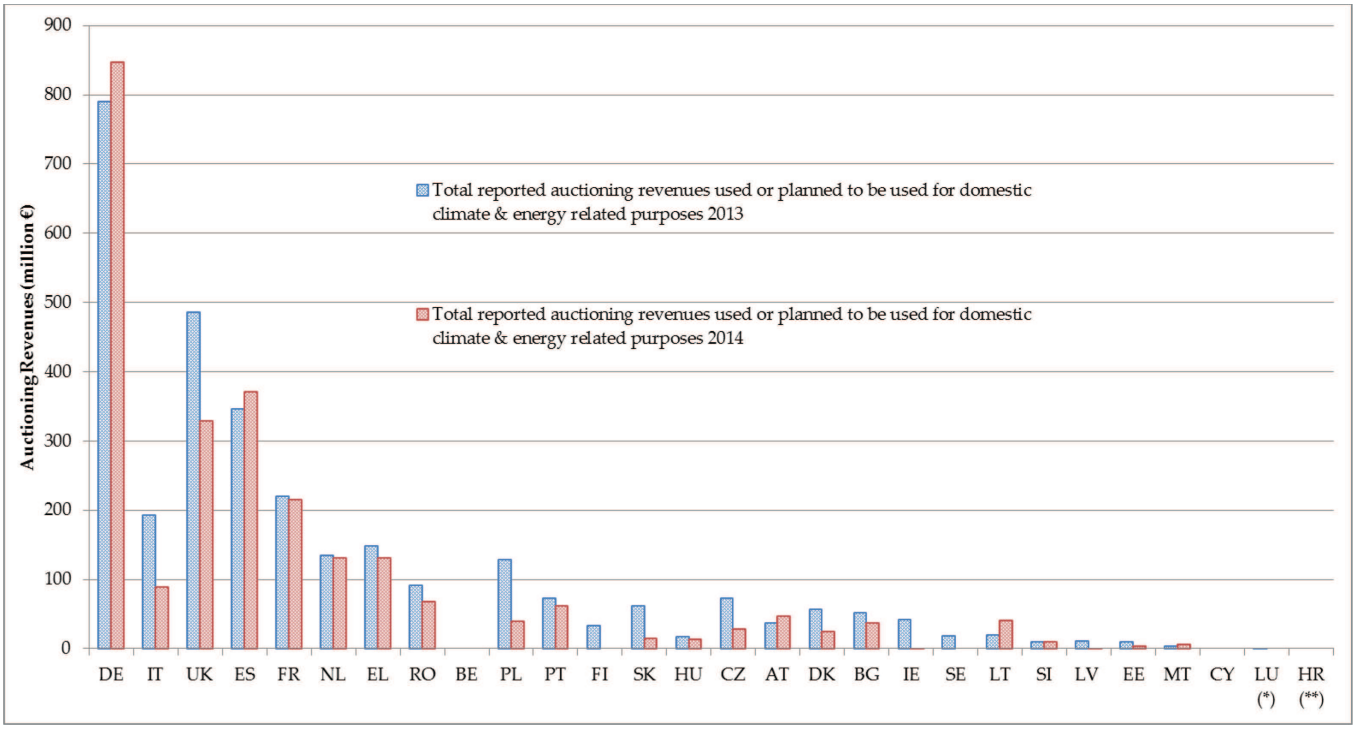
(3) HR began with the auctioning on 8 January 2015 hence no revenues in 2014.

Figure 6: Reported breakdown of the revenues from the auctioning of EU ETS allowances (millions of Euros) in 2014 used or planned to be used for domestic climate and energy related purposes EU-28.



Source: European Commission

Figure 7: Comparison of total reported auctioning revenues used or planned to be used for domestic climate and energy related purposes: 2013 & 2014



Source: European Commission

6. EU POLICIES AND MEASURES

This document provides an overview on the EU policies and measures (PaMs) which contribute to meeting the EU emission reduction target.

Table 14: Summary of implemented and planned policies and measures

Cross-cutting measures

Policies and measures	Stage of implementation /timetable /comments
EU Emission Trading System	The European Commission presented in July 2015 a legislative proposal to revise the EU emissions trading system for the period after 2020.
Creation of a market stability reserve for the EU ETS	Decision (EU) 2015/1814 of the European Parliament and of the Council of 6 October 2015 creates a Market Stability Reserve which will start operating in January 2019. The aim is two-fold: to neutralise the negative impacts of the existing allowance surplus that the EU ETS is experiencing and to improve the system's resilience to future shocks. This will be achieved among other things by an automatic rule-set adjusting the supply of allowances to be auctioned to the annual auction volumes when the total number of allowances in circulation is outside a certain predefined range.
2030 Climate and Energy package	In October 2014, the European Council reached an agreement on the main building blocks of the EU 2030 Climate and Energy Framework. The Package is now being implemented through the revision of the ETS directive. A revision of the ESD decision will be proposed in the course of 2016.
European Energy Security Strategy	Communication adopted by the Commission on 28 May 2014, subject to discussions within the EU institutions.
Monitoring and Reporting	In 2014 the Implementing Regulation (EU No 749/2014) and Delegated Regulation (EU No 666/2014) were adopted to enable the implementation of the Monitoring Mechanism Regulation (Regulation No 525/2013) in several of its provisions, specifying in more detail the structure of the information, reporting formats, and submission procedures.

Energy Supply

Policies and measures	Stage of implementation /timetable /comments
Renewables	The promotion of renewable energy in the EU has been of interest permanently during the last two decades. The EU has established a broad policy framework for renewable energies via the **Renewable Energy Directive** 2009/28/EC directly and indirectly affecting other sectors, such as transport or LULUCF. The Directive aims at a 20 % share of renewable energy by 2020. The EU is on track to meet this target and reached a share of 15 % of renewable energy in 2013 with 2014 share estimated at 15.3 % (COM(2015) 293 final). With 88 Mtoe or about 46 % of all primary renewable energy production in 2013, solid biomass still made the largest contribution in RES primary production, followed by hydro energy (32 Mtoe), while wind and solar energy production levels have doubled since 2009[10]. The new 2030 Framework for Climate and Energy framework (COM(2014) 15 final) stipulates a share of at least 27 % by 2030 binding at EU level. The Energy Union Strategy (COM(2015) 80 final) includes the EU commitment to become the world leader in renewable energy, the global hub for developing the next generation of technically advanced and competitive renewable energies. Further deployment of renewable energy sources will be a key factor in the EU and in all other countries as the global efforts to mitigate climate change. In the course of 2016, the Commission will propose initiatives on Renewable Energy.
CCS Directive	**The directive on the geological storage of CO_2 (CCS Directive):** establishes the legal framework for the environmentally safe geological storage of CO_2 to contribute to the fight against climate change. ec.europa.eu/clima/policies/lowcarbon/ccs/directive/index_en.htm

[10] http://ec.europa.eu/eurostat/statistics-explained/index.php/Energy_from_renewable_sources

Energy demand

Policies and measures	Stage of implementation / timetable /comments
Energy Efficiency	The EU has a binding target of improving energy efficiency by +20 % by 2020. According to the most recent Communication on Energy Efficiency (COM(2014) 520 final), the EU is not on track and is expected to miss the 20 % target by a limited margin of 1-2 % by 2020[11] under the current circumstances and if efforts are not increased. If all Member States prioritise energy efficiency in their national policies and measures and fully implement the agreed legislation such as the **Energy Efficiency Directive** 2012/27/EU, the 20 % target can still be achieved. As laid down in the new Energy Union Strategy, the EU will pay special attention to sectors with large energy efficiency potential, such as transport and buildings (**Energy Performance of Buildings Directive** 2010/31/EU). The Commission plans to promote new financing schemes to fully exploit the energy efficiency potential of buildings. The EU has an agreed target of improving energy efficiency by at least 27 % by 2030 within the context of the 2030 framework for Climate and Energy. This target will be reviewed in 2020 having in mind extending it to 30%. In the course of 2016, the Commission will propose initiatives on Energy Efficiency.
Ecodesign energy labelling	In terms of products and appliances, the EU aims to reduce their environmental impact and increase energy efficiency. This objective, which also helps customers save money, can be seen in the Energy Union Strategy. It is estimated that consumers could save around € 100 billion annually by 2020 through more efficient appliances (COM(2014) 520 final). The EU has implemented two Directives which provide the overall frameworks for **ecodesign** (2009/125/EC) and **energy labelling** (2010/30/EU currently under review). These are followed by a set of regulations (implemented measures and/or delegated acts) that define the technical requirements for each product category/group. The list of such products and appliances is continuously extended and kept up to date. A third, voluntary labelling scheme known as **Energy Star**[12] is also widely used for office equipment.

[11] The Directive explicitly sets goals of 1 483 Mtoe (mega tonnes of oil equivalent) of primary energy consumption and 1 086 Mtoe of final energy consumption by 2020.

[12] http://www.eu-energystar.org/

Policies and measures	Stage of implementation / timetable /comments
Green Public Procurement	With regard to the use of efficient products, the public sector acts as an example. Thus, the EU developed the **Green Public Procurement**[13] instrument which aims to promote the purchase of environmentally friendly goods, services and works. The overall impact of these measures will depend on how many implementing regulations are adopted. The emission reductions achieved could be very substantial over time, reaching 320 Mt CO_2 per year by 2020, including the impact of energy labelling, Energy Star and tyre labelling[14].

[13] http://ec.europa.eu/environment/gpp/index_en.htm

[14] Kemna R. (2014): Ecodesign Impact Accounting – Part 1 – Status Nov. 2013, https://ec.europa.eu/energy/sites/ener/files/documents/2014_06_ecodesign_impact_accounting_part1.pdf

Transport

Policies and measures	Stage of implementation / timetable / comments
Strategy on CO_2 from light duty vehicles; Regulation on CO_2 emissions from passenger cars, Regulation on CO_2 emissions from light commercial vehicles, car labelling directive	The **CO_2 and Cars Regulation** (EC) No 443/2009 limits CO_2 emissions from new cars to a fleet average of 130 grams of CO_2 per kilometre (g/km) by 2015 and 95 g/km by 2021. The 2015 and 2021 targets represent reductions of 18 % and 40 % respectively, compared with the 2007 fleet average. In 2014, Regulation (EU) No 333/2014 on modalities for reaching the 2021 target for cars was adopted. Implementing the 2021 emission targets for cars is expected to result in annual savings of 24.9 Mt CO_2 in 2021, and 43.6 Mt CO_2 in 2030. The **CO_2 and Vans Regulation** (EU) No 510/2011 limits CO_2 emissions from new vans to a fleet average of 175 g/km by 2017 and 147 g/km by 2020. These cuts represent reductions of 14 % and 28% respectively, compared with the 2007 average. The annual CO_2 equivalent savings are expected to be 1.9 Mt in 2020 and 5.3 Mt in 2030. The most recent (provisional) data published by the EEA[15] indicates that the EU car and van fleets will have met their targets well ahead of the deadlines. The average specific emissions of the European fleet in 2014 were 123.4 g/km for new cars (compared to the 130 g/km target for 2015) and 169.2 g/km for new vans (compared to the 175 g/km target for 2017).
Fuel Quality Directive	Directive 2009/30/EC on Fuel Quality tightens the requirements for a number of fuel parameters. The Directive introduces a binding target for fuel suppliers to reduce life-cycle GHG emissions per unit of energy from fuel and energy supplied by 6 % by 2020 compared to 2010. The reduction is to be obtained through the use of biofuels, alternative fuels, electricity in road transport or reductions in upstream emissions such as from flaring and venting at production sites. The expected savings of 6 % of total well-to-wheel road transport CO2 emissions in 2020 amount to roughly 55 Mt CO2 in 2020, excluding indirect land use change (ILUC) emissions[16]. Council Directive (EU) 2015/652 specifies calculation methods and reporting requirements under the Fuel Quality Directive.
Environmental and safety requirements of tyres and gear shift	A number of Regulations are in place related to environmental and safety requirements of tyres and gear shift indicators (GSI). Regulation (EC) No 661/2009 aims at increasing the fuel efficiency of motor vehicles by introducing tyre pressure monitoring systems and GSI. In

[15] EEA (2014): Monitoring CO_2 emissions from passenger cars and vans in 2013. EEA Technical report No 19/2014.
[16] European Commission, DG Climate Action.

Policies and measures	Stage of implementation / timetable / comments
indicators (GSI) Regulaion.	addition, Regulation (EC) No 1222/2009 on the labelling of tyres aims at influencing energy demand by promoting the market transformation towards fuel-efficient tyres. The Regulations' total CO2 emission savings from all vehicle types are expected to range from 1.5 to 4 Mt annually by 2020.
Clean Vehicles Directive	The Clean Vehicles Directive 2009/33/EC aims at a broad market introduction of environmentally-friendly vehicles. The Directive requires that energy and environmental impacts linked to the operation of vehicles over their whole lifetime, including CO_2 emissions, are taken into account in public procurement, including public transport operators. Public procurement of clean efficient vehicles is expected to result in savings of up to 1.9 Mt CO_2 emissions per year in 2017 compared to the baseline scenario.
MRV Shipping	The strategy for progressively including greenhouse gas emissions from **maritime transport** consists of the following consecutive steps (COM(2013) 479 final): (1) Establishing a system for monitoring, reporting and verifying (MRV) of CO_2 emissions; (2) Setting reduction targets for the maritime transport sector; (3) Applying further measures, including market-based instruments, in the medium to long term. Relating to the first of these three steps, on 29 April 2015 the Council and European Parliament adopted Regulation (EU) 2015/757 establishing an EU-wide MRV system for large ships. As from 2018, this system will cover all ships over 5 000 gross tonnes that use EU ports, irrespective of where the ships are registered. Under an MRV system, CO_2 emissions from the maritime transport sector are expected to be 2 % lower than the baseline in 2030.

Industry & non CO2 gases

'Industrial Processes	Stage of implementation / timetable / comments
Fluorinated gases	Fluorinated gases (F-gases), in particular hydrofluorocarbons (HFCs), were introduced mostly as replacements for ozone depleting substances. The EU has been controlling the use of these gases since 2006 and has recently adopted a revised **F-Gas Regulation** (EU) No 517/2014 that will lead to significant emission reductions in the coming years. The revised Regulation retains many important and successful features of the previous F-Gas Regulation related to leak prevention, F-gas recovery and technical training. As its main measure to reduce the use of HFCs, the new Regulation prescribes a cap and subsequent reduction of HFCs that can be placed on the EU market ("phase-down"), thus eliminating79 % of the current consumption levels by 2030, leading to a two-thirds reduction of emissions. The new F-Gas Regulation also includes a number of bans. F-gases with high GWPs are restricted from use in new equipment in refrigeration, small air conditioners, fire protection, foams and technical aerosols. In addition, a "service ban" requires operators of existing equipment to start using more climate-friendly alternatives from 2020 onwards. In addition, the EU proposed in April 2015 an amendment to the Montreal Protocol to include a phase-down of HFCs at global level. Mobile air conditioning (MAC) systems so far mostly used the hydrofluorocarbon R134a, which is a potent greenhouse gas. In order to phase out its use, Directive 2006/40/EC was put in place which covers MACs fitted to passenger cars and light commercial vehicles. It is being enforced over three phases, starting in 2008. Currently, air conditioning systems in new vehicle types have to be filled with gases with a GWP lower than 150. From 2017 onwards this applies to all new air conditioned vehicles put on the EU market.
Clean Air Package	**National Emissions Ceiling (NEC) Directive:** A revised NEC Directive – presented as a Commission proposal in 2013 as part of the Clean Air Policy Package – will (when agreed by the co-legislators) replace the existing directive from 2001 (Directive 2001/81/EC). Its overarching aim is to reduce adverse health impacts of air pollution, including reducing the cases of premature deaths per year due to air pollution by more than half. To this end the proposal includes national emission reduction commitments for each Member State for 2030 (with interim targets also set for 2025) for six specific pollutants: NO_x, SO_2, NMVOC, NH_3, $PM_{2.5}$ and CH_4. The European Parliament adopted its position on the proposal on 28 October 2015 as well as a mandate for first

'Industrial Processes	Stage of implementation / timetable / comments
	reading negotiations. The Council is currently preparing its position. http://ec.europa.eu/environment/air/clean_air_policy.htm
The Industrial Emmissions Directive	Energy and manufacturing industries account for more than half of the EU's total GHG emissions and are important energy consumers and emitters of atmospheric pollutants. The **Industrial Emissions Directive** 2010/75/EU (IED) sets out the main principles for the permitting and control of installations based on an integrated approach and the application of best available techniques (BAT). BAT means the most effective techniques to achieve a high level of environmental protection as a whole, which can be implemented under technically and economically viable conditions and taking into consideration the costs and benefits. The IED affects climate change by regulating greenhouse gases (CO_2, CH_4, N_2O, fluorinated gases) to the extent they are not covered by the ETS or where this would be necessary to prevent significant local pollution, and by regulating indirect greenhouse gases such as NO_x and SO_x and short-lived climate forcers such as black carbon. Furthermore, the IED promotes energy efficiency and makes fuel switching more attractive. The Directive governs various types of industrial installations, and thus affects the energy sector. It is complemented by other EU-wide policies, such as the National Emission Ceilings (NEC) Directive. The **European Pollutant Release and Transfer Register** (E-PRTR) provides easily accessible key environmental data, including GHG emissions, from industrial facilities in EU Member States. This register contributes to transparency and public participation in environmental decision-making.

Agriculture

Agriculture	Stage of implementation /timetable /comments
CAP reform post 2013	The agriculture sector has the specialty that it is mainly driven by one policy, the Common Agricultural Policy (CAP), which determines a common way for all Member States of the European Union. For the period 2014 – 2020, three strategic objectives for rural development in the EU have been set in line with the Europe 2020 Strategy (COM(2010) 2020 final): Improving the competitiveness of agriculture, the sustainable management of natural resources and climate action, and a balanced territorial development of rural areas. Regulation (EU) No 1305/2013 on support for rural development by the **European Agricultural Fund for Rural Development** (EAFRD) foresees that Member States draw up and co-finance multiannual rural development programmes (RDPs), at national or regional level. These programmes have to meet the three strategic objectives for 2014 – 2020, including sustainability and climate action. The "**Horizontal Regulation**" (EU) No 1306/2013 provides the financial management rules for the two CAP funds, the European Agricultural Guarantee Fund (EAGF) which finances market measures and direct payments, and the EAFRD which finances support to rural development. It brings together the rules on cross compliance, farm advisory systems and monitoring and evaluation of the CAP. The **Regulation on Transitional Provisions** (EU) No 1310/2013 is designed to bridge the gap between the two rural development programming periods – before and after the 2013 reform. Under certain circumstances already existing national programmes are also eligible for support in the new programming period. In 2013, the EU has agreed that at least 20 % of the Union's budget for 2014 – 2020 should be spent on climate related action. This also affects the CAP and its specific funding programs, which consequently take climate mitigation and adaptation as an additional criterion for support.

Forests and soils

'Forests'	Stage of implementation /timetable /comments
LULUCF reporting and accounting in the EU (LULUCF Decision)	At present LULUCF emissions are not accounted towards the "internal" EU targets under the 2020 Climate and Energy Package. It is, however, covered under the EU's 2nd commitment period target in the Kyoto Protocol. For preparing the integration of LULUCF in the 2030 Framework, the LULUCF Decision has been put in place in order to obtain more robust data and to harmonize the reporting system in the EU for agricultural land. In the second commitment period of the Kyoto Protocol it has become mandatory to report Forest Management (FM) in addition to Afforestation, Reforestation and Deforestation (ARD). In addition, the EU Decision requires EU Member States to establish systems for estimating emissions and removals for Cropland Management and Grazing Land Management, even if the activity has not been elected under the Kyoto Protocol.

Waste

Policies and measures	Stage of implementation / timetable / comments
Limitation of landfilling	The objective of the **Landfill Directive** 1999/31/EC is to prevent or reduce as far as possible negative effects on the environment resulting from the landfilling of waste – including emissions of GHG – by introducing stringent technical requirements for waste and landfills. By 2016, biodegradable waste going to landfills must be reduced to 35 % of the total amount (by weight) produced in 1995. In addition, the Directive requires collection of landfill gas from all landfills receiving biodegradable municipal waste. As an alternative to landfilling, waste is incinerated with energy recovery, which is governed by the Industrial Emissions Directive (cf. section **Error! Reference source not found.**). It is estimated that a full implementation of the Landfill Directive will lead to a net reduction of 62 million tonnes CO_2 eq in 2020 compared to 2008[17].
Management of biodegradable waste	Biodegradable waste is of interest in terms of GHG emissions, as this is the waste fraction delivering most CH_4 emissions during anaerobic decomposition. Several EU legal instruments address the treatment of biodegradable waste: (1) The Landfill Directive requires Member States to reduce bio-waste deposited on landfills; (2) the **Waste Framework Directive** 2008/98/EC contains specific elements related to bio-waste and (3) the Industrial Emissions Directive lays

[17] European Environment Agency (EEA) (2011). Waste opportunities: past and future climate benefits from better municipal waste management in Europe. Report no. 3/2011.

Policies and measures	Stage of implementation / timetable / comments
	down principles for controlling bio-waste treatment and incineration plants.
Policies targeting waste streams	Several EU Directives target waste streams. As an example, the Packaging and Packaging Waste Directive (PPWD) 94/62/EC provides for measures aimed at limiting the production of packaging waste and promoting recycling, re-use and other forms of waste recovery, hence, at reducing the final disposal of such waste. On 28 April 2015, the European Parliament approved of an amendment to the Directive targeting lightweight plastic carrier bags. It will require EU Member States to either reduce annual average consumption of lightweight plastic bags per citizen, or to ban the handing-over of free bags (Directive (EU) 2015/720).
Reduction of GHG Emissions from Urban Waste Water Treatment	The **Urban Waste Water Treatment Directive** 91/271/EEC concerns the collection, treatment and discharge of urban waste water and the treatment and discharge of waste water from certain industrial sectors. The Directive requires, *inter alia*, total nitrogen reduction for discharges from treatment plants to sensitive areas. As increased nitrogen removal has been found to lead to a decrease in N_2O emissions in wastewater treatment plants[18], this requirement can contribute to a reduction of N_2O emissions.

Climate Finance

Policies and measures	Stage of implementation /timetable /comments
Research and Innovation Framework Programme	○ **Horizon 2020:** Horizon 2020 is the largest ever EU Research and Innovation programme, with nearly €80 billion of funding available over seven years (2014 to 2020). One of Horizon 2020's principle objectives is to provide solutions through the means of science and innovation to European and global societal challenges. The EU aims to spend 35% of the overall Horizon 2020 budget on climate-related research and innovation actions. Particular global and/or regional societal challenges that will be addressed include: ▪ Food security, sustainable agriculture and forestry, marine and maritime and inland water research and the bio-economy; ▪ Secure, clean and efficient energy ▪ Smart, green and integrated transport Climate action, environment, resource efficiency and raw materials, as well as earth observation http://ec.europa.eu/programmes/horizon2020/en/what-horizon-2020

[18] http://www.bmlfuw.gv.at/publikationen/wasser/abwasser/Lachgasemissionen---Kl-ranlagen.html

Policies and measures	Stage of implementation /timetable /comments
European Structural and Investment Funds (EISF)	The budget and investment priorities of the ESIF for the 2014-2020 programming period are designed to ensure the implementation of the Europe 2020 strategy for smart, sustainable and inclusive growth. Regional policy targets all regions and cities in the European Union in order to support job creation, business competitiveness, economic growth, sustainable development, and improve citizens' quality of life. In order to reach these goals and address the diverse development needs in all EU regions, almost one third of the total EU budget has been set aside for Cohesion Policy for 2014-2020. http://europa.eu/legislation_summaries/glossary/structural_cohesion_fund_en.htm http://ec.europa.eu/regional_policy/sources/docgener/informat/basic/basic_2014_en.pdf
NER 300	Under the NER 300 programme, 38 renewable energy projects and one carbon capture and storage project were selected for funding in 20 Member States. The cumulative NER 300 funding will be €2.1bn, which is expected to leverage €2.7bn of private investments.

7. INFORMATION ON EX-POST EVALUATION OF CLIMATE POLICIES

The objective of the studies[19] briefly described below is to identify the main drivers behind the changes in greenhouse gas (GHG) emissions using several complementary approaches.

The ex-post evaluation of climate policies helps strengthening the understanding on the effects of various policies on the changes in emissions in view of further climate policy developments.

Three Factors Decomposition analysis

This section presents the results from the Index Decomposition Analysis aimed at evaluating the impact over time of the evolution of the European economy on emissions, and in particular (i) the impact of economic growth, (ii) the changes in the structure of the economy (i.e. the shift between economic sectors) and (iii) the technological improvements allowing progress in terms of carbon intensity.

Methodology

The empirical analysis has been performed for the EU-27[20] and uses the World Input-Output Database which allows for a sectorally disaggregated decomposition.

In this three-factor decomposition analysis, an index (the one for CO_2 emissions) is decomposed into its underlying parts. The following variables for a given country and $i=1,...N$ (where there are 35 sectors in total for each country) sectors in years t=0,..,T are being considered.

Table 15: Variables of three factor decomposition analysis

Variables	Description
Y_t	Output in volume of the country in year *t*
$Y_{t,i}$	Output of sector *i* in year *t*
E_t	Total CO_2 emissions of a country in year *t* ($E_t = \sum_i S_{t,i} \cdot I_{t,i} \cdot Y_t$)
$E_{t,i}$	Emissions of sector *i* in year *t*
$I_t = E_t / Y_t$	Emission intensity of the country in year *t*
$I_{t,i} = E_{t,i} / Y_{t,i}$	Emission intensity of sector *i* in year *t*

[19] The study presented in this section is conducted by ICF, UBA and ZEW for DG CLIMA. It will be published on DG CLIMA website. It builds upon and further develops the analysis carried out by the European Environment Agency ('EEA') in its report 'Why did greenhouse gas emissions decrease in the EU between 1990 and 2012?'Report available at http://www.eea.europa.eu/publications/why-are-greenhouse-gases-decreasing - see section 6 "Snapshot of key emission drivers in the EU, 2005-2012".

[20] As data for Croatia are not available

$S_{t,i} = Y_{t,i} / Y_t$ Share of sector *i* in the country's output

Source: European Commission.

The impact of economic growth on the index is called the "activity effect". It describes how the index would have changed had there been no change in the other factors, meaning if they were held fixed.

The "structural effect" is often also referred to as the "composition effect" as it addresses the effect on emissions due to a change in the composition of the countries' sectors that differ in their CO_2 emission intensity. Some sectors such as the manufacturing or basic metal sectors need more energy and thus emit more CO_2 per Euro of output while other sectors such as the financial or insurance sector need much less energy. The structural effect thus reflects the impact of a change in the economic weight of these sectors in a country's total output on emissions holding all other factors or effects fixed at their initial values in 1995. Or to put it in another way, the structural effect would increase if emission-intensive sectors such as the non-metallic minerals sectors (cement) would produce relatively more compared to other sectors. This means their share in total output of the country increases and thus emissions. As seen below, a distinction between 'in country' structural effect and 'within country' structural effects has also be drawn.

Finally, the "intensity effect" or "technological effect" measures the change in emissions assuming that the structure of the economy (share of sectors in total output) and the scale of the economy remain at their initial levels.

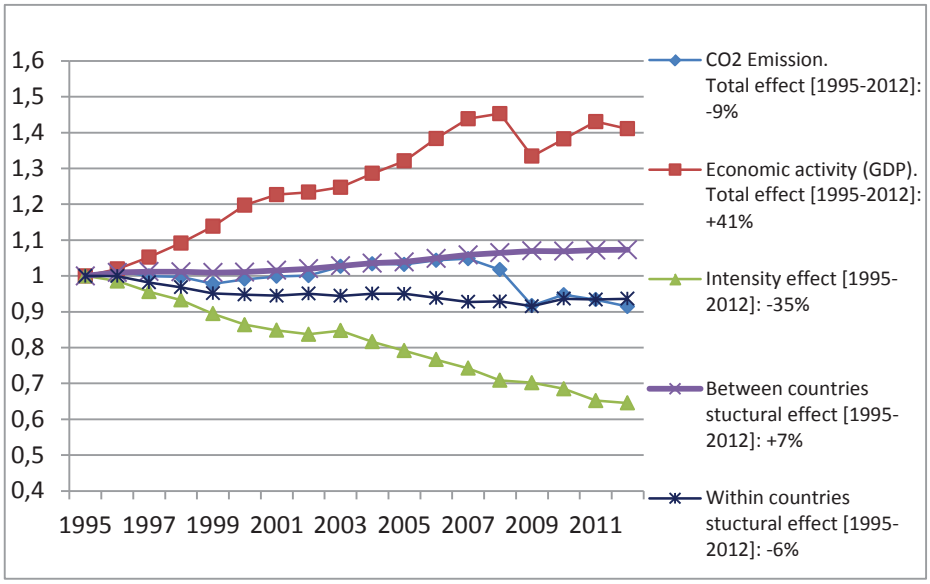
The decomposition relies on the use of a (logarithmic mean) weighting function of the CO_2 emitted used, using the following formula:

$$Total = Activity \,.\, Structure \,.\, Intensity$$

The index values have to be calculated for all countries and for all years.

Results Figure 8 below shows the results from the Index Decomposition Analysis for the EU-27:

Figure 8: 1995-2012 CO_2 decomposition analysis



Source: European Commission

Note: (1) Up until 2008, data from WIOD has been used to conduct the Index Decomposition Analysis. From 2009 onwards, data has been taken from Eurostat. WIOD data has been compiled using the NACE 1.1 industry classification. The Eurostat data is based upon NACE 2.0. NACE 2.0 is a completely new classification and not just a revision of its predecessor. There is no unique correspondence between the NACE 1.1 and NACE 2.0. Therefore, data are not directly comparable..

(2) Bulgaria, the UK, Ireland, and Portugal are excluded due to a lack of Eurostat data. Note, however, that the non-inclusion of these countries appeared to have only marginal impacts on the results when directly comparing the full EU27 results from 1995 – 2009 with those results for the same period when Bulgaria, the UK, Ireland, and Portugal have been excluded from the analysis.

The blue line represents the total effect, i.e. the CO_2 emissions relative to 1995. A value of 0.91 in case of the total effect in 2012, for instance, means that carbon dioxide emissions fell to 91% of the 1995 level.

The red line presents the contribution of the activity effect to total emissions. Growing output was the most important driver of CO_2 emissions in the EU-27. The activity effect was 1.41 in 2012. If all other factors had remained on their 1995's levels, CO_2 emissions would have been 41% bigger in 2012 than in 1995 due to the increase in economic output.

The between-country structural effect (purple line) measures the impact of changes in the composition of the different countries in the whole EU-27's total output on CO_2 emissions. In the present case, as the index value of this effect is greater than one, there has been a shift towards countries with higher carbon intensity. In other words, the contribution of relatively more carbon-intensive countries to the total output produced in the EU has been increasing. Thus, more carbon-intensive countries (such as the Central and Eastern European Member States) have been growing faster than the old European member states that have on average a lower carbon intensity. In 2012, this shift of the economy towards more carbon-intensive Member States increased CO_2 emissions by 7% compared to 1995.

The within-structural effect accounts for changes in the EU-27 CO_2 emissions due to changes in the composition of the different sectors of all EU-27 Member States altogether. The results show that, on average over all the Member-States and without considering the between-country structural effect described above, the sectoral composition of the European economy changed towards less CO_2 intensive industries. There has consequently been a shift towards sectors with a lower carbon intensity such as service sectors while relatively carbon-intensive

sectors such as manufacturing and basic metals contributed less to total emissions and, because all other factors are held fixed, also less to total production. Considering the between and within country effects, the shift of economic sectors in the EU as a whole had a marginal effect on emission during the period concerned (an increase of less than 1% between 1995 and 2012).

In 2012, the intensity effect (green) was 0.65. It accounts for the change in total CO_2 emissions that is due to improvements in the carbon intensity of production only holding fix the level activity(or GDP) and the structure of the economy. The reduction of the intensity effect thus clearly shows that there had been significant technical improvements in the European Union during the period of time considered.

The decomposition model identifies technological improvements as the main driving force behind emission reductions but it does not identify the policies and measures which contributed the most to these improvements. The implementation of EU and national policies played a role but other factors, such as the price of energy also contributed to stimulate innovation in low carbon technologies. The intensity effect also accounts for changes in the fuel-mix of the different sectors in the different member states. Hence, part of the intensity improvement could be the result of a switch from more carbon-intensive fuel such as oil or coal to less intensive ones such as gas.

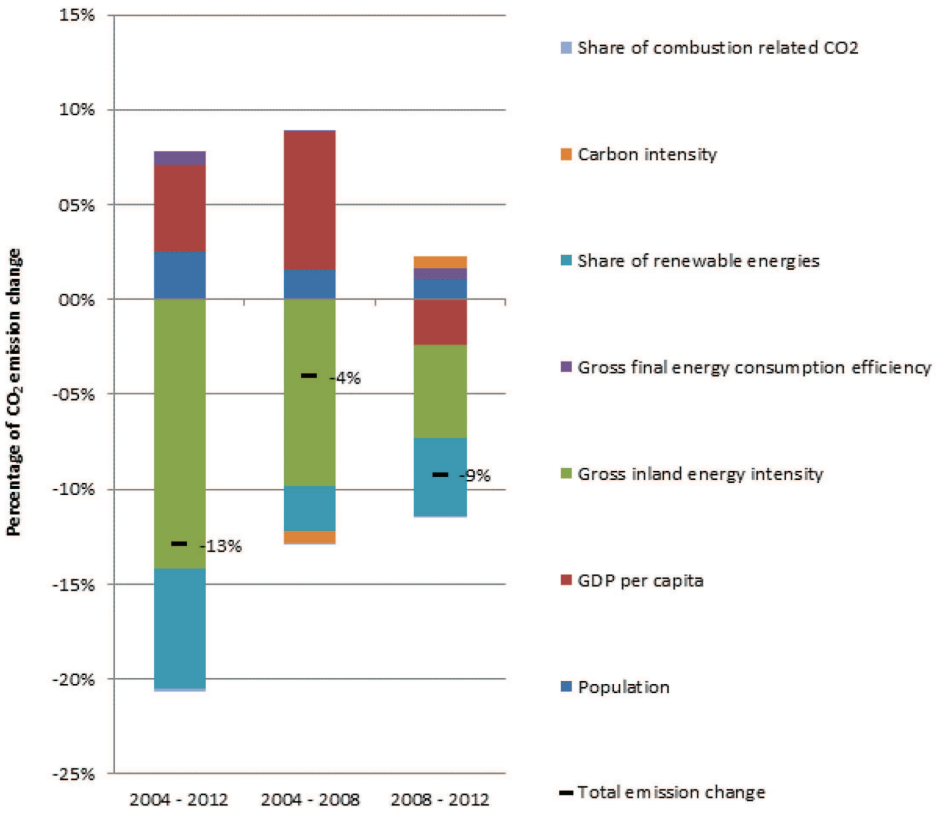
Sectorial Decomposition analysis

To understand why the technological changes is the main driver behind emission reductions, the analysis above has been completed with an economy wide and detailed sector specific decomposition analyses. These analyses rely on standard methods which will not be described here. Due to the availability of data, different timelines have been considered for every sector considered.

For all these sectors, namely electricity generation, inland passenger transport and household, the output increased over the recent years but the impact of the technological changes offset the growths of the sectors concerned.

1. Economy-wide decomposition

Figure 9: Economy-wide decomposition analysis- EU28

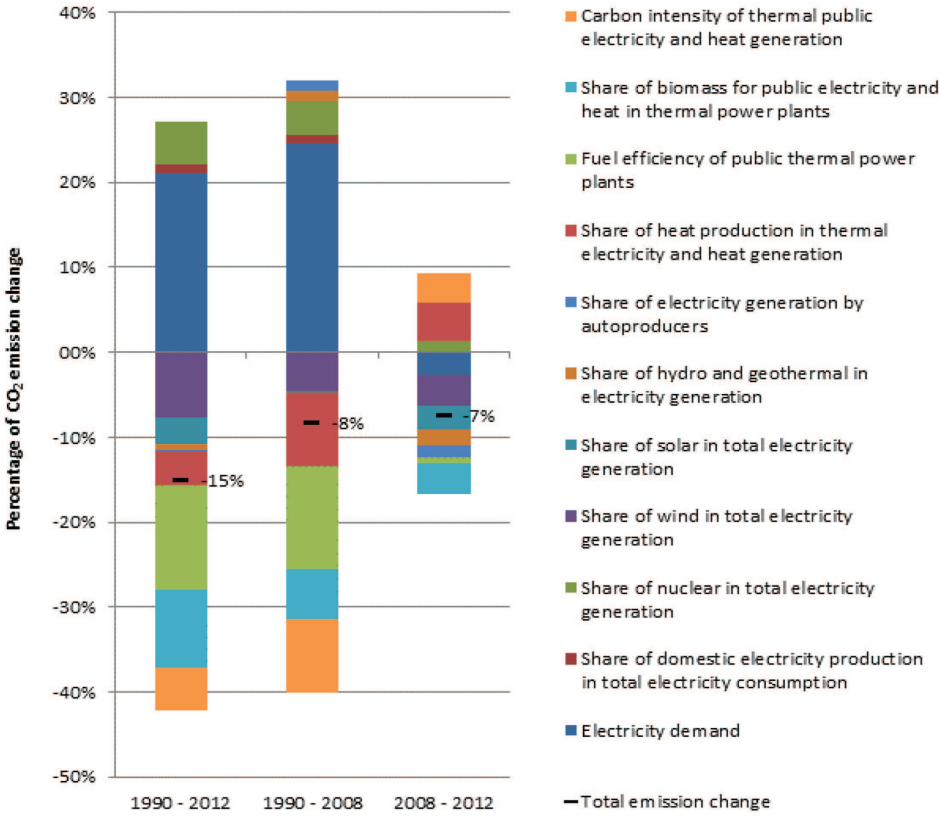


Source: European Commission

As can be seen from the graph, population increased over the period 2004-2012. All other factors constant, it contributed towards higher emissions. GDP is among the most important drivers towards increasing emissions between 2004 and 2008. Between 2008 and 2012, GDP decreased thus contributing to decreasing emissions. The improvements in terms of gross inland energy intensity and the increase in the share of renewable are the main drivers behind emission reductions.

2. Electricity generation

Figure 10: electricity generation decomposition analysis – EU 28

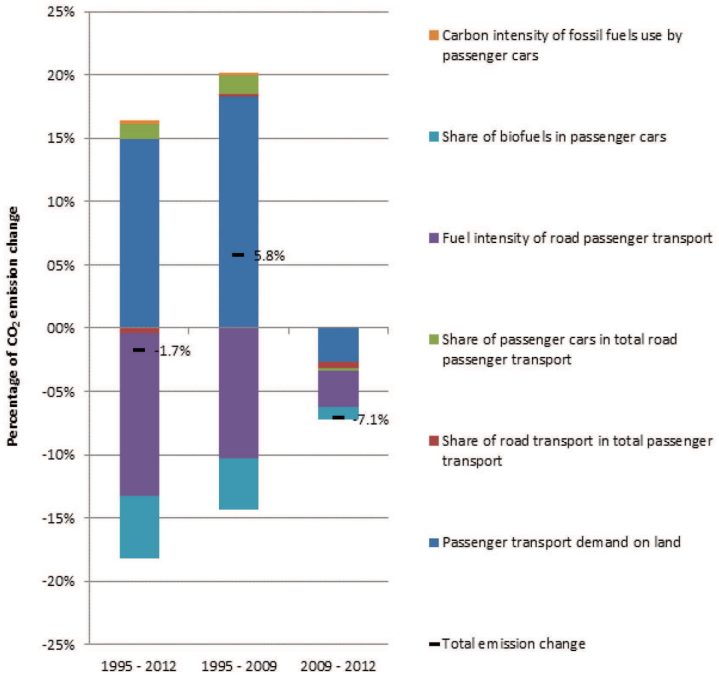


Source: European Commission

Electricity consumption increased by more than 27% between 1990-2012, while emissions decreased by 15%. The factors contributing to decreasing emissions, including the increasing production of renewable electricity from wind, solar and biomass and the increasing efficiency of thermal power plants, outweighed the impact of increasing the demand for electricity over the period concerned. They are themselves driven by technological improvements. The carbon intensity of energy use was also a factor contributing to lower emissions between 1990 and 2008. However, carbon intensity increased between 2008 and 2012, mainly due to a switch from gas to coal.

3. Inland passenger transport

Figure 11: Inland Passenger transport sector decomposition analysis – EU 28

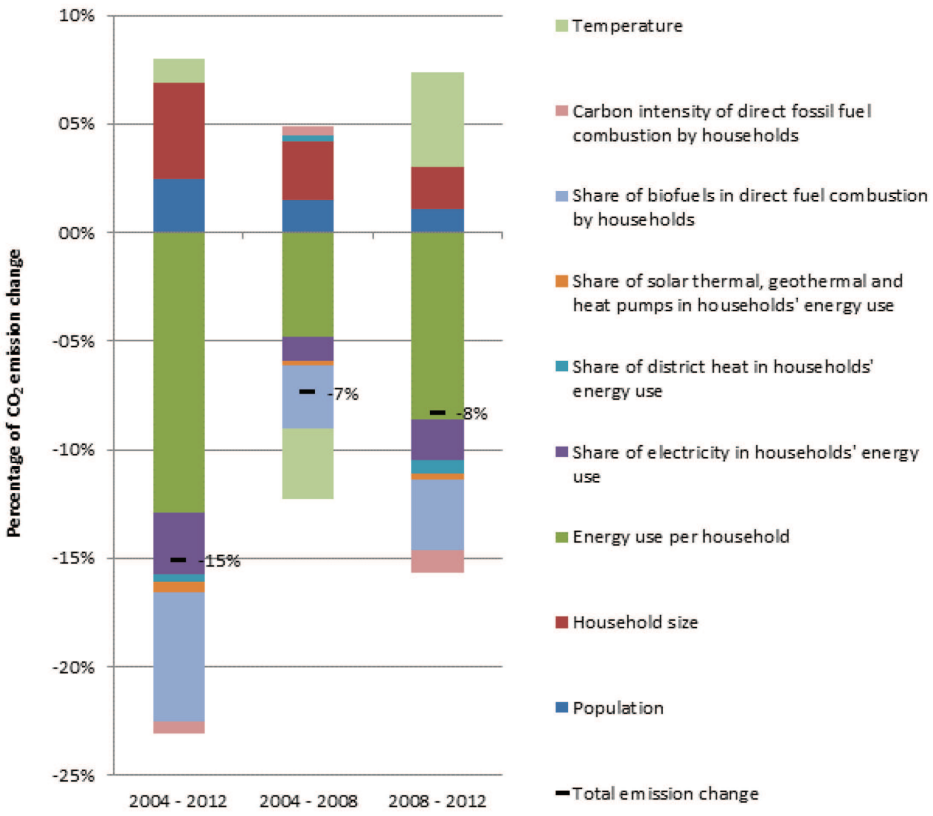


Source: European Commission

Regarding passenger transport, emissions peaked in 2007 (see section 3.1) and decreased by 1.7% during the 1995-2012 period. During this period of time, transport demand increased by 15% but this increase of demand was outweighed by the progress of fuel intensity of cars and by the increasing the use of biofuel. The Car and Van Regulation and the Renewable Energy Directive contributed to these improvements.

Households

Figure 12: Household sector decomposition analysis – EU28



Source: European Commission

Increase in population, average household size and average heating temperature increased during the 2004-2012 period and contributed to an increase in emissions. However, during the same period of time, the share of biofuels increased and the housing stock became significantly more energy efficient, contributing to a total decrease of emissions by 15% over the period. The Renewable and Energy Efficiency Directives as well as the implementation of the national targets under the Effort Sharing Decision contributed to these developments.

8. ADAPTATION TO CLIMATE CHANGE

The 2013 EU strategy on adaptation to climate change aims at making Europe more climate-resilient. It promotes adaptation action across the EU, ensuring that adaptation considerations are addressed in all relevant EU policies (mainstreaming), promoting greater coordination, coherence and information-sharing.

In 2017, the European Commission will report to the EU Parliament and Council on the implementation of the Adaptation Strategy. This report will also include an assessment of the progress made by Member States in terms of adaptation action and hence preparedness. Progress will be assessed, inter alia, on the basis of the reports provided this year by Member States within the framework of the Monitoring Mechanism Regulation. Some general trends are described below:

Adaptation planning and the identification of general risks and vulnerabilities are developed in many Member States. National adaptation strategies/actions plans have been adopted in 20[21] Member States and most of those who do not yet have a strategy are preparing one. In addition, several Member States are in the process reviewing their adaptation strategies and action plans. Effective horizontal coordination between relevant Ministries was beneficial in many cases: for example, in Austria, Belgium, and Hungary it has facilitated the planning for adaptation. Coordination between different levels of governance (local, regional, national) is on the contrary still weak in the majority of Member States. Stakeholder involvement is considered key to have a transparent, inclusive and well-informed planning process. However, some countries have yet to explore in-depth involvement and increase the commitment to adaptation of private sector and civil society stakeholders. Progress, in this direction, has been achieved in some Member States, for example the UK, the Netherlands, Luxembourg and France.

In the Member States, earmarked financing for adaptation is still more the exception than the rule. While over half of the MS have financial resources available for preliminary adaptation action (e.g. climate services, vulnerability assessments and climate research), only few (for instance Denmark, Germany and Malta) have a dedicated budget to implement adaptation action in vulnerable sectors. Public funding for adaption often focuses on water, agriculture, forestry and human health.

The definition of solid adaptation actions and their strategic implementation is still an outstanding issue for many Member States. Further comprehensive sector vulnerability assessments should be carried out. Only few countries have specific projects/programs to implement adaptation measures as such. Due to insufficient technical capacity and resources, measures are often implemented ad hoc. Providing information to relevant stakeholders (e.g. on adaptation tools, education, guidelines) and integrating adaptation concerns into priority policies are the main instruments in this regard. Priority sectors for adaptation implementation

[21] (April 2015), Austria, Belgium, Denmark, Finland, France, Germany, Hungary, Italy, Ireland, Lithuania, Luxemburg, Malta, the Netherlands, Poland, Portugal, Romania, Slovakia, Spain, Sweden and the UK.

cover a broad spectrum and include: agriculture, water, forests, energy, coastal areas, transport, and health.

Monitoring and Evaluation systems of adaptation have been developed only in few MS, for example Spain and Finland. This is partly explained by the relatively early stage in implementation of adaptation actions. The few MS that are more advanced with M&E focus more on processes than outcomes (e.g. reductions in vulnerability to climate change). Challenges in this regard include developing outcome indicators and addressing knowledge gaps, such as on cost and benefits of adaptation and vulnerability at local level.

9. MEMBER STATES CLIMATE FINANCE

In 2014, EU Member States submitted to the European Commission their second annual reports on financial and technology support provided to developing countries pursuant to Article 16 of the Monitoring Mechanism Regulation (MMR) with information for the year 2013. The information submitted by EU Member States is in accordance with the relevant provisions of the UNFCCC, including the common formats agreed under UNFCCC for the biennial reports.

The information in Table 20 provides an overview based on this reporting. The figures include climate finance sources from public budgets and other development financial institutions; they do not cover all multilateral contributions by the EU and its Member States.

Following discussions with the Member States, the European Commission proposed a set of recommendations as technical guidance for reporting under Article 16. After the first cycle of reporting in 2013, the guidance was updated to further enhance transparency. Differences in reporting methodologies and in the scope of the data still exist, despite efforts by the EU and its Member States to harmonise reporting methodologies.

Table 16: Climate finance provided to developing countries (2013).

EU and Member States	*Climate specific finance € (2013)*
EU	964,262,105
Austria	94,505,000
Belgium	63,220,259
Bulgaria	na
Croatia	1,797
Cyprus	na
Czech Republic	5,044,000
Denmark	249,000,000
Estonia	120,921
Finland	91,791,554
France	2,621,804,411
Germany	3,441,089,820
Greece	na
Hungary	582
Ireland	34,145,338
Italy	43,487,195
Latvia	na
Lithuania	114,500
Luxembourg	39,330,988
Malta	29,637
Netherlands	286,563,739
Poland	2,548,801

EU and Member States	*Climate specific finance € (2013)*
Portugal	15,975,760
Romania	na
Slovakia	290,800
Slovenia	1,960,525
Spain	254,575,047
Sweden	314,531,463
United Kingdom	985,543,000
Total	**9,509,937,241**

Source: Reporting submitted by MS under Monitoring Mechanism Regulation (EU) n 525/2013

Types of activities

The EU and its Member States supported both activities that reduce greenhouse gas emissions (mitigation) and adaptation to the consequences of climate change. Of all climate funding, approximately 43% was devoted to mitigation and 23% to adaptation. The remaining 34% was multi-purpose climate finance with both adaptation and mitigation objectives, including the fight against deforestation and forest degradation in developing countries (REDD+).

Types of support instrument

Support instruments are divided into four main categories: "grants", "loans", "equity" and "others". Around € 3.8 billion was identified as grants and around € 4.4 billion as loans[22].

Support provided in 2014

As the deadline for reporting under Article 16 is 30 September each year, only the EU aggregate figure is available for 2014.

In 2014, the EU and its Member States collectively committed € 14.5 billion to support developing countries in tackling climate change. This figure includes climate finance sources from public budgets and other development financial institutions.

In 2013 and 2014, the European Institutions alone provided € 1 641 million to developing countries, 50% to mitigation and 50% to adaptation. In 2014, this support was provided entirely in the form of grants. Moreover, for the first time in 2014, the European Commission also reports climate finance provided by the European Investment Bank. This contribution amounted to € 2.1bn in 2014, mostly in the form of loans dedicated to mitigation activities.

[22] Please note that these results are incomplete, as several MS donors did not provide a complete breakdown of the type of support instrument