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**REPORT FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT AND
THE COUNCIL**

PROGRESS TOWARDS ACHIEVING THE KYOTO OBJECTIVES

(required under Article 5 of Decision 280/2004/EC of the European Parliament and of the Council concerning a mechanism for monitoring Community greenhouse gas emissions and for implementing the Kyoto Protocol)

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TABLE OF CONTENTS

1.	SUMMARY	3
2.	ACTUAL PROGRESS 1990-2008	5
2.1.	GHG emission trends	5
2.2.	GHG intensities and emissions per capita in 2008.....	6
2.3.	GHG emissions in 2008 compared to 2007	7
2.4.	Emission trends in the main sectors	8
3.	PROJECTED PROGRESS TOWARDS MEETING THE KYOTO TARGET	10
3.1.	Projections of GHG emissions	10
3.1.1.	EU-15	10
3.1.2.	EU-12	10
3.1.3.	EU-27	10
3.2.	Implementation of the EU climate change policy.....	12
3.3.	Implementation of the EU Emissions Trading System (EU ETS).....	13
3.3.1.	Second trading period (2008-2012)	13
3.3.2.	Use of JI and CDM by operators.....	14
3.4.	Projected use of Kyoto mechanisms by government	14
3.5.	Projected use of carbon sinks	14
4.	MEETING THE 2020 TARGET	15
4.1.	EU GHG emission reduction target by 2020	15
4.2.	Policies contributing to the fulfilment of targets.....	15
4.3.	Projected distance to targets.....	15
5.	SITUATION IN THE EU CANDIDATE COUNTRIES	16

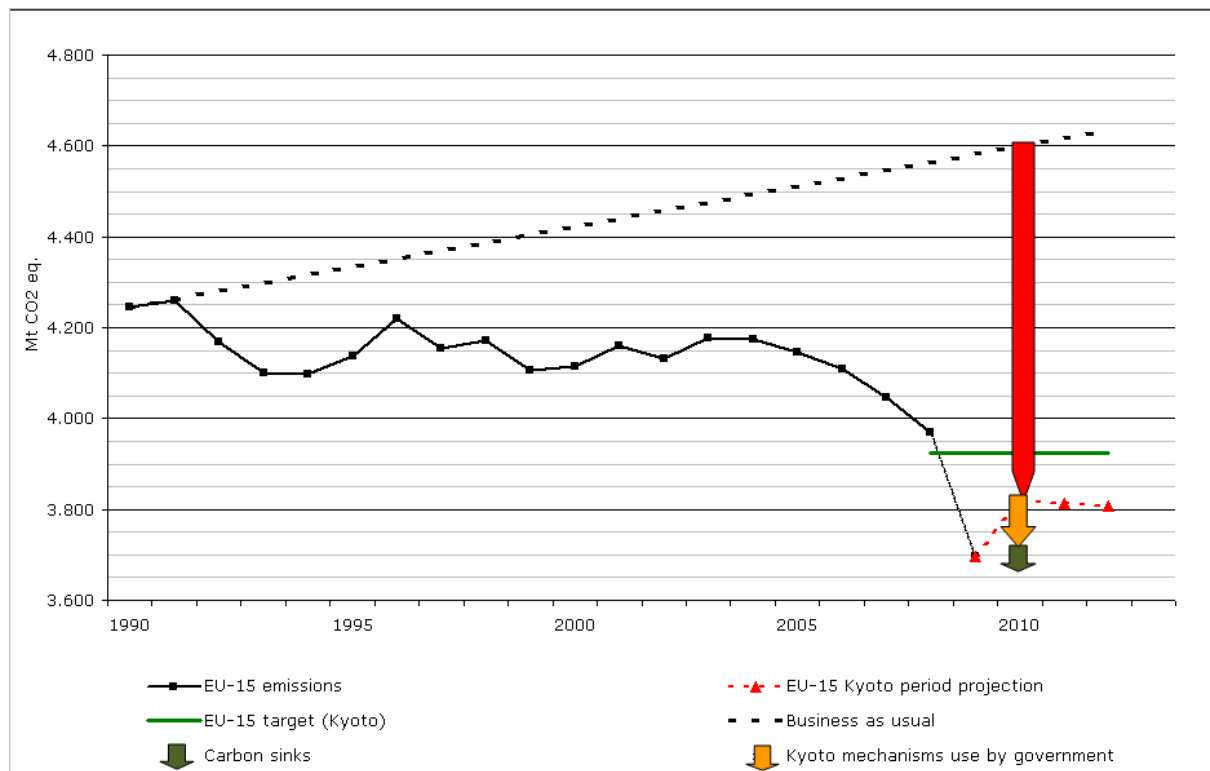
1. SUMMARY

On track to reach the Kyoto target, 2008-2012

Under the Kyoto Protocol, the EU-15 has agreed to reduce its greenhouse gas (GHG) emissions by 8% by 2008–12 compared to base year levels¹. Based on the latest available inventory data of 2008², total GHG emissions in the EU-15 have fallen for the fifth consecutive year and were 6.9% below base year emissions without Land Use, Land Use Change and Forestry (LULUCF). While since 1990, the economy has grown significantly with an increased of EU-15 GDP by almost 45%, GHG emissions in EU-15 have nevertheless been decreasing.

In 2008, EU-15 GHG emissions decreased by 1.9% compared to 2007 while the EU-15 GDP grew by 0.6%. **Projections³ as shown in Figure 1 indicate that the EU-15 will reach its Kyoto target.** Current projections, reflecting the economic recession, indicate that the target is very likely to be overachieved.

Figure 1: Actual and projected emissions for EU-15



Note: The arrows are based on 2008-2012 average and therefore do not correspond exactly to 2010 values of projected emissions. 2009 emissions are preliminary estimates from the European Environment Agency.

Source: European Commission

According to the recent GHG projections six Member States (Finland, France, Germany, Greece, Sweden, the United Kingdom) are on track to achieve their GHG reduction targets domestically. Taking into account the planned use of the Kyoto flexible mechanisms, use of unused allowances from the EU ETS new entrant reserve and carbon sinks, only two Member States (Austria and Italy) might face difficulties with achieving their targets, though not undermining the overall EU-15 capacity to meet its Kyoto target. In most of the twelve Member States which entered the EU as from 2004 emissions are projected to slightly

decrease between 2008 and 2012, nine of them that have a Kyoto target⁴ are projected to meet or over-achieve their Kyoto targets using only existing policies and measures. Slovenia projects that it will meet its target when all the existing and planned measures, including the purchase of Kyoto credits will deliver as expected.

Total EU-27 GHG emissions were, in 2008, 14.3% below base year levels without emissions and removals by LULUCF. Emissions were 2% lower compared to 2007 while during the same period the EU-27 economy grew by 0.7%.

Additionally, according to the provisional 2009 data⁵, EU-15 and EU-27 greenhouse gas emissions decreased by 6.9 % in 2009 compared to 2008. Based on these estimates, EU-15 stands 12.9 % below the base-year level, beyond its Kyoto commitment of 8% reduction for the first time. EU-27's 2009 emissions stand approximately 17.3 % below the 1990 level. The change of DGP in 1990-2009 was 38% for EU-15 and 40% for EU-27.

New measures to reach the EU's ambitious 2020 target

The climate and energy package⁶ adopted in 2009 provides an integrated and ambitious package of policies and measures to tackle climate change until 2020 and beyond.

From 2013 onwards the total EU effort to reduce greenhouse gas emissions by 20% by 2020 compared to 1990 will be divided between the EU ETS and non-ETS sectors as follows:

- (a) 21% reduction in EU ETS sector emissions compared to 2005;
- (b) reduction of around 10% compared to 2005 for the sectors that are not covered by the EU ETS.

The overall reduction of -20% compared to 1990 is equivalent to a -14% reduction compared to 2005. A larger reduction is required by the EU ETS sectors because it is more cost effective to reduce emissions in the sectors covered by the ETS rather than in the other sectors that are not covered by the system.

Since 2009 further preparation for the implementation of the GHG reduction commitment by 2020 has taken place. In regard to the implementation of the **revised EU ETS Directive** this covers among others a Commission Decision to determine the sectors and subsectors deemed to be exposed to carbon leakage and a Commission Decision on the Community-wide quantity of allowances to be issued in the third trading period. Furthermore, rules for the timing, administration and other aspects of auctioning of allowances and Community-wide harmonised allocation rules for allocating allowances in the third trading period are in preparation. The Registries Regulation is also being revised in order to address necessary changes.

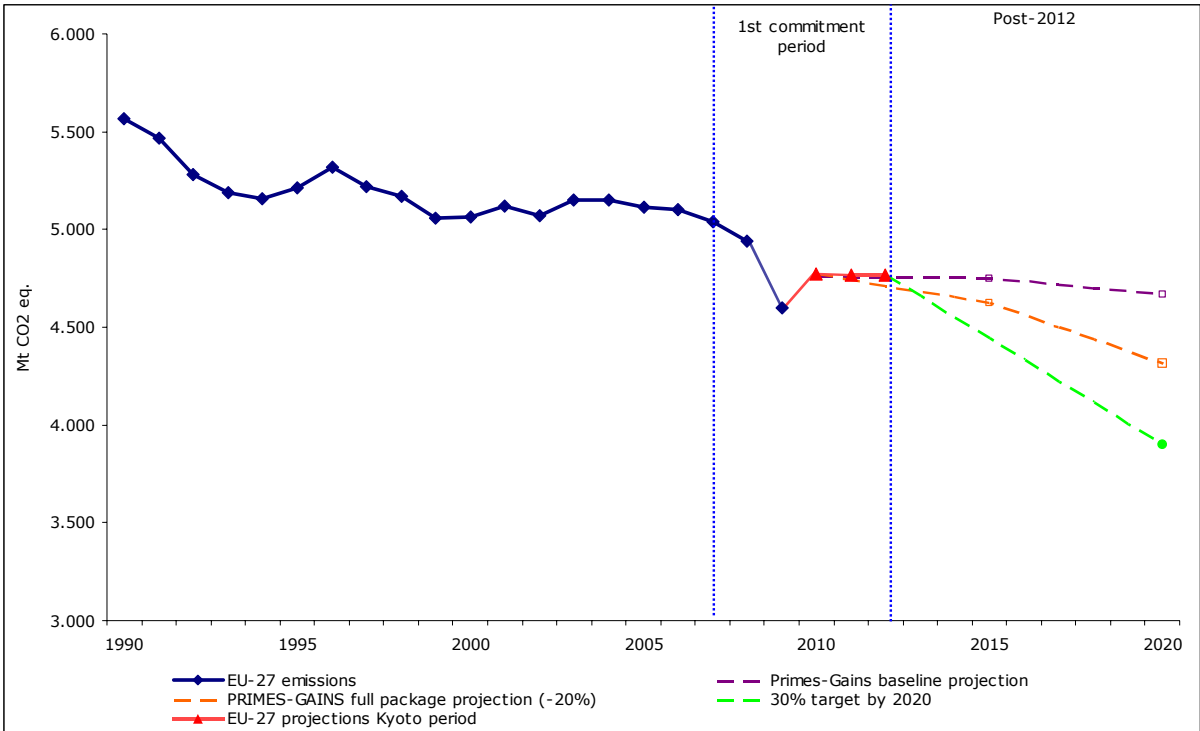
The **Effort Sharing Decision** regulates GHG emissions in all sectors except installations and aviation covered by the EU ETS, Land Use, Land Use Change and Forestry (LULUCF), and international maritime shipping. It obliges Member States to limit their GHG emissions between 2013 and 2020 according to a linear trajectory with binding annual targets. This will ensure a gradual move towards agreed 2020 targets in the respective sectors. Member States will be responsible for defining and implementing policies and measures to limit their emissions. A robust monitoring system will be put in place for monitoring Member States' action and help them make any necessary corrective measures if they fail to meet their targets. The Commission started work on implementing measures under the Effort Sharing Decision, which include determining the absolute values for Member States targets in 2013-2020 and

setting rules for transfers of annual emission allocations among Member States as well as ensuring their transparency.

The 20% GHG reduction objective was also rooted in the Europe 2020 strategy for jobs and smart, sustainable and inclusive growth adopted by the European Council in June 2010. The emission reduction target is one of the five headline targets.

Figure 2 illustrates the significant gap between projections for 2020 and the EU's 2020 targets (-20% and -30% respectively) requiring the EU to significantly step up its efforts to reduce its greenhouse gas emissions. Depending on the actual target, in 2020 emission reductions will have to amount to 350 – 800 Mt CO₂ equivalents compared to baseline scenario. This underlines the need for the EU and its Member States to implement as soon as possible the new legislation to ensure that necessary emission reductions will take place.

Figure 2: Actual and projected emissions for EU-27



Note: 2009 emissions are preliminary estimates from the European Environment Agency
Source: European Commission

2. ACTUAL PROGRESS 1990-2008

2.1. GHG emission trends

The overall EU GHG emission trend is strongly influenced by the two largest emitters Germany and the United Kingdom, together accounting for about one third of total EU-27 GHG emissions. In 2008, these two Member States have achieved total GHG emission reductions of 417 Mt CO₂ equivalents compared to 1990.

The main reasons for the favourable trend in Germany (-22% in 1990-2008) are the continuous efficiency improvements in power and heating plants as well as in the use of combined heat and power, as well as the investments in the economic restructuring of the five

new Länder after the German reunification. The reduction of GHG emissions in the United Kingdom (-18.5% in 1990-2008) was primarily the result of liberalising energy markets and the subsequent fuel switching from oil and coal to gas in electricity production and N₂O emission reduction measures in adipic acid production.

Italy and France are the third and fourth largest emitters, both with a share of 11%. Italy's GHG emissions were about 5% above 1990 levels in 2008. The observed increases since 1990 in Italy's GHG emissions are primarily due to road transport, electricity and heat production and petroleum-refining. France's emissions were 6% below 1990 levels in 2008. Large reductions were achieved in N₂O emissions from adipic acid production. But CO₂ emissions from road transport increased considerably between 1990 and 2008.

Spain and Poland are the fifth and sixth largest emitters in the EU-27, each accounting for 8% of total EU-27 GHG emissions. Spain increased emissions by 42 % between 1990 and 2008. This was largely due to emission increases from road transport, electricity and heat production and manufacturing industries. Poland decreased GHG emissions by 12.7 % between 1990 and 2008 (-29.8% since the base year, which is 1988 in the case of Poland). Main factors for decreasing emissions in Poland - as for other Central and Eastern European Member States - was the decline of energy inefficient heavy industry and the overall restructuring of the economy in the late 1980s and early 1990s as well as energy efficiency improvements over 1990-2008. The notable exception was transport, especially road transport, where emissions increased.

In 2008, seven Member States had GHG emissions above base year levels whereas the remaining 18 Member States had emissions below base year levels. Cyprus and Malta do not have emission reduction commitments under the Kyoto Protocol. In those countries, emissions in 2008 were above 1990 levels. The percentage changes of GHG emissions from the base year to 2008 range from -54% (Latvia) to +40% (Spain).

2.2. GHG intensities and emissions per capita in 2008

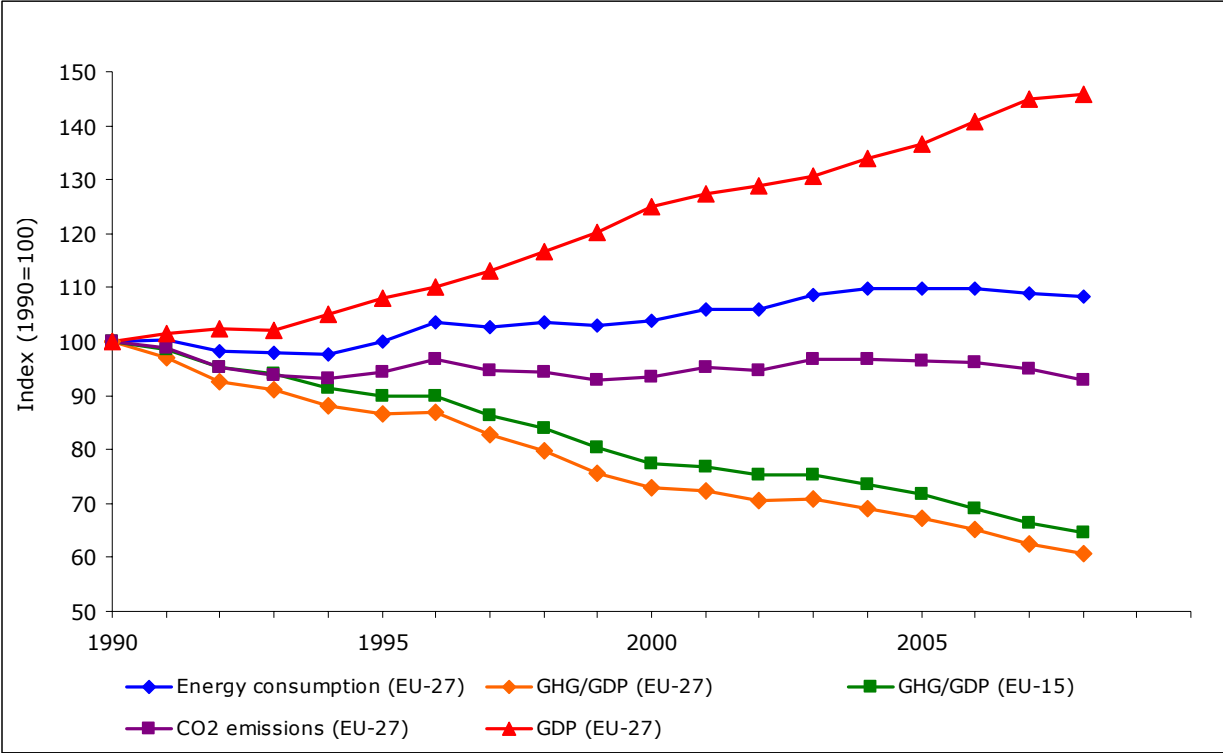
Emissions in both EU-15 and EU-27 have been decreasing while the economy has grown significantly. This indicates that a decoupling of GHG emissions growth from GDP growth has been taking place in the EU-15 since 1993, and in the EU-27 since 1996. Between 1990 and 2008, GDP in the EU-15 increased by 45 % with a 6.5 % reduction of GHG emissions and in the EU-27 GDP grew by 46 % while emissions decreased by 11.3 %.

All EU Member States, except Cyprus, Portugal and Spain have significantly reduced their emissions while their economy grew strongly between 1990 and 2008. Strong economic growth but decreasing emissions were in particular observed in the Member States in Central and Eastern Europe, due to the transformations of the inefficient heavy industry based manufacturing sector.

In 2008, in the EU-15 emissions per capita were on average at 10.1 tCO₂-eq. which means they decreased by 0.2 tCO₂-eq. compared to 2007, or 1.5 tCO₂-eq. compared to 1990. In the EU-27 the average was 9.9 tCO₂-eq. per capita. However, GHG emissions per capita show significant differences across European countries ranging from 5.2 to 25.8 tCO₂-eq. per capita. They are subject to the energy intensity and the energy mix of each country (see also figure 2 of the Staff Working Document (SWD)).

In the 1990s, per capita emissions decreased in the whole EU. Between 2000 and 2008, they decreased by 7.7 % in the EU-15 while they rose by 4.5% in the EU-12. Between 1990 and 2008, per capita GHG emissions increased most in Spain, Portugal, Malta, and Cyprus.

Figure 3: GHG intensity for EU-15 and EU-27, GDP, energy consumption and CO₂ emissions for EU-15



2.3. GHG emissions in 2008 compared to 2007

Between 2007 and 2008, emissions within the EU-27 fell by 99.0 MtCO₂-eq. (2%) with a decrease in the EU-15 by 75.7 MtCO₂-eq. (1.9%). GHG emissions decreased or were stable in all EU Member States except for Belgium, Germany, Cyprus, Slovakia and Slovenia.

Spain, the United Kingdom, Italy, Finland contributed significantly to the overall decrease of GHG emissions (-32.9 MtCO₂-eq., -11.8 MtCO₂-eq., -11.1 MtCO₂-eq., -7.9 MtCO₂-eq., respectively). Important decreases in GHG emission took place also in Romania, Czech Republic and Poland (-6.7 MtCO₂-eq., -6.1 MtCO₂-eq., -4.3 MtCO₂-eq., respectively). The emission decreases were due, in particular, to lower public electricity and heat productions, road transport and lower emissions from manufacturing industries.

Total GHG emissions grew most in Belgium (3.0 MtCO₂-eq.) and Slovakia (0.9 MtCO₂-eq.) due to increase in GHG emissions from energy sector, especially from fuel combustion.

Remarkably, the emissions from road transport in the EU-15 decreased to a significant extent (-22.8 MtCO₂-eq or -2.9 %). All EU-15 countries except Belgium, Luxembourg and the Netherlands, reported emission decreases. The highest reductions were reported by France (-6.3 MtCO₂-eq), Spain (-6.2 MtCO₂-eq), Italy (-4.8 MtCO₂-eq) where the use of biofuels increased strongly, and the United Kingdom (-4.3 MtCO₂-eq). In addition, Czech Republic, Estonia, Hungary, Latvia, Lithuania and Malta reported decreases.

For the first time since 1992, emissions from international aviation and maritime transport fell in the EU-27 (about 1.2% compared to 2007), partly due to the economic recession. These two sectors account for about 5.9% of total greenhouse gas emissions in EU-27 but are not included in the Kyoto targets.

However, keeping control over GHG emissions from transport sector will be important in the future.

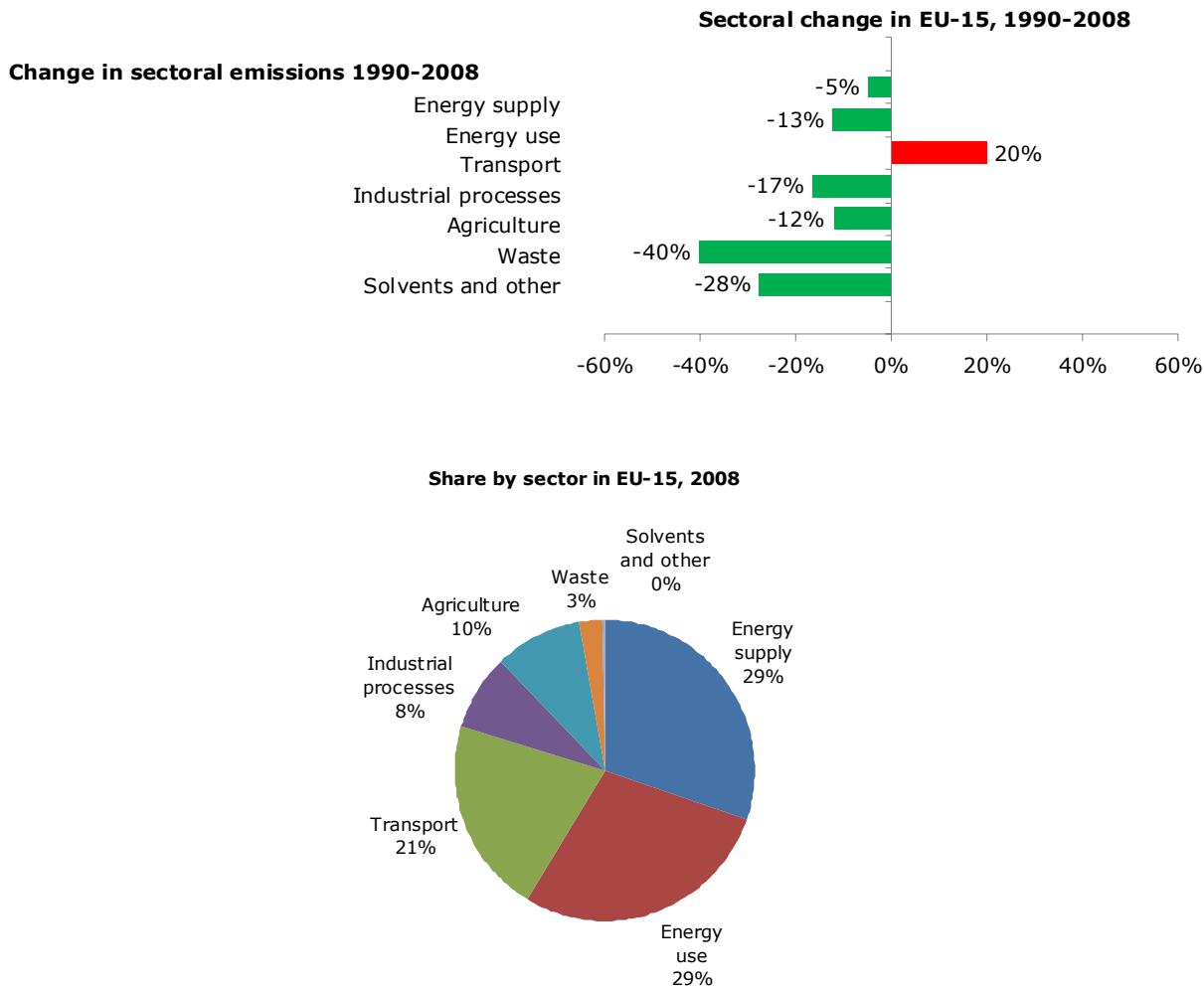
2.4. Emission trends in the main sectors

Figure 4 shows that energy supply and use, and transport are the most important sectors, accounting for 80% of total EU-15 emissions in 2008. Transport is responsible for 21% of total GHG emissions, agriculture for 10%, industrial processes for 8% and waste for 3%.

The decreases in energy, agriculture, industrial processes and waste has been partially offset by significant increases in the transport sector (for further details see also the SWD). In summary, compared to 1990, emissions in the EU-15 from:

- energy supply decreased by 5% and energy use decreased by 13%,
- transport increased by 20%,
- industrial processes decreased by 17% mainly due to lower emissions from adipic acid production and production of halocarbons and sulphur hexafluoride,
- agriculture declined by 12% due to declining cattle numbers and decreasing use of mineral fertiliser and manure,
- waste decreased by 40% due to lower CH₄ emissions from managed landfills.

Figure 4: Change in EU-15 GHG emissions by sector and share of sectors



Source: EEA

3. PROJECTED PROGRESS TOWARDS MEETING THE KYOTO TARGET

3.1. Projections of GHG emissions

The assessment of the progress towards meeting the Kyoto commitments is based on PRIMES/GAINS projections except for Denmark and Ireland both of which provided fully updated and complete projections in 2010. For more details see tables 7 and 8 in the SWD.

3.1.1. EU-15

Figure 5 presents the projections for non-ETS sectors and assesses the gaps between projected emissions and the target in those sectors. The aggregate projections for all sectors estimate that total GHG emissions of the EU-15 are likely to be 10.4% below base-year levels in the commitment period, i.e. the EU-15 would over-achieve its Kyoto target by 2.4 %. When including the,

- (1) government use of the Kyoto mechanisms which is expected to deliver an additional 2.7% emission reduction, and
- (2) total removal due to activities referred to in Art. 3.3 and 3.4 of the Kyoto Protocol in the EU-15 corresponding to a 1.0% reduction

the EU-15 is projected to reduce its emissions even further. Assuming that all these measures deliver as expected, the projected overall reduction of GHG emissions could be up to 14.2% in commitment period compared to base year levels.

Given, however the EU's ambitious reduction target of 20% by 2020 compared to 1990 and in order to pave the way for a smooth compliance with this target, it is imperative that Member States not only ensure timely delivery of emissions reductions from existing policies and measures but also that they accelerate the development and full implementation of their additional policies and measures.

3.1.2. EU-12

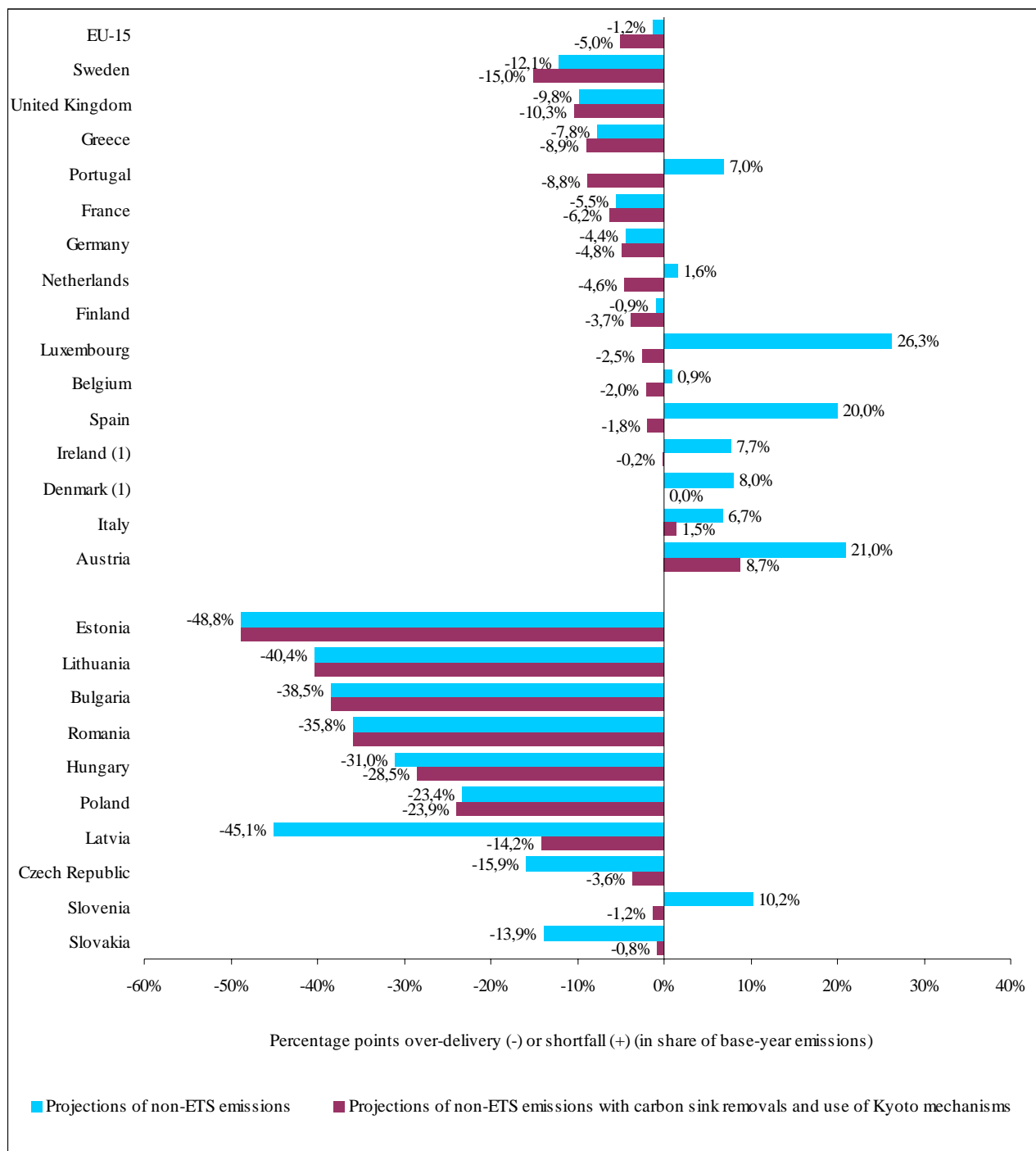
Aggregate emissions based on existing domestic policies and measures from the other 12 Member States are projected to slightly decrease compared to 2008 and will be about 36.8% below their base year levels in the commitment period. Slovenia is the only Member State out of the EU-12 that intends to invest in Kyoto mechanisms. Slovenia, the Czech Republic, Hungary and Poland intend to account for carbon sinks. Czech Republic, Hungary, Latvia and Slovakia plan to sell part of their Assigned Amount Units (AAUs) surplus.

3.1.3. EU-27

In the commitment period, total EU-27 GHG emissions are projected to be about 17.3% below base-year levels. This estimation is based on PRIMES/GAINS projections which takes into account existing polices and measures. The projected decline is even bigger when the effect of acquisitions of credits via the Kyoto mechanisms by governments and carbon sinks is accounted for.

However, these emission projections need to be considered in the perspective of the effective reductions already achieved, which amount to -11.3% for the EU-27 between 1990 and 2008 as well as projections by 2020. Therefore, reduction efforts will need to accelerate across the EU in the future if the EU is to meet its -20% or -30% target by 2020.

Figure 5: Relative gaps (over-delivery or shortfall) between GHG projections in the non-ETS sectors for the commitment period and the respective 2008-2012 targets based on projections and the use of Kyoto mechanisms and carbon sinks.



Note: (1) For Denmark and Ireland national projections were used for the estimate; (2) For all the other MS, (excluding Cyprus and Malta which do not have emission reduction commitments under the Kyoto Protocol) estimates were based on PRIMES/GAINS projections; (3) Use of unused allowances from the NER under the EU ETS was taken into account for those MS which indicated plans to use them for non-ETS compliance (Denmark and Ireland)

Source: European Commission

3.2. Implementation of the EU climate change policy

The European Climate Change Programme (ECCP)

Across the EU-27, an assessment of Member States' policies and measures identified **eight Common and Coordinated Policies and Measures (CCPMs) that are projected to deliver significant GHG emissions savings in the EU**. The largest savings can be expected from the EU ETS Directive (2003/87/EC) and the Renewables Directive (2009/28/EC) promoting electricity produced from renewable energy sources. In the transport sector, fuel quality legislation and reduction of CO₂ from cars are of significant importance. Further, energy demand will be reduced through the implementation of the Directives on the energy performance of buildings, ecodesign requirements, energy taxation and the promotion of co-generation (combined heat and power). Finally, the Kyoto Protocol's flexible mechanisms are projected to deliver significant GHG emissions savings.

In addition to these eight key policies and measures, **a further five CCPMs were identified** that are also predicted to deliver important savings across the EU. These five policies are the Landfill Directive (99/31/EC), the efficiency standards for new hot-water boilers, the Directive on labelling of appliances (2000/13/EC), Directive 2008/1/EC concerning integrated pollution prevention and control (IPPC) being amended by the Industrial Emissions Directive and the Motor Challenge programme, aimed at improving the energy efficiency of industrial electric motors. The F-Gas Regulation (842/2006/EC) and the MAC Directive (2006/40/EC), at the time of their adoption, were also expected to reduce projected annual GHG emissions by 23 Mt CO₂-eq by 2010. The actual impact of these two instruments also in terms of GHG emission reductions is currently being reviewed.

The top eight policies account for 92% of the total savings attributed to CCPMs in the EU-27. This underlines the importance of these key policies in helping Member States to achieve their emission reduction commitments.

Recent developments

Since the adoption of the climate and energy package, work on implementation measures is ongoing. By 2013, about twenty new legal acts and documents have to be in place in order to ensure proper functioning of the revised EU ETS as well as to prepare the ground for the implementation of GHG emission targets in the non-ETS sectors.

Currently, work on developing Community-wide harmonized allocation rules for allocating allowances for the third period is under preparation. The allocation will be to the extent feasible based on ambitious benchmarks, which will encourage innovation and reward more efficient installations that have invested in low-carbon ways of production. The Commission Regulation on the timing, administration and other aspects of auctioning of greenhouse gas emission allowances has been agreed by Member States in July 2010. The Registries Regulation has also been revised in order to establish the new ETS single registry. Measures against Certified Emission Reduction (CER) recycling and against fraud by improving access controls and security have been taken swiftly.

In 2009, work on implementing measures under the Effort Sharing Decision commenced which include determining the absolute values for Member States targets in 2013-2020 and setting rules for transfers of annual emission allocations among Member States and ensure their transparency.

The NER300 Decision laying down criteria and measures for the financing of large-scale commercial demonstration Carbon Capture and Storage (CCS) projects and innovative renewable energy technologies under the revised EU ETS has been developed and should be formally adopted soon. Also the preparation of guidance documents on various elements of CCS Directive to allow for its harmonised implementation is on-going and expected to be finalised by the end of 2010.

Work on the implementation measures of the Regulation (EC) 443/2009 regulating CO₂ emissions from cars is ongoing too.

Legal acts recently adopted

Implementation of the climate and energy package:

- (1) **EU ETS and carbon leakage:** Commission Decision 2010/2/EU⁷ determining a list of sectors and subsectors which are deemed to be exposed to a significant risk of carbon leakage.
- (2) **EU ETS total cap:** Commission Decision 2010/384/EU⁸ on the Community-wide quantity of allowances to be issued under the EU Emission Trading Scheme for 2013.
- (3) **CCS in EU ETS:** Commission Decision 2010/345/EU⁹ amending Decision 2007/589/EC as regards the inclusion of monitoring and reporting guidelines for greenhouse gas emissions from the capture, transport and geological storage of carbon dioxide.

Other:

- (4) **Aviation and EU ETS:** Commission Regulation (EU) No 82/2010¹⁰ amending Regulation (EC) No 748/2009 on the list of aircraft operators which performed an aviation activity listed in Annex I to Directive 2003/87/EC on or after 1 January 2006 specifying the administering Member State for each aircraft operator.
- (5) **Aviation and EU ETS:** Commission Regulation (EU) No 606/2010¹¹ on the approval of a simplified tool developed by the European organisation for air safety navigation (Eurocontrol) to estimate the fuel consumption of certain small emitting aircraft operators.

3.3. Implementation of the EU Emissions Trading System (EU ETS)

The first period of the EU ETS covered the years 2005-2007. Currently, operators subject to the EU ETS are in the middle of the second trading period (2008-2012). In 2013, a revised system will begin its operation. For more information on the implementation of the revised EU ETS see section 3.2.

3.3.1. Second trading period (2008-2012)

The EU-wide cap for 2008-2012 amounts to 2.081 billion allowances per year, 10.5% lower than what was initially proposed in the national allocation plans submitted by the Member States. In 2009, 11,032 installations participated in the system.

The total amount of verified emissions in 2009 from EU ETS installations in the EU-27 was 1.85 billion tonnes¹² of CO₂, almost 12% lower than in 2008. The drop of emissions is attributed to three main factors, i.e. reduced economic activity as a result of the recession, low level of gas prices throughout 2009, as well as reduction measures undertaken by installations.

3.3.2. *Use of JI and CDM by operators*

As part of the second National Allocation Plans (NAPs), a limit was established by each Member State for the maximum use of project-based credits by operators (Joint Implementation (JI) and Clean Development Mechanism (CDM)). In total, up to 278 million CERs or Emission Reduction Units (ERUs) may be used per year by ETS installations from all Member States in the second trading period, which corresponds to 13.4 % of the EU-wide cap for this period. In 2009, operators used 82 million CERs or ERUs which was 4.39% of all surrendered allowances. From 2013 onwards the rules for the use of JI and CDM credits will be revised as set in the revised EU ETS Directive.¹³

3.4. **Projected use of Kyoto mechanisms by government**

Ten Member States of the EU-15 as well and Slovenia have decided to use Kyoto mechanisms to reach their Kyoto targets. Together, these EU-15 Member States would acquire 116.7 Mt CO₂.eq. per year for compliance under the first commitment period under the Kyoto Protocol. This represents approximately 2.7 percentage points towards the EU-15 Kyoto target of -8 % (see Table 12 in the SWD). However, when looking at the amount of credits already delivered to the Member States' accounts in the registry, so far, the figure is much smaller and amounts to about 28 Mt CO₂.eq.

These 10 Member States together have decided to invest about €3 billion to acquire units through JI, CDM or emissions trading. Spain, Austria, the Netherlands, Luxembourg and Portugal allocated the largest budgets (€ 638 million, € 531 million, € 507 million, € 360 million and € 305 million, respectively, for the five-year commitment period). In Slovenia, the budget has been estimated for €80 million.

As regards AAUs sold by Member States, according to data in the registry about 56 Mt CO₂.eq. have been transferred. Czech Republic, Hungary, Latvia and Slovakia reported that they intend to sell credits.

3.5. **Projected use of carbon sinks**

In addition to the policies and measures targeting various sources of GHG emissions, Member States can make use of carbon sinks (see Table 13 in the SWD). The information provided so far indicates that the total net sequestration during the commitment period from afforestation and reforestation activities under Art. 3.3 of the Kyoto Protocol will be about 12.1 MtCO₂ per year for the EU-15. In addition, the use of activities under Art.3.4 is projected to contribute 27.7 MtCO₂ per year of the commitment period in the EU-15 and will amount to 34.2 MtCO₂ per year taking into account contributions from EU-12.

Together, activities under Art. 3.3 and 3.4 in the EU-15 Member States are projected to reduce emissions by 42.5 Mt CO₂ per year of the commitment period equivalent to about 12.5% of the EU-15 reduction commitment of 341 Mt CO₂ per year during the commitment period compared to base year emissions.

4. MEETING THE 2020 TARGET

4.1. EU GHG emission reduction target by 2020

The Climate and Energy package set a 20% GHG emission reduction target for EU-27 by 2020. Total EU effort to reduce greenhouse gas emissions by 20% compared to 1990 by 2020 (which also accounts to -14% compared with 2005) will be divided between the EU ETS and non-ETS sectors as follows:

- (a) 21% reduction in EU ETS sector emissions compared to 2005;
- (b) reduction of around 10% compared to 2005 for the sectors that are not covered by the EU ETS.

These greenhouse gas emissions reduction targets were included in the Europe 2020 strategy for jobs and smart, sustainable and inclusive growth adopted by the European Council in June 2010. The Europe 2020 strategy will require tracking progress towards the targets on an annual basis.

4.2. Policies contributing to the fulfilment of targets

The emission caps from 2013 until 2020 are defined in the Effort Sharing Decision and the revised ETS Directive. In parallel, other EU-wide policies will contribute to reaching the targets by Member States, such as the binding targets for renewable energy, the emission performance standards for new passenger vehicles, the CCS Directive or the Fuel Quality Directive. On top of these EU-wide policies, national policies will play an important role, especially for the reduction of non-ETS emissions.

4.3. Projected distance to targets

As shown in table 1 and according to the Commission's latest projections that incorporate the effect of the economic crisis, implemented national policy measures as of 2009 would not be sufficient to reach the EU emission reduction targets in the year 2020.

Table 1: EU-27 internal GHG emission reductions in the baseline

EU27 baseline scenario	Total GHG	Non-ETS sectors
Total GHG emissions 2005-2020	-7%	-3.5%
Reduction targets 2005-2020	-14%	-10%

Note: For more details on projections see COM(2010) 265 final and the accompanying Staff Working Document SEC(2010) 650, Part 2

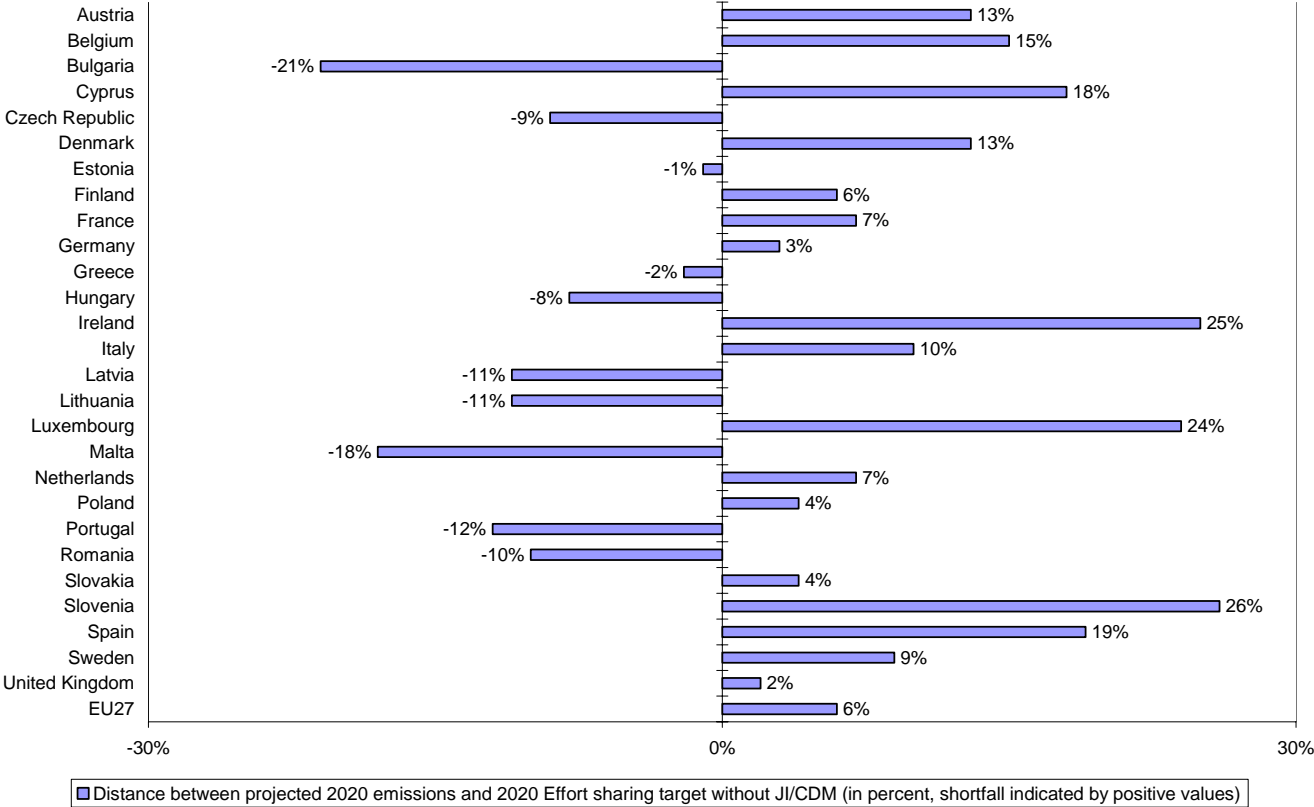
Source: European Commission

Despite the positive trends towards KP commitment achievement shown by 2008-2012 projections, more effort and additional policies will be necessary to achieve the 2020 objectives. The flexibilities provided for in the Effort Sharing Decision and the revised ETS Directive, such as the use of project credits, will also contribute to the attainment of the targets.

Total EU-27 non-ETS GHG emissions are projected to decrease by 3.5% between 2005 and 2020 according to the PRIMES-GAINS baseline (see table 1). This decrease is mainly driven by non-CO₂ emissions reductions of around 8% and a stabilisation of CO₂ emissions, which

see a decrease of around 1%. As expected, in the year 2020 the EU level non-ETS target of around -10% is unlikely to be achieved. Without use of JI/CDM the distance to target at EU level is around 6% (see figure 6), hence additional measures will still be necessary, with synergies between the implementation of the Renewables Directive and of the Effort Sharing Decision. Ten Member States are projected to meet their non-ETS target already with the current set of policies and measures as illustrated with a "-" in the figure 6. These are Bulgaria, Czech Republic, Estonia, Greece, Hungary, Latvia, Lithuania, Malta, Portugal and Romania. According to PRIMES/GAINS projections, seventeen Member States including the eight largest non-ETS emitters and the EU-27 as a whole would miss their non-ETS targets.

Figure 6: Projected gap to 2020 targets for non-ETS sectors



Source: European Commission; non-ETS sector scope as of 2013, i.e. excluding also ETS sectors which only enter the ETS by 2013, to enable data comparability over time

5. SITUATION IN THE EU CANDIDATE COUNTRIES

Between 1990¹⁴ and 2008 **Croatia's** GHG emissions decreased by 0.6% and compared to 2007 decreased by 3.7%. According to the GHG projections included in the 5th National Communication, Croatia is projected to face difficulties with achieving its Kyoto target with the current set of policies and measures.

Iceland's GHG emissions between 1990 and 2008 increased by 44% and in 2008 were 9% higher than in 2007. Taking into account decision 14/CP.7, according to the GHG projections included in the 5th National Communication, Iceland is on track to meet its Kyoto target.

In 2008, **Turkey's** GHG emissions were 366.5 MtCO₂-eq compared to 187 MtCO₂-eq. in 1990, so increased by 96% and comparing to 2007 decreased by 3.5%. Turkey has no GHG limitation commitment under the Kyoto Protocol.

An up-to-date inventory of GHG emissions in **the former Yugoslav Republic of Macedonia** is not available. Most recent GHG data is included in the 2nd National Communication and covers the period 1990-2002. Between 1990 and 2002 total GHG emissions decreased by around 10%.

For more information please see section 2 of the SWD.