



COMMISSION OF THE EUROPEAN COMMUNITIES

Brussels, 15.12.2005  
COM(2005) 655 final

**REPORT FROM THE COMMISSION**

**PROGRESS TOWARDS ACHIEVING THE COMMUNITY'S KYOTO TARGET**

**(required under 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)**

{SEC(2005) 1642}

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## 1. INTRODUCTION

This is the sixth annual progress report for monitoring Community greenhouse gas emissions and the second report under of Council Decision 280/2004/EC concerning a mechanism for monitoring Community greenhouse gas emissions and for implementing the Kyoto Protocol (280/2004/EC). This report is based on the detailed European Environment Agency (EEA) report “*Greenhouse gas emission trends and projections in Europe*” (EEA, 2005). It assesses the actual and projected progress of Member States and the Community towards fulfilling their greenhouse gas emissions commitments under the United Nations Framework Convention on Climate Change (UNFCCC) and the Kyoto Protocol.

Although this report assesses the progress of the EU-25, developments in the EU-15 are often highlighted because of their collective target and the burden sharing agreement. Moreover, the quality of 2003 data, especially their completeness and accuracy, varies across new and old Member States. The report<sup>1</sup> also includes some emission data for the two acceding countries Bulgaria, and Romania and for Croatia which is a candidate country. For Turkey, which is also a candidate country, no data are available yet.

This report analyses actual emissions data from 2003, together with projections of emissions assuming scenarios ‘*with existing measures*’<sup>2</sup> and ‘*with additional measures*’. These projections are aggregated Member States projections that will be analysed in depth in the future as not all Member States provided updated projections. The projections include the use of flexible mechanisms under the Kyoto Protocol, i.e., Joint Implementation, the Clean Development Mechanism and international emissions trading.

The projections show that the EU-15 will reach the reduction target of -8% with additional measures and with the use of flexible mechanisms.

## 2. ATTAINING THE COMMUNITY’S KYOTO TARGET

### 2.1. Actual emissions in 2003 for the EU-25 and the EU-15

Greenhouse gas emissions from the EU-25 and the EU-15 both increased between 2002 and 2003, though emissions were below emissions in the base year by 8% and 1.7% respectively (Figure 1) alongside a 27% economic growth for the EU-15. The distance above the linear target path for the EU-15 was 1.9% in 2003 (Figure 2), including use of the Kyoto Mechanisms but not including domestic sinks or use of the European Emissions Trading Scheme launched at a later date.

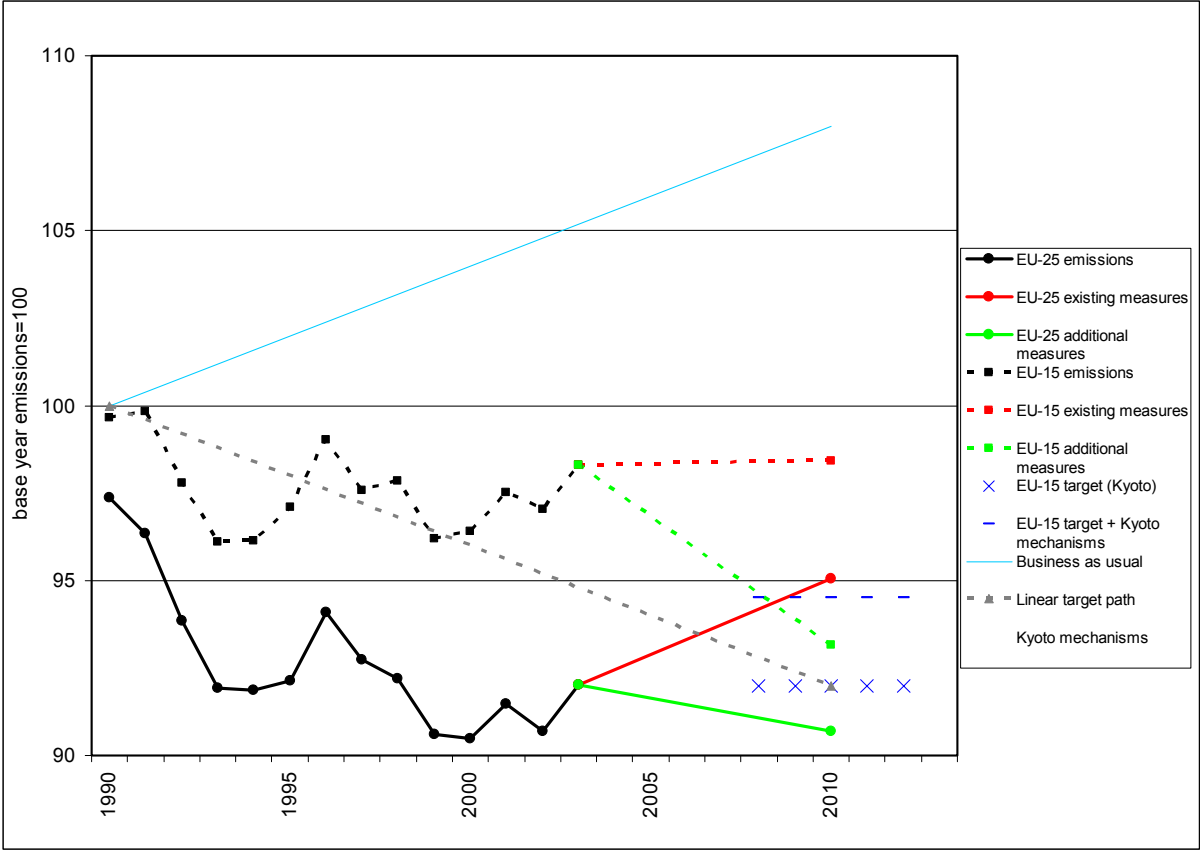
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<sup>1</sup> Furthermore, Annex 1 lists the background data and Annex 4 contains a comprehensive list of CCPMs [SEC(2005) 1642]

<sup>2</sup> Existing policies and measures are those for which one or more of the following applies:(a)national legislation is in force;(b)one or more voluntary agreements have been established;(c)financial resources have been allocated; (d)human resources have been mobilised;(e)an official government decision has been made and there is a clear commitment to proceed with implementation. Additional (planned) policies and measures are options under discussion with a realistic chance of being adopted and implemented in future.

The EU emissions trading scheme launched on 1 January 2005 is the largest greenhouse gas trading scheme in the world and is intended to work alongside effective implementation of existing and additional policies and measures to obtain the emission reductions required under the Kyoto protocol.

**Figure 1: Actual and projected emissions for EU-25 and EU-15**

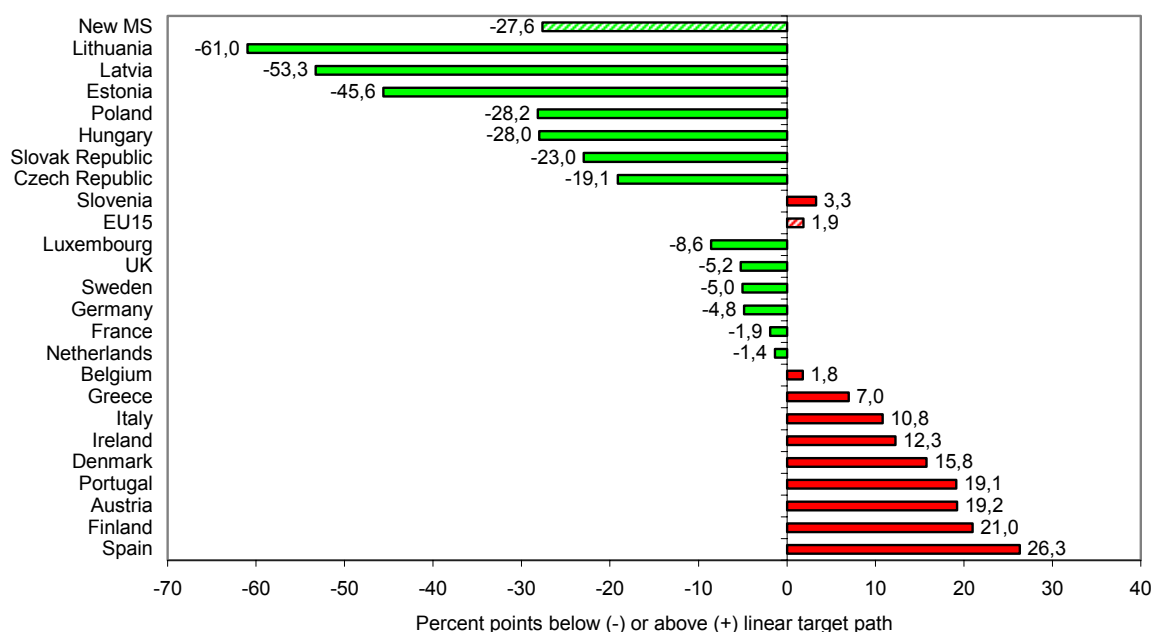


**Note:** Data exclude emissions and removals from land-use, land-use change and forestry. The figure refers to a theoretical EU-25 base-year as 100 in order to allow a consistent analysis of greenhouse gas emission trends and projections. It is 1990 for most Member States for CO<sub>2</sub>, methane (CH<sub>4</sub>) and nitrous oxide (N<sub>2</sub>O) but 1995 for fluorinated gases, with the following exceptions: The base year for CO<sub>2</sub>, CH<sub>4</sub> and N<sub>2</sub>O for Hungary is the average of 1985-1987, for Slovenia 1986 and for Poland 1988; the base year for fluorinated gases is 1990 for France and Finland. This means that the value for 1990 is not exactly 100. Cyprus and Malta are not included due to lack of data and because they do not have targets under the Kyoto Protocol. The linear target path shows the theoretical linear decrease in GHG emissions up to the Kyoto target from the base year level until 2010, the mid-term year of the first commitment period.

Source: EEA, 2005

Members States' performance varies. Including Kyoto mechanisms, thirteen Member States are on track to achieve their emissions reduction commitments as shown in Figure 2. Of these, France, Germany, Luxembourg, the Netherlands, Sweden and the United Kingdom are the EU-15 Member States on track to achieve their commitments under the burden sharing agreement (Council Decision 2002/358/EC). However, ten Member States are still above their target paths: Finland and Spain by more than 20%; Austria, Denmark and Finland even widened the gap compared to 2002. Cyprus and Malta are Non-Annex I Parties to the UNFCCC and thus do not have a target under the Kyoto Protocol.

**Figure 2: Distance-to-target indicators in 2003 (in index points = percent) for the EU-25, including Kyoto mechanisms**



**Note:** Data exclude emissions and removals from land-use, land-use change and forestry. Distance to target in percentage points relative to base year emissions (the bars) show the deviations between a hypothetical target (in 2003) and what has actually been achieved (in 2003), on the assumption that reductions as a percentage of base year levels take place on a linear basis. It assumes that the Member States meet their target on the basis of domestic measures and also includes the use of Kyoto mechanisms. Sinks are not included. Cyprus and Malta are Non-Annex I Parties to the UNFCCC and thus do not have a target under the Kyoto Protocol.

Source: EEA, 2005

## 2.2. Projected emissions in 2010 for the EU-25 and the EU-15

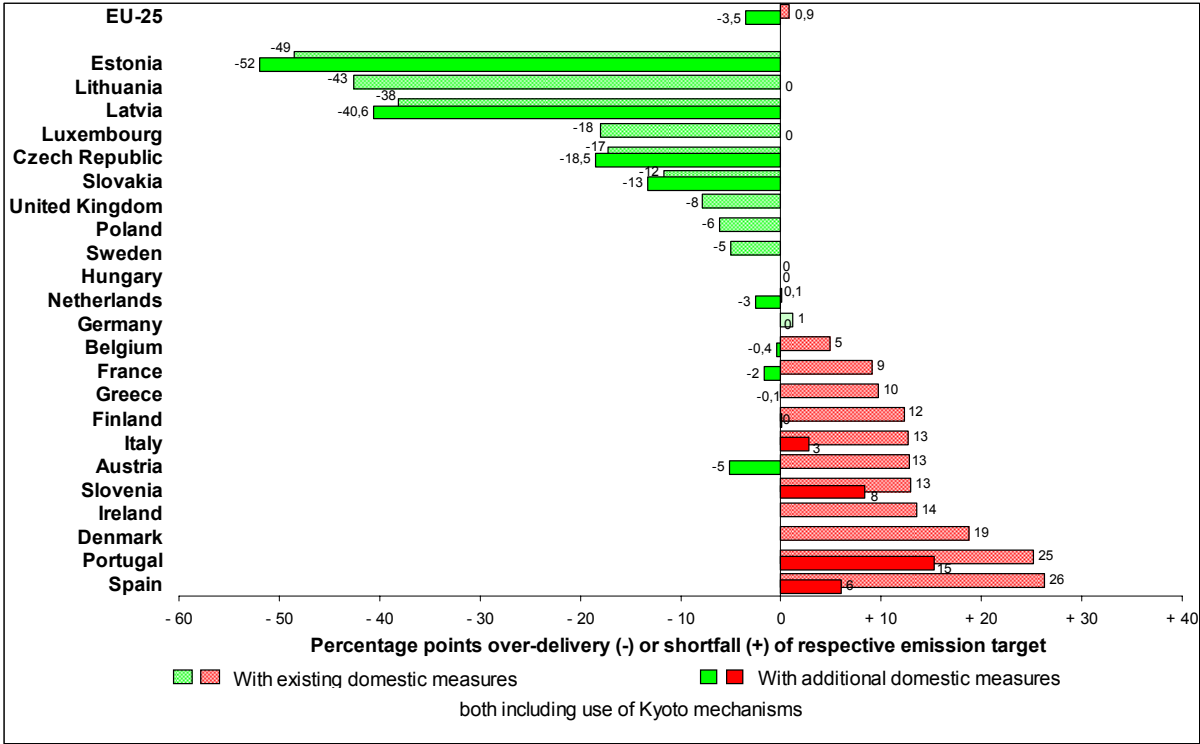
Aggregate projections for the EU-25 ‘with *existing domestic policies and measures*’ show that total emissions of greenhouse gases will be 5% below 1990 levels in 2010 (Figure 1). The following Member States expect to reach their Kyoto targets using only existing domestic policies and measures (Figure 3): Czech Republic, Estonia, Hungary, Latvia, Lithuania, Luxembourg, Poland, Slovakia, Sweden and the United Kingdom. The implementation of additional measures is projected to reduce EU-25 greenhouse gas emissions to 9% below 1990 levels by 2010.

Aggregate EU-15 projections suggest that 2010 emissions could be reduced by 9.3% below base year levels when savings from the use of Kyoto mechanisms (2.5% reduction) and additional domestic policies and measures (6.8% reduction) are accounted for, sufficient to reach the collective EU-15 Kyoto target (Figure 1).

The projected use of Kyoto mechanisms by nine of the EU-15 countries (Austria, Belgium, Denmark, Finland, Ireland, Italy, Luxembourg, the Netherlands and Spain) amounts to 106.8 Mt CO<sub>2</sub>-equivalents per year of the commitment period or about 2.6% compared to the EU target of -8% (Figure 1). Nine countries have allocated financial resources for using the Kyoto mechanisms (Austria, Belgium, Denmark, Finland, Germany, Italy, the Netherlands, Spain and Sweden) with a total amount of about EUR 2,730 million for the whole 5-year commitment period.

Considering that the reduction between 1990 and 2010 with existing measures (~1.6% reduction) and with the use of Kyoto mechanisms (2.5% reduction) will be approximately 4.1%, the additional domestic policies and measures to be implemented by Member States will have to, over the next 6 years, cover the 3.9% remaining gap in order for the EU-15 to reach their -8% Kyoto target. Those Member States that are above their targets should take additional policies and measures and use the Kyoto mechanisms in order to meet their targets.

**Figure 3: Distance-to-target in 2010 (percentage points) for the EU-25, including Kyoto mechanisms**



**Notes:** Data exclude emissions and removals from land-use, land-use change and forestry. All EU-15 Member States provided projections assuming existing domestic policies and measures. Several countries provided projections with additional domestic policies and measures. For following Member States the additional effects of the use of Kyoto mechanisms is included: Austria, Belgium, Denmark, Finland, Ireland, Italy, Luxembourg, the Netherlands and Spain). For EU-15 the effect of use of Kyoto mechanisms is calculated based on information from these nine countries. Projections for Poland cover only CO<sub>2</sub> and N<sub>2</sub>O. Projections for Spain cover only CO<sub>2</sub>. Projections for Cyprus and Malta are not available.

Source: EEA, 2005

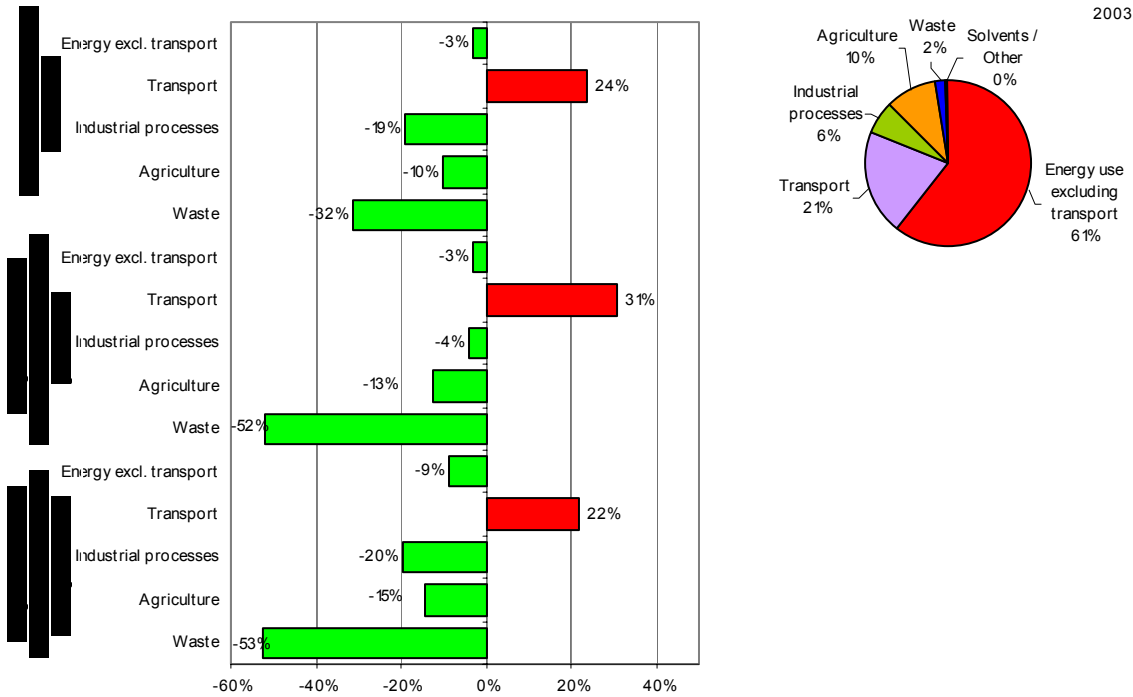
The legislative measures currently in force or already proposed by the Commission – according to the ECCP estimates – result in potential emissions reductions of about 420-490 million tonnes CO<sub>2</sub>-equivalents in 2010 (10%-12% of base year emissions) for the EU-15. These estimates assume full implementation of the measures by Member States and do not include overlap between policies. The emissions reductions from these policies should start to be apparent with the inventory data for 2006, which will be published in 2008. Timely and effective implementation by Member States of existing policies and policies in the planning stage will result in a very significant impact on greenhouse gas emissions from the Union.

**2.3. Emissions by sector**

As regards the emissions related to the main economic sectors, Figure 4 shows the changes since 1990 for the EU-15. Most greenhouse gas emissions in the European Union are from the

production and use of energy, including transport. Energy-related emissions in the EU-15 increased between 1990 and 2003, largely as a result of growing transport and electricity demand. However, for both EU-15 and EU-25, the growth in GHG emissions in energy supply and use excluding transport is becoming decoupled from energy demand, with emissions falling despite increases in demand. This is also happening, but to a lesser extent, in the transport sector in the EU-15. When looking at the country-by-country statistics, the most striking result is that contrary to the general trend transport emissions in France and Germany have been declining - indeed for the fourth consecutive year in Germany. This would seem to reflect the combined effects of improved fuel efficiency, higher fuel prices and broader transport policies.

**Figure 4: Change in EU-15 greenhouse gas emissions by sector 1990 - 2003, sector projections with existing and with additional measures, 1990 - 2010, and share of sectors in 2003**



**Note:** Several Member States did not report projections for all sectors/scenarios. Therefore, the information on projections has to be interpreted with care. For most Member States, the base year for F-gases is 1995, not 1990. This might change the data for industrial processes slightly but data for 1990 are not available for all Member States.

Source: EEA, 2005

The growth in energy-related emissions was offset by reductions in emissions from non-energy related sources, such as waste, industrial processes and agriculture. Waste emissions fell as the waste policies resulted in less solid waste disposal on land. The introduction of abatement techniques, particularly for N<sub>2</sub>O, helped reduce industrial process emissions and agricultural emissions were lower as the cattle population decreased.

In the EU-25, greenhouse gas emissions fell in almost all sectors. The fall in the emissions in the ten new member states was to a considerable extent due to the economic restructuring. The exception is transport where emissions have increased since 1990.

### 3. CONCLUSIONS

By 2003, EU-15 GHG emissions had decreased by 1.7% from the base year level and reached 4180 million tonnes CO<sub>2</sub>-equivalents. This reduction is a little more than one fifth of the EC's Kyoto target. Without Kyoto mechanisms, the distance to the target has doubled from 2002, to 3.5 index points. Including Kyoto mechanisms, total GHG emissions were still 1.9 index points above the linear target path in 2003. The projections show that the EU-15 will meet their Kyoto Protocol emission reduction commitment of -8% when additional measures are implemented along with the use of flexible mechanisms. Those Member States that are above their targets urgently need to take additional measures and use the Kyoto flexible mechanisms in order to ensure that they will meet their Kyoto target.

The EU is also determined to take further action. The second phase of the European Climate Change Programme (ECCP) started in 2005. The Commission plans to review progress and explore new actions to exploit cost effective emission reduction options. ECCP II will include carbon capture and storage, emissions from road vehicles, aviation and strategies to adapt to the effects of climate change. The role of the EU in reducing vulnerability and promoting adaptation will also be explored. In addition, further policy initiatives in the field of energy efficiency and renewable energy are foreseen.