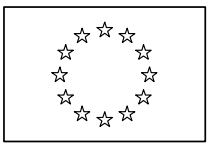

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Annexes 1 to 5 of the

Report From the Commission

"Catching Up With The Community's Kyoto Target"
(COM(2004) 818 final, adopted on 20.12.2004)

Annex 1

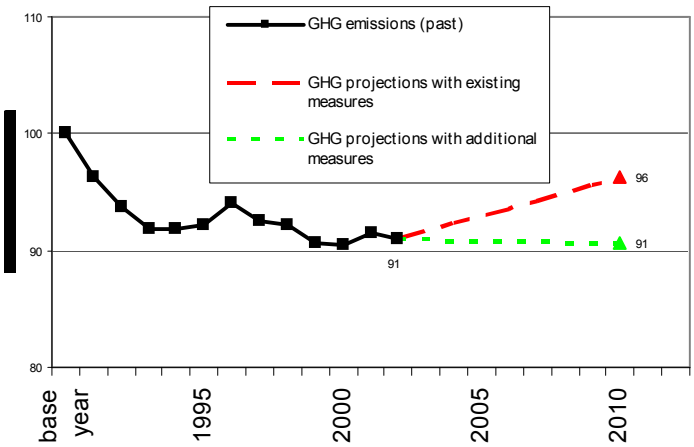
1. EVALUATION OF ACTUAL PROGRESS

1.1. Actual progress of the EU-25

EU-25 greenhouse gas (GHG) emissions decreased by 9.0 % from the base year level in 2002 (Figure 1) reaching 4852 million tonnes CO_2-equivalent emissions. This reduction was mainly due to the decline in emissions in most of the new Member States in the early 1990s.

In 2002, GHG emissions stood at 11 tonnes per capita for the EU as a whole. They were outstandingly high in Luxembourg, Ireland and Finland at 24, 18 and 16 tonnes per capita respectively. These were caused mainly by fuel tourism to Luxembourg, by high emissions from the agricultural sector in Ireland, and by the energy industries in Finland. Per capita GHG emissions in Portugal, Sweden and Hungary stood at 8 tonnes, while in Malta, Lithuania and Latvia they were even lower at 7, 6 and 5 tonnes respectively.

Figure 1: Actual Progress of EU-25



For the EU-25, average GHG emissions per unit of GDP stood at 605 tonnes per million euros in 2002 (see Figure 2). They differed considerably between economically less and more advanced Member States. While Estonia, the Czech Republic and Lithuania showed the highest emissions with 4978, 3213 and 2971 tonnes per unit of GDP, the emissions in Austria, France and Sweden were lowest with 403, 395 and 303 tonnes per unit of GDP respectively.

Figure 2 clearly shows the decline of GHG emissions per unit of GDP in almost all Member States between 1990 and 2002, which provides clear evidence for the further decoupling of GHG emissions and GDP.

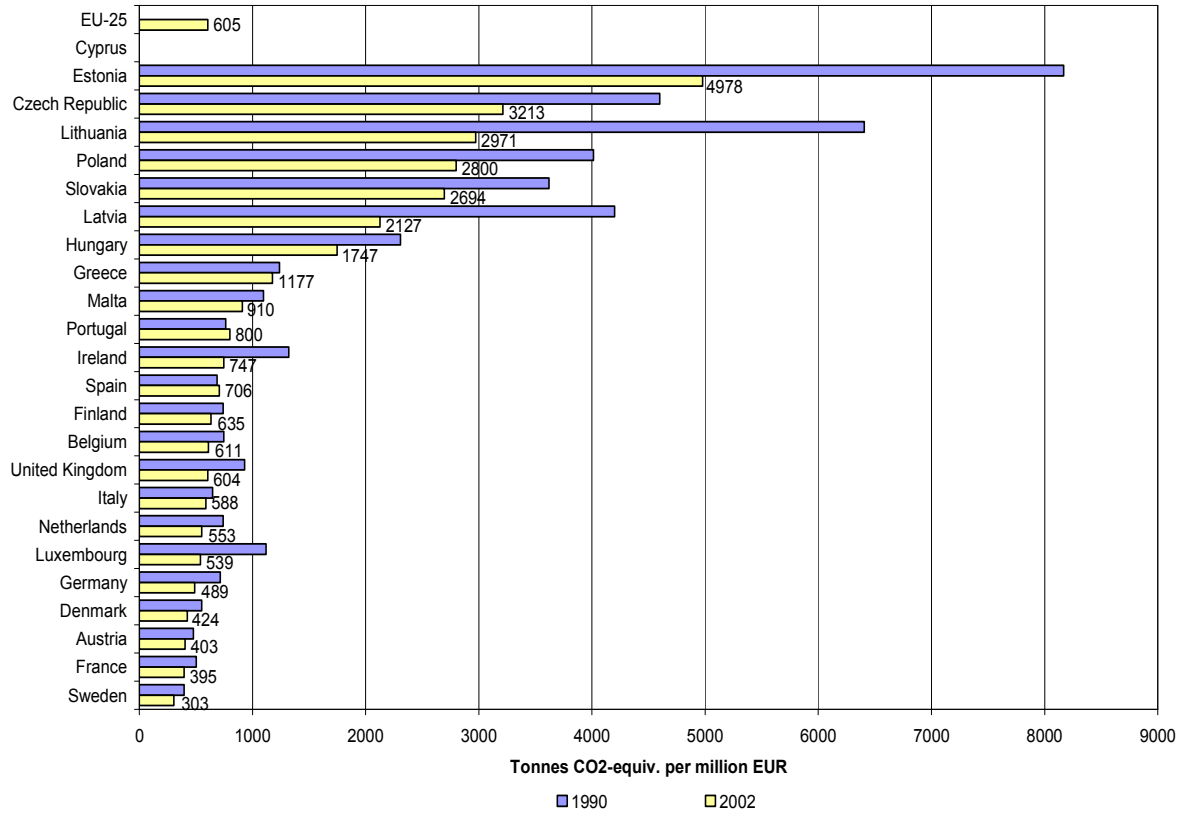
Progress towards achieving the Kyoto target: Actual progress is measured by the distance-to-target indicator.[1] The comparison with the target path is a tool to visualise the evolution of GHG emissions from the European Community (EC) and its Member States. However, when assessing the deviations from the target path it has to be kept in mind that:

[1] The distance-to-target indicator shows the difference between the actual GHG emissions of a Member State and a notional Kyoto target path for that Member State. The Kyoto 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.

- the ECCP was only launched in 2000 and most policies and measures resulting from that programme are thus only just starting to deliver;

- the intended use of Kyoto mechanisms and emissions and removals from LULUCF are not considered in the distance-to-target index in this report.

Fig. 2: Greenhouse gas emissions per GDP in the EU-25



The 2002 emissions of the Member States are shown in Figure 2 of the report. Compared to last year's report, eight Member States (Denmark, Finland, Greece, Italy, Luxembourg, Portugal, Slovenia and Spain) increased their distance above the target path in 2002, three (Spain, Portugal and Finland) by more than one percentage point. In total, twelve Member States were above their target paths, with Ireland, Spain and Portugal significantly above 20 %. However, France was able to bring its GHG emissions below its Kyoto target path. Seven Member States (the Czech Republic, Germany, Hungary, Latvia, Lithuania, Slovakia and the United Kingdom) increased their distance below the Kyoto target path, the Czech Republic and the United Kingdom by more than two percentage points, thus performing best. However, the three Baltic States (Latvia, Lithuania and Estonia) were furthest below their target path. Their distance-to-target indicators were more than 50 % below the hypothetical linear path from 1990 towards the Kyoto target in 2010.

Emission trends by Member State and sectors: Germany and the United Kingdom are the largest emitters of GHG within the EC, together accounting for approximately 35 % of EU-25 GHG emissions. By 2002, these two Member States had reduced their GHG emissions by 348 million tonnes CO_2-equivalent compared to the base year level. Since 1990, German CO_2 emissions from energy generating- and manufacturing industries have declined by 14 % and 33 % respectively. Remarkably, Germany and the United Kingdom are the only EU Member

States with decreasing CO_2 emissions in the transport sector. While the decrease in the United Kingdom was modest, in Germany transport emissions decreased significantly for the third consecutive year. The reasons for this decline could include the environmental tax reform and increased fuel prices, while in the United Kingdom the decline in transport emissions seem to be due mainly to the combined effects of fuel efficiency improvements, fuel prices and broader transport policies.

Italy and France are the third and fourth largest emitters with shares of 11% each. In 2002, Italian GHG emissions fell by 0.1% compared to 2001 which means it is still drifting further away from the Kyoto target path. Italy's 6.5% reduction target translates into an annual reduction of 0.3%, which is three times higher than the emissions reductions that it is presently achieving. Emissions increased primarily in the transport sector and energy generating industries. In France, GHG emissions decreased significantly by 1.4% below 2001, thus reversing the previous upward trend. Emissions were very close to the base year level.

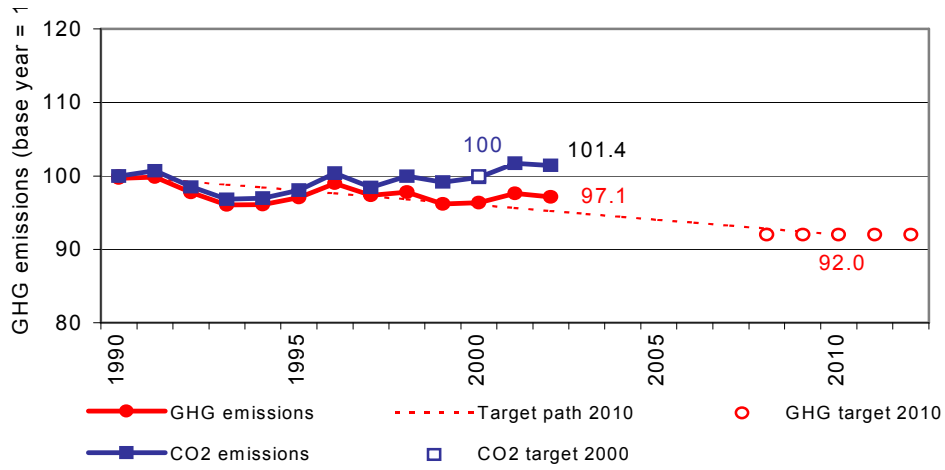
The fifth and sixth largest emitters in the EU are Spain and Poland, each accounting for almost 8 % of total EU-25 greenhouse gas emissions. In Spain, 2002 emissions were 39% higher than their base year level. Overall emissions even increased by 4.2% between 2001 and 2002, with a remarkable 15 % increase in the emissions from the energy generating industries due to a decrease of almost 50 % in electricity production from hydropower plants (Eurostat, 2004).

In the new Member States, GHG emissions declined across all sectors except the transport sector. For the energy sector excluding transport, the agriculture sector and other sectors (mainly households and waste management), this decrease was around or in excess of 30% compared to 1990. GHG emissions from industrial processes decreased by 10%. In the transport sector, 2002 GHG emissions were 12 % above 1990 levels strongly recovering from a reduction of 9% below 1990 levels in 1995. New Member States seem to be repeating the experience of Greece, Ireland, Portugal and Spain: high economic growth appears to lead to strong growth in GHG emissions from transport.

1.2 Actual progress of EU-15

By 2002, EU-15 GHG emissions had decreased by 2.9 % from base year level (Figure 3) and reached 4123 million tonnes CO_2-equivalent.

Figure 3 EU-15 greenhouse gas emissions compared with targets for 2010 (excl. LULUCF emissions and removals)



Note: The linear Kyoto target path is used to evaluate EC GHG emissions in 2002 compared to the Kyoto target of the EC, not as an approximation of future EC emission trends. **Source:** EEA, 2004

This reduction is little more than one third of the EC's Kyoto target. The distance to the target has been slightly reduced by 0.2 index points. However, in total GHG emissions were still 1.9 index points above the linear target path in 2002. Further considerable reductions of emissions are needed, supplemented by the implementation of Kyoto mechanisms in order to comply with the EU-15 commitment under the Protocol. Those Member States that are above their targets urgently need to take additional measures.

Progress by greenhouse gas and sector: Table 1 reflects the trends in GHG emissions by sector. The trends for the different sectors and greenhouse gases vary considerably. CO_2 is the most important greenhouse gas in the EU-15, accounting for 82 % of total GHG emissions in 2002 as in previous years. From 2001 to 2002, EU-15 CO_2 emissions decreased by 0.3 %. However, they were still above 1990 levels and also higher than in 2000, at which time the UNFCCC stabilisation target for CO_2 emissions had been achieved. Emissions from most of the other GHG, however, have been reduced since 1996, only emissions of hydrofluorocarbons (HFC) have increased.

Table 1: GHG emissions by sector for 1990 and 2002 (in Million tonnes CO_2 equivalent emissions) for EU-15

Year	2002	total emissions in 2002 (%)	change 1990-2002 (%)
Energy excl. transport	2480	61	-4,9
transport	869	21	+21,9
Industrial processes	248	6	-18,2
agriculture	416	10	-8,8
Waste	100	2	-27,6

The transport sector shows a continuous increase in CO_2 throughout the period for which data are available (since 1990) and is still growing (21 % above the 1990 level in 2002 for the EU-15). Energy industries (mainly energy combustion for electricity and heat production, but also in refineries) are the largest contributor to CO_2 emissions. In this sector, emissions are fluctuating around 2500 million tonnes depending on weather conditions and water

availability for hydropower. At the same time, the share of combined heat and power generation is stagnating at 10 %. The share of renewable energy sources dropped from 15.2% in 2001 to 13.6% in 2002 mainly caused by the reduction in large-scale hydropower generation.

Methane (CH_4) emissions account for 8 % of total EU-15 GHG emissions and decreased by 22 % between 1990 and 2002. The main reasons for declining CH_4 emissions were the decline of coal mining, reductions in solid waste disposal on land and technical measures to reduce these emissions, and decreasing number of cattle. Emissions from these sectors have been decreasing constantly since 1990.

Nitrous oxide (N_2O) emissions, responsible for 8 % of total EU-15 GHG emissions, have decreased by 17 % between 1990 and 2002. The chemical industry has been the most important contributor to this decline, especially the production of adipic acid where emissions have fallen substantially as a result of technical measures, and emissions from agricultural soils following a reduction in the use of fertilisers.

Fluorinated gas emissions show opposing trends for different gases within this family. Whereas HFC emissions increased by 25 % between 1995 and 2002, perfluorocarbons (PFC) emissions declined by 42 % and sulphur hexafluoride (SF_6) emissions by -38 %. Fluorinated gases accounted for only 1 % of total GHG emissions in 2002. However, between 2001 and 2002, HFC and SF_6 emissions were increasing.

2. EVALUATION OF PROJECTED PROGRESS

This chapter presents the aggregated projections of the GHG emissions of the EU-25 and again assesses the EU-15 projections in more detail because these were the only Member States with reporting obligations under Council Decision 280/2004/EC. The assessed projections are those for the year 2010, the mid-term year of the first commitment period of the Kyoto Protocol. The assessment for the EU-15 is undertaken in three steps:

(1) Assessment of GHG emissions under the '*with existing measures'* projections, which consider domestic policies and measures already implemented, including Common and Co-ordinated Policies and Measures (CCPMs),
(2) assessment of the intended use of Kyoto mechanisms in addition to (1), and
(3) assessment of the '*with additional measures'* projections in addition to (1) and (2).

2.1. Projected progress of EU-25

Assessment of the '*with existing measures'* projections: By 2010, EU-25 GHG emissions will increase by roughly 4 % to 95.3 % of its base year emissions in the '*with existing measures'* projections[2]. Annex 4 on '*with existing measures'* projections shows detailed figures of how far existing domestic policies and measures implemented by Member States are expected to contribute to their individual targets and to fill the remaining gaps. These contributions vary significantly across Member States. Only eight Member States (the Czech Republic, Estonia, Latvia, Lithuania, Poland, Slovakia, Sweden and the United Kingdom) are projecting to have lower GHG emissions in 2010 than their respective burden sharing targets, and in the case of Latvia and Estonia by as much as some 50%.

[2] Note that no data are available for Cyprus and Malta.

Assessment of accounting for the use of Kyoto mechanisms: In order to complement the assessment of progress on the basis of domestic measures, a specific survey was made of

Member States' intentions and preparations for use of the Kyoto mechanisms (Articles 6, 12 and 17 of the Kyoto Protocol) and of carbon sinks (Articles 3(3) and 3(4) of the Kyoto Protocol). Additional information has been taken from the 3rd National Communication to the UNFCCC and from NAP notified by Member States to the Commission under the emissions trading scheme.[3] The information contained in the NAP is the most up-to-date of these sources and so was used as the basis for the assessment in this report.

Table 2: Intended use of Kyoto mechanisms notified in the National Allocation Plans

Member State	**million tonnes CO_2-equivalent per year**
Austria	7.0*
Belgium	2.5*
Denmark	3.7*
Ireland	3.7*
Italy	32.5-60.0
Luxembourg	3.0*
The Netherlands	20.0*
Spain	20.0
Total	**39.9* (92.4 – 119.9)**

* assessed plans as of November 2004

The eight Member States listed in Table 2 notified their intended use of the Kyoto mechanisms in the NAP. They are planning to purchase between 92.4 and 119.9 million tonnes of CO_2-equivalent each year. The NAPs of six of these Member States were already assessed by the Commission amounting to 40 million tones CO_2-equivalent each year. With their forecasted use of the Kyoto mechanisms Austria, Belgium, Denmark and Ireland will significantly reduce the gap between their '*with existing measures'* projections and their burden-sharing target. Luxembourg and the Netherlands expect to reach their respective burden-sharing targets.

Assessment of the '*with additional measures'* projections: In the '*with additional measures'* projections, aggregated GHG emissions will roughly stay at 2002 levels (90.6 % of base year emissions in 2010; see Figure 4).

[3] 2003/87/EC from 13/10/03, OJ L275, 25/10/2003, p.32-46

Preliminary assessment of accounting for carbon sinks under the Kyoto Protocol: The nine Member States listed in Table 3 have provided projected annual estimates for net carbon stock changes under Article 3.3 of the Kyoto Protocol. Whereas Austria expects additional emissions, the other Member States listed expect net sequestration. Moreover, five Member States (Austria, Italy, the Netherlands, Portugal and Spain) have so far decided to account for forest management under Article 3.4 of the Kyoto Protocol.

Table 3: Intended use of sinks from Member States (under Article 3.3 and 3.4)

	Million tonnes CO_2 per year
Austria	+0.73
Denmark	-0.46
Ireland	-6.45
Italy	-7.16
The Netherlands	-0.11
Portugal	-2.20 - -2.50
Slovenia	-3.85
Spain	-7.63
United Kingdom	-3.93
Total	**-31.06 - -31.36**

However, these data must be interpreted with caution. They are still to be considered preliminary, as the Good Practice Guidance on LULUCF[4] has not yet been used.

Reported aggregate estimates of the Member States from activities under Articles 3.3 and 3.4 of the Kyoto Protocol would represent a net sequestration of about 31 million tonnes of CO_2 per year. This amount is composed of about 26 million tonnes CO_2-equivalent emissions per year for afforestation, reforestation and deforestation and about 5 million tonnes for forest management.[5] No data is available so far regarding the quantitative contribution of other activities under Article 3.4 (cropland management, grazing-land management and re-vegetation).

These activities could significantly help some Member States to meet their Kyoto commitments. Contributions by Slovenia, Ireland, Spain and Portugal are reported to be 19, 12.4, and 3 % of 1990 emissions respectively, and are the largest of the Member States.

2.2. Projected progress of EU-15

Assessment of the '*with existing measures'* projections: The aggregated current '*with existing measures'* projections show a decrease of only 1 % in GHG emissions by 2010 relative to the 1990 level. This would constitute a shortfall of 7 percentage points with regard to the target of minus 8% (330 million tonnes CO_2-equivalent per annum, see Figure 4). This gap is slightly smaller than last year's projections, which forecast a 0.5 % decrease in EU-15 GHG emissions for 2010.

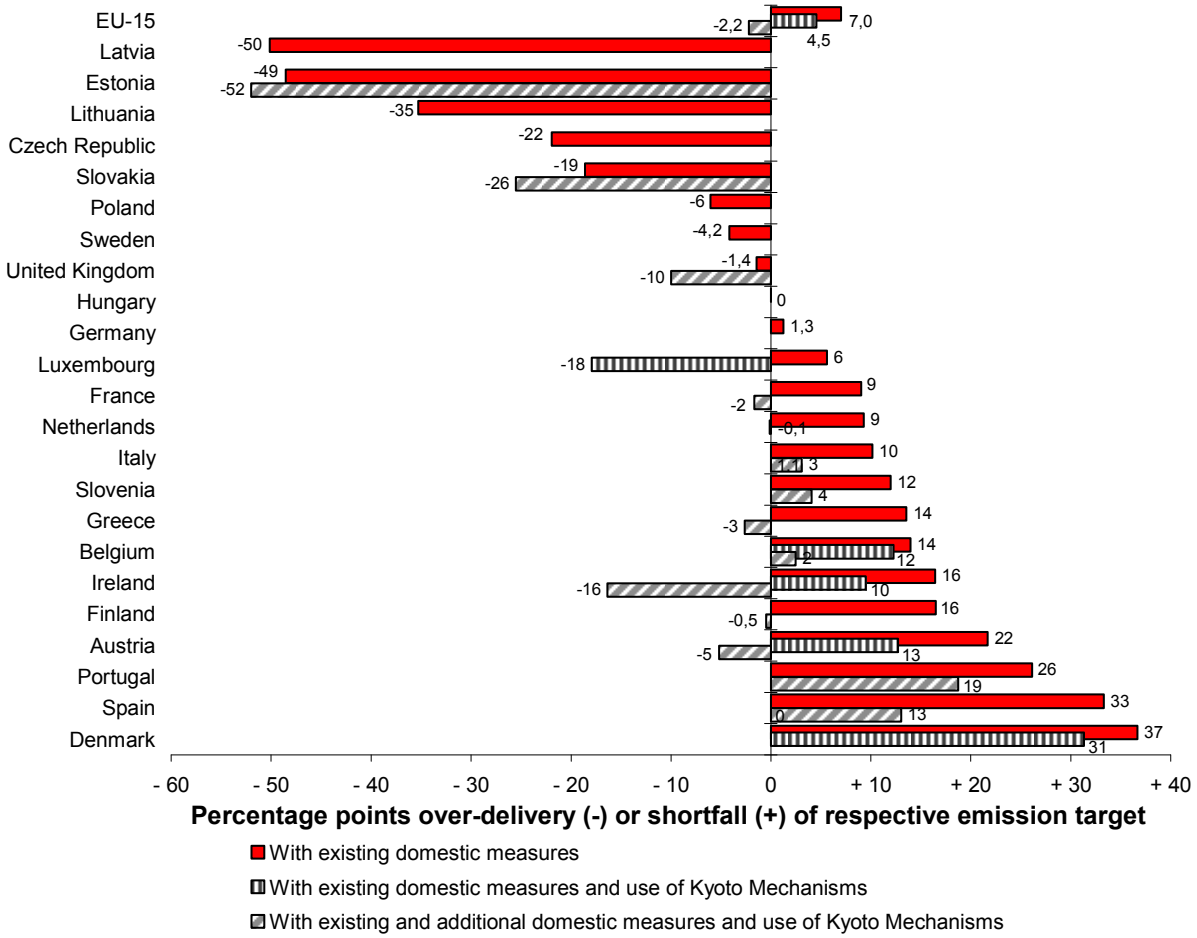
The EU-15 '*with existing measures'* projections for individual gases suggest that the emissions of CO_2 will increase by 4%. Again, projections of GHG emissions from the transport sector are of considerable concern. They indicate under the '*with existing measures'* scenario a rise of about 34 % by 2010, compared to 1990. Road transport is by far the largest source in the transport sector (98 % in 2002) and both passenger and freight transport are

[4] Good Practice Guidance for Land-use, land use change and forestry, IPCC 2003

[5] no removals under Article 3.4 of the Kyoto Protocol, were accounted for above the cap defined by Decision 12/CP.7, UNFCCC

projected to continue to increase. In particular, freight transport on roads increased by 40 % in 2000 relative to 1990 and is projected to be 84 % above 1990 levels in 2010.[6]

Figure 4: Relative gap (over-delivery or shortfall) between GHG projections based on *'existing'* and *'additional'* domestic policies and measures and 2010 targets and on the use of Kyoto mechanisms



Notes: Projections for Poland cover only CO_2 and N_2O and include LULUCF. Projections for Cyprus, Lithuania and Malta are not available. Projections for Austria do not reflect most recent information indicating higher emission trends in certain sectors (e.g. transport and energy). Therefore, over-delivery in the '*with additional measures'* projections seems to be unlikely.

Information for other GHG is less comprehensive, chiefly because information from up to five EU-15 Member States is missing in certain sectors. Therefore, it is difficult to draw firm conclusions. For CH_4 and N_2O, decreases of 34 % and 16 % are projected over the period 1990 to 2010 for those countries that reported information on these gases. However, for fluorinated gases a significant increase of 37 million tonnes CO_2-equivalent is projected by 2010 compared to the base year, which is almost a doubling (+ 94 %).

Accounting for Kyoto mechanisms: The quantified estimates on the use of Kyoto mechanisms by those six EU-15 Member States notified in their respective NAP and

[6] EC DG TREN (2003): European Energy and Transport Trends to 2030, http://europa.eu.int/comm/dgs/energy_transport/figures/trends_2030/index_en.htm

approved by the Commission contribute about 0.9% to the EU-15 Kyoto target of –8 %. With this figure, the aggregated current '*with existing measures'* projections indicate a shortfall of some 6.1% with regard to the EU-15 Kyoto target (about 260 million tonnes CO_2-equivalent) by 2010.

Assessment of the '*with additional measures'* projections: The projections reveal that with additional policies and measures, the EU-15 will achieve its Kyoto target. With additional measures, the EU-15 will decrease GHG emissions further by 7.7%. This is 0.6% more than required for reaching the EU-15 collective Kyoto target when taking into account the intended accounting for Kyoto mechanisms (around 0.9% of base year emissions). Nine EU-15 Member States, i.e. Austria, Finland, France, Greece, Ireland, Luxembourg, the Netherlands, Sweden and the United Kingdom expect to achieve their burden-sharing target. Sweden sees existing policies and measures as being sufficient. Most of the GHG savings of additional policies and measures are expected to come from further reductions in CO_2.

– It should be noted, however, that there is still scope for improving the completeness and quality of the projections provided. Overall quality generally suffers from uncertainties related to: two of the EU-15 Member States which are not on track to reach their Kyoto target (Denmark and Germany) did not provide a '*with additional measures'* projection;

– the level of implementation of policies and measures;

– the methodologies used for the projections and their reporting.

Common and Co-ordinated Policies and Measures of the EC

This chapter relates to the most recent state (2004) while the aforementioned chapters were based on the 2002 data.

Since 2000, the ECCP has been the Commission's main instrument to develop, prepare and implement CCPMs at Community level to help Member States and the EU to meet their Kyoto commitments. Since last year's progress report, work has continued in EU institutions on the implementation of CCPMs, and in particular on those measures that the Commission had committed itself to in its ECCP Communication at the end of 2001.

Since last year's progress report, three important measures have been adopted by the EU institutions:

– the Directive linking project-based mechanisms to GHG emissions trading,

– the Council Decision on monitoring Community GHG emissions and implementing the Kyoto Protocol and

– the Directive on the promotion of co-generation.

In addition, legislative work is progressing well in the EU institutions on other proposals, such as the proposal for a regulation on fluorinated gases, the proposal for a framework Directive on eco-efficiency requirements for energy-using products, and the proposal for a Directive on energy end-use efficiency and energy services, which was adopted by the Commission in December 2003. This last proposal also includes promotion of energy-efficient public procurement, which was originally considered as a separate ECCP initiative.

Of the priority actions listed in the Communication, most of the measures the Commission committed itself to propose in the period 2002-2003 have indeed been put forward, with the notable exception of a comprehensive framework on infrastructure use and charging in the transport sector, and the IPPC reference document on generic energy efficiency techniques. A comprehensive overview of the state of play of the relevant climate change CCPMs can be found in Annex 5.

The legislative measures currently in force or already proposed by the Commission would – according to the *ex ante* ECCP estimates – result in potential emissions reductions of about 350-430 million tonnes CO_2-equivalent in the EU-15. Some of the CCPMs adopted are already considered in the projections of Member States, but others are still missing. If all of these measures were adopted and implemented by Member States in a comprehensive and timely manner, this reduction potential would be realised and would help to close the gap between the *with existing measures* projection and the EC target.

While this demonstrates the significant progress that the EU has achieved in terms of implementation, the above figures should be treated with caution, since '*ex ante*' ECCP evaluation of the potential of a certain measure does not necessarily mean it will actually be implemented. Not all of the detailed provisions of the measures, as transposed into national legislation, have been taken into account in the initial assessment. Another reason for caution is that estimated potential is based on reaching certain indicative targets, and these will effectively need to be met. In order to better evaluate the EU's ability to meet its Kyoto targets, the Commission intends to intensify its efforts to evaluate the effects of EU and national policies and measures.

The Commission has continued its work on integrating climate change into other policy areas, and on the implementation and monitoring of its climate change measures. The most important results of the past year are:

- the assessment of National Allocation Plans under the Emissions Trading Directive,
- a progress report regarding the EU's progress towards its renewables target and the announcement of a number of additional actions in this field,
- the yearly monitoring report regarding voluntary commitments by car manufacturers' associations,
- implementation of the work programme 'Intelligent Energy for Europe,'
- sustainable transport, energy efficiency and renewables are taken up as priority areas in the Commission's future cohesion policy,
- new opportunities to address climate change and the promotion of biomass production in the Common Agricultural Policy following the 2003 reform and in the recent Commission's proposal for a regulation on rural development relating to the next programming period (2007-2013).

3. GREENHOUSE GAS EMISSIONS IN CANDIDATE COUNTRIES

Table 4 shows the emissions, trends and projections of GHG emissions in the Candidate Countries Bulgaria, Croatia and Romania. No data are yet available for Turkey. All of these countries are on track to reach their reduction targets under the Kyoto Protocol. Bulgaria

could even reduce its GHG emissions by more than 50 % since the base year. While Romania and Bulgaria are also expecting to reach their reduction targets, Croatia is expecting GHG emissions to be 16 % above its reduction target in 2010.

Table 4: GHG emissions in the base year and projections in Candidate Countries

	GHG emissions for base year (Mt CO_2)	Reduction target	GHG emissions 2002 (Mt CO_2)	Change 2002 relative to base year (in %)	Change 2002 relative to 2001 (in %)	Distance-to target indicator (index points)	Projections for 2010	Gap between projections and target (in % of base year)
Croatia	31.6	-5.0 %	28.0	-11.5 %	+4.0 %	-8.5	35.2	+16.4 %
Bulgaria	141.9	-8.0 %	62.4	-56.0 %	-5.1 %	-51.2	133.7	-6.9 %
Romania	262.8	-8.0 %	136.5	-48.0 %	+3.9 %	-43.2	180.0	-31.5 %

Annex 2: Data Basis

EU-25 compliance with UNFCCC and Kyoto Protocol reporting obligations and the evaluation of actual progress depends upon the timely availability of the relevant national inventories and projections. The inventories from the EU-15 Member States are of special importance because the inventory of the EC as a Party to the Kyoto Protocol is compiled from these data only. The EU-15 Member States were, for the last time, required to submit 2002 inventory data by 31 December 2003. This deadline was postponed by 2 weeks to 15 January for next years' reporting according to the new Council Decision concerning a mechanism for monitoring Community GHG emissions and for implementing the Kyoto Protocol (280/2004/EC), which entered into force in March 2004.

Six EU-15 Member States (Germany, Greece, Italy, Luxembourg, Portugal and Spain) did not send their inventories in time. By April 2004, however, all of these Member States had reported their inventory data for 2002, Germany was the last on 30 April. Therefore, submission of the EC GHG inventory report 2004 to UNFCCC, which was due by 15 April, had to be postponed until 21 May.

Data completeness has not improved compared to the previous year. Gaps still exist for Greece (SF_6 for 1990–2002) and Luxembourg (CO_2, CH_4, N_2O for 1991–93; HFCs, PFCs, SF_6 for 1990–97, 1999). The gaps in Luxembourg data were filled by a gap-filling procedure.

The future effects of both implemented and proposed policies and measures are used to assess the projected progress towards fulfilling commitments under the Kyoto Protocol. All EU-15 Member States submitted projections for total GHG emissions for 2010. In 2004, nine EU-15 Member States reported new or revised projections (Austria, Belgium, Denmark, Greece, Ireland, Netherlands, Portugal, Spain, Sweden); nine EU-15 Member States reported new or updated policies and measures (Austria, Denmark, Finland, Greece, Ireland, Netherlands, Portugal, Spain, Sweden). In addition, Denmark, Ireland and Portugal provided their Third National Communications to the UNFCCC in 2003. The quality of reporting on projections varied considerably between different Member States and had hardly improved compared with last year's reporting. Germany, Ireland, the Netherlands and Spain did not deliver projections by gas, nor by sector, Portugal did not give projections by gas and Luxembourg did not give projections by sector. Therefore, for the EU as a whole, an analysis of the effects of policies and measures is only possible to a limited extent.

Furthermore, the new Member States are only required to submit yearly inventories and projections under Decision 280/2004/EC starting in 2005. Their assessment in this report is mainly based on their Third National Communications to the UNFCCC. In addition, Poland and Slovenia reported new policies and measures and the Czech Republic and Slovenia reported new projections.

Annex 3: Greenhouse gas emissions in CO_2-equivalents (excl. LULUCF emissions and removals) and Kyoto Protocol targets for 2008-2012

	GHG emissions for base year (Mt CO2)	Reduction target[7]	GHG emissions 2002 (Mt CO2)	Change 2002 relative to base year (in %)	Change 2002 relative to 2001 (in %)	Distance-to target indicator (index points)
Austria	78,0	-13,0 %	84,6	+8,5 %	+0,3 %	+16,3
Belgium	146,8	-7,5 %	150,0	+2,1 %	+0,5 %	+6,6
Cyprus	--	--	--	--	--	--
Czech Republic	192,1	-8,0 %	142,8	-25,7 %	-3,5 %	-20,9
Denmark	69,0	-21,0 %	68,5	-0,8 %	-1,2 %	+11,8
Estonia	43,5	-8,0 %	19,5	-55,2 %	+0,3 %	-50,4
Finland	76,8	0,0 %	82,0	+6,8 %	+1,7 %	+6,8
France	564,7	0,0 %	553,9	-1,9 %	-1,4 %	-1,9
Germany	1253,3	-21,0 %	1016,0	-18,9 %	-1,1 %	-6,3
Greece	107,0	+25,0 %	135,4	+26,5 %	+0,3 %	+11,5
Hungary	113,1	-6,0 %	78,0	-31,0 %	-1,2 %	-27,4
Ireland	53,4	+13,0 %	68,9	+28,9 %	-1,6 %	+21,1
Italy	508,0	-6,5 %	553,8	+9,0 %	-0,1 %	+12,9
Latvia	28,9	-8,0 %	10,6	-63,1 %	-1,1 %	-58,3
Lithuania	50,9	-8,0 %	20,2	-60,2 %	-2,6 %	-55,4
Luxembourg	12,7	-28,0 %	10,8	-15,1 %	+10,4 %	+1,7
Malta	2,2	--	2,8	+28,5 %	0,0 %	--
The Netherlands	212,5	-6,0 %	213,8	+0,6 %	-1,1 %	+4,2
Poland	565,3	-6,0 %	382,8	-32,3 %	0,0 %	-29,0
Portugal	57,9	+27,0 %	81,6	+41,0 %	+4,1 %	+24,8
Slovakia	72,3	-8,0 %	51,9	-28,2 %	-0,8 %	-23,4
Slovenia	20,6	-8,0 %	20,4	-1,1 %	+0,6 %	+3,7
Spain	286,8	+15,0 %	399,7	+39,4 %	+4,2 %	+30,4
Sweden	72,3	+4,0 %	69,6	-3,7 %	+2,0 %	-6,1
The United Kingdom	746,0	-12,5 %	634,8	-14,9 %	-3,3 %	-7,4
Total EU-15	**4245,2**	**-8,0 %**	**4123,3**	**-2,9 %**	**-0,5 %**	**+1,9**
Total EU-25	**5334,1**	**--**	**4852,4**	**-9,0 %**	**+0,02 %**	**--**

Source: EEA, 2004

[7] EU-15 = burden sharing target

Annex 4: Actual and projected GHG emissions

	Base year (used for projections assessment) (Mt CO2)	Individual burden sharing target (in % of base year)	Commitm. implied by burden sharing (Mt CO2) (derived from base year)	Projections for 2010 (Mt CO2)	(in % of base year)	Gap between projections and target (Mt CO2)	(in % of base year)
Austria	77,6	-13,0 %	67,5	84,4	+8,7 %	+16,9	+21,7 %
Belgium	141,0	-7,5 %	130,4	150,1	+6,5 %	+19,7	+14,0 %
Cyprus	--	--	--	--	--	--	--
Czech Republic	192,2	-8,0 %	176,8	134,6	-30,0 %	-42,2	-22,0 %
Denmark	69,0	-21,0 %	54,5	79,8	+15,7 %	+25,3	+36,7 %
Estonia	43,5	-8,0 %	40,0	18,9	-56,6 %	-21,1	-48,6 %
Finland	77,2	0,0 %	77,2	89,9	+16,5 %	+12,7	+16,5 %
France	545,0	0,0 %	545,0	594,3	+9,0 %	+49,3	+9,0 %
Germany	1218,2	-21,0 %	962,4	977,8	-19,7 %	+15,4	+1,3 %
Greece	109,3	+25,0 %	136,6	151,4	+38,6 %	+14,8	+13,6 %
Hungary	101,7	-6,0 %	95,6	95,6	-6,0 %	+0,0	+0,0 %
Ireland	53,4	+13,0 %	60,4	69,1	+29,4 %	+8,8	+16,4 %
Italy	521,0	-6,5 %	487,1	540,1	+3,7 %	+53,0	+10,2 %
Latvia	30,6	-8,0 %	28,2	12,8	-58,2 %	-15,4	-50,2 %
Lithuania	37,7	-8,0 %	34,7	21,4	-43,3 %	-13,3	-35,3 %
Luxembourg	12,7	-28,0 %	9,2	9,9	-22,4 %	+0,7	+5,6 %
Malta	--	--	--	--	--	--	--
The Netherlands	212,0	-6,0 %	199,3	219,0	+3,3 %	+19,7	+9,3 %
Poland	498,5	-6,0 %	468,6	438,4	-12,1 %	—30,2	-6,1 %
Portugal	65,1	+27,0 %	82,7	99,7	+53,1 %	+17,0	+26,1 %
Slovakia	72,5	-8,0 %	66,7	53,2	-26,6 %	-13,5	-18,6 %
Slovenia	20,7	-8,0 %	19,0	21,5	4,0 %	+2,5	+12,0 %
Spain	207,0	+15,0 %	238,1	307,0	+48,3 %	+69,0	+33,3 %
Sweden	71,9	+4,0 %	74,8	71,8	-0,2 %	-3,0	-4,2 %
The United Kingdom	744,7	-12,5 %	651,6	640,9	-13,9 %	-10,7	-1,4 %
Total EU-15	**4125,2**	**-8,0 %**	**3795,1**	**4085,3**	**-1,0 %**	**+290,2**	**+7,0 %**
Total EU-25	**5122,5**	**--**	**--**	**4881,6**	**-4,7 %**	**--**	**--**

Source: EEA, 2004

Notes: For projected emissions gaps, plus figures signify that the target is not met, while minus figures mean a projected over-delivery of emissions. Base year emissions used for projections assessment differ from base year emissions from the emission inventories for some countries. Gaps for total EC in terms of Mt CO_2-equivalents are not equal to the sum of MS' gaps due to a slight inconsistency between the MS's burden sharing targets and the EC's Kyoto target.

Annex 5: Progress with common and co-ordinated policies and measures

Proposed measure	Status of implementation	Entry into force	Starting to deliver (estimate)
Cross-cutting issues			
Directive establishing a scheme of GHG emissions trading within the Community	Adopted by Council and Parliament[8]	2003	2005
Effective implementation of IPPC (Integrated Pollution Prevention and Control Directive)	Work on an IPPC reference document on generic energy efficiency techniques to start by end 2004; Ongoing work on various sector-specific BAT (best available techniques) reference documents; Revision of published BAT reference documents to start in early 2005	In preparation	
Linking project-based mechanisms to GHG emissions trading	Proposal adopted by the Commission,[9] agreed upon by Council and Parliament and to be adopted in the second half of 2004	2004	2005
Decision for monitoring Community GHG emissions and for implementing the Kyoto Protocol	Adopted by Council and Parliament [10]	2004	-
Energy			
Directive on taxation of energy products	Adopted by the Council[11].	2003	2005
Directive on energy performance of buildings	Adopted by Council and Parliament[12]	2003	2006
Directive on the promotion of electricity from renewable energy sources	Adopted by Council and Parliament[13]	2001	2003
Proposal for a framework directive on eco-efficiency requirements for energy-using products	Proposal adopted by the Commission[14] First reading completed; common position adopted by the Council	-	
Proposal for a Directive on energy end-use efficiency and energy services	Proposal adopted by the Commission[15]	-	
Directive on the promotion of cogeneration (CHP)	Adopted by Council and Parliament [16]	2004	2006
Public awareness campaign and campaign for take-off	Included in 2003 Work Plan "Intelligent Energy for Europe". Will start in late 2004.	-	
Transport			
Voluntary agreement by the car manufacturers from EU, Japan and Korea to reduce fleet average CO_2 emissions to 140g/km by 2008/2009 (pre ECCP)	Monitored through yearly report 4th Review in 2003[17]	1998	1999

8 2003/87/EC from 13/10/03, OJ L275, 25/10/2003, p.32-46
9 COM(2003)403 of 23/07/03
10 280/2004/EC, OJ L 49 of 11/02/2004, p. 1-8
11 2003/96/EC, OJ L 283 of 31/10/2003
12 2002/91/EC, OJ L 001 of 04/01/2003, p. 65-71
13 2001/77/EC, OJ L 283 of 27/10/2001, p. 33-40
14 COM(2003)453 of 23/07/03
15 COM (2003) 739 final
16 2004/8/EC,OJ L 52 of 21/02/2004, p.50-60
17 COM(2004) 78 final of 11/02/2004

Shifting the balance between modes of transport, in particular towards rail transport	Rail infrastructure Package,[18] second railway package[19] and proposal for the third railway package,[20] in accordance with the White Paper on a Common Transport Policy adopted	2001 - 2006	2003 - 2008
Proposal for improvements in infrastructure use and charging	Proposal to amend the current "Eurovignette" directive adopted by the Commission[21]		
Promotion of the use of bio-fuels for transport	Adopted by Council and Parliament[22]	2003	2005
Proposal on special tax arrangements for diesel fuel used for commercial purposes and on the alignment of excise duties on petrol and diesel fuel	Proposal adopted by the Commission[23]	-	
Proposal for a regulation on the granting of Community financial assistance to improve the environmental performance of the freight transport system (Marco Polo I and II program)	Proposal adopted by the Commission[24]		
Agriculture			
Common rules for direct support schemes under the common agricultural policy and establishing certain support schemes for farmers (carbon credit for energy crops)	Adopted[25]	2003	2005
Support for rural development from the European Agricultural Guidance and Guarantee Fund (EAGGF)	Adopted[26]	2003	2003
Proposal for a Council Regulation on support for rural development by the European Agricultural Fund for Rural Development (EAFRD)	Proposal adopted by the Commission		
Industry			
Proposal for legislative action on fluorinated gases	Proposal adopted by the Commission in co-decision [27]	-	
Waste			
Landfill Directive	Adopted[28]	1999	2000

18 2001/12/EC, 2001/13/EC and 2001/14/EC, OJ L 75 of 15/3/2001, p. 1-25, 26-28 and 29-46

19 Regulation 881/2004 of 29/04/2004, OJ L 164 of 30/04/2004, p. 1-43, Corrigendum OJ L 220 of 21/6/2004, p. 3-15
2001/49/EC of 29/04/2004, OJ L164 of 30/4/2004, p.44-113, Corrigendum OJ L220 of 21/6/2004, p.16-39
2001/50/EC, OJ L 164 of 30/04/2004, p. 114-163, Corrigendum OJ L 220 of 21/6/2004, p. 40-57
2001/51/EC, OJ L 164 of 30/04/2004, p. 164-172, Corrigendum OJ L 220 of 21/6/2004, p. 58-60

20 http://europa.eu.int/comm/transport/rail/package2003/new_en.htm

21 COM(2003)448 of 23.07.2003

22 2003/30/EC, OJ L 123 E of 17/05/2003, p. 42-46

23 COM(2003)410 of 24/07/2002

24 Regulation EC No. 1382/2003, OJ L 196 of 02.08.2003, p. 1-6

25 Regulation 1782/2003, OJ L 270 of 21.10.2003, p. 1

26 Regulation 1783/2003, OJ L 270 of 21.10.2003, p. 70

27 COM (2003) 492 of 11/08/2003

28 1999/31/EC, OJ L 182 of 16/07/99, p.1-19