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Delegations will find attached document SWD(2014) 336 final.

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COMMISSION STAFF WORKING DOCUMENT
Accompanying the document

REPORT FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT AND THE COUNCIL
PROGRESS TOWARDS ACHIEVING THE KYOTO AND EU 2020 OBJECTIVES

(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)

{COM(2014) 689 final}

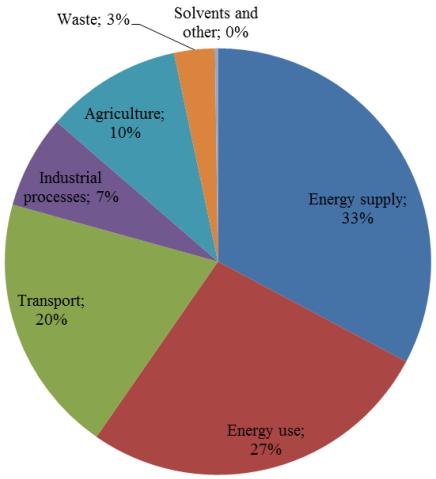
Contents

1. EMISSION TRENDS IN THE MAIN SECTORS.

1.1. Change in sectorial emissions

In 2012, energy-related activities, such as energy production and final use including transport, continued to be responsible for 80 % of emissions in the EU. Agriculture was responsible for 10 % of total emissions, followed by the sector Industrial Processes with 7 % and Waste with 3 %. Solvents and others accounted for less than 1%, as illustrated below:

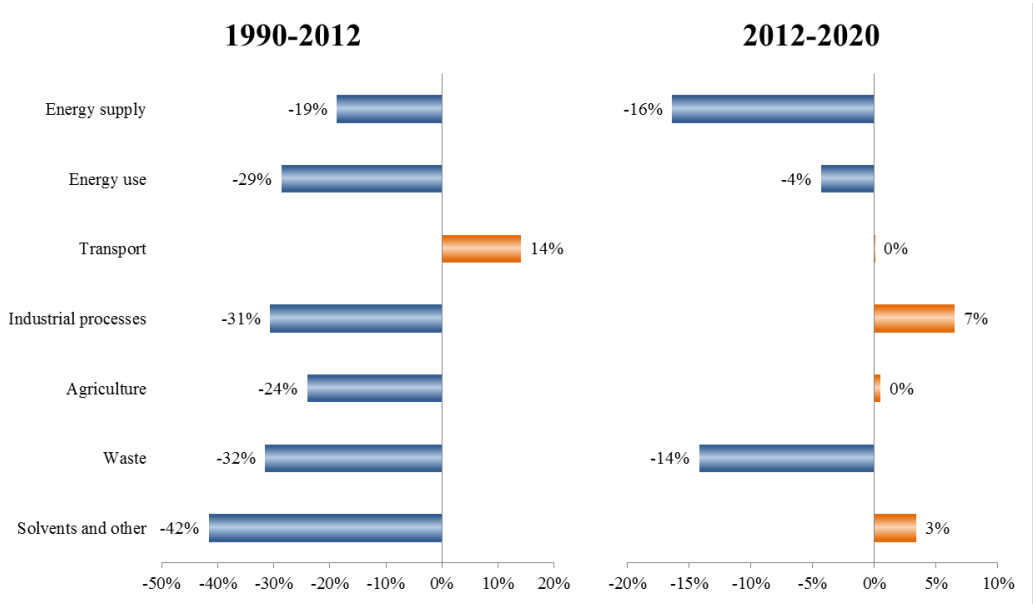
Figure 1: Share of emissions by sector in the EU-28; 2012



Source: EEA, EU greenhouse gas inventory, 2014 submission

Since 1990, emissions in energy, agriculture, industrial processes and waste have been decreasing while emissions in the transport sector significantly increased. 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: 2012 national inventories, EEA

According to projections based on existing measures, emissions from energy supply will further decrease between 2013 and 2020, mainly due to the renewable energy policy and the EU ETS. Emissions from energy use and, to a lesser extent, from transport are also projected to decrease. For transport, it is expected that the increasing demand will be compensated by the improvement of the efficiency of the means of transport and also to a limited extent by the promotion of rail. Emissions from agriculture are projected to remain almost stable until 2020. According to national projections, emissions in the industrial sector will start increasing again. Emissions from waste will continue to decrease while those from solvents and other sectors will increase.

1.2. Energy supply and use, excluding transport

Table 1: GHG emissions from energy supply and use, excluding transport (1990-2012)

	Share in 1990 total emissions	**Share in 2012 total emissions**	**Change 1990-2012**	**Change 2000-2012**
EU	63.0 %	59.7 %	-23.5 %	-12.1 %

Total emissions from energy, excluding transport, fell by nearly a quarter over the period 1990-2012. The two biggest contributors to emissions from energy (fossil fuel combustion) were energy supply and use, together accounting for nearly 60 % of the EU total emissions (excluding LULUCF). There is a slight contraction of the share of these emissions of about three percentage points compared to 1990.

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 (40 %). Public electricity and heat production alone was responsible for 27 % of EU total emissions (excluding LULUCF) in 2012.

Energy supply emissions showed a 16 % 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 natural gas but also a strong uptake of renewables. Regarding the latter, the share of renewables in gross final energy consumption in the EU reached 14.1 % in 2012.[1]

When it comes to **energy use**, most emissions came from burning fuels in the **residential and commercial sectors** (17 % of energy emissions), followed by **manufacturing industries** (15 %). Energy-related emissions in industry experienced a decline of over 38 % since 1990, with a sharp fall in 2009 due to the effects of the economic crisis, rebounding slightly in 2010 but then again returning to a declining trend. For the residential sector, emissions are also linked to climatic conditions (e.g. colder winters that require more heating or hotter summers that require more cooling) and can show annual fluctuations. The residential and commercial sectors emissions have also shown a decline (-17 %) since 1990 and are one of the major contributors to lower GHG emissions in the EU.[2]

1.3. Transport

Table 2: GHG emissions from transport (1990-2012)

	Share in 1990 total emissions	**Share in 2012 total emissions**	**Change 1990-2012**	**Change 2000-2012**
EU	13.9 %	19.7 %	14.1 %	-2.7 %

Transport is the only sector that increased emissions in the EU over the period 1990-2012: an increase of over 14 %, yet with a downward trend since 2007. The share of transport in total emissions was 19.7 % in 2012, marking an increase of 5.8 percentage points since 1990.

The biggest emission source within transport was by far **road transport**, responsible for 94 % of all transport-related emissions. **Domestic aviation** (i.e. within national boundaries) comes second with a much smaller share of less than 2 % of transport emissions in the EU. The remaining modes, such as railways, inland navigation and other comprise about 4 % of transport emissions. Unlike road transport and aviation, they have experienced large declines of emissions, for railways over 46 % since 1990 levels, due the electrification of railway networks.

Emissions from road and domestic aviation have continued to grow since 1990, peaking in 2007 after which there is a decline. Over the entire period, road transport emissions increased by 16.7 % and domestic aviation by 13.6 %.

However, when we also consider **international aviation** (i.e. flights across the borders of a single EU country), the increase in combined emissions from aviation since 1990 is much larger: 79.2 %. This

[1] For further analysis on the drivers behind emission reductions in the energy sector, see "Why did greenhouse gas emissions decrease in the EU between 1990 and 2012?", an EEA analysis, available: http://www.eea.europa.eu/publications/why-are-greenhouse-gases-decreasing.

[2] For further analysis, see ibid.

makes the combined share of all aviation (domestic and international combined) 17 % of all transport emissions, while their share in the EU total emissions (excluding LULUCF) is 3.3 % – roughly equivalent to all emissions from waste.

Emissions from international aviation have grown rapidly since 1990, peaking in 2007 and then declining, with another smaller increase in 2011. In 2012, international aviation emissions were eight times larger than emissions from domestic aviation.

International aviation is reported as a memorandum item in the official greenhouse gas inventories and emissions from that source are not considered towards Kyoto targets.

1.4. Agriculture

Table 3: GHG emissions from agriculture (1990-2012)

	Share in 1990 total emissions	Share in 2012 total emissions	Change 1990-2012	Change 2000-2012
EU	11.0 %	10.3 %	-24.0 %	-10.0 %

Emissions from **agriculture** in the EU have also shown a steady decline since 1990 levels, with an overall decrease of nearly a quarter (24 %). The most prevalent greenhouse gas emitted from agriculture are methane (CH_4) and nitrous acid (NO_2), with respectively 25 and 298 times the global warming potential of carbon dioxide.[3]

In 2012, agriculture emissions amounted to 10.3% of the EU total (without LULUCF),. This share has slightly decreased since 1990 (11% in 1990).

Half of the agriculture-related emissions came from agricultural soils (mostly N_2O), roughly one third from enteric fermentation in animals, primarily cattle (mostly CH_4) and the remainder from manure management and other activities. Each of these three major sources showed declines in emissions since 1990 of around 23-24%.

1.5. Industrial processes

Table 4: GHG emissions from industrial processes (1990-2012)

[3] According to the new UNFCCC reporting guidelines and IPCC 2006-Guidelines.

	Share in 1990 total emissions	Share in 2012 total emissions	Change 1990-2012	Change 2000-2012
EU	8.2 %	7.1 %	-30.6 %	-18.6 %

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 CO2 but so called fluorinated gases (F-gases) have a significant share too. In 2012, the share of industrial processes emissions in the EU total was 7.1 % of the EU total (excluding LULUCF), showing a small shrinkage compared to its share in 1990.

The biggest sources of industrial processes emissions in 2012 are **cement production and refrigeration and air conditioning equipment**, each responsible for about a quarter of industrial emissions. The next big source is the chemical industry (chiefly ammonia production) and metallurgy (chiefly iron and steel production), each with a 17% share of these emissions.

Overall emissions from industrial processes have shown one of the largest reductions since 1990 levels, compared to other sectors, where over 30% (nearly a third) of emissions have been cut. In the chemical industry, big cuts were achieved since 1990 in **nitric acid production** – from about 11% of all industrial emissions in 1990 to 3% in 2012; and **adipic acid production** – from 13% in 1990 to 0.2% in 2012. Another marked decrease took place for emissions from the production of halocarbons and SF_6.

On the other hand, emissions from the **consumption of halocarbons and SF_6** grew by 1013%, or over 11 times since 1990 levels. Most of this growth was in F-gases used in refrigeration and air conditioning. This specific source accounts for a very small share of EU total emissions (2%), yet its growth rate is alarming. 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[4], in contrast to all the others that have generally been reduced.

1.6. Waste management

Table 5: GHG emissions from waste management (1990-2012)

	Share in 1990 total emissions	Share in 2012 total emissions	Change 1990-2012	Change 2000-2012
EU	3.7 %	3.1 %	-31.5 %	-25.7 %

The last emissions sector with a share of 3 % of the EU total in 2012 is waste. Solid waste disposal on land (e.g. in landfills) continued to dominate this sector, accounting for nearly three quarters of waste emissions, followed by wastewater handling with less than a quarter and waste incineration/other responsible for the remainder.

[4] 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).

Waste emissions are also one of the sectors with largest reductions of nearly a third (31.5 %) since 1990 levels. The most prevalent gas was methane, comprising 88 % of all waste emissions. 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[5] or similar legislation in the Member States.

2. GHG EMISSIONS IN THE EU CANDIDATE COUNTRIES AND POTENTIAL CANDIDATES

Candidate countries

According to its latest National Communication dated 2009, **Albania**'s emission have decreased by 70 % between 1990 and 2000.

Iceland ratified the Kyoto Protocol in May 2002. For the second commitment period, Iceland and the 28 EU Member States will fulfil their commitments jointly. For the first commitment period, Iceland committed to keep the increase of GHG emissions (excluding those from single projects) within 10 % compared to its base year (1990) during the first commitment period (2008 - 2012). According to the latest inventory data, Iceland increased its emissions over the period 2008-2012 on average by 38.7% compared to its base year level. However, taking into account Decision 14/CP.7[6] regarding the impact of single projects on emissions (allowing Iceland to exclude emissions from the heavy industry from the commitment level under the Kyoto Protocol in the period 2008-2012), Iceland will achieve its target under the first commitment period.

The former Yugoslav Republic of Macedonia became a Party to the UNFCCC in January 1998 and ratified the Kyoto Protocol in November 2004. The former Yugoslav Republic of Macedonia is considered a developing country under the Convention and provided its third National Communication to the UNFCCC in March 2014. According to this document, total GHG emissions decreased by 22 % between 1990 and 2009. In 2005, CO_2 emissions per capita are at level of 5.7 tonnes CO_2-eq and GDP per capita amounted to 2300 €. Currently, there are no GHG projections for the former Yugoslav Republic of Macedonia.

Montenegro became a party to the UNFCCC in 2006 and ratified the Kyoto Protocol in 2007 as a non-Annex I country. It submitted its initial national communication in May 2010 which provides GHG inventory for 1990 and 2003. Between 1990 and 2003 total GHG emissions (excluding LULUCF) increased by around 4.9 %.

The **Republic of Serbia** is a non-Annex I Party to the United Nations Framework Convention on Climate Change (UNFCCC), and has ratified the Kyoto Protocol. Serbia submitted its Initial National Communication in November 2010, with GHG inventories for 1990 and 1998, as well as projections

[5] Council Directive 1999/31/EC of 26 April 1999 on the landfill of waste

[6] Decision 14/CP.7 sets rules regarding the impact of single projects. Single project which adds in any one year of the commitment period more than 5 per cent to the total CO_2 emissions in 1990 of a Party shall be reported separately. The Decision also sets conditions under which emissions from single projects shall not be included in national totals to the extent that they would cause the party to exceed its assigned amount.

for 2012 and for 2015. Its total GHG emissions - not taking into account the amounts removed by forests - decreased by around 17.9 % between 1990 and 1998. When the amounts removed by forests are taken into account, the decrease is estimated at 22.2 %. Serbia is currently preparing its second national communication to the UNFCCC. An up-to-date inventory of GHG emissions is not available. The Country has begun preparations for the Second National Communication (to cover GHG emissions for 2000 - 2010).

Turkey ratified the Kyoto Protocol in May 2009. However, for the time being, Turkey has no GHG reduction commitment. Turkey's first National Communication to the UNFCCC was submitted in January 2007. According to its latest GHG inventory, Turkey's emissions amounted to 439.9 $MtCO_2$-eq in 2012. Emissions increased of 133,4 % compared to 188,5 $MtCO_2$-eq. in 1990. The emissions also increased by 3,7 % between 2011 and 2012. Between 1990 and 2012, per capita GHG emissions have increased in Turkey. However, with a 5.9 tonnes CO_2-eq per capita, emissions in Turkey remain significantly below the average EU of 9 tonnes. Turkey's emissions intensity is 20 % higher than in the EU. Turkey has not performed any projections.

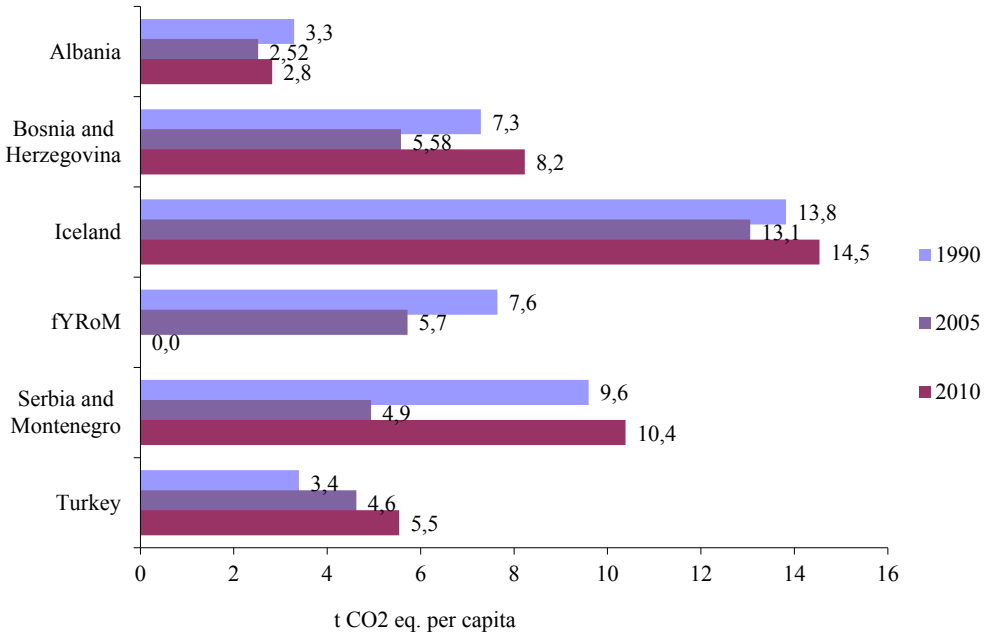
Potential candidates

Bosnia and Herzegovia is a non-annex I country while Kosovo* has not ratified yet the UNFCCC..

Bosnia and Herzegovina submitted its second National Communication in November 2013 according to which emission decreased by 48 % between 1991 and 2001. No data is available for Kosovo.

* This designation is without prejudice to positions on status, and is in line with UNSCR 1244/1999 and the ICJ Opinion on the Kosovo declaration of independence.

Figure 3: GHG emissions per capita in the EU candidates and potential candidates



Source: UNFCCC submissions, EDGAR database (see: http://edgar.jrc.ec.europa.eu/index.php)

3. IMPACT OF THE ECONOMIC CRISIS ON GHG EMISSIONS

The impact of the economic crisis on emissions trends can be assessed by developing a counterfactual growth scenario. Total GHG emissions can be considered in light of their relationship to GDP and the ratio of emissions to GDP, known as GHG emissions intensity of the economy.

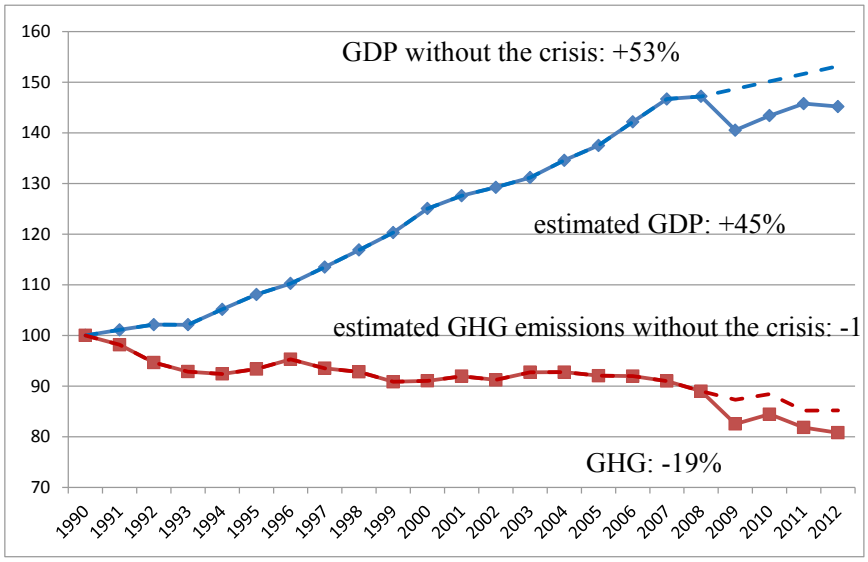
During the 2008-2012 period, the EU GDP decreased by 1.2 % as the result of the economic downturn. The GHG emission intensity of the economy improved by 8 % during this period, mainly due to improvements in the energy intensity of the economy and the decrease of fossil fuel in primary energy consumption (see section 4.3 of the main document).

In the counterfactual growth scenario, an annual 1 % GDP growth is assumed between 2008 and 2012 (i.e. a 4.1 % growth over the period instead of a contraction of the economy by 1.2 %). The GHG emissions intensity is assumed to have decreased by the same quantity regardless of the economic crisis .On this basis, the total GHG emission would have decreased by 4.2 % instead of 9.2 % over the period. Accordingly, under such a counterfactual scenario, the total GHG emissions (excluding LULUCF and international aviation) would have been 15 % lower in 2012 as compared to 1990, instead of 19 % (see

Figure 4).

The analysis carried by the European Environment Agency (see section 4.3) and the above-described counterfactual analysis show that the economic crisis contributed to less than half of the reduction observed during this period (2008-2012).

Figure 4: Counterfactual analysis - estimate of the impact of the economic crisis on GHG emission reduction (excl. LULUCF and international aviation)



Source: European Commission

4. SERIES OF TABLES: SUPPORTING DATA

Table 6: GHG emissions for 2008–12, with flexible mechanisms and carbon sinks compared with Kyoto Targets

			Kyoto or burden sharing target			*GHG emissions*				*Flexible Mechanisms [total 2008-2012]*			*Carbon sinks [total 2008-2012]*	
Country	**1990**	**Base year (1)**	***Average 2008-2012***	***Target***	***Cumulative 2008-2012 (AAU budget)***	***Total [2008-2012]***	***Average [2008-2012]***	***GHG emissions 2012***	***Change 2012 relative to base year***	***CER use in ETS (phase 2)***	***ERU use in ETS (phase 2)***	***Planned used of AAUs, CER and ERUs at gov. level***	***Removal or emissions of sinks activities (Art 3.3 & 3.4 of KP)***	***(4) Cumulative gap between relevant AAU budget and emissions, incl. carbon sinks and flexible mechanisms***
	Mt CO_2	Mt CO_2	Mt CO_2	%	Mt CO_2	Mt CO_2	Mt CO_2	Mt CO_2	%	Mt CO_2	Mt CO_2	Mt CO_2	Mt CO_2	%
Austria	78,1	79,0	68,8	-13,0	343,9	414,7	82,9	80,1	1,3	9,0	5,0	-80,0(3)	-6,8	-7,6%
Belgium	143,0	145,7	134,8	-7,5	674,0	626,3	125,3	116,5	-20,0	13,7	5,4	-29,0	1,1	-13,0%
Bulgaria	109,1	132,6	122,0	-8,0	610,0	311,9	62,4	61,0	-54,0	9,8	13,6	18,0	-3,6	-46,3%
Croatia	31,9	31,3	29,8	-5,0	148,8	144,6	28,9	26,4	-15,7	0,0	0,0	0,0	-4,9	-5,7%
Cyprus	6,1	10,0	6,1	-	30,4	49,8	10,0	9,3	-7,0	1,8	0,9	0,0	0,0	No target
Czech Republic	196,1	194,2	178,7	-8,0	893,5	680,1	136,0	131,5	-32,3	19,9	18,7	125,0	-6,6	-13,8%
Denmark	68,7	69,3	55,8	-19,6	278,8	294,5	58,9	51,6	-25,5	5,0	7,5	-13,0	-8,6	-5,3%
Estonia	40,6	42,6	39,2	-8,0	196,1	95,3	19,1	19,2	-55,0	0,4	2,3	92,1	2,4	-4,2%
Finland	70,3	71,0	71,0	0,0	355,0	338,4	67,7	61,0	-14,1	12,3	4,1	1,0	-2,9	-9,9%
France	557,4	563,9	563,9	0,0	2819,6	2538,7	507,7	490,1	-13,1	56,6	19,0	8,6	-16,1	-12,9%
Germany	1248,0	1232,4	973,6	-21,0	4868,1	4706,6	941,3	939,1	-23,8	169,3	132,9	13,6	-39,7	-7,9%
Greece	104,9	107,0	133,7	25,0	668,7	598,5	119,7	111,0	3,7	16,6	11,3	0,0	-2,1	-18,7%
Hungary	97,6	115,4	108,5	-6,0	542,4	336,0	67,2	62,0	-46,3	7,0	2,8	20,0	-11,0	-35,9%

			Kyoto or burden sharing target			*GHG emissions*				*Flexible Mechanisms [total 2008-2012]*			*Carbon sinks [total 2008-2012]*	
Country	**1990**	**Base year (1)**	***Average 2008-2012***	***Target***	***Cumulative 2008-2012 (AAU budget)***	***Total [2008-2012]***	***Average [2008-2012]***	***GHG emissions 2012***	***Change 2012 relative to base year***	***CER use in ETS (phase 2)***	***ERU use in ETS (phase 2)***	***Planned used of AAUs, CER and ERUs at gov. level***	***Removal or emissions of sinks activities (Art 3.3 & 3.4 of KP)***	***(4) Cumulative gap between relevant AAU budget and emissions, incl. carbon sinks and flexible mechanisms***
	Mt CO_2	Mt CO_2	Mt CO_2	%	Mt CO_2	Mt CO_2	Mt CO_2	Mt CO_2	%	Mt CO_2	Mt CO_2	Mt CO_2	Mt CO_2	%
Ireland	55,2	55,6	62,8	13,0	314,2	308,5	61,7	58,5	5,3	3,7	2,9	-8,4	-16,3	-13,3%
Italy	519,1	516,9	483,3	-6,5	2416,3	2476,8	495,4	460,1	-11,0	66,4	29,2	-10,2	-75,3	-4,7%
Latvia	26,2	25,9	23,8	-8,0	119,2	56,5	11,3	11,0	-57,6	1,2	0,5	28,8	-6,2	-32,3%
Lithuania	48,7	49,4	45,5	-8,0	227,3	109,8	22,0	21,6	-56,2	3,3	3,5	38,1	-5,7	-37,2%
Luxembourg	12,9	13,2	9,5	-28,0	47,4	60,1	12,0	11,8	-10,1	0,8	0,0	-14,2	-0,4	-4,1%
Malta	2,0	3,0	2,0	-	10,0	15,2	3,0	3,1	3,2	0,0	1,1	0,0	0,0	No target
Netherlands	211,8	213,0	200,3	-6,0	1001,3	997,1	199,4	191,7	-10,0	17,6	11,0	-44,9	2,1	-7,1%
Poland	466,4	563,4	529,6	-6,0	2648,2	2006,3	401,3	399,3	-29,1	64,9	30,7	120,0	-26,1	-22,8%
Portugal	60,8	60,1	76,4	27,0	381,9	361,6	72,3	68,8	14,3	10,1	4,6	-8,1	-50,3	-31,1%
Romania	247,7	278,2	256,0	-8,0	1279,8	615,8	123,2	118,8	-57,3	15,9	16,3	317,9	-18,2	-28,5%
Slovakia	73,2	72,1	66,3	-8,0	331,4	226,5	45,3	42,7	-40,7	9,7	0,3	42,0	-1,4	-20,6%
Slovenia	18,4	20,4	18,7	-8,0	93,6	98,5	19,7	18,9	-7,1	1,5	4,7	0,0	-6,6	-7,8%
Spain	283,7	289,8	333,2	15,0	1666,2	1792,0	358,4	340,8	17,6	83,5	23,6	-145,0	-52,8	-12,4%
Sweden	72,7	72,2	75,0	4,0	375,2	305,5	61,1	57,6	-20,2	8,0	2,1	1,3	-10,6	-24,7%
United Kingdom	775,5	776,3	679,3	-12,5	3396,5	2982,0	596,4	580,8	-25,2	55,3	22,1	0,0	-14,2	-13,0%
EU-15	**4262,1**	**4265,5**	**3924,3**	-8,0	**19621,4**	**18801,2**	**3760,2**	3.619,5	-15,1	**527,7**	**280,6**	**-328,3**	**-293,0**	**-10,5%**
EU-28 (2)	**5626,3**	**5804,1**	**5355,3**	**-**	**26776,7**	**23547,5**	**4709,5**	**4.544,2**	**-21,7**	**663,1**	**375,8**	**473,9**	**-380,9**	**-14,4%**

(1) For EU-15 the base year for carbon dioxide, methane and nitrous oxide is 1990; for the fluorinated gases 12 Member States have selected 1995 as the base year, whereas Austria, France and Italy have chosen 1990. As the EU-15 inventory is the sum of Member States' inventories, the EU-15 base year estimates for fluorinated gas emissions are the sum of 1995 emissions for 12 Member States and 1990 emissions for Austria, France and Italy. The EU-15 base year emissions also include emissions from deforestation for the Netherlands, Portugal and the UK. The base year for carbon dioxide, methane and nitrous oxide for Bulgaria is 1988, for Hungary is the average of 1985-1987, for Slovenia 1986, for Poland 1988, for Romania 1989; for the fluorinated gases Slovakia has chosen 1990 as the base year and Romania 1989 all other central and eastern European members states have selected 1995. 1990 values have taken considered for Cyprus and Malta.

(2) The base year emissions for EU-28 are calculated with average emissions 2008-2012 for Malta and Cyprus.

(3) This figure represents the upper limit of the amount of Kyoto Protocol's flexible mechanisms that can be acquired under the Austrian legislation

(4) Including ETS and non-ETS.

Table 7.a: GHG emissions in the non ETS sector for 2008–2012, compared with total allowed non-ETS emissions

							Non ETS emissions with carbon sink removals and use of Kyoto mechanisms			*Non-ETS Gap*
Country	*1990*	*Base year*	*Total allowed Non-ETS emissions (total [2008-2012])*	*Non- ETS emissions (total [2008-2012])*	*Use of Flexible mechanisms at gov. level (total [2008-2012])*	*Removal (-) or emissions (+) of sinks activities (Art 3.3 & 3.4 of KP)*	*Annual average 2008-2012*	*Non-ETS Emissions as % of 1990 emissions*	*Non-ETS Emissions as % of BY emissions*	*Gap between non-ETS emissions and allowed non-ets (total 2008-2012)*
	Mt CO_2	Mt CO_2	Mt CO_2	Mt CO_2	Mt CO_2	Mt CO_2	Mt CO_2	%	%	Mt CO_2
Austria	78,1	79,0	189,5	265,3	-80,0	-6,8	35,7	46%	45%	-11,0
Belgium	143,0	145,7	381,1	385,3	-29,0	1,1	71,5	50%	49%	-23,7
Bulgaria	109,1	132,6	411,4	133,0	18,0	-3,6	29,5	27%	22%	-264,1
Croatia (4)	31,9	31,3	148,8	144,6	0,0	-4,9	28,0	88%	89%	-9,0
Cyprus (2)	6,1	10,0	3,1	24,8	0,0	0,0	5,0	82%	50%	not applicable
Czech Republic	196,1	194,2	460,6	306,9	125,0	-6,6	85,1	43%	44%	-35,3
Denmark (1)	68,7	69,3	156,6	177,6	-13,0	-8,6	31,2	45%	45%	-0,6
Estonia	40,6	42,6	130,5	28,5	92,1	2,4	24,6	61%	58%	-7,5
Finland	70,3	71,0	167,3	162,0	1,0	-2,9	32,0	45%	45%	-7,3
France	557,4	563,9	2159,7	1978,6	8,6	-16,1	394,2	71%	70%	-188,6
Germany	1248,0	1232,4	2646,5	2447,6	13,6	-39,7	484,3	39%	39%	-225,0
Greece	104,9	107,0	327,1	284,7	0,0	-2,1	56,5	54%	53%	-44,5
Hungary	97,6	115,4	410,2	219,6	20,0	-11,0	45,7	47%	40%	-181,6
Ireland	55,2	55,6	209,3	220,9	-8,4	-16,3	39,2	71%	71%	-13,1
Italy	519,1	516,9	1407,1	1510,7	-10,2	-75,3	285,1	55%	55%	18,2
Latvia	26,2	25,9	96,2	42,3	28,8	-6,2	13,0	49%	50%	-31,4

							Non ETS emissions with carbon sink removals and use of Kyoto mechanisms			*Non-ETS Gap*
Country	***1990***	***Base year***	***Total allowed Non-ETS emissions (total [2008-2012])***	***Non- ETS emissions (total [2008-2012])***	***Use of Flexible mechanisms at gov. level (total [2008-2012])***	***Removal (-) or emissions (+) of sinks activities (Art 3.3 & 3.4 of KP)***	***Annual average 2008-2012***	***Non-ETS Emissions as % of 1990 emissions***	***Non-ETS Emissions as % of BY emissions***	***Gap between non-ETS emissions and allowed non-ets (total 2008-2012)***
	Mt CO_2	Mt CO_2	Mt CO_2	Mt CO_2	Mt CO_2	Mt CO_2	Mt CO_2	%	%	Mt CO_2
Lithuania	48,7	49,4	184,3	80,2	38,1	-5,7	22,5	46%	46%	-71,8
Luxembourg	12,9	13,2	35,0	49,5	-14,2	-0,4	7,0	54%	53%	0,0
Malta (2)	2,0	3,0	-0,8	5,4	0,0	0,0	1,1	55%	36%	not applicable
Netherlands	211,8	213,0	564,0	591,4	-44,9	2,1	109,7	52%	52%	-15,4
Poland	466,4	563,4	1619,3	1011,6	120,0	-26,1	221,1	47%	39%	-513,8
Portugal	60,8	60,1	222,5	229,0	-8,1	-50,3	34,1	56%	57%	-51,9
Romania	247,7	278,2	908,4	356,5	317,9	-18,2	131,2	53%	47%	-252,3
Slovakia	73,2	72,1	168,7	114,7	42,0	-1,4	31,1	42%	43%	-13,4
Slovenia	18,4	20,4	52,5	57,9	0,0	-6,6	10,3	56%	50%	-1,2
Spain	283,7	289,8	905,0	1101,8	-145,0	-52,8	180,8	64%	62%	-1,0
Sweden	72,7	72,2	264,3	207,3	1,3	-10,6	39,6	54%	55%	-66,3
United Kingdom	775,5	776,3	2172,7	1795,6	0,0	-14,2	356,3	46%	46%	-391,4
EU-15	**4262,1**	**4265,5**	**11822,0**	**11407,4**	**-328,3**	**-293,0**	**2.157,2**	**51%**	**51%**	**-1035,9**
EU-28 (3)	**5626,3**	**5804,1**	**16439,9**	**13933,4**	**473,9**	**-380,9**	**2799,2**	**50%**	**48%**	**-2443,8**

(1) Denmark's burden-sharing target and allowed non-ETS emissions include a base–year compensation of 1 million AAUs per ear of the first commitment period.

(2) No commitment under the Kyoto Protocol. The base year for Malta and Cyprus is calculated with average emissions 2008-2012.

(3) The base year emissions for EU-28 are calculated with average emissions 2008-2012 for Malta and Cyprus

(4) Croatia had no ETS emissions during the 2008-2012 period.

Table 7.b Summary table: GHG emissions 2008-2012 and use of Kyoto mechanisms (by governments and by ETS operators) and carbon sinks.

		GHG emissions		*With Kyoto Flexible Mechanisms*		*With Kyoto flexible mechanisms and Carbon sinks*	
Country	***Base year***	***average [2008-2012]***	***change from base year***	***average [2008-2012].***	***change from base year.***	***average [2008-2012]***	***change from base year***
	Mt CO2	Mt CO2	%	Mt CO2	%	MtCO2	%
EU-15	4265,5	3760,2	-11,8%	3.532,9	-17,2%	3.474,3	-18,5%
EU-28 (1)	5804,1	4709,5	-18,9%	4.596,5	-20,8%	4.520,3	-22,1%

(1)Note: The base year emissions for EU-28 are calculated with average emissions 2008-2012 for Malta and Cyprus.

Table 8: Key figures of the emission trading scheme for 2008-2012 and 2013 for EU-28

		Freely allocated allowances							verified emissions							Difference between verified emissions and allocated allowances						
Sector	**Number of installations**	**2008**	**2009**	**2010**	**2011**	**2012**	**[Accum 2008-2012]**	**2013**	**2008**	**2009**	**2010**	**2011**	**2012**	**Accum [2008-2012]**	**2013**	**2008**	**2009**	**2010**	**2011**	**2012**	**[2008 - 2012]**	**2013**
	Mt CO2	Mt CO2	Mt CO2	Mt CO2	Mt CO2	Mt CO2	Mt CO2	Mt CO2	Mt CO2	Mt CO2	Mt CO2	Mt CO2	Mt CO2	Mt CO2	Mt CO2	%	%	%	%	%	%	%
20 All combustion of fuels (20.0 + 20.1)	7.147	1286,7	1294,4	1316,2	1331,7	1363,1	6592,1	279,0	1534,1	1397,4	1432,7	1398,2	1389,3	7151,7	1355,8	19%	8%	9%	5%	2%	8%	386 %
21 All refining of mineral oil (21.0 + 21.2)	140	148,1	148,3	152,7	152,2	155,0	756,4	105,2	150,4	141,9	139,6	138,3	133,4	703,7	134,2	2%	-4%	-9%	-9%	-14%	-7%	27%
22 All production of coke (22.0 + 22.3)	19	22,6	22,6	22,9	22,6	22,6	113,3	21,5	21,0	15,8	20,0	19,5	16,8	93,1	23,0	-7%	-30%	-13%	-14%	-26%	-18%	7%
23 All metal ore roasting or sintering (23.0 + 23.4)	14	4,5	4,2	4,3	4,3	4,3	21,5	3,0	4,1	2,8	3,6	4,0	3,8	18,3	3,5	-8%	-35%	-15%	-8%	-11%	-15%	17%
24 All production of pig iron or steel (24.0 + 24.5)	262	169,2	169,4	169,5	170,6	170,7	849,3	139,5	119,8	83,9	100,8	99,9	97,5	501,9	101,0	-29%	-50%	-41%	-41%	-43%	-41%	-28%
25 Production or processing of ferrous metals	187	3,9	3,9	4,0	4,0	4,0	19,7	9,9	3,1	2,1	2,3	1,9	2,0	11,3	10,0	-19%	-47%	-42%	-52%	-51%	-42%	1%
26 Production of primary aluminium	30	0,5	0,5	0,5	0,5	0,5	2,4	6,7	0,4	0,3	0,3	0,3	0,3	1,6	6,9	-22%	-42%	-40%	-36%	-28%	-33%	3%
27 Production of secondary aluminium	28	0,1	0,1	0,1	0,1	0,1	0,4	0,9	0,1	0,0	0,0	0,0	0,0	0,1	0,9	-31%	-69%	-71%	-75%	-82%	-66%	7%
28 Production or processing of non-ferrous metals	67	0,1	0,1	0,1	0,1	0,1	0,6	5,7	0,0	0,0	0,0	0,0	0,1	0,2	5,3	-67%	-66%	-60%	-66%	-27%	-57%	-7%
29 All production of cement clinker (29.0 + 29.6)	450	196,0	197,5	199,0	198,8	200,5	991,8	156,0	176,8	142,6	142,1	140,8	130,9	733,2	129,3	-10%	-28%	-29%	-29%	-35%	-26%	-17%
30 Production of lime, or calcination of dolomite/magnesite	75	13,4	13,9	13,9	13,9	13,9	69,0	10,4	11,9	9,0	10,3	10,5	9,8	51,5	10,3	-11%	-35%	-26%	-24%	-30%	-25%	-1%
31 All manufacture of glass (31.0 + 31.7)	383	24,9	25,2	25,3	25,7	25,8	126,9	17,7	22,5	19,2	20,0	20,5	19,5	101,8	18,8	-10%	-24%	-21%	-20%	-24%	-20%	7%
32 All manufacture of ceramics (32.0 + 32.8)	1.007	18,3	18,6	18,7	18,2	17,8	91,6	14,9	13,4	9,1	9,0	9,0	7,9	48,4	12,8	-27%	-51%	-52%	-51%	-55%	-47%	-14%
33 Manufacture of mineral wool	13	0,2	0,2	0,2	0,3	0,3	1,1	0,3	0,1	0,1	0,2	0,2	0,2	0,9	0,4	-16%	-16%	-2%	-27%	-15%	-16%	36%
34 Production or processing of gypsum or plasterboard	33	0,2	0,2	0,2	0,2	0,2	1,0	0,8	0,2	0,1	0,2	0,2	0,2	0,8	1,0	-15%	-27%	-25%	-22%	-25%	-23%	19%
35 Production of pulp	58	2,4	2,4	2,4	2,4	2,4	12,0	2,7	1,9	1,7	1,8	1,7	1,7	8,7	1,7	-23%	-27%	-26%	-30%	-29%	-27%	-35%

		Freely allocated allowances							verified emissions							Difference between verified emissions and allocated allowances						
Sector	**Number of installations**	**2008**	**2009**	**2010**	**2011**	**2012**	**[Accum 2008-2012]**	**2013**	**2008**	**2009**	**2010**	**2011**	**2012**	**Accum [2008-2012]**	**2013**	**2008**	**2009**	**2010**	**2011**	**2012**	**[2008 - 2012]**	**2013**
	Mt CO2	Mt CO2	Mt CO2	Mt CO2	Mt CO2	Mt CO2	Mt CO2	Mt CO2	Mt CO2	Mt CO2	Mt CO2	Mt CO2	Mt CO2	Mt CO2	Mt CO2	%	%	%	%	%	%	%
36 All production of paper or cardboard (36.0 + 36.9)	662	36,9	37,8	38,6	38,8	39,5	191,6	29,4	30,5	27,1	29,2	28,1	26,9	141,9	26,1	-17%	-28%	-24%	-28%	-32%	-26%	-11%
37 Production of carbon black	4	0,1	0,1	0,1	0,1	0,1	0,7	0,3	0,1	0,1	0,1	0,1	0,1	0,6	0,2	-16%	-21%	-2%	-6%	-21%	-13%	-30%
38 Production of nitric acid	23	0,0	0,0	0,3	0,3	0,2	0,7	2,4	0,0	0,0	0,1	0,0	0,1	0,2	1,6	-	-	-75%	-81%	-76%	-77%	-32%
39 Production of adipic acid	2	0,0	0,0	0,0	0,0	0,0	0,0	0,5	0,0	0,0	0,0	0,0	0,0	0,0	0,1	-	-	-	-	-	-	-71%
41 Production of ammonia	20	1,1	2,4	1,8	1,7	1,6	8,7	12,2	1,1	1,0	1,2	1,4	1,4	6,1	13,7	3%	-57%	-37%	-17%	-13%	-30%	12%
42 Production of bulk chemicals	193	6,0	6,3	6,2	6,2	6,2	30,8	19,3	5,6	5,4	5,4	5,2	5,4	26,9	13,4	-6%	-15%	-13%	-16%	-13%	-13%	-31%
43 Production of hydrogen and synthesis gas	32	0,0	0,0	0,0	0,0	0,0	0,0	7,3	0,0	0,0	0,0	0,0	0,0	0,0	7,1	-	-	-	-	-	-	-2%
44 Production of soda ash and sodium bicarbonate	11	0,0	0,0	0,0	0,0	0,0	0,0	4,4	0,0	0,0	0,0	0,0	0,0	0,0	1,9	-	-	-	-	-	-	-57%
99 Old activity code 99. Other activity opted-in under Art. 24	523	22,8	24,0	21,1	24,1	25,8	117,8	15,6	22,6	19,8	20,1	24,6	19,8	106,9	25,0	-1%	-18%	-5%	2%	-23%	-9%	60%
20-99 All installations	11.383	1957,9	1972,0	1997,9	2016,7	2054,7	9999,3	865,6	2119,7	1879,6	1938,9	1904,5	1867,2	9709,9	1904,1	8%	-5%	-3%	-6%	-9%	-3%	120 %

Source: EEA EU ETS data viewer

Table 9: Overview on the EU ETS verified emissions and 2nd NAPs

Country	Average 2008-2012 ETS issued: Free Allowances + Auctions	Average 2008-2012 Freely allocated allowances	2008 verified emissions	2009 verified emissions	2010 verified emissions	2011 verified emissions	2012 verified emissions	*2008 verified emissions vs average annual EU ETS cap*	*2009 verified emissions vs average annual EU ETS cap*	*2010 verified emissions vs average annual EU ETS cap*	*2011 verified emissions vs average annual EU ETS cap*	*2012 verified emissions vs average annual EU ETS cap*	share of EU ETS in total GHG emissions in 2008-2012	share of CERs in total verified emissions 2008-2012	share of ERUs in total verified emissions 2008-2012
	Mt CO_2	Mt CO_2	Mt CO_2	Mt CO_2	Mt CO_2	Mt CO_2	Mt CO_2	%	%	%	%	%	%	%	%
Austria	30,9	30,5	32,1	27,4	30,9	30,6	28,4	3,9%	-11,4%	0,2%	-0,9%	-8,0%	36,0%	6,0%	3,3%
Belgium	58,6	56,7	55,5	46,2	50,1	46,2	43,0	-5,3%	-21,1%	-14,5%	-21,1%	-26,6%	38,5%	5,7%	2,2%
Bulgaria	39,7	39,7	38,3	32,0	33,5	40,0	35,0	-3,6%	-19,4%	-15,6%	0,7%	-11,8%	57,4%	5,5%	7,6%
Croatia	0,0	0,0	0,0	0,0	0,0	0,0	0,0		-	-	-	-	0,0%	-	-
Cyprus	5,5	5,5	5,6	5,4	5,1	4,6	4,4	1,9%	-2,0%	-7,6%	-15,9%	-19,9%	50,2%	7,1%	3,4%
Czech Republic	86,6	86,1	80,4	73,8	75,6	74,2	69,3	-7,2%	-14,8%	-12,7%	-14,3%	-20,0%	54,9%	5,3%	5,0%
Denmark	24,5	23,9	26,5	25,5	25,3	21,5	18,2	8,6%	4,1%	3,3%	-12,2%	-25,6%	39,7%	4,3%	6,4%
Estonia	13,1	13,1	13,5	10,4	14,5	14,8	13,5	3,2%	-20,9%	10,7%	12,9%	3,3%	70,1%	0,7%	3,4%
Finland	37,5	37,5	36,2	34,4	41,3	35,1	29,5	-3,7%	-8,5%	10,0%	-6,5%	-21,4%	52,1%	7,0%	2,3%
France	132,0	132,0	124,1	111,1	115,6	105,6	103,7	-6,0%	-15,8%	-12,4%	-20,0%	-21,5%	22,1%	10,1%	3,4%
Germany	444,3	400,3	472,9	428,3	454,9	450,3	452,6	6,4%	-3,6%	2,4%	1,4%	1,9%	48,0%	7,5%	5,9%
Greece	68,3	64,6	69,9	63,7	59,9	58,8	61,4	2,3%	-6,8%	-12,3%	-13,9%	-10,1%	52,4%	5,3%	3,6%
Hungary	26,4	24,9	27,2	22,4	23,0	22,5	21,3	3,1%	-15,2%	-13,0%	-15,0%	-19,5%	34,6%	6,0%	2,4%
Ireland	21,0	20,9	20,4	17,2	17,4	15,8	16,9	-2,8%	-17,9%	-17,2%	-24,8%	-19,4%	28,4%	4,2%	3,3%
Italy	201,8	201,8	220,7	184,9	191,5	190,0	179,1	9,3%	-8,4%	-5,1%	-5,9%	-11,3%	39,0%	6,9%	3,0%
Latvia	4,6	4,6	2,7	2,5	3,2	2,9	2,7	-40,3%	-45,8%	-29,4%	-36,3%	-40,3%	25,0%	8,3%	3,3%
Lithuania	8,6	7,9	6,1	5,8	6,4	5,6	5,7	-29,0%	-32,7%	-25,6%	-34,8%	-33,5%	27,0%	11,3%	11,7%

Country	Average 2008-2012 ETS issued: Free Allowances + Auctions	Average 2008-2012 Freely allocated allowances	2008 verified emissions	2009 verified emissions	2010 verified emissions	2011 verified emissions	2012 verified emissions	*2008 verified emissions vs average annual EU ETS cap*	*2009 verified emissions vs average annual EU ETS cap*	*2010 verified emissions vs average annual EU ETS cap*	*2011 verified emissions vs average annual EU ETS cap*	*2012 verified emissions vs average annual EU ETS cap*	share of EU ETS in total GHG emissions in 2008-2012	share of CERs in total verified emissions 2008-2012	share of ERUs in total verified emissions 2008-2012
	Mt CO_2	Mt CO_2	Mt CO_2	Mt CO_2	Mt CO_2	Mt CO_2	Mt CO_2	%	%	%	%	%	%	%	%
Luxembourg	2,5	2,5	2,1	2,2	2,3	2,1	2,0	-15,6%	-12,3%	-9,5%	-17,5%	-20,0%	17,6%	7,5%	0,1%
Malta	2,1	2,1	2,0	1,9	1,9	1,9	2,1	-5,8%	-11,5%	-12,4%	-9,9%	-4,2%	64,3%	0,0%	11,0%
Netherlands	87,5	84,3	83,5	81,0	84,7	80,0	76,4	-4,5%	-7,3%	-3,1%	-8,6%	-12,6%	40,7%	4,3%	2,7%
Poland	205,8	205,7	204,1	191,2	199,7	203,0	196,6	-0,8%	-7,1%	-2,9%	-1,3%	-4,4%	49,6%	6,5%	3,1%
Portugal	31,9	31,9	29,9	28,3	24,2	25,0	25,2	-6,2%	-11,4%	-24,2%	-21,6%	-20,8%	36,7%	7,6%	3,4%
Romania	74,3	74,2	63,8	49,1	47,3	51,2	47,9	-14,1%	-33,9%	-36,3%	-31,0%	-35,6%	42,1%	6,1%	6,3%
Slovakia	32,5	32,5	25,3	21,6	21,7	22,2	20,9	-22,1%	-33,6%	-33,3%	-31,7%	-35,7%	49,4%	8,7%	0,3%
Slovenia	8,2	8,2	8,9	8,1	8,1	8,0	7,6	7,8%	-1,9%	-1,1%	-2,8%	-7,4%	41,3%	3,7%	11,5%
Spain	152,2	152,2	163,5	136,9	121,5	132,7	135,6	7,4%	-10,1%	-20,2%	-12,8%	-10,9%	38,5%	12,1%	3,4%
Sweden	22,2	22,2	20,1	17,5	22,7	19,9	18,2	-9,5%	-21,1%	2,2%	-10,5%	-18,1%	32,2%	8,1%	2,2%
United Kingdom	244,8	220,2	265,1	231,9	237,3	220,9	231,3	8,3%	-5,2%	-3,0%	-9,8%	-5,5%	39,8%	4,7%	1,9%
EU-15	**1559,9**	**1481,3**	**1622,3**	**1436,4**	**1479,5**	**1434,3**	**1421,5**	**4,0%**	**-7,9%**	**-5,2%**	**-8,1%**	**-8,9%**	39,3%	7,1%	3,8%
EU-28	**2067,4**	**1985,9**	**2100,3**	**1860,4**	**1919,5**	**1885,3**	**1848,6**	**1,6%**	**-10,0%**	**-7,2%**	**-8,8%**	**-10,6%**	40,8%	6,9%	3,9%

Source: EEA EU ETS data viewer, CITL, UNFCCC

Table 10: Planned government use of the Kyoto mechanisms

Mt CO_2

			Intended use of flexible mechanisms at government level 2008-2012 (Questionnaires from 2014)						
Country	***Planned use of Kyoto mechanisms at government level***	***Type of Kyoto mechanisms***	***Total use***	***AAU***	***CER***	***ERU***	***Allocated budget if intended acquisition***	***ERU issued as of 06/2014 (1)***	***Net total intended use of flexible mechanisms by governments***
Austria	Yes	IET, JI, CDM	80,0	10,4	26,4	43,2	611,0	0,0	80,0[3]
Belgium	Yes	IET, JI, CDM	29,4	NA [4]	NA	NA	240,6	-0,4	29,0
Bulgaria	Yes	IET, JI	-18,0	0,0	0,0	-7,0	-	-8,4	-18,0
Croatia	No	-	0,0	0,0	0,0	0,0	-	0,0	0,0
Cyprus	not applicable	-	0,0	NO	NO	NO	-	0,0	0,0
Czech Republic	Yes	-	-125,0	NA	NA	NA	-	-4,4	-125,0
Denmark	Yes	IET, CDM, JI	13,0	NA	NA	NA	160,9	0,0	13,0
Estonia	Yes	IET, JI	-92,0	-91,0	0,0	-1,0	-	-1,1	-92,1
Finland	No	JI, CDM	0,0	0,0	0,0	0,0	-	-1,0	-1,0
France	No	JI, CDM	-9,5	0,0	0,0	-9,5	-	-8,6	-8,6
Germany	No	-	0,0	0,0	0,0	0,0	-	-13,6	-13,6
Greece	No	-	0,0	0,0	0,0	0,0	-	0,0	0,0
Hungary	Yes	IET, JI	-20,0	NA	NA	NA	-	-7,4	-20,0
Ireland	Yes	IET, JI, CDM	8,4	1,8	6,4	0,1	290,0	0,0	8,4
Italy	Yes	IET, JI, CDM	10,2	2,0	8,0	0,2	NA	0,0	10,2
Latvia	Yes	IET, JI	-28,8	-28,7	0,0	0,0	0,0	0,0	-28,8
Lithuania	Yes	IET, JI	-38,3	-29,8	0,0	-8,6	0,0	-8,6	-38,3

Mt CO_2

			Intended use of flexible mechanisms at government level 2008-2012 (Questionnaires from 2014)						
Country	***Planned use of Kyoto mechanisms at government level***	***Type of Kyoto mechanisms***	***Total use***	***AAU***	***CER***	***ERU***	***Allocated budget if intended acquisition***	***ERU issued as of 06/2014 (1)***	***Net total intended use of flexible mechanisms by governments***
Luxembourg	Yes	IET, JI, CDM	14,2	9,0	4,7	0,6	120 to 125	0,0	14,2
Malta	not applicable	-	0,0	NO	NO	NO	-	NA	0,0
Netherlands	Yes	IET, JI, CDM	44,9	3,0	28,2	13,7	446,1	0,0	44,9
Poland	Yes	IET, JI	-120,1	-100,0	0,0	-20,1	-	-20,1	-120,1
Portugal	Yes	IET, JI, CDM	8,1	NA	NA	NA	124,8	0,0	8,1
Romania	Yes	IET, JI	-317,9	-300,0	0,0	-17,9	-	-17,9	-317,9
Slovakia	Yes	IET, JI	-42,0	-41,5	0,0	-0,5	-	0,5	-42,0
Slovenia	Yes	-	0,0	0,0	0,0	0,0	-	0,0	0,0
Spain	Yes	IET, JI, CDM	145,9	NA	NA	NA	400,0	-0,9	145,0
Sweden	No	-	0,0	0,0	0,0	0,0	-	-1,3	-1,3
United Kingdom	No	-	0,0	0,0	0,0	0,0	-	0,0	0,0
EU-15			**344,5**	**26,2**	**73,7**	**48,2**	**2.523,3**	**-25,7**	**328,3**
EU-28			**-457,6**	**-564,8**	**73,7**	**-6,9**	**2.523,3**	**-94,1**	**-473,9**

Notes: IET: International Emissions Trading; JI: Joint Implementation; CDM: Clean Development Mechanism. Net total intended use: positive sign (+) acquiring; negative sign (-) selling.
Cyprus and Malta have no emissions targets for the period 2008-2012 under the Kyoto Protocol.

Sources:

(1) Source: UNFCCC (UNFCCC (http://ji.unfccc.int/statistics/2014/ERU_Issuance.pdf)

(2)Questionnaires submitted under the greenhouse gas Monitoring Mechanism Regulation(Regulation (EU) 525/2013) (April 2014)

(3) This figure represents the upper limit of the amount of Kyoto Protocol's flexible mechanisms that can be acquired under the Austrian legislation

(4) NA: not applicable; NE: not estimated.

Table 11: Projected net carbon stock changes under Articles 3.3 and 3.4 for the first commitment period

	Article 3.3	*Article 3.4*						
Unit: MtCO2 eq	***Net carbon stock change***	***Forest Management***	***Cropland Management***	***Grazing Land Management***	***Revegetation***	***Net carbon stock change***	***Total RMUs***	***Total RMUs (average [2008-2012])***
Austria	-6,8	0,0	0,0	0,0	0,0	0,0	-6,8	-1,4
Belgium	1,1	0,0	0,0	0,0	0,0	0,0	1,1	0,2
Bulgaria	-3,6	0,0	0,0	0,0	0,0	0,0	-3,6	-0,7
Croatia	0,2	-5,1	0,0	0,0	0,0	-5,1	-4,9	-1,0
Cyprus	0,0	0,0	0,0	0,0	0,0	0,0	-	-
Czech Republic	-0,7	-5,9	0,0	0,0	0,0	-5,9	-6,6	-1,3
Denmark	0,3	-1,2	-8,2	0,6	0,0	-8,9	-8,6	-1,7
Estonia	2,4	0,0	0,0	0,0	0,0	0,0	2,4	0,5
Finland	14,0	-17,0	0,0	0,0	0,0	-17,0	-2,9	-0,6
France	28,5	-44,6	0,0	0,0	0,0	-44,6	-16,1	-3,2
Germany	-17,0	-22,7	0,0	0,0	0,0	-22,7	-39,7	-7,9
Greece	-0,4	-1,7	0,0	0,0	0,0	-1,7	-2,1	-0,4
Hungary	-5,6	-5,3	0,0	0,0	0,0	-5,3	-11,0	-2,2
Ireland	-16,3	0,0	0,0	0,0	0,0	0,0	-16,3	-3,3
Italy	-24,3	-51,0	0,0	0,0	0,0	-51,0	-75,3	-15,1

	Article 3.3	*Article 3.4*						
Unit: MtCO2 eq	***Net carbon stock change***	***Forest Management***	***Cropland Management***	***Grazing Land Management***	***Revegetation***	***Net carbon stock change***	***Total RMUs***	***Total RMUs (average [2008-2012])***
Latvia	4,8	-11,1	0,0	0,0	0,0	-11,1	-6,2	-1,2
Lithuania	-0,6	-5,1	0,0	0,0	0,0	-5,1	-5,7	-1,1
Luxembourg	-0,4	0,0	0,0	0,0	0,0	0,0	-0,4	-0,1
Malta	0,0	0,0	0,0	0,0	0,0	0,0	-	-
Netherlands	2,1	0,0	0,0	0,0	0,0	0,0	2,1	0,4
Poland	-11,0	-15,0	0,0	0,0	0,0	-15,0	-26,1	-5,2
Portugal	-23,7	-4,0	-17,1	-5,5	0,0	-26,7	-50,3	-10,1
Romania	7,1	-27,3	0,0	0,0	1,9	-25,4	-18,2	-3,6
Slovakia	-1,4	0,0	0,0	0,0	0,0	0,0	-1,4	-0,3
Slovenia	1,3	-7,9	0,0	0,0	0,0	-7,9	-6,6	-1,3
Spain	-39,9	-12,3	-0,6	0,0	0,0	-12,9	-52,8	-10,6
Sweden	10,0	-20,6	0,0	0,0	0,0	-20,6	-10,6	-2,1
United Kingdom	-7,4	-6,8	0,0	0,0	0,0	-6,8	-14,2	-2,8
EU-15	**-80,3**	**-181,8**	**-26,0**	**-4,9**	**0,0**	**-212,7**	**-293,0**	**-58,6**
EU-28	**-87,4**	**-264,5**	**-26,0**	**-4,9**	**1,9**	**-293,4**	**-380,9**	**-76,2**

Note:

Consistent with the reporting of emission inventories a negative sign '-' is used for removals and a positive sign '+' for emissions.

Source: Questionnaires and projection reports submitted under the EC greenhouse gas Monitoring Mechanism;

Table 12: Total reported revenues from the auctioning of ETS allowances in 2013 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* (millions of euros)	*Of which domestic climate & energy related purposes* (millions of euros)	*Of which support to third countries* (millions of euros)	*Not used for climate & energy related purposes* (millions of euros)	*No split reported* (millions of euros)
DE	790,3	100%	790,3	547,5	242,8	0,0	
ES (1)	346,1	100%	346,1	346,1	0,0	0,0	
PL	244,0	50%	128,7	128,7	0,0	115,3	
FR	219,2	100%	219,2	219,2	0,0	0,0	
NL(2)	134,2	100%	134,2	134,2	0,0	0,0	
RO	122,7	74%	91,2	91,2	0,0	31,6	
BE	115,0						115,0
CZ	80,7	91%	73,2	73,2	0,0	7,5	
PT	72,8	100%	72,8	70,4	2,4	0,0	
FI (3)	67,0	50%	33,5,0	0,0	33,5	0,0	
SK (4)	61,7	100%	61,7	61,7	0,0	0,0	
DK (2)	56,0	100%	56,0	28,0	28,0	0,0	
AT (2)	55,8	66%	37,0	29,9	7,1	18,8	
BG	52,6	97%	51,3	51,3	0,0	1,3	
IE (2)	41,7	100%	41,7	41,7	0,0	0,0	
SE	35,7	50%	17,9	17,9	0,0	17,8	

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* (millions of euros)	*Of which domestic climate & energy related purposes* (millions of euros)	*Of which support to third countries* (millions of euros)	*Not used for climate & energy related purposes* (millions of euros)	*No split reported* (millions of euros)
HU	34,6	50%	17,3	17,3		17,3	
LT	20,0	100%	20,0	20,0	0,0	0,0	
EE	18,1	50%	9,0	9,0		9,0	
SI	17,7	50%	8,9	8,9		8,9	
LV (4)	10,8	100%	10,8	10,8	0,0	0,0	
LU	5,0	50%	2,5	2,5	0,0	2,5	
MT	4,5	64%	2,9	2,9	0,0	1,6	
CY(5)							
EL	147,6	100%	147,6			0,0	
HR	0,0		0,0	0,0	0,0	0,0	
IT	385,9	50%	192,9				
UK	485,4(6)	100%	485,4	297,1	188,3	0,0	
Total	3625,1	87%(7)	3052,1(7)	2357,0	502,1	380,1	455,6

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

(1) These figures do not include revenues generated in 2012. Both committed and disbursed amounts.

(2) According to their submissions, auctioning revenues in AT, IE, NL and DK are not earmarked in their national budget and therefore no direct attribution to specific purposes is possible. The data reported only relates to examples covering a small part of overall climate-related spending.

(3) Finland currently channels all auctioning revenues to Official Development Assistance activities, including climate finance, which will account for 50% of these revenues.

(4) includes revenues that LV and SK plan to use for climate related purposes though a new financial instrument which will be funded directly from auctioning revenues.

(5) no reporting pursuant Article 17 MMR provided.

(6) The data submitted by the UK includes the early auctioning of ETS Phase III allowances in 2012.

(7) does not include Belgium.

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

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*
AT (1)	29,8	0,0	0,0	29,8	0,0	0,0	0,0	0,0
BE	n.p. (5)	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
BG	51,3	0,0	0,0	0,0	51,3	0,0		0,0
CY (2)								
CZ	73,2	0,0	0,0	73,2	0,0	0,0		0,0
DE (3)	631,8	84,9.	322,2.	11,5.	83,3.	0,2.	17,4	129,5
DK (1)	28,0	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	28,0
EE	9,0	0,0	0,0	9,0	0,0	0,0		0,0
EL	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
ES	346,1	34,6	0,0	0,0	311,5	0,0	0,0	0,0
FI	0	0	0	0	0	0		0
FR	219,2	0,0	0,0	219,2	0,0	0,0		0,0
HR	0	0	0	0	0	0	0	0
HU	17,3	n.p.	n.p.	n.p.	n.p.	n.p.		n.p.
IE (1)	41,7	25,0	0,0	15,5	0,0	0,0		0,0
IT	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
LT	20,0	0,0	0,0	20,0	0,0	0,0		0,0

Country	*Total reported auctioning revenues used or planned to be used for <u>domestic</u> 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*
LU	2,5	n.p.	n.p.	n.p.	n.p.	n.p.		n.p.
LV (4)	10,8	n.p.	n.p.	n.p.	n.p.	n.p.	0,0	n.p.
MT	2,9	0,0	0,0	0,0	2,8	0,0	0,0	0,0
NL (1)	134,2	n.p.	n.p.	n.p.	n.p.	n.p.		n.p.
PL	128,7	34,8	2,2	45,7	44,5	0,0	0,0	0,1
PT	71,4	15,1	0,0	0,0	56,1	0,1	0,0	0,0
RO	91,2	7,8	83,3	0,0	0,0	0,0	0,0	0,0
SE	17,9	16,8	0,0	0,0	0,0	0,0		1,1
SI	8,9	n.p.	4,0	n.p.	0,6	n.p.	0,0	n.p.
SK (4)	61,7	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
UK	297,1	73,2	0,0	50,1	74,3	0,0	0,8	98,6

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

(1) According to their submissions, auctioning revenues in AT, IE, NL and DK are not earmarked in their national budget and therefore no direct attribution to specific purposes is possible. The data reported only relates to examples covering a small part of overall climate-related spending.

(2) no reporting pursuant to Article 17 MMR provided

(3) only committed or disbursed from the climate and energy fund in 2013. Does not include administrative expenses related to the functioning of the ETS.

(4) includes revenues that LV and SK plan to use for climate related purposes though a new financial instrument which will be funded directly from auctioning revenues.

(5) not provided.

4.1. Climate Finance

In 2013, EU Member States submitted to the European Commission their first 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 years 2011 and 2012. The information submitted by EU Member States was in accordance with the relevant provisions of the UNFCCC, including the common formats agreed under UNFCCC for the biennial reports. EU Member States also had the deadline of 1 January 2014 for submitting their biennial reports (BR) to UNFCCC.[7]

The information in tables 14,15,16 provides an overview of the financial support provided to developing countries, based on the in MMR and BR submissions[8].

The experience with this first year of MMR reporting showed that there are differences in how EU Member States report climate finance, which poses difficulties in aggregating the information. Important areas where these differences exist include reporting of core/general finance[9], climate specific finance, and the respective definitions. For example, at this point it is difficult to assess the amount of climate finance included in the category "core/general finance", and therefore, Table 1 below does not identify the share of climate finance under "core/ general finance". During the course of 2014, the Commission has discussed with the Member States an approach to improving the MMR submissions in order to facilitate the aggregation of data and technical guidance for reporting.

Table 14: Total climate financial support provide to developing countries (2011-2012)

EU and Member States	*Climate specific only in 1000 € (2011 -2012)*	*Core/general only in 1000 € (2011 - 2012)*	*Core/general and Climate-specific 1000 € (2011 - 2012)*
EU	1.362.115	0	1.362.115
Austria	76.470	0	76.470
Belgium	59.582	0	59.582
Bulgaria	0	0	0

[7] The EU and Member States biennial reports submissions can be consulted at https://unfccc.int/national_reports/biennial_reports_and_iar/submitted_biennial_reports/items/7550.php

[8] The BR submissions have been used as source of information for the following Member States which have not submitted a MMR at the time of preparing this overview, namely Poland, Italy, Bulgaria, Denmark, and for the EU.

[9] This refers to support to multilateral institutions that Parties cannot specify as climate-specific.

EU and Member States	*Climate specific only in 1000 € (2011 -2012)*	*Core/general only in 1000 € (2011 - 2012)*	*Core/general and Climate-specific 1000 € (2011 - 2012)*
Croatia	0	69	69
Cyprus	600	0	600
Czech Republic	9	127	136
Denmark	194.129	371.786	565.914
Estonia	3.000	0	3.000
Finland	169.723	647.432	817.155
France	4.890.860	1.415.778	6.306.638
Germany	3.139.610	124.110	3.263.721
Greece	15.266	1.609	16.876
Hungary	1.464	0	1.464
Ireland	77.390	55.104	132.494
Italy	97.423	437.657	535.080
Latvia	20	20	40
Lithuania	118	0	118
Luxembourg	65.550	0	65.550
Malta	300	0	300
Netherlands	478.721	2.167.655	2.646.376
Poland	9.304	9.304	18.608
Portugal	30.217	34.421	64.638
Romania	0	318	318
Slovakia	4.761	847	5.608
Slovenia	1.732	666	2.398
Spain	451.831	447.377	899.208
Sweden	650.428	1.487.720	2.138.148
United Kingdom	1.062.836	1.980.671	3.043.507
Total	**12.843.459**	**9.182.671**	**22.026.130**

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

Table 15: Climate specific only support provided to developing countries per type of financial instruments (2011-2012) in 1000 EUR

EU and Member States	*Grant*	*Concessional Loan*	*Non-concessional loan*	*Equity*	*Other*	*not attributed*
EU	1.362.115	-	-	-	-	-
Austria	76.470	-	-	-	-	-
Belgium	59.582	-	-	-	-	-
Bulgaria	-	-	-	-	-	-
Croatia	-	-	-	-	-	-
Cyprus	600	-	-	-	-	-
Czech Republic	9	-	-	-	-	-
Denmark	194.129	-	-	-	-	-
Estonia	3.000	-	-	-	-	-
Finland	154.726	-	-	13.001	1.996	-
France	87.163	2.623.086	2.180.610	-	-	-
Germany	2.751.986	34.750	500	-	-	352.374
Greece	14.907	-	-	-	-	359
Hungary	1.464	-	-	-	-	-
Ireland	77.390	-	-	-	-	-
Italy	97.423	-	-	-	-	-
Latvia	10	-	-	-	10	-
Lithuania	118	-	-	-	-	-
Luxembourg	65.550	-	-	-	-	-
Malta	300	-	-	-	-	-
Netherlands	478.721	-	-	-	-	-
Poland	7.646	-	1.659	-	-	-
Portugal	1.326	13.179	-	-	-	15.713
Romania	-	-	-	-	-	0

EU and Member States	*Grant*	*Concessional Loan*	*Non-concessional loan*	*Equity*	*Other*	*not attributed*
Slovakia	4.761	-	-	-	-	
Slovenia	1.732	-	-	-	-	0
Spain	63.555	15.182	100.140	147.900	125.054	0
Sweden	650.428	-	-	-	-	0
United Kingdom	655.164	-	-	-	407.671	0
Totals:	**6.810.274**	**2.686.197**	**2.282.909**	**160.901.**	**534.732**	**369.497.641**
Grand Total	**12.843.459**					

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

Table 16: Total climate support provided to developing countries per type of support (2011 – 2012)

Type	*Total (€)*	*Percentage of total*
Mitigation	6.800.958	53%
Adaptation	1.925.105	15%
Cross-cutting	1.954.741	15%
Other	2.162.655	17%
Total	**12.843.459**	

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

4.2. Comparison of EU-28 GHG total emissions and projections under the Kyoto Protocol and under the Climate and Energy Package

The EU unilateral 20 % reduction commitment by 2020 under the Climate and Energy package covers CO_2 emissions from international flights departing from the EU. The Kyoto Protocol includes GHG emissions from domestic aviation only.

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 2012, when the emissions from international aviation are also taken into account, amount to -18 % compared to 1990 levels. When excluding international aviation, the reduction amounts to -19 %.

Emissions ($MtCO_2$-eq.) covered by the Kyoto Protocol

	1990	2005	2012	2020
Total GHG emissions	5.626,3	5.178,2	4.544,2	
Of which domestic aviation	14,2	19,1	16,1	
Projections as compilation of MS data, WEM scenario				4369.2 (1)
-20% compared to Kyoto base year(2)				4639.4

Emissions ($MtCO_2$-eq.) covered by the Climate and Energy Package

	1990	2005	2012	2020
Total GHG emissions	5.696,2	5.310,6	4.678,8	
of which domestic aviation	14,2	19,1	16,1	
of which international aviation CO2(3)	69,9	132,4	134,6	
Projections as compilation of MS data, complemented by PRIMES/GAINS (4)				4513.5
-20 % compared to 1990				4556.0

Note: (1) This projected value is based on the most recent aggregated national projections, gap-filled by the 2013 EU projections with implemented measures based on PRIMES and GAINS models where necessary.

(2) The Kyoto base year emissions is different from 1990 emissions level and amount to 5799.2 Mt CO_2 eq.

(3) figures for emissions from domestic aviation cover CO_2, CH_4, N_2O; figures for emissions from international aviation cover CO_2 only. (4) National projections as under (1), international aviation estimated based on the 2013 EU projections with implemented measures based on PRIMES and GAINS models.

5. INFORMATION ON POLICIES AND MEASURES

5.1. List of legal acts recently adopted

Implementation of the climate and energy package:

(1) **EU ETS Registry – Union Registry:** Commission Regulation (EU) No 389/2013 of 2 May 2013 establishing a Union Registry pursuant to Directive 2003/87/EC and of the Council, Decisions No 280/2004/EC and No 406/2009/EC of the European Parliament and of the Council and repealing Commission Regulations (EU) No 920/2010 and No 1193/2011.

(2) **Auctioning:** Commission Regulation (EU) No 176/2014 of 25 February 2014 amending Regulation (EU) No 1031/2010 in particular to determine the volumes of greenhouse gas emission allowances to be auctioned in 2013-20.

(3) **International carbon market:** Commission Regulation (EU) No 1123/2013 of 8 November 2013 on determining international credit entitlements pursuant to Directive 2003/87/EC of the European Parliament and of the Council

(4) **Monitoring Mechanism:** 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.

Commission Regulation (EU) No 206/2014 of 4 March 2014 amending Regulation (EU) No 601/2012 as regards global warming potentials for non-CO_2 greenhouse gases

Commission Implementing Regulation (EU)) No 749/2014 of 30 June 2014 on structure, format, submission processes and review of information reported by Member States pursuant to Regulation (EU) No 525/2013 of the European Parliament and of the Council

(5) **LULUCF:** Decision No 529/2013/EU of the European Parliament and of the Council of 21 May 2013 on accounting rules on greenhouse gas emissions and removals resulting from activities relating to land use, land-use change and forestry and on information concerning actions relating to those activities.

(6) **Effort Sharing Decision:** 2013/162/EU Commission Decision of 26 March 2013 on determining Member States' annual emission allocations for the period from 2013 to 2020 pursuant to Decision No 406/2009/EC of the European Parliament and of the Council.

Commission Implementing Decision of 31 October 2013 on the adjustments to Member States' annual emission allocations for the period from 2013 to 2020 pursuant to Decision No 406/2009/EC of the European Parliament and of the Council.

Other:

(7) **Aviation and the EU ETS:** Regulation (EU) No 421/2014 of the European Parliament and of the Council of 16 April 2014 amending Directive 2003/87/EC establishing a scheme for greenhouse gas emission allowance trading within the Community, in view of the implementation by 2020 of an international agreement applying a single global market-based measure to international aviation emissions.

(8) **Cars and Vans:** Regulation (EU) No 333/2014 of the European Parliament and of the Council of 11 March 2014 amending Regulation (EC) No 443/2009 to define the modalities for reaching the 2020 target to reduce CO_2 emissions from new passenger cars

Regulation (EU) No 253/2014 of the European Parliament and of the Council of 26 February 2014 amending Regulation (EU) No 510/2011 to define the modalities for reaching the 2020 target to reduce CO_2 emissions from new light commercial vehicles.

(1) Commission Implementing Regulation (EU) No 427/2014 of 25 April 2014 establishing a procedure for the approval and certification of innovative technologies for reducing CO_2 emissions from light commercial vehicles pursuant to Regulation (EU) No 510/2011 of the European Parliament and of the Council.

(9) **F-gas:** Regulation (EU) No 517/2014 of the European Parliament and of the Council of 16 April 2014 on fluorinated greenhouse gases and repealing Regulation (EC) No 842/2006

Implementation of the EU Strategy on adaptation to climate change

The EU Adaptation Strategy adopted in April 2013 foresees 8 actions in order to achieve its key objectives of promoting action by Member States, 'climate-proofing' action at EU level and better informed decision-making.

Action	**EU action – status and planned**

Action 1: Encourage all Member States to adopt comprehensive adaptation strategies.	As of June 2014, 16 Member States have adopted an Adaptation Strategy. An adaptation preparedness scoreboard has been prepared by the Commission, following discussions with Member States. Interaction with Member States take place via the working group 6 on adaptation under the Climate Change Committee.
Action 2: Provide LIFE funding to support capacity building and step up adaptation action in Europe. (2013-2020).	The LIFE Regulation was published on 20 December 2013. The LIFE multiannual work programme for 2014-2017[10] has been adopted by a Commission Decision on 19 March 2014. It highlights policy priorities for the financing of adaptation projects. LIFE will support adaptation projects via traditional action grants, integrated projects and through a new innovative financial instrument: the Natural Capital Financing Facility, to be set up in 2014.
Action 3: Introduce adaptation in the Covenant of Mayors framework (2013/2014).	Mayors adapt[11] – the Covenant of Mayors Initiative on Climate Change Adaptation – was launched in April 2014 by the European Commission to encourage cities to take action to adapt to climate change.
Action 4: Bridge the knowledge gap.	The Commission is preparing a knowledge gap strategy on adaptation, with the aim of identifying and bridging cross-cutting and additional specific sectoral gaps. It will be discussed with relevant stakeholders and Member States in 2014. Additional work is under way with the Commission's Joint Research Center on how to close gaps in the biophysical and economic assessment of climate change impacts, with a focus on droughts, coastal areas, ecosystems, as well as on the economic impacts of climate change in the rest of the

[10] http://ec.europa.eu/environment/life/about/index.htm
[11] http://mayors-adapt.eu/

	world and their repercussions for the EU. The Commission produced a cross-sectoral EU overview of natural and man-made disaster risks, based on national risk assessments.[12]
Action 5: Further develop Climate-ADAPT as the 'one-stop shop' for adaptation information in Europe.	A medium term work plan, until 2017, has been developed and agreed between the key actors. Climate-ADAPT is being used to foster adaptation aciton in 12 EU countries lagging behind in development of national adaptation strategies. The platform has been constantly improved, as regards both content(20-25% growth on adaptation resources) and usability. Several tools (Adaptation Support Tool, Mapviewer, Case Studies Tool) have been enhanced, and calls for users' contribution made more prominent. A section on adaptation funding sources is being developed and a process for further linking Climate-ADAPT and national adaptation platforms is underway. Urban/Local adaptation resources are being developed, through a specific site and other tools.
Action 6: Facilitate the climate-proofing of the Common Agricultural Policy (CAP), the Cohesion Policy and the Common Fisheries Policy (CFP).	A Commission's document on principles and recommendations on how to integrate climate change adaptation considerations under the 2014-2020 European Maritime and Fisheries Fund operational programmes was released in July 2013[13]. Factsheets on the mainstreaming of climate action in European Structural and Investment Funds were published on DG Climate action's website[14].

12 http://ec.europa.eu/echo/files/news/post_hyogo_risks_overview_en.pdf
13 http://ec.europa.eu/clima/policies/adaptation/what/docs/swd_2013_299_en.pdf
14 http://ec.europa.eu/clima/publications/index_en.htm#Mainstreaming

Action 7: Ensuring more resilient infrastructure.	The Commission launched in May 2014 a mandate for the three European standardisation organisations to identify the European standards that are most relevant for adaptation to climate change in the sectors of energy infrastructure, transport infrastructure and construction/buildings[15]. Adaptation considerations have been integrated in the revised Environmental Impact Assessment Directive[16].
Action 8: Promote insurance and other financial products for resilient investment and business decisions.	The contributions to the public consultation on the Green Paper on the Insurance of Natural and Man-made Disasters as well as a summary of responses are available online.[17] Various workshops and stakeholders' dialogues with and between insurance companies were organised in 2013/2014.

15 C(2014) 3451 final

16 See: http://ec.europa.eu/environment/eia/review.htm

17 http://ec.europa.eu/internal_market/consultations/2013/disasters-insurance/index_en.htm

Table 17: Summary of implemented and planned policies and measures

Cross-cutting measures

Policies and measures **'Cross-cutting'**	**Stage of implementation /timetable /comments**
EU Emission Trading Scheme	In force
Monitoring Mechanism Regulation	Adopted and in force since 8 July 2013
Back loading	Auctioning of 900 million allowances from the early years of phase 3 of the EU ETS postponed to the end of the trading period. Auctioning Regulation amended accordingly on 25 February 2014.
Creation of a market stability reserve for the ETS phase 4 (2021 onwards)	Proposal adopted on 22 January 2014; submitted to the Council and Parliament. The current draft proposes under pre-defined circumstances automatic adjustments of the volume of allowances to be auctioned in relation to the number of allowances in circulation.
2030 Climate and Energy package	Communication adopted by the Commission on 22 January 2014, subject to discussions within the EU institutions.
European Energy Security Strategy	Communication adopted by the Commission on 28 May 2014, subject to discussions within the EU institutions.

Roadmap for moving to a competitive low-carbon economy in 2050 (2011)	Communication adopted by the Commission “
7th Environment Action Programme (2013)	In force
Clean Air Policy Package	Package proposed by the Commission, subject to discussions within the EU institutions.

Energy Supply

Policies and measures **‘Energy supply’**	**Stage of implementation /timetable /comments**
Promotion of electricity from RES-E (2001)	In force
Renewable energy Directive (Directive 2009/28/EC)	In force
CCS Directive	In force
NER 300 laying down criteria and measures for the financing of commercial demonstration projects for CCS and innovative renewable energy technologies under the revised EU ETS	Under the first call for proposals, the Commission made funding awards in December 2012 for a total value of € 1.2 billion to 23 renewable energy projects. Second call for proposals was awarded in July 2014 and amounts to € 1 billion, supporting 18 renewable and 1 CCS projects.
Directive on promotion of cogeneration	In force until mid-2014. Repealed by the new Energy Efficiency Directive.
Further measures on renewable heat (including biomass action plan)	Biomass Action Plan, Dec 2005, over 20 further actions planned. Renewable heat included in proposed new Directive on renewable energy

Policies and measures 'Energy supply'	Stage of implementation /timetable /comments
Intelligent Energy for Europe: programme for renewable energy	Programme for policy support in renewable energy
Developing the internal energy market	Amendments to a number of directives to continue to help complete the internal energy market.
Strategic Energy Technology (SET) Plan	6 European Industrial Initiatives and 10 Integrated Research Programmes that address the development and market roll-out of new generation of renewable energy, carbon capture and storage, nuclear and smart grids technologies are in force since 2010/11. At EU level these initiatives are supported by FP7.

Energy demand

Policies and measures 'Energy demand'	Stage of implementation / timetable /comments
Energy Efficiency Directive	The Directive entered into force on 4 December 2012. Most of its provisions had to be implemented by the Member States by 5 June 2014.
Directive on the energy performance of buildings	Replaced by the recast Directive below.
Directive on the energy performance of buildings (recast)	Adopted in May 2010 with implementation deadline for most of its provisions by July 2012.

Policies and measures **'Energy demand'**	**Stage of implementation / timetable /comments**
Directive on ecodesign requirements for energy-related products Directive on labelling of the consumption of energy and other resources by energy-related products	Product policy under implementation. 25 implementing measures adopted on ecodesign, including voluntary industry agreements and 12 on energy labelling. Numerous implementing measures are under the preparation.
Regulation on the labelling of tyres with respect to fuel efficiency and other essential parameters	Product policy under implementation
Regulation on energy efficiency labelling programme for office equipment (Energy Star)	Product policy under implementation
Directive on energy end use efficiency and energy services	In force until 5 June 2014, except for Article 4 which will be repealed from 1 January 2017. Afterwards to be (almost fully) replaced by the new Energy Efficiency Directive; National Energy Efficiency Action Plans adopted in all EU-27.
Action Plan on Energy efficiency as a follow-up to the Green Paper	Launched Oct 2006. Identifies 10 priority actions to help achieving the 20% energy efficiency target of 368 Mtoe primary energy savings in 2020 (or 740 $MtCO_2$-eq). Reinforced in March 2011 (see below).
Energy Efficiency Plan 2011	Launched March 2011. Aims at closing the gap to the 20% energy efficiency target in 2020. It was followed by the adoption of the new Energy Efficiency Directive.
Action under the Industrial emission directive	Reference document on Best Available Techniques regarding Energy Efficiency finalised.

Policies and measures **'Energy demand'**	**Stage of implementation / timetable /comments**
Intelligent Energy for Europe programme (incl. Covenant of Mayors, ELENA), followed by the Horizon 2020 programme	Programme for policy support in energy efficiency
European Energy Efficiency Fund	Launched in July 2011. Estimated investment potential of EUR 265 million for energy efficiency, renewables and sustainable urban transport projects.
Public procurement	EU Handbook developed for guidance for increased energy efficient public procurement
Strategic Energy Technology (SET) Plan	Launch in 2012 of the Smart Cities and Communities European Innovation Partnership addressing the demand side of low carbon technologies in energy, transport and ICT sectors.

Transport

Policies and measures **'Transport'**	**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 two amending Regulations implementing 2021/2020 targets for cars/vans entered into force. Regulations request a review setting targets beyond 2020 by the end of 2015.
Fuel quality Directive –setting a 6/% reduction target of the carbon intensity of fuels and also regulates the sustainability of biofuels	First implemented in 1998. Revised in 2009 and amended in 2011 - implementing act laying down calculation methods under preparation
Directive on the promotion of transport bio-fuels	Repealed, Replaced by the Renewable Energy Directive (Directive 2009/28/EC).
Initiative on fair and efficient road pricing, revising Directive 1999/62/EC and Directive 2004/52/EC	Proposal under preparation by the Commission
Infrastructure charging for heavy goods (revised Eurovignette)	Adopted (Directive 2011/76/EU)
Proposal for a Directive revising Directive 96/53/EC on maximum weights and dimensions	Proposal adopted by the Commission.
Shifting the balance of transport modes	Package of measures in implementation
Fuel taxation (Energy taxation directive 2003//96/EC)	In force Review of the Energy Tax Directive under special legislative procedure with unanimity.

Policies and measures **'Transport'**	**Stage of implementation / timetable / comments**
Directive on mobile air conditioning systems: HFCs	In force
Inclusion of Aviation in EU ETS for flights within the EEA	Adopted. Includes all intra-European flights since 1/01/2012. Since March 2014, the coverage of the EU ETS is limited to flights within the European Economic Area for the period from 2013 to 2016, pending the adoption of international rules under the aegis of the International Civil Aviation Organization.
Strategy on Integrating maritime transport emissions in the EU's greenhouse gas reduction policies	Adopted. In June 2013 the Commission proposed a Regulation which would establish an EU-wide system for the monitoring, reporting and verification of CO_2 emissions from large ships starting in 2018
Public procurement of vehicles (Directive on the Promotion of Clean and Energy Efficient Road Transport Vehicles 2009/33/EC)	In force The Directive requires that energy and environmental impacts linked to the operation of vehicles over their whole lifetime, including CO2 emissions, are taken into account in public procurement decisions.
Strategic Energy Technology (SET) Plan	One Joint technology Initiative on Fuel cells and Hydrogen in force since 2009 and one European Industrial Initiative and Integrated Research Programme on bioenergy in force since 2010/11. At EU level these initiatives are supported by FP7.
White Paper: Roadmap to a Single European Transport Area	Strategy to create a competitive and efficient internal EU transport system, cut transport emissions by

Policies and measures **'Transport'**	**Stage of implementation / timetable / comments**
	60% by 2050, adopted in 2011
Regulation EURO 5 and 6 (692/2008/EC)	In force
Euro VI standard for heavy duty vehicles (2013)	In force
Clean Power for Transport package including the deployment of alternative fuel infrastructure	Proposal adopted by the Commission

Industry & non CO2 gases

Policies and measures **'Industrial Processes**	**Stage of implementation / timetable / comments**
Fluorinated gases: - F-gas Regulation - MAC Directive (mobile air conditioning systems)	In force. The newly adopted F-gas Regulation 517/2014 replaces the previous Fgas Regulation 842/2006 and will apply from 1 January 2015.
Industrial Emissions Directive 2010/75/EU	In force In 2008 the IPPC Directive was codified and in 2010 amended by the Industrial Emissions Directive

Agriculture

Policies and measures **'Agriculture'**	**Stage of implementation /timetable /comments**
Reduction of CH4 and N2O from animal manure	Possibility for support through Rural development programmes, through anaerobic digestion and improved manure storage and management.
N2O from soils	Possibility for support through Rural development programmes and from an improved implementation of the nitrates Directive (1991/676/EEC). Through promotion of more efficient usage of nitrogen fertiliser.

Policies and measures **'Agriculture'**	**Stage of implementation /timetable /comments**
CAP reform post 2013	The reformed CAP was agreed in late 2013. This consists of two pillars Pillar I: Direct payments (new changes will be ready for 2015) • Contains a new greening component to help protect soil carbon Pillar II: Rural development program (changes will impact on country RDPs submitted this year) Includes a new 20% climate mainstreaming requirement

Forests and soils

Policies and measures **'Forests'**	**Stage of implementation /timetable /comments**
Decision on accounting rules and action plans on greenhouse gas emissions and removals resulting from activities related to land use, land use change and forestry (LULUCF)	Adopted and in force since 8 July 2013. In the Decision, Member States agreed to improve monitoring, reporting and verification of agricultural soil and other carbon pools in a non-binding way as from 2015. Provisional estimates will be made for each year from 2013 (delivered in 2015, etc.) for both forest and agricultural land activities. The accounting rules applied will be those applicable under KP. Information on national actions for enhancing mitigation in the sector are to be communicated by mid-2014 (or alternatively, early 2015 for some MS).
EU Forest Strategy and EU Forest Action Plan	The Forest Action Plan was presented in June 2006. Its timeframe was 2006-2011. It builds on the EU's Forestry Strategy adopted in 1998. The EU Forestry Strategy, moving forward from the Forest Action Plan of 2006 and replacing the 1998 Strategy, has been revised, and Council conclusions adopted (May 2014). Work is underway to develop sustainable forest management criteria to be applied to solid biomass from forests.
Afforestation and reforestation: - Afforestation programmes - Natural forest expansion	The 2020 Common Agricultural Policy still provides for support of forestry schemes through rural development. However, scope for significant afforestation is limited to a few MSs, and natural forest expansion, while continuing, does counter the decline of forest carbon sink, due to age class legacy issues.
Restoration of forests damaged by natural disasters, fires, pests damage and forest fire prevention action	Possibility for support through Rural development programmes, specific measure for restoring forestry potential and introduction of prevention actions

Policies and measures **'Forests'**	**Stage of implementation /timetable /comments**
Forest management (various measures)	Possibility for support through forestry scheme of rural development, dependent on national implementation.

Waste

Policies and measures **'Waste'**	**Stage of implementation / timetable / comments**
Landfill Directive	In force. Commission proposal to reinforce landfill reduction targets adopted on 2 July 2014.
Waste Framework Directive	In force. Commission proposal to reinforce re-use/recycling targets for municipal waste adopted on 2 July 2014.
Packaging and Packaging Waste Directive	In force. Commission proposal to reinforce recovery/recycling targets for packaging waste adopted on 2 July 2014.
Directive 2012/19/EU on waste electrical and electronic equipment (WEEE)	In force. Directive recast in 2012.

Integration Research & Development

Policies and measures	Stage of implementation /timetable /comments
Research and Innovation Framework Programme	In force. Under the 7th Framework program (FP7), which ran from 2007 to 2013, a budget of 50.5 billion euros was allocated over the entire period. Over 2.3 billion to energy related R&D activities. First calls of the Horizon 2020 programme (2014-2020) have been launched. Around 35% of the Horizon 2020 budget of around 70 billion euro is expected to be invested in climate-related research and innovation actions.
Competitiveness and Innovation Framework Programme (CIP)	CIP ran from 2007 to 2013 with a total budget of 3.6 billion euros. The CIP is divided in three operational programmes two of which are related to energy and climate change.
Strategic Energy Technology (SET) Plan	In force since 2007 and implemented at EU level through FP7 and Horizon 2020.

Integration Cohesion Policy

Policies and measures	Stage of implementation /timetable /comments
Integration climate change in structural funds &cohesion funds	The legislative basis is in place for the structural and cohesion funds as part of the European Structural and Investment Funds (ESIF) 2014-2020; it includes a range of important references to climate action.

	The programming of ESIF is ongoing, including the mainstreaming of climate action into Partnership Agreements and fund-specific programmes (ERDF, ESF, CF, EAFRD, EMFF), and will largely be completed by end 2014. Overall the programming documents are expected to set out a comprehensive range of climate actions and contribute fully to the political objective of dedicating at least 20% of the budget of the Union to climate change objectives in the period 2014-2020. The climate mainstreaming covers both the mitigation of climate change (reducing emissions of greenhouse gases) and adaptation to climate change (enhancing the resilience to the adverse impacts). On the latter, the climate mainstreaming supports the implementation of the EU Strategy on adaptation to climate change. The mainstreaming of climate action represents a comprehensive process focusing on local climate action across the EU, Member States and regions, contributing to the transition to a low-carbon and climate resilient economy.