

# Second ECCP Progress Report

## Executive Summary

In the last two years, the European Climate Change Programme has analysed extensively the most environmentally beneficial and cost-effective additional policies and measures enabling the EU to meet its –8% target under the Kyoto Protocol, equivalent to 336Mt CO<sub>2</sub>eq. The programme was not carried out in isolation, but rather built links with on-going activities at EU level. It also dovetails with the Sixth Environmental Action Programme and the EU Strategy for Sustainable Development. In the field of renewable energy and energy demand, there are evident synergies with the European Strategy for the Security of Energy Supply.

This report is a follow-up of the first ECCP report, published in June 2001, that was followed by a Commission Communication in October 2001, laying down the concrete policy proposals the Commission intends to bring forward.

This report gives an overview of the work within the different working groups of the European Climate Change Programme that were operational in 2002, in particular *'JI and CDM & the link with emissions trading'*, *'Agriculture'*, *'Sinks in agricultural soils'*, *'Forest related sinks'* and *'Fluorinated gases'*. It also gives an overview of the follow-up work in terms of implementation of measures that were identified in the first phase of the ECCP.

By bringing together the information and data of the different working groups and implementation activities, the report gives an indication on the EU's ability to meet its Kyoto targets of the first commitment period 2008-2012. In this respect, it should be emphasised that the emission reduction potential for the various ECCP measures are (ex-ante) estimates. Detailed information related to the calculation, the underlying assumptions and the source of the data are given in the specific sections. The actual emission trends in the EU and the Member States are addressed in the Commission's annual greenhouse gas monitoring report.

### ***Results relating to the follow-up of measures identified in the first phase of ECCP***

The monitoring mechanism and its review, as well as the EU's emissions trading scheme and the link with the Kyoto flexible mechanisms (JI and CDM) are key elements of the EU's climate change strategy. On these issues, ***the planned work is proceeding on schedule.***

The implementation of measures relating to the ***supply of energy is well on track.*** In total, current proposed or implemented measures (RES-E Directive and proposals on transport bio-fuels and Combined Heat and Power) have an emission reduction potential of approximately 150Mt CO<sub>2</sub>eq. Some aspects of RES-H are covered by other proposals (CHP, Energy performance of buildings). Additional RES-H initiatives could enable to exploit better the large potential identified in this sector and help removing specific barriers hampering increased market introduction. These could also complete the "third pillar" of the implementation of the renewable strategy -next to RES-E and the bio-fuels proposals- in order to reach the 12% target as put forward in the 1997 White Paper on renewable energy.

The first phase of the ECCP has ***a strong focus on energy demand*** measures in the household, tertiary and industry sector, which was also mirrored in several concrete measures within the action plan established by the ECCP Communication of October 2001. In this sector, considerable CO<sub>2</sub> savings are usually combined with good cost-efficiency due to lower energy costs. With regards to implementation of measures, the interplay of various measures (awareness campaign, labelling of equipment, setting minimum standards, defining best practices, promoting energy services,...) is in many cases decisive in improving energy efficiency in the field. The potential in the first commitment period in the field of energy demand is estimated at 214-259Mt CO<sub>2</sub>eq.

In 2002, considerable progress has been achieved in the preparation of key measures (e.g. Directive on the establishment of a framework for the eco-design of energy-using products, Directive on energy services, campaign for take-off & public awareness campaign, public procurement). It is expected that concrete proposals will be brought forward in the near term. The Motor Challenge Programme has already been launched in February 2003.

Except for the strategy on the reduction of CO<sub>2</sub> emissions of passenger cars, the **implementation of measures in the transport sector proves difficult and shows slow progress** in a number of key areas (e.g. initiative on infrastructure use and charging, a concept for enhanced environmentally friendly vehicles). This is of particular importance in view of the projected further increase of emissions (18% increase in 2000 and 28% increase in 2010 with respect to 1990). With regards to the promotion to shift the balance between modes of transport, the Commission has proposed several measures concerning the revitalising of railways, the quality of port services and a support Program for intermodal freight transport, which may play a major role in curbing emissions in the longer term, i.a. through promoting intermodality. The Commission is also working on actions on urban transport and investigating the promotion of alternative fuels, including their impact on greenhouse gas emissions.

The **strategy on the reduction of CO<sub>2</sub> emissions of passenger cars is now to a large extent implemented**. The monitoring of the voluntary CO<sub>2</sub> commitments is demonstrating positive results. In this respect, it must be noted that all associations have committed themselves to review in 2003 (ACEA and JAMA) or 2004 (KAMA) the potential for additional CO<sub>2</sub> reductions, "with a view to moving further towards the Community objective of 120 g CO<sub>2</sub>/km by 2012".

The projected growth in **fluorinated gases, including mobile air conditioning systems, warrants specific action**. Preparations on a regulatory framework on fluorinated gases have continued in the second phase of the ECCP. The Commission will finalise its legislative proposal, in the form of a Regulation on fluorinated gases, with adoption envisaged in the third quarter of 2003. In addition, better control on non-CO<sub>2</sub> emissions in industrial sectors under the IPPC Directive is promoted through periodical update of BREFs.

Methane emissions in landfills make up the large majority of GHG emissions from **waste** (4% of total 1990 emissions). In 1999, they have already been reduced by 22% with respect to 1990 thanks to national measures. The **implementation of the Landfill Directive** means that further reductions in methane emissions can be expected, estimated at 41Mt CO<sub>2</sub>eq.

#### **Results relating to new working groups active in the second phase**

In 2002, three ECCP working groups were operational dealing with new subjects, i.e. 'agriculture', 'sinks in agricultural soils' and 'forest related sinks'.

**The agricultural sector** is responsible for 10% of all greenhouse gas emissions. Greenhouse gas emissions have declined with 6.4% in the period 1990-2000, compared to 3.5% overall. It can be expected that the implementation of Agenda 2000 Reform will strengthen this trend. The ECCP working group identified –for the first commitment period- an additional potential reduction of 2.9% of agricultural emissions, totalling 12Mt CO<sub>2</sub>eq, to a large extent through the reduction of N<sub>2</sub>O emissions from the soil. The recent CAP Reform proposals of 22 January 2003 (COM(2003)23 final) include certain measures and incentives that have, if adopted, implicitly or potentially a mitigating effect on GHG emissions, such as through the introduction of cross compliance requirements with environmental legislation (e.g. the nitrates Directive) and the transfer of funds from the market support pillar of the CAP to the rural development pillar, where Member States may use it to support agri-environmental measures.

Following the Marakech accords, the ECCP established two working groups related to **carbon sequestration in agricultural soils and forests**, in order to assess the EU's potential in this field, as well as its environmental and socio-economic implications. The working groups have identified and assessed a considerable number of climate friendly farming and forestry activities and practices, which, in many cases, have positive (environmental) co-benefits (e.g. soil protection and bio-diversity). The total technical potential for the first commitment period identified by the working groups is about 60-70 Mt CO<sub>2</sub>eq for agricultural soils and approximately 33 Mt CO<sub>2</sub>eq for forests. Both working groups have stressed certain limitations (e.g. need for adequate monitoring & verification, geographical differentiation, lack of cost data) and uncertainties (more research needed to investigate long term effects). Like for the reduction of emissions in the agricultural sector, the CAP Reform proposals include certain measures and incentives, that, if adopted by the Member States, have implicitly a positive effect on carbon sequestration, such as definition of good agricultural conditions for the soil linked to direct payments, non-rotational set-aside, and increased funds for rural development, which gives Member States increased possibilities to support agri-environment measures.

Increased demand for **renewable raw resources for energy and material substitution** opens up new opportunities for the EU's agricultural and forestry sector. It is estimated that the total **technical** potential of energy substitution by bio-energy from agriculture, forests and other residues could be 200-600Mt CO<sub>2</sub>eq/year (EU-15), representing 60-180% of the total EU-15 reduction required under the first commitment period. Wood products are a physical pool of carbon (currently not accounted for under the Kyoto Protocol) and can act as a substitute for more energy-intensive materials. The production, processing and supply of renewable raw resources should receive more attention in order to meet the expected growth in demand, while taking into account other environmental effects. The CAP Reform proposals include a specific support scheme for the promotion of energy crops, which is envisaged to be reviewed in 2006.

### **Overall Conclusions**

The policies and measures included in this report **have a total emission reduction potential of 578-696 Mt CO<sub>2</sub>eq** (excluding the voluntary commitments of the car manufacturers), about twice the EU-15's emission reduction required under the first commitment period of the Kyoto Protocol. In addition, **potentially 93-103 Mt CO<sub>2</sub>eq could be sequestered** through the enhancement of sink activities in the agricultural and forestry sector.

In order to have a better overview of the status of implementation, the policies and measures of this report were categorised in terms of their stage of implementation. The **legislative measures currently in force or already proposed** by the Commission represent a potential 276-316 Mt CO<sub>2</sub>eq, including key measures such as the RES-E Directive, Directive on the energy performance of buildings, the Landfill Directive, proposals for a Directive on bio-fuels and CHP. However, it must be noted that the 'ex ante' ECCP evaluation of the potential of a certain measure does not necessarily coincide with the actual realisation in the field, as not all of the detailed provisions of the proposals or adopted measures have been taken into account in this pre-evaluation. Another reason is that the estimated potential is based on reaching certain (indicative) targets, which will need to be proven in practice (eg. CHP and biofuels proposals). For the implemented measures, it will be of utmost importance to **closely monitor their implementation and effectiveness, and to review if appropriate**. In addition, the review of the voluntary commitments of the car manufacturers will take place in 2003.

A number of other key measures are in **an advanced stage of preparation** and have an additional potential of 83-116 Mt CO<sub>2</sub>eq, comprising proposals to link JI/CDM with the emissions trading scheme, on energy services, public procurement, on minimum energy

efficiency standards for end-use equipment, on fluorinated gases and the campaign for take-off & public awareness campaign.

Other measures are still at the preparatory stage and the Commission's examination of the measures is still on going, comprising :

- An analysis of the ongoing Council legislation process and implementation of the CAP reform (including climate change related measures in the rural development plans by Member States) in view of the further elaboration of the relationship between agricultural policy instruments and climate change benefits ,
- The integration of climate change in the structural funds
- Further measures related to RES-H
- Follow up on the inventory of public aid for energy
- E2MAS : integration energy efficiency in EMAS
- Directive on fiscal measures for passenger cars
- Introduction of a concept of Environmentally Enhanced Vehicles
- Initiative on CO<sub>2</sub> emissions of light commercial vehicles
- Mobile air conditioners

The results of the European Climate Change Programme confirm the projections of the monitoring report for the year 2000, indicating that the EU would not achieve the Kyoto target *with the measures currently in place*, but could exceed the target with *additional policies and measures*. Preliminary data for the year 2001 indicate that for the second consecutive year, the greenhouse gas emissions in the EU are on the rise. This is a strong signal for a continued and strengthened implementation policy, that is accompanied with a strong monitoring process of the effectiveness of the measures that have already been adopted and appropriate review .