

Mandate

**Working Group Sinks - Subgroup Soils**

**1. Introduction**

On 8 March 2000, the Commission adopted the Communication on “EU policies and measures to reduce greenhouse gas emissions: "Towards a European Climate Change Programme (ECCP)”, COM(00)88.<sup>1</sup>

The ECCP activity is carried out over a period of one year and started in June 2000 with different Working Groups (Flexible Mechanisms, Energy Supply, Energy Consumption, Transport, Industry, Research), which already completed their work in June 2001. In December 2000 the number of working groups was extended to areas such as agriculture and sinks<sup>2</sup>. After several meetings the Working Group Agriculture completed its work at the end of December 2001.

The Working Group Agriculture has discussed topics such as N<sub>2</sub>O emissions from soils, CH<sub>4</sub> emissions from enteric fermentation and CH<sub>4</sub> and N<sub>2</sub>O emissions from manure management, as these are the main sources of emissions of greenhouse gases in the agricultural sector. Beside this, two further issues were on the agenda of the Working Group: the substitution potential of fossil fuel sources by providing renewable raw materials for the energy/industrial sector, and the carbon sequestration potential of agricultural soils.

The carbon sequestration potential of agricultural soils is a very important issue due to a specific result of the Bonn Conference (the 6<sup>th</sup> Conference Of the Parties - COP 6 bis) in July 2001: soils can be used as sinks (carbon store). Agricultural soils could contribute significantly to fulfilling the reduction objective of the EU, which is -8% between 2008 and 2012 from a 1990 base. According to first estimations made by DG ENV, a moderate change of land use (e.g. no tillage) on 20 % of EU agricultural land could create an absorption potential of 7,8 Mt C, which would contribute to 8,6% of the total EU reduction objective.

The carbon sequestration of agricultural soils could not be fully dealt with in the context of the Agriculture WG. In the light of the importance of the issue it is suggested that a “Sub-group Soil” is being established in order to provide answers to a number of questions surrounding the absorption potential of different land use systems and the sustainability of those measures<sup>3</sup>.

In the Sixth Environmental Action Programme the Commission announced its intention to develop a thematic strategy for soil protection and now aims to bring forward this communication during the first half of 2002. The work of the Subgroup Soils will be very relevant also to this process.

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<sup>1</sup> COM(2000)88 final.

<sup>2</sup> The sinks group is a subgroup of the Working Group Research.

<sup>3</sup> The questions have been formulated in first discussions by the Working Group Agriculture.

## **2. Objectives**

### **2.1 General objective**

The general objective of the Subgroup "Soils" is, on the basis of the final report of the Working Group Agriculture<sup>4</sup>, to estimate the carbon sequestration potential of agricultural land in the EU, to answer the questions formulated by the Working Group Agriculture (see specific objectives), and to identify areas of further research in this field. The work of the Subgroup "Soils" should provide the technical background analysis that enables the Commission to propose in due course, if appropriate, policy proposals to the Council and the European Parliament taking also into account the forthcoming mid-term review of the Common Agricultural Policy. Proposals for policy measures in the agricultural sector should also consider possible synergy effects with other policies to increase the potential for carbon sequestration.

### **2.2 Specific objectives**

Under the above-mentioned general objective, the working group has several specific objectives:

1. Clarifying the uncertainties connected with the measures already discussed in the Working Group Agriculture, as well as completing these measures, where appropriate. This should be the first step. Proposals for measures should be in accordance with the criteria described under Article 3.4 of the Kyoto Protocol.
2. Providing, for all selected measures, a quantitative estimation of the carbon absorption potential per hectare and the surface of agricultural land that is available and suitable for the implementation of those measures.
3. Organic matter is an important issue in connection with soil fertility, stability and structure and water storage capacity. The decline in organic matter in many areas is threatening the capacity of these soils to remain fertile and to keep performing their most essential environmental functions. Looking at carbon stored in farm soils, the new Subgroup should make the link with the organic matter issue and the broader aspects of soil protection linked to it.
4. An important issue is the cultivation of organic soils (e.g. peatlands). These soils may release up to 20 tonnes of CO<sub>2</sub>-equivalents per hectare and year and hence have higher greenhouse gas flux densities than any other agricultural system. Therefore, possibilities of alternative use of peatlands and its long-term effects, as well as the environmental and social side-effects, should be considered.
5. The issue of composting and use of sewage sludge in agriculture should be examined as a possible means of building up soil organic matter.
6. Reporting on the implementation and the monitoring of LULUCF (land use, land use change and forestry) activities is an important factor influencing whether

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<sup>4</sup> The final report of the Working Group Agriculture will be published in December 2001 on the ECCP-website, established by DG ENV.

carbon absorption by soils can be accounted as a sink under Article 3.4 or not. Even if the detailed reporting requirements will be decided on the basis of IPCC (Intergovernmental Panel on Climate Change) recommendations on good practice, the working group should pay attention to how far the monitoring of different measures is possible and reasonable from an economic point of view. In doing so, it will need to be aware of the great variation in organic matter between different soils due to parent materials, climatic conditions, other geographical aspects and agricultural activities.

7. The extent to which the existing instruments of the CAP are already contributing to an increase or decrease of the carbon sequestration potential of agricultural soils should be analysed. In this respect, relevant CAP instruments to be examined could be, for instance, agri-environmental schemes covered by the Rural Development Regulation (EC) No 1257/1999, environmental protection requirements established under Article 3 of Regulation (EC) No 1259/99, as well as certain sectoral policies (e.g. arable crops, olive oil).
8. Furthermore, the effects on farm income and environmental side-impacts of different possible policy options, which seem to be relevant regarding the implementation of the Kyoto Protocol (Article 3.4), should be analysed.
9. Finally, if appropriate, possible recommendations for actions should be considered, with a view to increasing the sink potential of agricultural soils. Individual measures should be screened on the basis of cost-benefit analysis, also in comparison with other sectors. Particular attention should be paid to possible longer term measures, as carbon build up is rather slow while carbon release can be very rapid.

### **2.3 Output**

As a result, a consistent strategy should be proposed, aiming at selecting key actions that can contribute to the reduction objective of the EU, as long as these actions are policy relevant, have significant environmental impact, and are consistent with cost-benefit analysis.

### **2.4 Working Method**

The discussion of the group shall be based on a pre-study. The pre-study shall be a sequel to the final report of the Working Group Agriculture and contain a detailed review of literature linked to the specific objectives mentioned under Point 2.2. Based on this study and on the expertise and competence of the members of the working group, a final report shall be prepared.

### **3. Work Programme (Terms of Reference)**

The Terms of Reference shall include all issues mentioned under the objectives (point 2.2). The final work programme should be decided by the working group during the first meeting, and will depend on the output of the pre-study.

### **4. Participants**

Chairperson: Leo Maier/Adelmo Moreale (AGRI-FI)  
Secretary: Andreas Gumbert (AGRI-FI)

- 3-6 Commission representatives
- 3-6 National experts
- 3 Business representatives
- 3 NGO representatives

### **5. Organisation/timetable**

The Subgroup "Soils" will organise up to three meetings/workshops. Use will be made of the ECCP electronic forum, in particular for the agreement of records of meetings and draft conclusions. Participants will be requested to make contributions to issue papers, which will be sent out via e-mail before the meetings to facilitate the discussions. Available studies, relevant to the subject, will be distributed to the participants.

Draft conclusions will be drawn up and agreed after each meeting. After the last meeting, a final report will be produced.

Timetable: The pre-study will be distributed to the members of the group prior to the first meeting.

The first workshop will take place in 31 May 2002. On this meeting the participants shall discuss the need for further studies and/or workshops.