European Commission

PROGRESS TOWARDS ACHIEVING THE KYOTO AND EU 2020 OBJECTIVES

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Climate Action

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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)

{SWD(2014) 336 final}

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1. SUMMARY

On track to overachieve the Kyoto targets

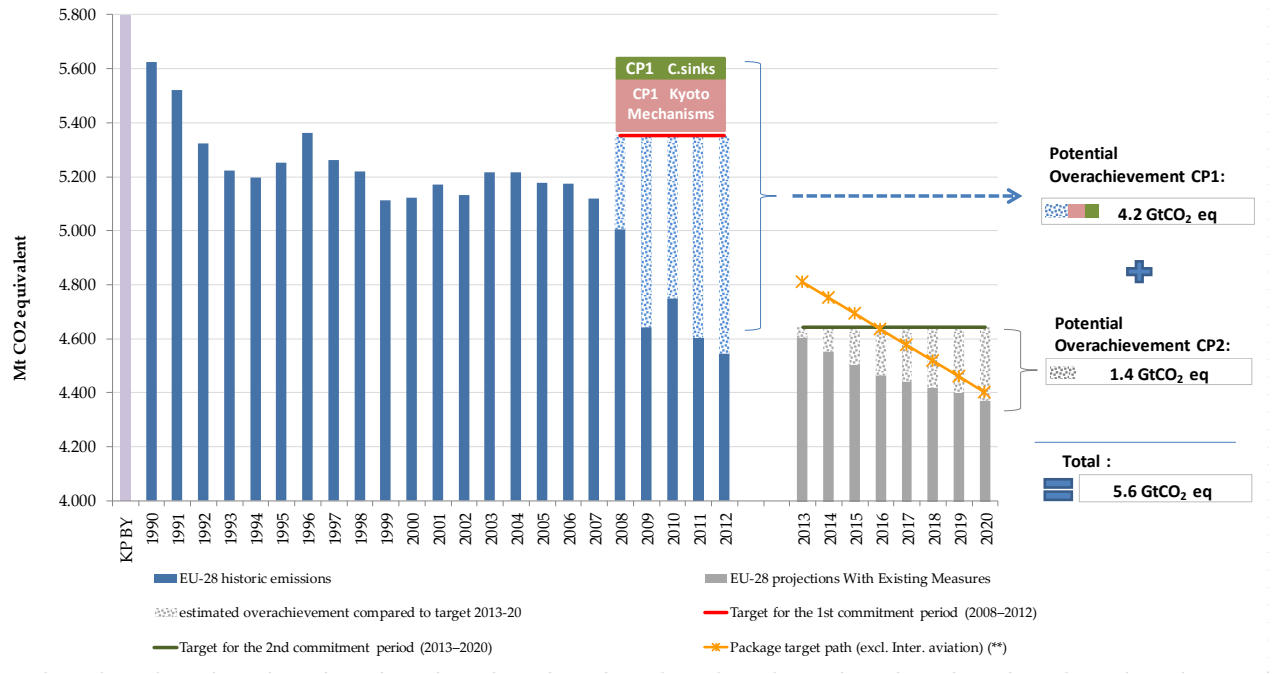
In 2012, emissions reached their lowest levels since 1990. Total EU greenhouse gas (GHG) emissions[1] (without international aviation and Land Use, Land Use Change and Forestry (LULUCF)) were 19.2 % below 1990 levels and 21.6 % below Kyoto base years level. According to preliminary estimates, total emissions further decreased by 1.8 % in 2013.

Over the first commitment period (2008-2012), EU-28 Member States overachieved their targets by a total of 4.2 Gt CO_2-eq.

On average over the second commitment period (2013-2020), total emissions (excluding LULUCF and international aviation) are expected to be 23 % lower than base year levels according to Member States' projections. The EU is consequently on track to meet its Kyoto target for the second commitment period with a potential overachievement of 1.4 Gt CO_2-eq.

The total potential cumulative overachievement is estimated around 5.6 Gt CO_2 eq. for the 2008-2020 period. This amount represents more than the total EU emissions in 2012.

Figure 1: Total overachievement during the first commitment period (2008-2012) of the Kyoto Protocol and projected overachievement during the second commitment period (2013-2020) (EU-28)



Source: European Commission, EEA

[1] According to the 2014 inventory submission providing GHG emissions data up to 2012. Unless stated otherwise, all the GHG emission data are based on the Revised 1996 IPCC guidelines calculated using the global warming potential from the IPCC 2nd Assessment Report.

On track to meet the Europe 2020 GHG target

Total EU emissions against the scope of the Climate and Energy Package (excluding LULUCF and including international aviation) were already in 2012 18 % below 1990 level and are estimated to be around 19 % below 1990 level in 2013.

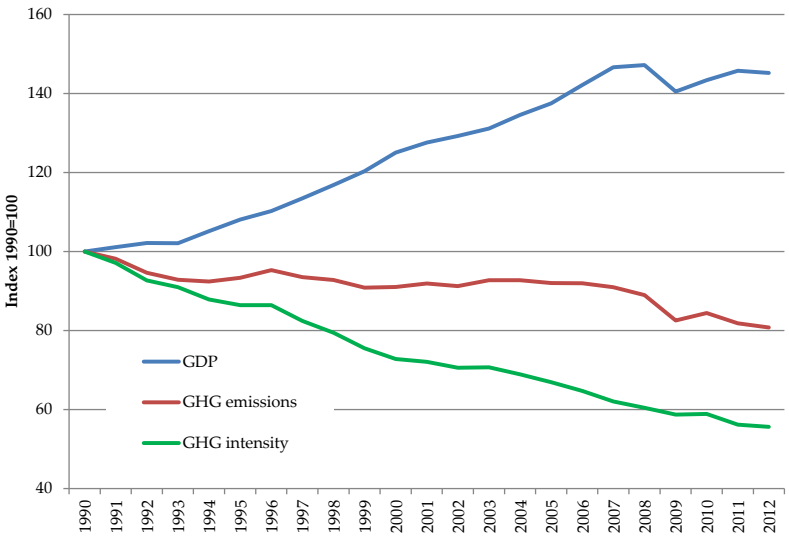
According to the projections provided by Member States based on existing measures, emissions will be 21 % lower in 2020 than in 1990[2]. The EU is thus on track to meet its GHG emission reduction target domestically.

However, 13 Member States still need to implement additional policies and measures to meet their 2020 national emission reduction target in the sectors not covered by the EU ETS. Furthermore, preliminary estimated 2013 emissions data[3] in Germany, Luxembourg[4] and Poland are higher than their respective 2013 targets set under Effort Sharing Decision (ESD).

Successful decoupling between economic activity and GHG emissions

During the period 1990-2012, the combined GDP of the EU grew by 45 %, while total GHG emissions (excluding LULUCF and international aviation) decreased by 19 %. As a result, the greenhouse gas emissions' intensity of the EU was reduced by almost half between 1990 and 2012. Decoupling occurred in all Member States.

Figure 2: Evolution of GDP (in real terms), GHG emissions and emission intensity (i.e. ratio of greenhouse gas emissions to GDP): Index (1990 = 100)



Source: EEA, DG ECFIN (Ameco database), Eurostat

2 For most Member States, this does not include yet the expected effects of the Energy Efficiency Directive and does not assume yet a full implementation of the Climate and Energy package.

3 The approximated 2013 emissions data are estimates compiled by the EEA in the approximated EU GHG inventory for 2013.

4 LU issued recently its own estimates according to which its ESD emissions in 2013 were 1.61% below the 2013 ESD target.

The structural policies implemented in the field of climate and energy have contributed significantly to the EU emission reduction observed since 2005[5]. The economic crisis contributed to less than half of the reduction observed during the 2008-2012 period. .

2. PROGRESS TOWARDS MEETING THE KYOTO TARGET 2013-2020 AND THE EUROPE 2020 TARGET

2.1. Second commitment period under the Kyoto Protocol

For the second commitment period, the EU, its 28 Member States and Iceland have inscribed a commitment of reducing average annual emissions by 20 % during the 2013-2020 period, as compared to base year, to be fulfilled jointly.

According to the projections with existing measures (WEM) submitted by the Member States (not including LULUCF and Kyoto mechanims), total emissions excluding LULUCF and international aviation are projected to be 22 % lower in 2020 compared to 1990 and 25 % compared to base year.

As regards LULUCF, preliminary projections show that the EU as a whole could benefit from a small net sink. However, this will vary from Member State to Member State. In addition, as the technical review process goes forward with regard to the Forest Management Reference Levels, changes could still occur.

2.2. Union's GHG emission reduction target by 2020

2.2.1. The Union's progress

The Climate and Energy package adopted in 2009 sets for the Union a 20 % GHG emission reduction target by 2020 compared to 1990[6], which is equivalent to -14 % compared to 2005. This effort has been divided between the sectors covered by the Emission Trading System ('ETS') and non-ETS sectors under the Effort Sharing Decision (ESD). While the ETS provides an EU-wide cap, the ESD sets annual emission allocations in the non-ETS sector for each Member State.

According to Member States' updated projections[7] with existing measures (including international aviation), emissions are projected to be 21 % lower in 2020 than in 1990 (including ETS and non-ETS). The EU as a whole is currently on track to meet its EU 2020 target.

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5 See analysis by the European Environment Agency, section 4.3 hereafter

6 The scope of the package differs from the scope of the Kyoto Protocol. It includes international aviation but excludes LULUCF and emissions of nitrogen trifluoride NF3.

7 For most MS, these are the projections submitted in 2013. The following Member States submitted on a voluntary basis updated projections in 2014: CY, IE, LT, LU, PL and RO. Member States submissions were quality-checked, gap-filled and adjusted where necessary by the EEA. An estimation of the share of non-ETS emissions had to be made for several Member States. For the gap filling and ETS/non-ETS split estimation, data from the 2013 EU climate policy "baseline with adopted measures" projection based on the PRIMES and GAINS models have been used. This projection has also been used as sensitivity analysis in the first EU Biennial Report [SWD(2014)1].

2.2.2. Member States progress

However, 13 Member States will need additional efforts to meet domestically their 2020 targets for the non-ETS sectors while 15 Members States are already projected to reach these commitments with existing policies and measures (see Figure 3).

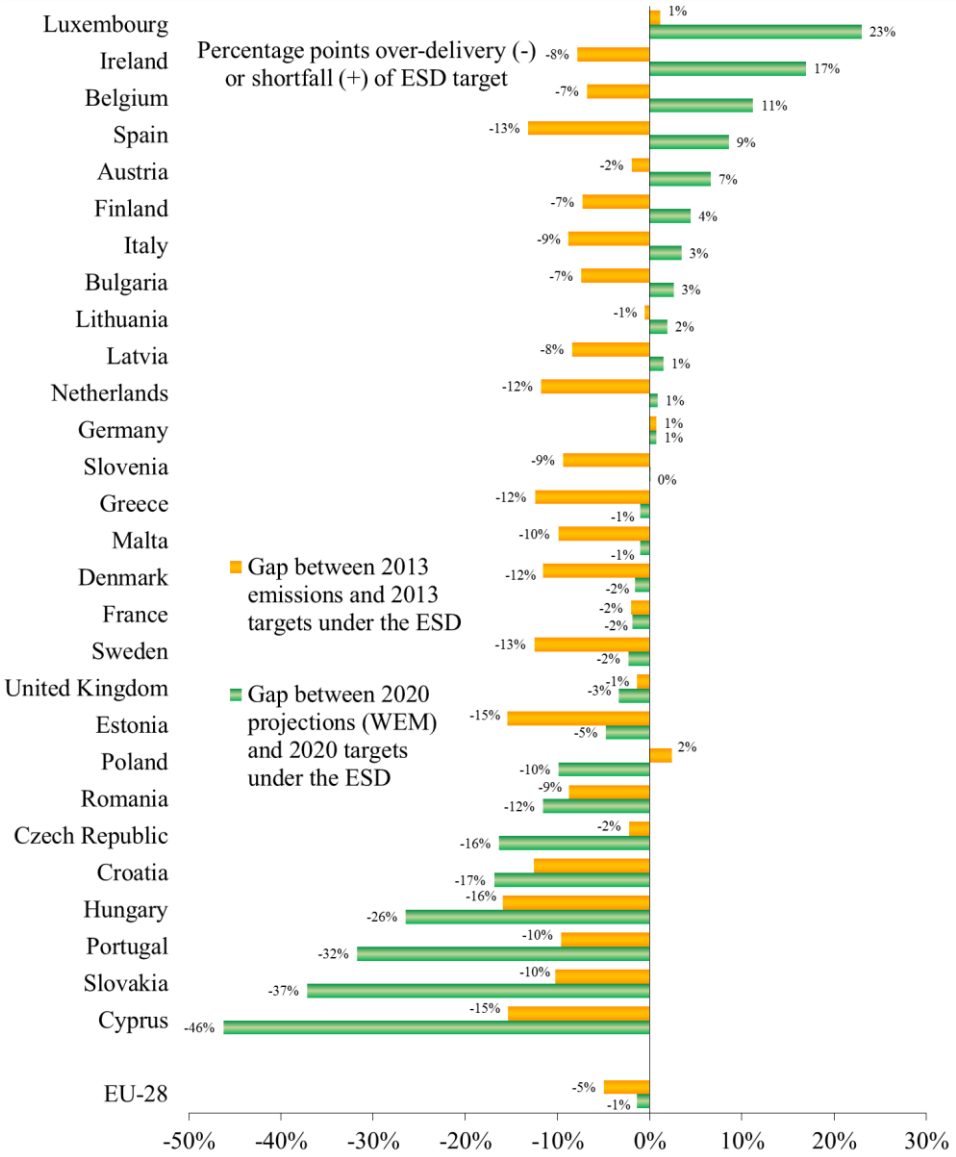
Furthermore, according to approximated 2013 emission data[8], the non-ETS emissions in Germany, Luxembourg and Poland were higher than their respective 2013 targets set under the ESD[9] by 0.7, 1.1 and 2.4 percentage points of their respective ESD base-year emissions[10]. This analysis does not yet take into account the use of flexibilities provided for in the ESD, such as the use of international project credits or transfers of unused emission allowances between Member States.

8 The approximated 2013 emissions data are estimates compiled by the EEA in the approximated EU GHG inventory for 2013 based on data submitted by Member States by 31 July 2014. Final emissions data will be available in 2015 using the new 2006 IPCC methodology on inventories.

9 Data calculated with the global warming potential from the IPCC 4th Assessment Report

10 ESD base-year emissions are calculated for each Member State so as to be consistent with both relative and absolute 2020 ESD targets.

Figure 3: **Gap between projected 2020 emissions and targets in the non-ETS sectors (in percentage of 2005 base year emissions) and gap between the 2013 emissions and the non-ETS 2013 target. Negative and positive values respectively indicate overdelivery and shortfall**



Note: The percentages represented correspond to percentage points of ESD base-year emissions. These base-year emissions are defined for each Member State so as to be consistent with both relative and absolute 2020 ESD targets.

Source: EEA, European Commission based on projections by the Member States.

As part of the European Semester 2014, the Commission carried out specific analysis based on the latest projections with existing measures provided by Member States:

- GHG emissions in Luxembourg are projected to exceed the national target by 23 percentage points. Significant GHG emission reductions could be achieved by increasing taxation on transport fuel and developing public transport. At the same time, this would lead to higher growth and to co-benefits of climate policies, such as reducing traffic congestion, which entails significant costs.

- Ireland's GHG emissions are expected to exceed the target by 17 percentage points due to a large increase of emissions in transport and agriculture. Ireland is however currently developping a range of initiatives to reduce emissions under the Low-Carbon Development Bill.

- Emissions in Belgium are projected to fall short of the target by 11 percentage points. The analysis stressed the need for a clear division of tasks between authorities. Reducing transport emissions also needs to be combined with a reduction of road congestion.

- Five other Member States (ES, AT, FI, BG, IT) are expected to fall short of their target by a gap of 3 percentage points or more.

Other country-specific recommendations relevant to GHG emissions reduction have also been adopted. The Council recommended to shift the tax burden away from labour to taxes less detrimental to growth, including environmental taxes to several Member States (BE, CZ, FR, HU, IE, IT, LT, LV, ES). It recommended EE to strenghten environmental incentives to contribute to less resource-intensive mobility. The Council also recommended BG, CZ, EE, HU, LT, LV, PL and RO to pursue efforts to improve energy efficiency.

MT was recommended to further develop renewable energy. In 2013, DE reformed its support system for electricity from renewable sources. DE was recommended to monitor the impact of this reform. The UK developed an electricity market reform in order update its generation capacity, including in the renewable sector. The UK was recommended to increase the predictability of the planning processes as well as to provide clarity on funding commitments.

3. OVERACHIEVEMENT OF THE KYOTO TARGETS UNDER THE FIRST COMMITMENT PERIOD (2008-2012)

The final assessment of compliance of the EU and its Member States for the first commitment period of the Kyoto Protocol will follow the UNFCCC review of the 2014 inventory, which includes emission data up to 2012, and the additional true-up period. The EU and its Member States will be able to use Kyoto mechanisms until the end of the completion of the compliance assessment.

3.1. EU-28

During the first commitment period, total emissions in the EU-28 were significantly lower than the relevant targets:

- on average for the period 2008-2012, annual emissions (without LULUCF) were 18.9 % below base year levels (3.21 Gt CO_2 eq. overachievement as compared to the relevant targets);

- taking into account carbon sinks from LULUCF brings an additional 1.3 % emission reduction (0.38 Gt CO_2 eq.);

- A number of Member States are sellers of international credits under the Kyoto mechanisms. The combined expected sale of these international credits represent 1.6 % of base year emissions (-0.47 Gt CO_2 eq.);

- companies located in the EU offset part of their emissions with international credits under the Kyoto mechanisms (CERs and ERUs), representing an additional 3.6 % of base year emissions (1.03 Gt CO_2 eq.).

Taking into account all the above components, the total overachievement for the EU-28 as a whole is estimated at 4.2 Gt CO_2 eq. during the period, representing an average reduction of 22.1 % compared to base year levels (see Figure 1 in the summary).

3.2. EU-15

Over the first commitment period, total emissions in the EU-15 were significantly lower than the relevant target (reduction by 8 % on average during the 2008-2012 as compared to the base year):

- on average for the period 2008-2012, annual emissions (without LULUCF) were 11.8 % below base year levels (an overachievement of 0.8 Gt CO_2 eq. during the first commitment period);

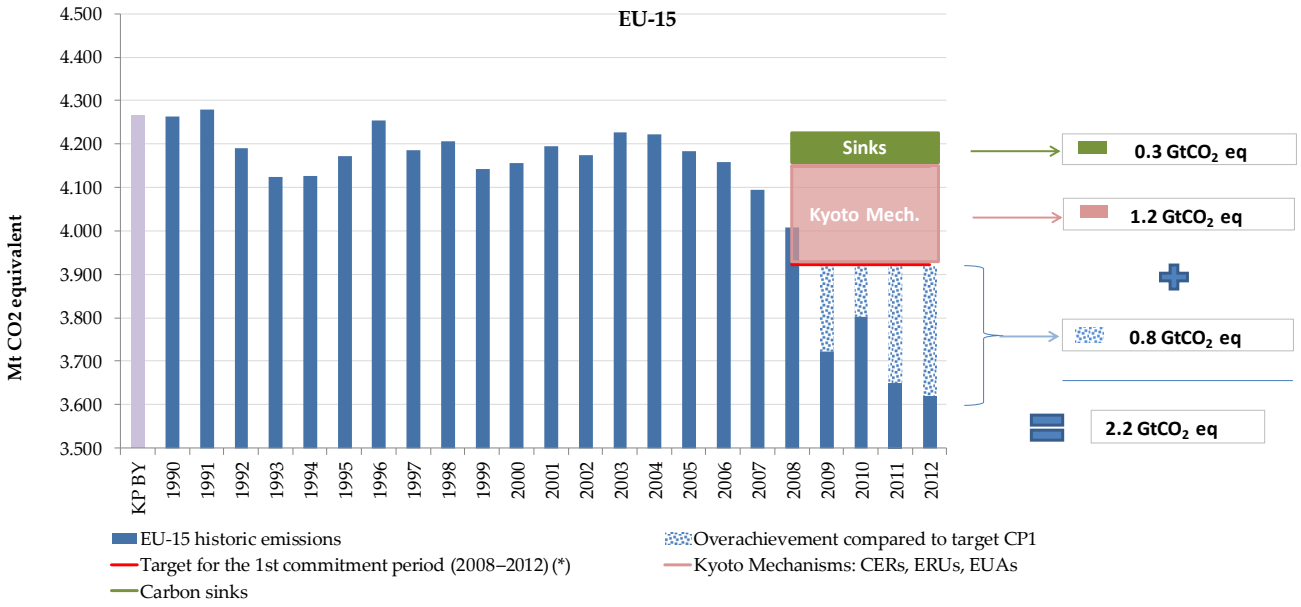
- when taking into account carbon sinks from LULUCF, an additional emission reduction of 1.4 % (0.3 Gt CO_2 eq) is achieved;

- with the intended use of the Kyoto mechanisms by governments, an additional 1.5 % emission reduction can be expected (0.3 Gt CO_2 eq). However, in light of the economic downturn, Member States may adjust their intentions with regard to the use of the Kyoto mechanisms compared to their latest reported information;

- with the use of international credits by ETS operators, an additional 3.8 % emission reduction is achieved (0.8 Gt CO_2 eq. in total).

Consequently, the EU-15 reduced its emissions by 18.5 % during the first commitment period, meaning a total reduction of 2.2 Gt CO_2 eq. The EU-15 emission reduction has therefore been more than twice their target for the first commitment period (see Figure 4)

Figure 4: Total overachievement during the first commitment period (2008-2012) (EU-15)



Source: EEA, European Commission

3.3. Performance at Member States level

EU-15

Progress towards meeting the respective Member States' Kyoto targets can be evaluated on the basis of assessing the performance under the non-ETS sectors.

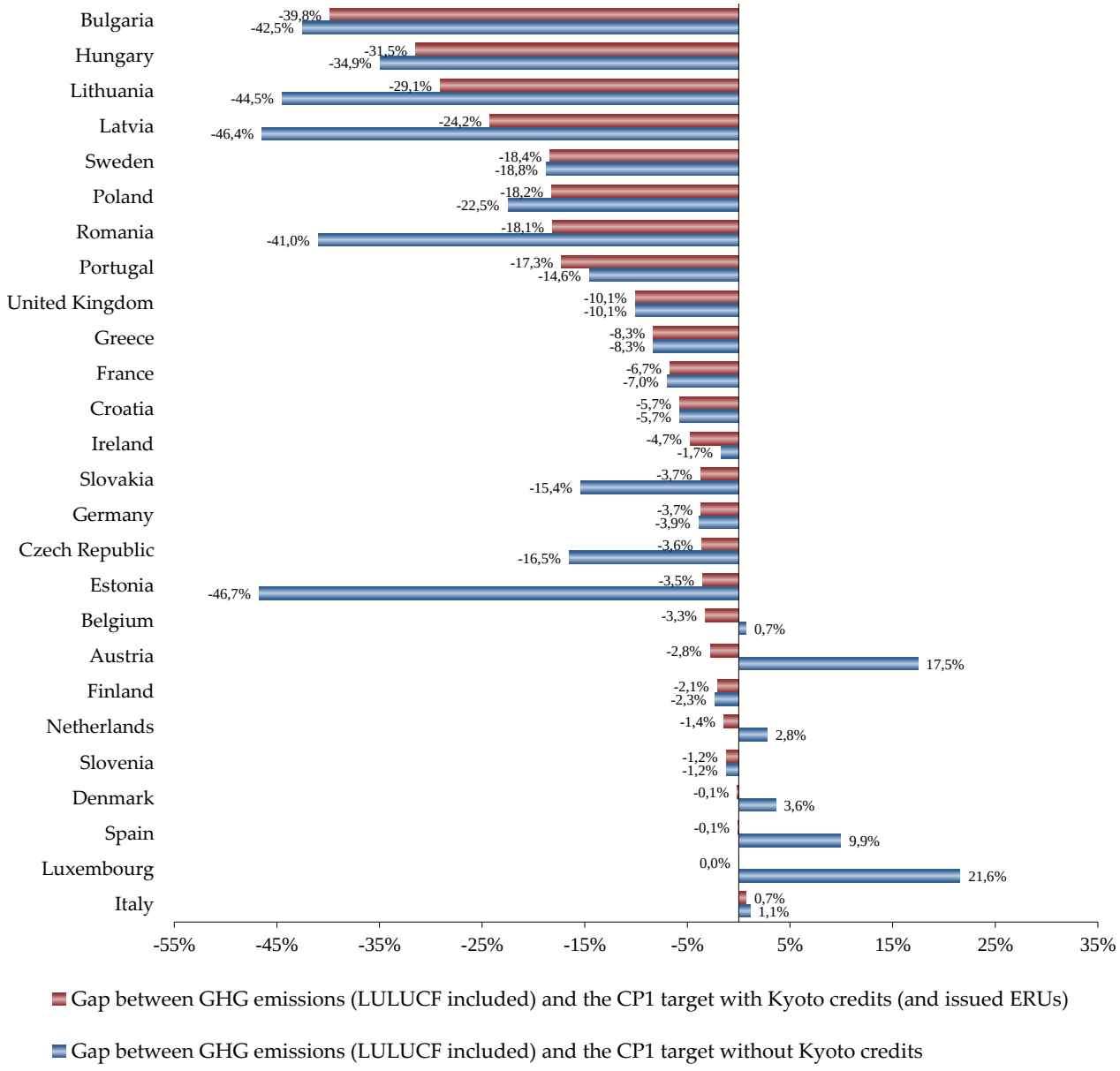
As shown in Figure 5, seven Member states (AT, BE, DK, ES, IT, LU, NL) have made or will need to make use of international credits under the Kyoto mechanisms. According to its latest reporting, Italy will have to purchase additional international credits before the end of the true-up period.

EU-11

Eleven other Member States[11] have individual targets under the Kyoto Protocol's first commitment period. All of them will overachieve their targets through domestic emission reduction measures alone (i.e. without taking into account LULUCF and the use of Kyoto mechanisms), and some will do so by a wide margin. Many of them have already sold part of their unused Assigned Amount Units (AAUs). Romania, the Czech Republic and Poland are the largest sellers of AAUs with respectively 318, 125 and 120 Mt CO_2 eq. sold to other Parties.

[11] MT and CY have no target under the first commitment period.

Figure 5: Relative gaps between GHG emissions in the non-ETS sectors for the first commitment period and the respective 2008-2012 Kyoto targets (including LULUCF) with and without the intended use of Kyoto mechanisms at government level.



Source: EEA, European Commission

4. GHG EMISSIONS TRENDS IN THE EU

4.1. GHG emissions in 2012 compared to 2011

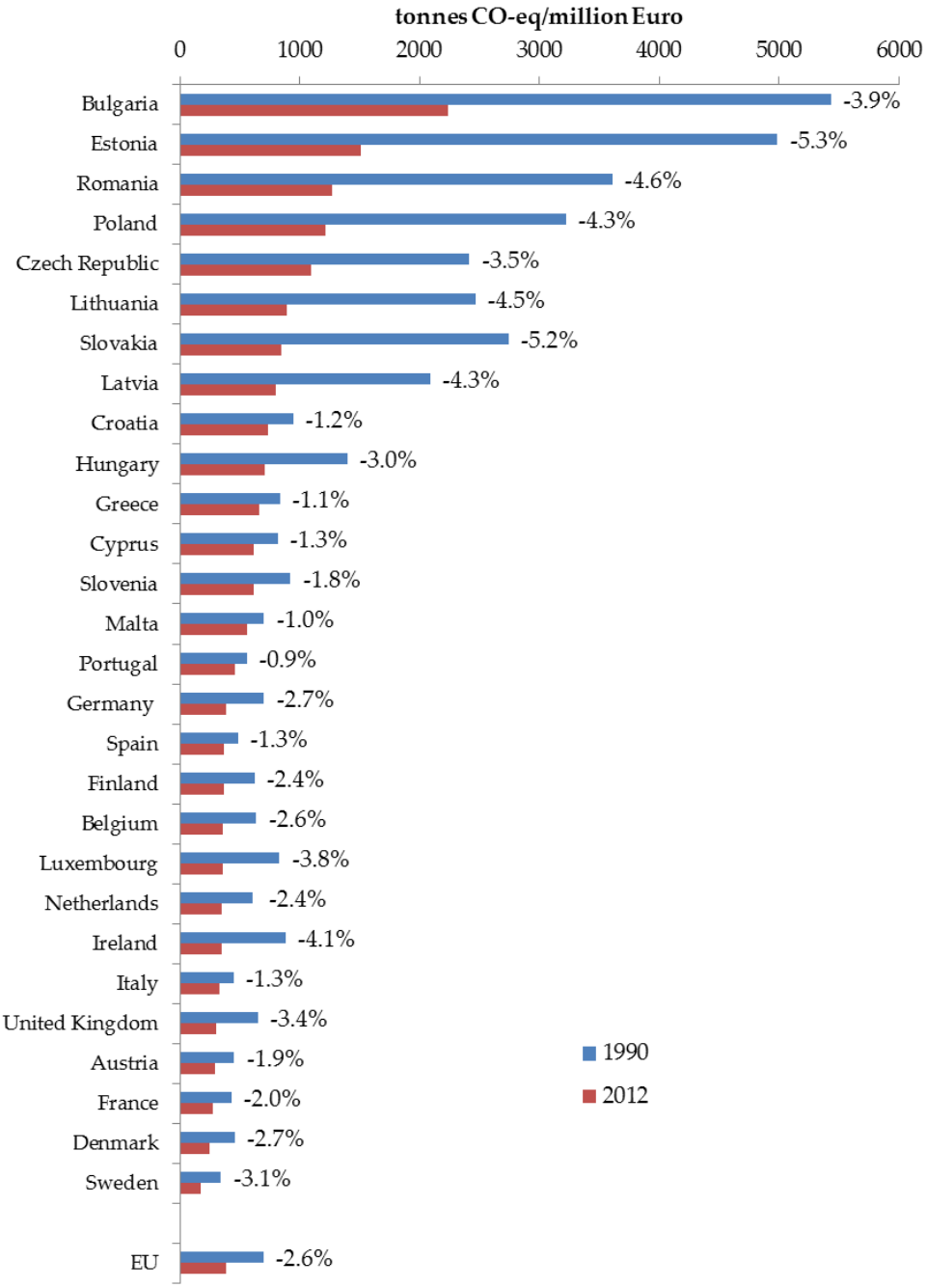
In 2012, total EU emissions continued to decrease by 1.3 % compared with 2011. Emissions decreased the most in the transport and the industrial sectors (-3.6 % for both sectors). In the power generation sector, however, emissions increased by 0.8 % even if the share of renewable in total electricity production increased from 21.5 % to 23.1 % in 2012. This is due

to the increase in the production of electricity from solid fuels (coal and lignite) linked to the relatively lower price of coal compared to gas. The year-on-year changes of emissions range from + 3.7 % in Malta to - 8.8 % in Finland. Emissions increased in four Member States (Malta, Germany (+ 1.1 %), Ireland (+ 1.4 %) and the UK (+ 3.2 %).

4.2. 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 6).

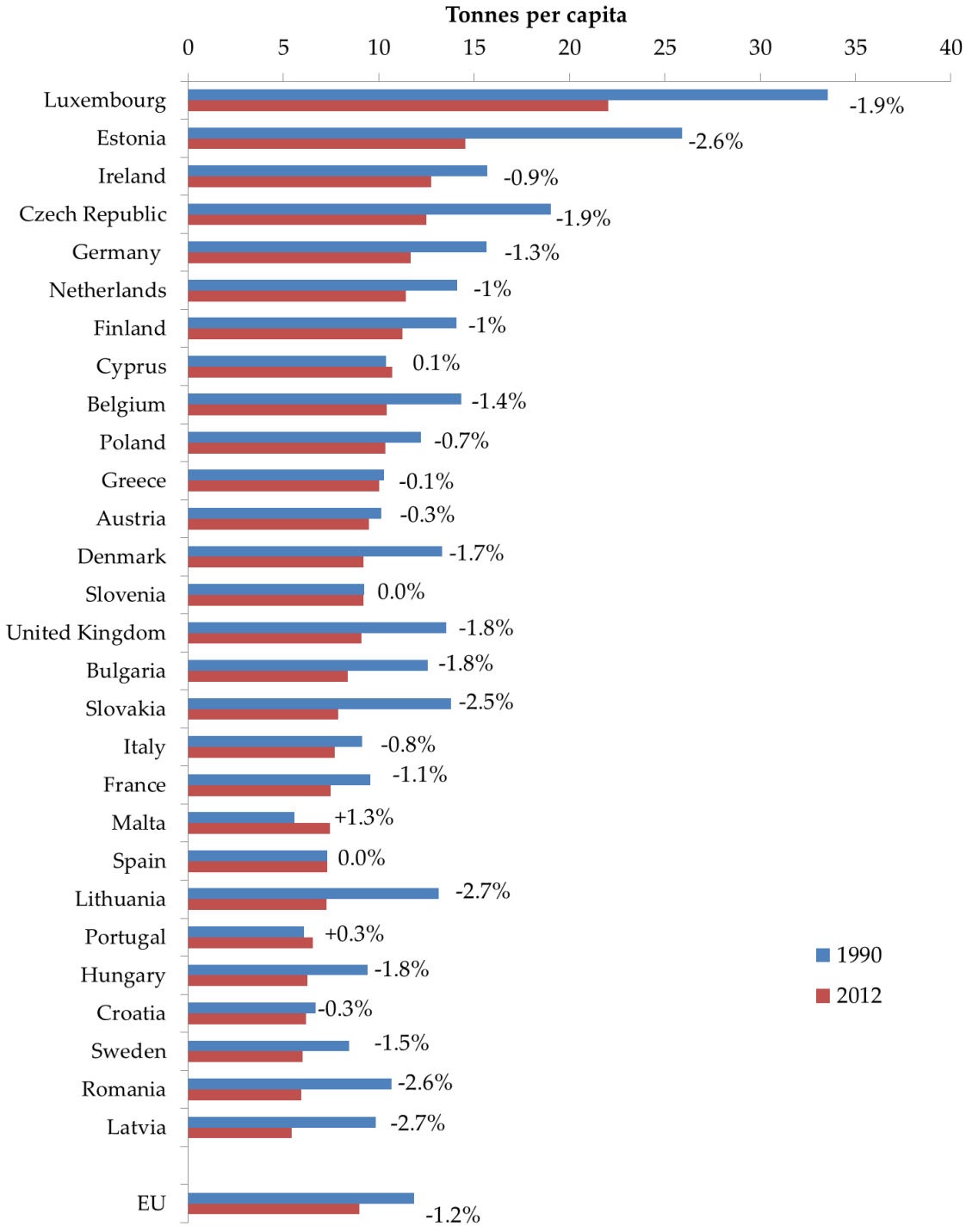
Figure 6: GHG emissions intensity in the EU-28, 2012/1990. Percentages reflect annual average reduction



Source: Commission, EEA

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

Figure 7: GHG emissions per capita in the EU, 2012/1990. Percentages reflect annual average reduction



Source: Commission, EEA

4.3. Ex-post evaluation of the drivers behind CO_2 emission reductions

The European Environmental Agency has carried out an analysis of the main drivers behind emission reductions during the period 2005-2012[12]. This analysis provides a quantification of the impact of the decomposition factors affecting CO_2 emissions, namely (i) population; (ii) GDP per capita; (iii) primary energy intensity[13] and (iv) carbon intensity of primary energy use[14]. The assessment, based on a decomposition analysis, covers CO_2 emissions from fossil fuel combustion which account for about 80 % of total GHG emissions.

As summarised in Figure 8, CO_2 emissions from fossil fuel decreased by respectively 3.3 % and 9.2 % during the 2005-2008 and 2008-2012 periods. This can be attributed to the three main factors:

(1) the 'primary energy intensity' of the EU economy decreased significantly, including through energy efficiency improvements, thus contributing to a large emission reduction for the two periods concerned;

(2) the carbon intensity of primary energy use decreased due to the development of renewables (nuclear production has been declining since 2005), also contributing to reducing emissions for both periods of time;

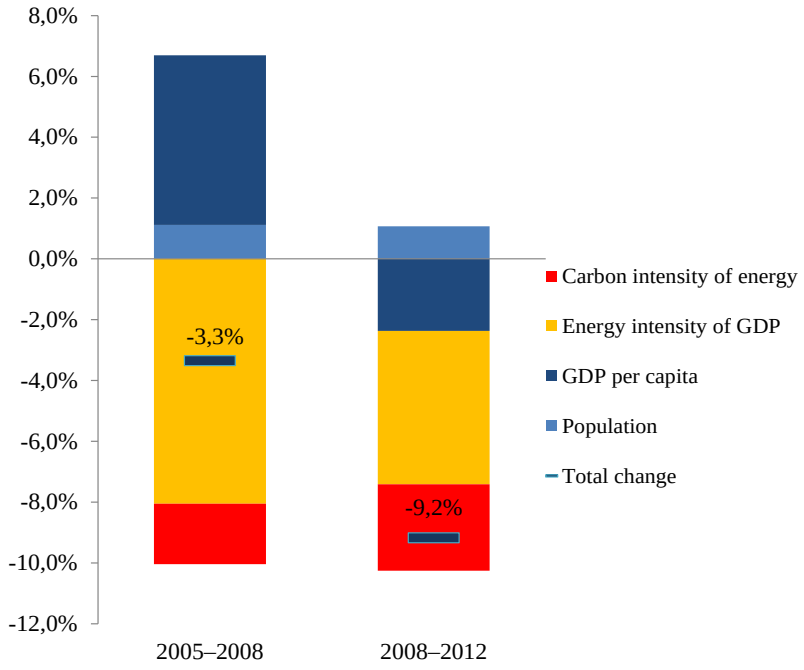
(3) The effect of growth was contrasted for the two periods considered. The GDP grew between 2005 and 2008 therefore mitigating the emission reductions driven by other factors. Conversely, the GDP decreased during the period 2008-2012, therefore reinforcing the emission reductions driven by factors other than the economic recession.

12 EEA 2014 - *Why did GHG emissions decrease in the EU between 1990 and 2012?* http://www.eea.europa.eu/publications/why-are-greenhouse-gases-decreasing

13 primary energy consumption per unit of GDP

14 CO_2 per primary energy from fossil fuels

Figure 8: Aggregate decomposition of the change in total CO_2 emissions from fossil fuel combustion in the EU for the 2005-2008 and 2008-2012 periods.



Source: EEA

This analysis carried by the European Environment Agency and the Commission's counterfactual analysis described in the accompanying Staff Working Document (SWD) show that the economic crisis[15] contributed to less than half of the reduction observed during the 2008-2012 period.

4.4. Aviation impact on the global climate

Domestic aviation GHG emissions in the 28 Member States have been decreasing since 2000, and were just over 16 Mt CO_2 eq. in 2012. On the contrary, the international emissions (CO_2 only) reported to the UNFCCC have increased to reach nearly 135 Mt CO_2 in 2012 (against nearly 70 Mt in 1990). Overall, total reported aviation emissions represent 3.22 % of total EU emissions reported in 2012.

Emissions of nitrogen oxides (NO*x*), aerosols and their precursors (soot and sulphate) and increased cloudiness in the form of persistent linear contrails and induced-cirrus cloudiness are also contributing to climate change.

Efforts have been made in the recent years to provide quantified estimates of the impacts of factors other than CO_2 on climate change despite the lack of observational data on the impacts such as contrails and induced-cirrus cloudiness. For example, a study partly financed by the EU 6th Framework Programme integrated project 'QUANTIFY'[16], attempted to estimate overall aviation impacts. The study concluded that aviation represents a 3.5 % share of total anthropogenic forcing in 2005 excluding aviation induced cloudiness (AIC), or a 4.9 % share including AIC.

[15] Represented by the decomposition factor 'GDP per capita' in Figure 8

[16] http://www.pa.op.dlr.de/quantify/

The research project REACT4C[17] performed in 2010-2014 investigated the potential of climate-optimised flight routing as a means of reducing the atmospheric impact of aviation. The results of this scientific research show that 25 % reduction of the climate impact can be already achieved with only small changes in the air traffic routing and economic costs increase by less than 0.5 % of operational costs.

5. STATE OF IMPLEMENTATION OF THE UNION'S CLIMATE CHANGE POLICY

5.1. Reducing emissions

5.1.1. Preparation of the 2030 Climate and Energy framework

In January 2014 the European Commission outlined a policy framework shaping the climate and energy policies after 2020[18]. This policy framework has been completed by a Communication on energy efficiency in July 2014[19]. It sets out the following key elements:

- a binding domestic greenhouse reduction target of 40 % in 2030 compared to 1990 to be met by an annual reduction of the cap on the EU-ETS emissions of 2.2 % after 2020 and a reduction of emissions of non-ETS sectors to be shared equitably among the Member States in the form of binding national targets;

- an EU level target of at least 27 % of renewable energy to be consumed in the EU by 2030. This commitment will be delivered through clear commitments decided by the Member States themselves, supported by strengthened EU level delivery mechanisms and indicators;

- a 30 % energy efficiency target for 2030;

- and a new governance system based on national plans for competitive, secure and sustainable energy.

In response to the current geopolitical environment and the EU´s import dependence, the Commission also adopted a Communication putting forward a new European Energy Security Strategy[20], inseparable from the 2030 Climate and Energy framework. Diversifying external energy supplies, upgrading energy infrastructure, completing the EU internal energy market and saving energy are among its main points.

The October 2014 European Council reached an agreement[21] on the 2030 Climate and Energy framework based on the Commission's proposal.

5.1.2. EU ETS

Work on implementation has led to the successful start of phase 3 under the EU ETS (period 2013-2020). In terms of scope, the ETS now covers, in addition to CO_2 from most of

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17 7thFP project "Reducing Emissions from Aviation by Changing Trajectories for the benefit of Climate" (2010-2014)

18 COM(2014) 15.

19 COM(2014) 520

20 COM(2014) 330

21 See conclusions of the European Council (http://www.european-council.europa.eu/council-meetings/conclusions)

industrial installations, nitrous oxide (N_20) from the production of nitric and other acids and PFCs from the production of aluminium.

The EU ETS phase 3 does no longer provide an individual cap for every Member State, but a single cap for the EU, Iceland, Liechtenstein and Norway. As of 2013, around 43 % (excluding NER 300[22]) of the emission allowances have been auctioned, and this share is expected to increase over time.

Since 2009, a growing surplus of allowances and international credits has been available on the carbon market, leading to a fall of the carbon price. To address this imbalance, the Commission proposed to postpone ('back-load') the auctioning of 900 million allowances from the early years of phase 3 of the EU ETS to the end of the trading period. The 'back-loading' was adopted by amending the Auctioning Regulation on 25 February 2014.

On 22 January 2014, the Commission furthermore adopted a legislative proposal to establish a market stability reserve at the beginning of the fourth trading period in 2021. The proposed reserve will complement the existing rules. Allowances are placed in the market stability reserve – i.e. deducted from future auction volumes – according to the "total number of allowances in circulation". The flow of allowances into and out of the reserve would occur on the basis of an automatic, fully rule-based process.

In the aviation sector, the International Civil Aviation Organization (ICAO) Assembly agreed in autumn 2013 to adopt a definitive agenda leading to a global agreement to tackle aviation emissions. Pending the possible adoption of international rules, the Council and European Parliament limited in March 2014 the coverage of the EU ETS to flights within the European Economic Area for the period from 2013 to 2016.

5.1.3. Other policies and measures

The Commission adopted a Communication[23] setting out a strategy for progressively including GHG from maritime transport in the EU's policy for reducing its overall GHG emissions. As a first step in implementing this strategy, 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. The draft Regulation is under consideration of the Parliament and the Council.

Implementation of the legislation setting targets for CO_2 emissions from cars[24] to 2021 and from light commercial vehicles[25] to 2020, is complete. The Commission has approved six eco-innovations which reduce CO_2 emissions.

A new legislation[26] on fluorinated greenhouse gases has been adopted and will apply as from 1st January 2015. It will reduce fluorinated gases emissions by two-thirds in the period from

22 See section 0
23 COM(2013) 479
24 Regulation (EC) n° 443/2009
25 Regulation (EC) n° 510/2011
26 Regulation (EC) n° 517/2014

2015 to 2030 entailing a total cumulative savings estimated at 1.5 Gt CO_2 eq. until 2030, and 5 Gt CO_2 eq. until 2050, compared to a business-as-usual scenario.

In order to mitigate against the indirect land use change emissions from biofuel production, the Commission proposed a number of amendments to the Renewable Energy and Fuel Quality Directives ('the ILUC proposal'). The proposed text is currently discussed within the European Institutions.

Member States have begun the reporting, under legislation adopted in 2013[27], on their current and future LULUCF actions to limit or reduce emissions and maintain or increase removals in that sector.

A list of legal acts recently adopted is available in section 3 of the accompanying SWD.

5.2. Adaptation to climate change

On 16 April 2013, the Commission adopted the EU Strategy on Adaptation to Climate Change aiming at contributing to a more climate resilient Europe. It focuses on meeting three key objectives with the following main developments:

- Promoting action by Member States: The Commission encourages Member States to adopt comprehensive adaptation strategies and is developing an adaptation preparedness scoreboard. In March 2014, the European Commission launched the Covenant of Mayors Initiative encouraging cities to take action to adapt to climate change. Mayors Adapt aims at increasing the support for local activities, providing a platform for greater engagement and networking by cities, and raising public awareness about adaptation and the measures that are needed. The Commission also supports adaptation projects, in particular through the new LIFE Climate action sub-programme.

- Mainstreaming adaptation action into EU policies: the objective to devote at least 20 % of the budget of the Union for climate change related objectives is used as a tool for promoting adaptation.

- Promoting better informed decision-making, in particular through the Climate-ADAPT platform, which enables collecting and disseminating adaptation information in the EU. The Commission is furthermore completing a knowledge gap strategy on adaptation aiming at identifying and bridging specific sectorial knowledge gaps.

[27] Decision 529/2013/EU of the European Parliament and the Council

5.3. Climate Finance

5.3.1. Auctioning revenues

5.3.1.1. Use of auctioning revenues by Member States

Under the Monitoring Mechanism Regulation, Member States were requested to report for the first time by 31 July 2014 on the amounts and use of the revenues generated by the auctioning of ETS allowances in the year 2013 (see Figure 9 and in Annex as well as more detailed information in SWD). The total revenues for the EU were € 3.6 billion.

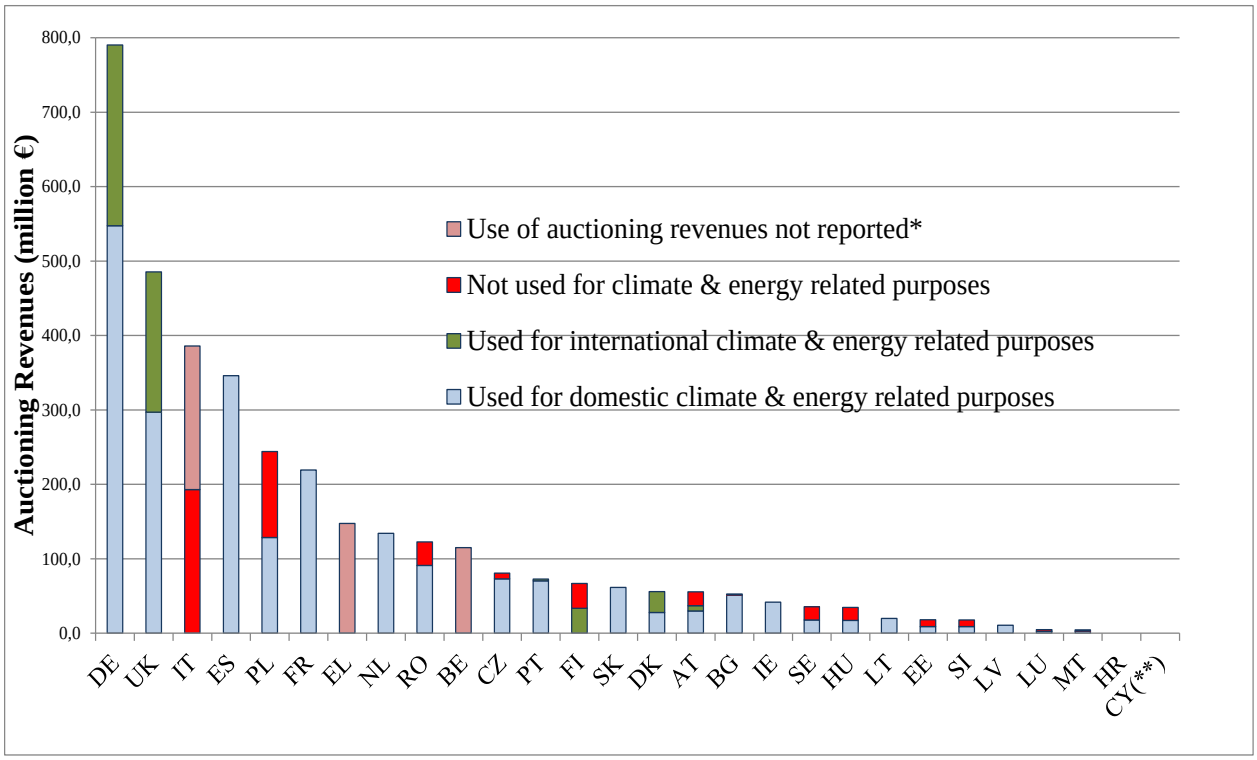
The EU ETS Directive provides that at least 50 % of auctioning revenues or the equivalent in financial value of these revenues should be used by Member States for climate and energy related purposes. All Member States have reported to have used or to plan to use[28] 50 % or more of these revenues or the equivalent in financial value of these revenues for climate and energy related purposes[29] (87 % on average representing approximately € 3 billion), largely to support domestic investments in climate and energy.

The reported amounts represent only a proportion of total climate and energy related spending in Member States' budgets.

[28] Certain Member States intend to use at least 50 % of auctioning revenues for climate related purposes. However; the revenues collected in 2013 have not been allocated yet and will be reported to subsequent years (for instance FI, LV and SK).

[29] According to their submissions, auctioning revenues in AT, DK, IE, NL and UK 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.

Figure 9: Reported revenues from the auctioning of EU ETS allowances (millions of euros) in 2013 and share of these revenues or the equivalent in financial value used or planned to be used for climate and energy related purposes



* IT, EL: split between domestic and international use not reported. BE: no information on the use of auctionning revenues provided.

** No reporting provided.

Source: European Commission

Only some Member States reported information on the split of the use of revenues per type of action (see SWD). For instance, France, the Czech Republic and Lithuania use all their auctioning revenues in projects to improve the energy efficiency of buildings. Bulgaria, Portugal and Spain use most of their revenues to develop renewable energy. Poland uses most of its revenues that are dedicated to climate change in support of energy efficiency and renewable energy. In Germany, all auctioning revenues are used for climate and energy related purposed, with most of those revenue directed to a specific climate and energy fund, which supports a wide range of projects. Finland channels its auctioning revenues to Official Development Assistance activities, including climate finance. The UK uses around 15 % of auctioning revenues to provide financial assistance to low income households in relation to energy expenses.

5.3.1.2. NER 300

The NER 300 funding programme is mechanism in support of innovative renewable energy technology development and Carbon Capture Storage (CCS) demonstration projects. It is financed by the auctioning of 300 million allowances from the new entrants' reserve of the EU ETS. Two calls for proposals were launched under this programme.

The second call, awarded in July 2014, was funded from the sale of the remaining allowances and unused funds from the first call. 18 renewable energy and 1 CCS projects were selected and will receive €1 billion in total, which will generate private investments for a total value of almost €900 million. In total, the two calls will provide € 2.1 billion to 39 projects (38 in the field of renewable energy and 1 CCS project).

5.3.2. Mainstreaming Climate Policies into EU budget

5.3.2.1. Multiannual Financial Framework

As regards the mainstreaming of climate action into the EU budget, all Institutions have agreed that at least 20 % of the overall expenditures under the Multiannual Financial Framework (2014-2020) will be climate-related. The contribution towards climate expenditure in 2014 and in 2015 represents almost 13 % of the EU budget for each year.

A significant upward revision is expected as from the 2016 budget, when the Operational Programmes of the Member States under the European Structural and Investment Funds are adopted and the Common Agricultural Policy's new direct payment scheme, including the greening measures, is fully implemented.

5.3.2.2. Climate Research and Innovation

Climate research was one of the main research themes of the EU's 7th Framework Programme (2007-2013) and is central to Horizon 2020, the new EU programme for research and innovation 2014-2020, budgeted to € 79 billion. At least 35% of the Horizon 2020 budget is expected to be invested in climate-related objectives. This represents a significant increase compared to the estimated € 900 million that have been spent under the 7th Framework Programme.

For example, the Horizon 2020 Societal Challenge "Climate Action, Environment, Resource Efficiency and Raw Materials" (with a budget of about € 3 billion), supports mitigation research and innovation projects. These projects aim at analysing and mitigating the pressure on the environment (oceans, atmosphere, and ecosystems) and improving the understanding of climate change. In addition, research actions will focus on assessing impacts, vulnerabilities and solutions for adapting to climate change, developing strategies for disaster risk reduction and stimulating a transition to a low-carbon society and economy.

Climate change mitigation and adaptation are important drivers for programming research and innovation under all other Societal Challenges as well, notably in transport, energy, bioeconomy, and food, agriculture, and the in pillar "Industrial leadership".

5.3.2.3. Supporting developping countries

With a share of 51 % of Official Development Assistance (ODA) for climate change from all donors reporting to OECD, the EU and its Member States have been the largest contributor to both mitigation and adaptation related ODA for the period 2010-2012.

As part of the fast-start finance commitment by developed countries of USD$30 billion, the EU and its Member States fulfilled their commitment by allocating € 7.34 billion to fast-start finance over that period. After the end of the Fast Start Finance period, the EU and its Member States have continued to provide climate finance support to developing countries in

view of the developed countries goal to jointly mobilise USD$100 billion per year by 2020 from a wide variety of sources.

At the Doha Climate Change Conference in December 2012, the EU and a number of Member States announced voluntary climate finance contributions to developing countries. The total contribution is expected to exceed € 5.5 billion. An initial assessment shows that this amount was on track to be delivered in 2013[30].

In 2013, 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 with information for the years 2011 and 2012. The total climate financial support provided to developing countries (2011-2012) by the EU and its Member States and per type of instrument is available in the tables of the SWD.

6. SITUATION IN THE UNION'S CANDIDATE COUNTRIES AND POTENTIAL CANDIDATES

6.1. EU candidate countries (Albania, Iceland, Turkey, the Former Yugoslav Republic of Macedonia, Montenegro and Serbia)

Albania is a non-Annex I Party. According to its latest National Communication dated 2009, Albania's emissions have decreased by 70% between 1990 and 2000.

Iceland is an Annex I Party which met its individual target for the first commitment period[31]. For the second commitment period, Iceland, the EU and its Member States will enter into a joint emission reduction commitment (cf. section 2.1).

Turkey's GHG emissions (excluding LULUCF) increased by 133 % between 1990 and 2012 and 3.7 % between 2011 and 2012. While Turkey is an Annex I Party, it has no target under the first or the second commitment period of the Kyoto Protocol.

The former Yugoslav Republic of Macedonia is a non-Annex I Party. It 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 Montenegro, which is also a non-Annex I Party to the Convention, total GHG emissions (excluding LULUCF) increased by around 4.9 % between 1990 and 2003.

No recent information is available for Serbia regarding GHG emissions inventories.

30 see http://ec.europa.eu/clima/policies/finance/documentation_en.htm. Each year, Member States submit to the European Commission information on financial and technology support provided to developing countries by 30 September.

31 Iceland must limit the increase of emissions below 10 % on average over the first commitment period. Emissions decreased by a 2 % average over this period.

6.2. EU potential candidates (Bosnia and Herzegovina and Kosovo*)

Bosnia and Herzegovina submitted its second National Communication in November 2013. Between 1991 and 2001, the total emission of Bosnia and Herzegovina decreased by 48 %.

No data are 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.

EUROPEAN
COMMISSION

Brussels, 28.10.2014
COM(2014) 689 final

ANNEX 1

ANNEX

to the

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)

{SWD(2014) 336 final}

Table 1: Reported revenues from the auctioning of EU ETS allowances (millions of euros) in 2013 and share of these revenues or the equivalent in financial value of these revenues used or planned to be used for climate and energy related purposes

Country	*Total reported revenues from the auctioning of allowances(millions of euro)*	*Used or planned to be used for climate & energy related purposes(domestic and international)*	*Share used or planned to be used for climate & energy related purposes*
DE	790.3	790.3	100%
UK(*)	485.4	485.4	100%
IT	385,9	192,9	50%
ES	346.1	346.1	100%
PL	244.0	128.7	50%
FR	219.2	219.2	100%
EL	147,6	147,6	100%
NL	134.2	134.2	100%
RO	122.7	91.2	74%
BE	115.0	not provided	not provided
CZ	80.7	73.2	91%
PT	72.8	70.4	100%
FI (**)	67.0	33.5	50%
SK (***)	61.7	61.7	100%
DK	56.0	28.0	50%
AT	55.8	29.9	66%
BG	52.6	51.3	97%
IE	41.7	41.7	100%
SE	35.7	17.9	50%
HU	34.6	17.3	50%
LT	20.0	20.0	100%
EE	18.1	9.0	50%
SI	17.7	8.9	50%
LV (***)	10.8	10.8	100%
LU	5.0	2.5	50%
MT	4.5	2.9	64%
HR	0	0	
CY	no reporting provided		
Total	3635.1(****)	3052.1	87% (*****)

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

(**) Finland currently channels all auctioning revenues to Official Development Assistance activities, including climate finance, which will account for 50% of these revenues. During the reporting year FI allocated approximately € 7 million of revenues, of which € 2 million were used for international purposes related to climate and energy. The use of the remainder of the funds will be reported in subsequent years.

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

(****) does not include Cyprus (no reporting provided).

(*****) does not include Belgium (share of revenues used for climate & energy related purposes not reported) and Cyprus.

Source: European Commission

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COMMISSION STAFF WORKING DOCUMENT
Accompanying the document

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(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)

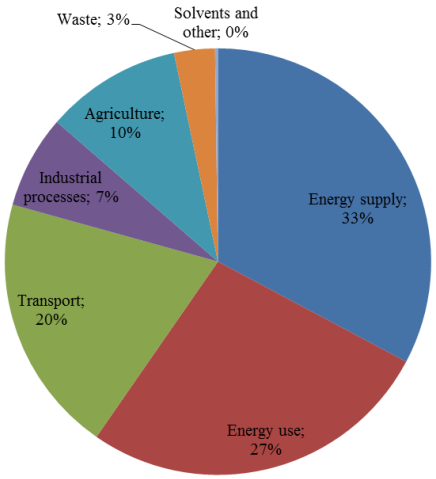
{COM(2014) 689 final}

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:

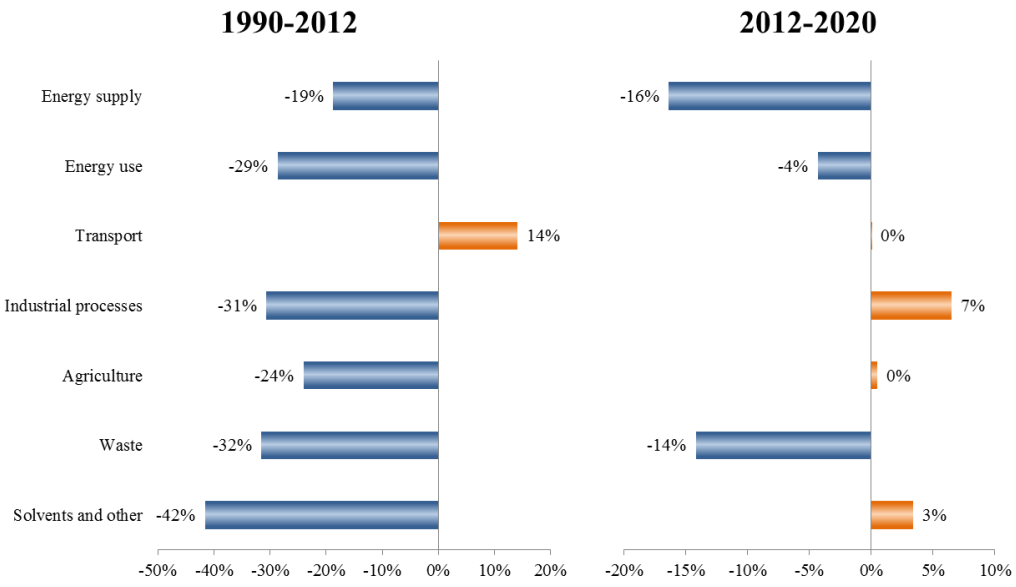
Figure 10: Share of emissions by sector in the EU-28; 2012



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 11: 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 2: 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.[32]

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

[32] 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.

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.[33]

1.3. Transport

Table 3: 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 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.

[33] For further analysis, see ibid.

1.4. Agriculture

Table 4: 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.[34]

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 5: GHG emissions from industrial processes (1990-2012)

	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

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

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[35], in contrast to all the others that have generally been reduced.

1.6. Waste management

Table 6: 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.

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[36] 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%

[35] 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).
[36] Council Directive 1999/31/EC of 26 April 1999 on the landfill of waste

compared to its base year level. However, taking into account Decision 14/CP.7[37] 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 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

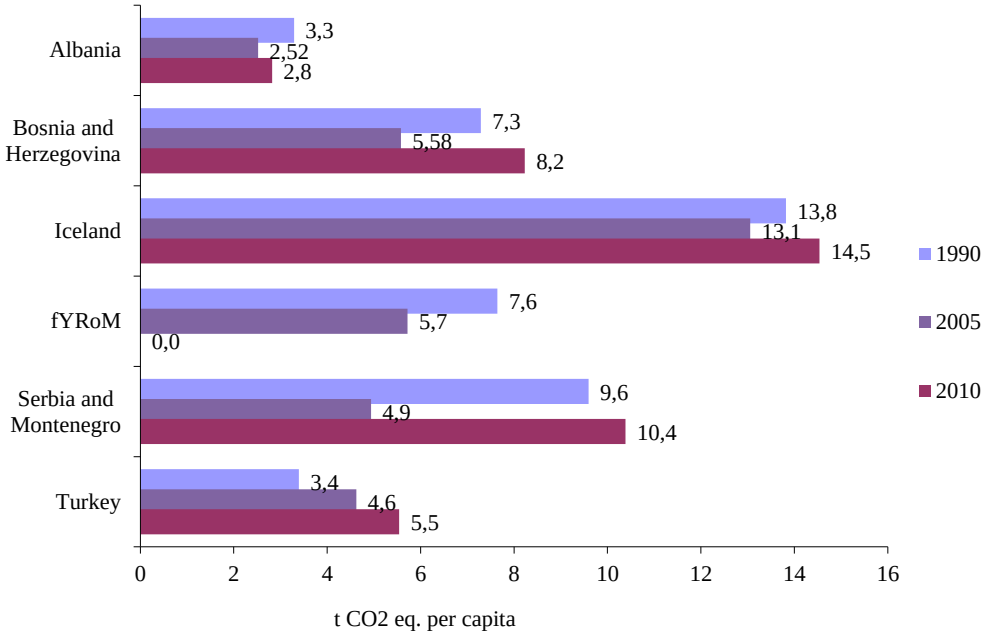
Bosnia and Herzegovia is a non-annex I country while Kosovo[*] has not ratified yet the UNFCCC..

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.

[37] 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.

[*] 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 12: 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

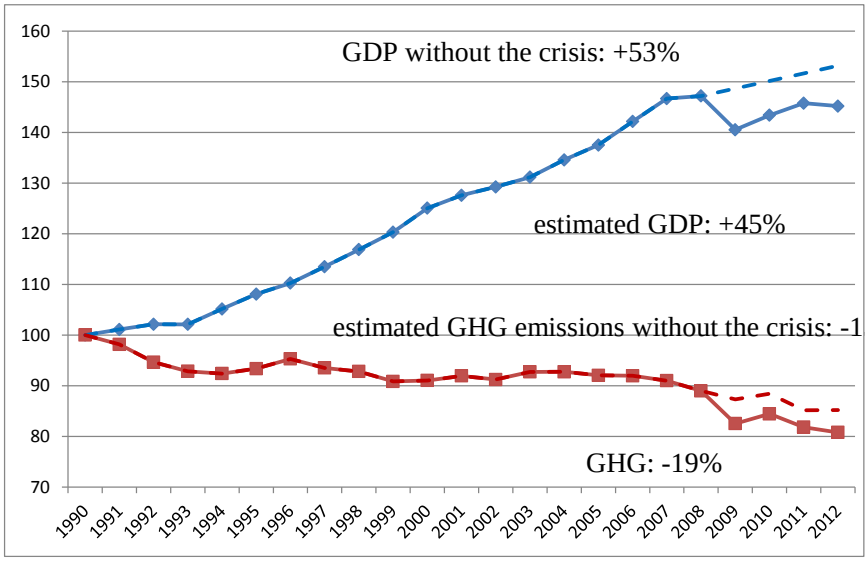
The impact of the economic crisis on emissions trends can be assessed by developing a counterfactual growth scenario. Total GHG emissions can be considered in light of their relationship to GDP and the ratio of emissions to GDP, known as GHG emissions intensity of the economy.

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 13).

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 13: 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 7: 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 8.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
Lithuania	48,7	49,4	184,3	80,2	38,1	-5,7	22,5	46%	46%	-71,8

							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
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		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%

		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	%	%	%	%	%	%	%
glass (31.0 + 31.7)	383																					
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%
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	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%

		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	%	%	%	%	%	%	%
under Art. 24																						
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%
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%

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	%	%	%	%	%	%	%	%
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
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

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***
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
Latvia	4,8	-11,1	0,0	0,0	0,0	-11,1	-6,2	-1,2

	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])***
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	

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)
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	
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	

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)
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

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*
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
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.

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*
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.[38]

[38]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

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[39].

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[40], 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
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

[39] 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.

[40] 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)*
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:

(4) **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.

(5) **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.

(6) **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

(7) **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

(8) **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.

(9) **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:

(10) **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.

(11) **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.

(12) **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[41] 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[42] – 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 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.[43]
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

41 http://ec.europa.eu/environment/life/about/index.htm

42 http://mayors-adapt.eu/

43 http://ec.europa.eu/echo/files/news/post_hyogo_risks_overview_en.pdf

	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[44]. Factsheets on the mainstreaming of climate action in European Structural and Investment Funds were published on DG Climate action's website[45].
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[46]. Adaptation considerations have been integrated in the revised Environmental Impact Assessment Directive[47].
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.[48] Various workshops and stakeholders' dialogues with and between insurance companies were organised in 2013/2014.

44 http://ec.europa.eu/clima/policies/adaptation/what/docs/swd_2013_299_en.pdf
45 http://ec.europa.eu/clima/publications/index_en.htm#Mainstreaming
46 C(2014) 3451 final
47 See: http://ec.europa.eu/environment/eia/review.htm
48 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	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

Policies and measures 'Energy supply'	Stage of implementation /timetable /comments
technologies under the revised EU ETS	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
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.
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

Policies and measures **'Energy demand'**	**Stage of implementation / timetable /comments**
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.
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.
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

Policies and measures **'Transport'**	**Stage of implementation / timetable / comments**
	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 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.
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
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.

Policies and measures 'Waste'	Stage of implementation / timetable / comments
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.