

Agriculture and forestry contributing to the EU climate change roadmap to Copenhagen



Copa - Cogeca position paper

AGRICULTURE AND FORESTRY - adaptation practices and mitigation potential to face the effects of a changing climate

Copa-Cogeca, representing European farmers, agri-cooperatives and forest producers, supports the signing of a global and comprehensive climate agreement by the 15th Conference of the Parties to the United Nations Framework Convention on Climate Change in Copenhagen in December 2009.

Copa-Cogeca welcomes the June 2009 European Council's reaffirmation of its commitment to reaching such an agreement. We acknowledge the importance of the EU's leadership but call for caution when it comes to defining a coherent and fair manner of distributing emission reduction responsibilities among the different EU economic sectors.

Copa-Cogeca wishes to reinforce the current and future key role of EU agriculture and forestry in adapting to and mitigating climate change, but believes that this should not jeopardise the economic viability of sustainable farming and forestry in Europe and thereby its ability to provide secure and safe supplies of food and other products and services demanded by society.

In our understanding, an agreement for the next commitment period (beginning in 2013) will provide a forward-looking scenario for the whole of society, in order to contribute to a common future based on a low carbon and more resource-efficient economy.

Introduction

Copa-Cogeca recognises that adaptation and mitigation are global challenges for European farmers, agri-cooperatives and forest producers.

Consequently, Copa-Cogeca recognises the importance of integrating climate change aspects into all EU policies. Whilst the Common Agricultural Policy (CAP) is not a European climate change policy it can, in combination with other measures, offer a framework for effective policy support and the tools and incentives required to address climate change. This is of the highest importance since the agricultural sector cannot face current and future challenges on its own, despite the fact that climate change was recognised as a "new challenge" in the CAP "Health Check".

Farmers' commitments, supported by the CAP reforms as well as the enforcement of European environmental legislation are already contributing to a significant decrease in greenhouse gas (GHG) emissions from agriculture (20% between 1990-2007 in the EU-27).

The December 2008 agreement on the EU's "Climate action and renewable energy package" will boost efforts to mitigate climate change. It sets an ambitious EU unilateral commitment to curbing GHG emissions by 20% by 2020. Increasing renewable energy use in the transport sector by 10% is an effective means of reducing the EU's dependency on fossil fuels and in combating climate change and European farmers and forest producers are willing to play a key role in reaching this target. In addition, the reviewed EU Emission Trading System ("ETS") and the decision on "effort-sharing", which covers all non-ETS sectors including agriculture, will promote efforts to abate GHG emissions.

Nevertheless, the implementation of the EU's climate and energy package must not jeopardise the economic viability and competitiveness nor the social component of agricultural and forestry activities. Copa-Cogeca

highlights that, beyond their productive role, environmental benefits, landscape preservation and employment opportunities are delivered by both sectors.

Climate change, food security and energy security need to be seen as convergent drivers of sustainable agricultural production. Copa-Cogeca echoes the FAO's¹ major concern in ensuring global food security under a changing climate. The farming sector faces the global challenge of nearly doubling its production if it is to feed the projected world population of 9 billion people by 2050 and ensure improved diets for the 1 billion hungry in the world. At the same time climate change is expected to seriously jeopardise the production capacity of many countries, global demand for renewable raw materials is rising and there is increasing pressure to use land to meet urban and transport needs. It is therefore vital among other things that the CAP reflects the strategic importance of agriculture and provides effective tools to ensure food security and stability to European citizens while contributing to world food needs. With the right research and investment, significant reductions in GHG emissions can be achieved whilst at the same time developing the EU's agricultural and forestry production potential through increased productivity.

¹ Note by the FAO for the G8 Agriculture Ministers' Meeting (Treviso, Italy), 18-20 April 2009.

Agriculture and forestry have a positive role to play in adaptation and mitigation to climate change - 10 key messages

1. Climate change is becoming a key driver in farmers', forest producers' and agri-cooperatives' management decisions and in their economic viability. Adaptation to natural conditions has always been part of farm and forest management, but the complexity and magnitude of weather-related phenomena threaten European farming and forestry and early action is needed.
2. The GHG emissions profile of agriculture is fundamentally different to that of other sectors such as industry, households and transport: the gases are emitted from inherently variable, biological processes linked to all kinds of agricultural production. Agriculture is willing to play its part in contributing to a further reduction of greenhouse gases but binding sector-specific targets for agriculture are neither appropriate nor acceptable.
3. There is a broad synergy between adaptation and mitigation in agriculture and forestry.
4. Thanks to the commitment of European farmers and forest producers, some considerable environmental improvements have been made alongside advancements in energy-, resource- and nutrient-use efficiency, all achieved within existing environmental legislation.
5. The delocalisation of European agricultural and forestry production due to a climate policy that fails to take into account the whole spectrum of existing challenges would result in carbon leakage and the risk of carbon emissions being even higher in third countries.
6. Clear rules on accounting for the climatic effects of land use, land use change and forestry (LULUCF) could create incentives for agriculture and forestry. Moreover, the contribution of renewable energy provisions sourced from agriculture and forestry and made available to the energy, transport and heating sectors has to be acknowledged.
7. Mitigation options providing multiple environmental benefits should be favoured, for example pasture-based livestock systems can simultaneously contribute to carbon sequestration, biodiversity protection, water storage and prevention of fires, floods and erosion.
8. There is a need to enhance active and sustainable forest management to increase forest growth and consequently, its carbon sequestration and mitigation capacity. The increased use of wood to replace non renewable materials could further mobilise the potential of this carbon substitution effect and it should be promoted as an integral part of a low carbon strategy.
9. Advisory and vocational training schemes are of the utmost importance in helping farmers and forest producers to prepare for the coming challenges. Innovation and the development of new technologies are essential and need funding for agricultural research.
10. Farmers and forest producers need mechanisms to provide incentives and reward their efforts to adapt and mitigate as they face the uncertainties of climate change.

Considerations on the role of agriculture and forestry

Agriculture and forestry activities are on the front line of the impact of climate change

Copa-Cogeca highlights the fact that farming and forest management are subject to uncontrollable weather conditions. Farmers and forest producers work “with” and “into” nature, meaning that they regularly have to adapt their management decisions and operations to natural elements due to the changing climate. The magnitude and complexity of weather-related phenomena present risks to European farming and forestry. These effects are felt much more strongly by the farming and forestry sectors than by other economic activities. The need for changes in agricultural production is important for the whole of European society. The sectors are acutely aware of the need to adapt to and combat climate change as they are on the front line of its impacts: extreme events such as fires, violent storms, flooding and drought (droughts being increasingly prolonged and even irreversible), early or late frosts, the increasing variability of seasonality, inter-seasonal and inter-annual rainfall patterns and the arrival of new animal and plant diseases affecting production. The above mentioned pressures are likely to lead to decreasing agricultural and forestry activities, to a greater risk of yield and quality, to employment losses in most European regions, and to increasing economic instability in farmers’ and forest producers’ economic situation. Conversely, the changing climate may open up opportunities for some regions, for example, to grow new crops or varieties.

The specific nature of the sectors emissions

Copa-Cogeca emphasises that the GHG emissions profile of agriculture is fundamentally different to that of other sectors such as industry, households and transport, as it is dominated by methane (CH₄) and nitrous oxide (N₂O). Methane arises from enteric fermentation by ruminant animals and from manure while the application of organic and inorganic fertilisers to soil can give rise to nitrous oxide. The inherently variable, biological nature of agricultural emissions must not be disregarded when selecting suitable mitigation options.

Copa-Cogeca believes that agriculture and forestry cannot be penalised for emissions arising from natural processes which are unrelated to management practices. Increasing temperatures and the greater likelihood of drought and water deficit will result in additional carbon being released from the soil. Separating such a natural effect from one of anthropogenic origins, e.g. tillage, is extremely complex and depends heavily on micro-climate and local hydro-geological conditions. Agriculture is willing to play its part in contributing to a further reduction of greenhouse gases but binding sector-specific targets for agriculture are neither appropriate nor acceptable.

Agriculture and forestry can deliver both adaptation and mitigation solutions in synergy

Copa-Cogeca highlights the unique role of the agricultural and forest sector in being able to reduce GHG emissions whilst adapting their own businesses and facilitating societal adaptation to climate change. In addition, the implementation of mitigation



measures in agriculture and forestry can further decrease GHG emissions whilst production remains stable or even increases. In many cases, by their very nature, mitigation and adaptation in agriculture and forestry are interlinked by simultaneously addressing both challenges.

Farming and forestry are the only economic sectors that can sequester carbon in soils and biomass during their production processes. Through photosynthesis, plants absorb carbon dioxide (CO₂) from the atmosphere across the wide range of cropping, grazing systems and forest

management in Europe. Both agriculture and forestry inherently act as carbon sinks and consequently can play a key role in limiting global warming and enhancing ecosystem resilience. The European model of agriculture, which includes systems such as organic, high nature value, low input and conventional farming, as well as the use of specific management practices such as reduced tillage, efficient nutrient and water management, environmentally sustainable management of grassland, allow the natural capacity of sequestration and storage to be fostered. Moreover, sustainable forest management enhances the carbon



sequestration and storage. Wetlands naturally emit GHGs and, through sustainable management practices, farmers can contribute to some extent to improving soil's carbon storage capacity and to reducing nitrous oxide emissions.

The main consequence of the depopulation of rural areas across the EU is land abandonment. When the maintenance of agricultural production is not longer possible, **this land could be converted into new forest areas** through appropriate afforestation and reforestation policies supporting sustainable land use change, leaving them able to cope with a changing

climate and a high potential to capture CO₂.

Copa-Cogeca would like to highlight the positive contribution from agriculture and forestry by harvesting energy which has been neglected for too long. Sectoral reductions in GHG emissions are possible through the production of bioenergy, which substitutes society's use of non-renewable fossil fuel sources. Energy crops, bio-residues and manure from agriculture can be used to produce biofuels and biogas whilst perennial energy crops and forest biomass can be used for heat, electricity and biofuels production.

The increased use of agricultural commodities in the production of industrial materials such as polymers, lubricants, surface active agents, solvents and fibres can also help to reduce the need for petrochemistry based products. These needs become markets, thus offering opportunities to diversify agri-production systems and agri-ecosystems. **The important carbon substitution effect provided by harvested wood products** replacing energy-intensive industrial materials, for example, in construction and for furniture, and the use of fibres for packaging is essential and has to be acknowledged.

In addition, **other renewable energy services embedded within agriculture** in some EU regions such as the establishment of wind power and solar power plants on farms contribute towards reducing dependency on fossil energy sources.

Copa-Cogeca calls for the acknowledgment of these significant contributions from agriculture and forestry to the energy, industry, construction and transport sectors, even if the current climate policy does not credit the benefits to them.

The agricultural sector is committed to **improving its resource use efficiency**. Advances in efficiency provide good opportunities in various sectors of production. There is potential for further improvements in the energy efficiency potential of farm buildings and of the machinery used in livestock farming and crop production. Continued improvement in fertiliser and manure management through better planning and application is likely to reduce emissions in addition to improving water quality, and precision techniques could play an important role in resource optimisation.

An **increase in water use efficiency** in agriculture contributes to adapting to reduced water availability and as such contributes to mitigating GHG emissions as the energy needed for irrigation technology can be lowered. In addition, it reverses degradation and desertification and thus secures the soil and biomass carbon sink function of agricultural land.

Livestock mitigation possibilities have to be in accordance with regional specificities aiming at the reduction of methane and nitrous oxide emissions. Maintaining permanent pasture-based systems to avoid land abandonment, improving livestock productivity whilst respecting animal welfare, promoting innovative solutions in the animal housing, responding to the results of research by modifying animal feeding practices as well as introducing dietary specific agents, boosting the performance of animal selection and improving manure management are good examples of the mitigation options the livestock sector is getting involved with.

Several factors hampering the contribution of agriculture and forestry to combating climate change

The European agricultural sector today faces many global challenges in addition to climate change: producing food for a growing population, increasing price volatility and market turbulences, higher energy prices, rising demand for bioenergy and speculation in agricultural commodities as well as increasing expectations to protect the environment and global climate change. The impact of climate change on world food production must be taken into account when devising EU climate change measures, additional requirements and action to fight climate change. All of this requires a strong farming community in rural areas.

Copa-Cogeca's members are committed to improving the resilience of their activities to climate change and to continue to supply consumers with good quality food and forest products produced to high environmental and safety standards. However, market failures and distortions in competition prevent agriculture and forestry's full adaptation and mitigation potential from being delivered. The Stern Review² correctly identified financial constraints as being one of the main barriers to adaptation.

Copa-Cogeca shares the UNFCCC's worry about the barriers to implementing mitigation practices in agriculture. This includes a high degree of uncertainty associated with agricultural emissions issued from natural processes, the limited information available for establishing baselines, the high costs of measurement and monitoring of emissions to verify reductions, the need for enhanced investment in research and development, and the need to change consumer preferences.

Copa-Cogeca calls upon the EU negotiators at the upcoming international climate agreement in Copenhagen to reach clear and harmonised modalities, rules and guidelines for accounting and monitoring of LULUCF activities. Copa-Cogeca warns that the absence of a methodology to distinguish between the impact of uncontrollable natural processes and those derived from anthropogenic activities, uncertainties on the current monitoring and accounting rules for the land-use, land-use change and forestry activities (LULUCF) continues to present a major challenge.

Copa-Cogeca points out that assessing the options to overcome these barriers requires investment into research to fill existing knowledge gaps of the mitigation potential of management practices, their acceptance and their costs so that the most cost-effective options can be chosen at the farm level.

The provision of advice and vocational training are key to improving farmers' and forest producers' adaptive capacity and to facilitating access to tools to foster the mitigation potential of their activities.

Copa-Cogeca would like to draw attention to the risk that measures put in place to reduce the sector's greenhouse gas emissions will result in a shift in EU production. This would simply 'export' these emissions by shifting agricultural and forestry production to countries outside the EU with all the related impacts into the EU's agri-food sector. In addition, an increase in greenhouse gas emissions will result from the transport used to import these agricultural and forestry products. Examples of such mitigation measures include the extensification of animal



husbandry without decreasing European consumer demand or the reduction of inputs to crop production, with negative impacts on yield. Furthermore, the cost of allowances under the ETS scheme will have detrimental effects for some energy-intensive facilities (e.g. dairy, tomato and pig meat processing cooperatives). Carbon leakage would also lead to increased emissions if production in other countries were less efficient than in the EU.

² Nicholas Stern, "The Economics of Climate Change – The Stern Review", Cambridge University Press 2006.

Agriculture and forestry need a forward-looking policy framework to ensure their role in facing climate change

Copa-Cogeca shares the European Commission's view in recognising the limited capacity of autonomous farm level adaptation over the longer term³. Therefore, European farmers and agri-cooperatives ask for a strong Common Agricultural Policy to support farmers in improving



their resilience to climatic variability and to contribute to climate change mitigation, which will deliver cost-saving benefits for the whole of society. The CAP ensures that farmers can carry out their important economic and social role of producing food in a way which protects our environment. The maintenance of agricultural production in the EU minimises

the risk of delocalisation towards countries producing with lower environmental standards.

Climate change is becoming a key driver in farmers' and agri-cooperatives' management decisions. Therefore a stable policy framework is vital, so that long term investments in climate-friendly technologies can be made. The priority should be granted to so-called "no-regret" options providing economic and environmental benefits simultaneously and thus avoiding conflicts arising between the different objectives. Incentives should be given for measures that simultaneously help to reduce GHG emissions and provide additional environmental benefits, e.g. improvements in biodiversity protection, water management and soil quality.

The CAP after 2013 should ensure that farmers can fulfil their production role and respond to the requirements of the Copenhagen agreement. Concerning forestry, Copa-Cogeca calls for political recognition in the Copenhagen agreement of the carbon storage capacity of harvested wood products.

Copa-Cogeca welcomes the EU Recovery Plan that calls for **well-designed financial incentives for speeding up the adaptation** of our economies to long-term challenges such as climate change including, for example, incentives for energy efficiency and for measures aiming to increase biomass production for energy generation. Using these funds to facilitate adaptation in agriculture and to boost innovation in mitigation would enhance the positive role of farming in reducing GHG emissions. Copa-Cogeca believes that the development and integration of future technologies represents a significant opportunity to adapt farming and agro-cooperatives to global competitive pressures. Innovative production methods using new technologies will require new competences and could provide additional employment.

Copa-Cogeca shares the Commission's view that the Copenhagen agreement could boost sustainable farming at global level and to adjust to the EU's need for food security. The pre-condition should be that farmers' efforts are supported by fair and robust policies, in the EU and worldwide. The importance of food security and the competitiveness of agriculture have to be fully taken into account by international climate negotiators when drafting a Protocol for the next commitment period.

³ EC Staff Working document accompanying the White Paper on adaptation: "Adapting to climate change: The challenge for European agriculture and rural areas"(SEC(2009)417).

PRESENTATION OF COPA AND COGECA: THE VOICE OF EUROPEAN FARMERS AND EUROPEAN AGRICULTURAL COOPERATIVES

Copa-Cogeca is the united voice of farmers and their cooperatives in the EU. Overall membership of both organisations has risen to 76. Copa represents 15 million people working either full or part-time on EU farm holdings whilst Cogeca represents the interests of 40,000 agricultural cooperatives employing some 660,000 people and with a global annual turnover in excess of 300 billion euros throughout the enlarged EU. Copa-Cogeca aims to ensure that EU agriculture is sustainable, innovative, strong and competitive, guaranteeing food security to half a billion people throughout Europe.



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