## Basic information

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| **2009/2157(INI)**<br>INI - Own-initiative procedure | Procedure completed |
| EU agriculture and climate change<br>**Subject**<br>3.10 Agricultural policy and economies<br>3.70.03 Climate policy, climate change, ozone layer | |

## Key players

### European Parliament

| Committee responsible | Rapporteur | Appointed |
|---|---|---|
| AGRI Agriculture and Rural Development | LE FOLL Stéphane (S&D) | 02/09/2009 |

| Committee for opinion | Rapporteur for opinion | Appointed |
|---|---|---|
| ENVI Environment, Public Health and Food Safety | The committee decided not to give an opinion. | |
| ITRE Industry, Research and Energy | SOSA WAGNER Francisco (NI) | 18/11/2009 |

### European Commission

| Commission DG | Commissioner |
|---|---|
| Agriculture and Rural Development | -- -- |
| Environment | -- -- |

## Key events

| Date | Event | Reference | Summary |
|---|---|---|---|
| 01/04/2009 | Non-legislative basic document published | SEC(2009)0417 | Summary |
| 22/10/2009 | Committee referral announced in Parliament | | |
| 17/03/2010 | Vote in committee | | Summary |
| 24/03/2010 | Committee report tabled for plenary | A7-0060/2010 | |
| 19/04/2010 | Debate in Parliament | | |
| 05/05/2010 | Decision by Parliament | T7-0131/2010 | Summary |
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| 05/05/2010 | Results of vote in Parliament | | |
| 05/05/2010 | End of procedure in Parliament | | |

| Technical information | |
|---|---|
| **Procedure reference** | 2009/2157(INI) |
| **Procedure type** | INI - Own-initiative procedure |
| **Procedure subtype** | Initiative |
| **Legal basis** | Rules of Procedure EP 55 |
| **Other legal basis** | Rules of Procedure EP 165 |
| **Stage reached in procedure** | Procedure completed |
| **Committee dossier** | AGRI/7/01314 |

**Documentation gateway**

**European Parliament**

| Document type | Committee | Reference | Date | Summary |
|---|---|---|---|---|
| Committee draft report | | PE430.412 | 17/12/2009 | |
| Amendments tabled in committee | | PE438.281 | 05/02/2010 | |
| Committee opinion | ITRE | PE430.834 | 24/02/2010 | |
| Committee report tabled for plenary, single reading | | A7-0060/2010 | 24/03/2010 | |
| Text adopted by Parliament, single reading | | T7-0131/2010 | 05/05/2010 | Summary |

**European Commission**

| Document type | Reference | Date | Summary |
|---|---|---|---|
| Non-legislative basic document | SEC(2009)0417 | 01/04/2009 | Summary |

# EU agriculture and climate change

2009/2157(INI) - 05/05/2010 - Text adopted by Parliament, single reading

The European Parliament adopted a resolution on EU agriculture and climate change.

It notes that agriculture, as one of the main sources of two major GHGs (nitrous oxide and methane) which are generated by various biological processes linked to agricultural production is contributing to climate change while also being very vulnerable to its adverse impact. Such impact includes declining water resources, brackishness and more frequent drought, desertification, a significant increase in winter rainfall and flooding in the north, threats to low-lying coastal areas from rising sea levels and the danger of salination, extreme weather events, erosion and landslides and the proliferation of insect pests and animal and plant diseases. The expected acceleration of such problems could have serious economic, social and environmental repercussions for the agricultural, forestry and tourism sectors.

**Contribution of EU agriculture to global warming mitigation efforts**: Members affirm that EU agriculture and forestry can contribute to achieving the Union's climate change mitigation objectives by finding ways to help reduce its GHG emissions, promoting CO2 sequestration in the soil, develop the production of sustainable renewable energies, and maximise photosynthesis function. To this end, it is essential to foster the development of an

agriculture producing tradable and non tradable goods which exploit the potential of each ecosystem as efficiently as possible and which reconcile economic, environmental and social performance as well as animal welfare imperatives so as to improve its sustainability. Members also state that, if agriculture is to be more actively involved in the global process of curbing climate change, care must be taken to ensure that the competitive position of the EU's agri-foodstuffs sector in the world market does not suffer.Organic farming, extensive grazing and integrated pest management practices are among the ecologically effective systems needing further development.

They call for the future CAP to encourage – through the provision of information, training and incentives – practices that contribute to improving the efficiency of agriculture and its potential to reduce GHG emissions, and to improving carbon sequestration, including:

- cultivation techniques that provide plant cover (such as reduced or no-tillage and leaving crop residues on the ground) and facilitate intercropping and crop rotation, thereby maximising photosynthesis and helping to enrich the soil with organic matter, as demonstrated by the SoCo project launched at the European Parliament's instigation;
- the development of afforestation, reforestation, agroforestry, hedges, wooded areas on farmland, permanent or temporary grassland pasture systems and reforestation;
- the introduction of farming methods which will increase the carbon storage period in existing forests;
- better management of soil and of minerals and protection of carbon-rich land (peatland) and wetlands (growing suitable crops, such as reeds, as an alternative to drainage);
- farm modernisation (building insulation, energy-efficient equipment and the use of renewable energies) and more efficient production chains;
- modern techniques of feeding, animal keeping and manure treatment and use, which will significantly reduce methane emissions;
- the use of biomass energy integrated into food production, which will contribute to reducing CO2 emissions in addition to making use of by-products and waste;
- the planting of woody and herbaceous energy crops in floodplains, areas which are wet or sandy and areas less suitable for agriculture, with the aim of increasing CO2 absorption and carbon sequestration.

Members recommend introducing a **common European forestry policy** that promotes sustainable forestry management and does more to tap the potential and the economic development of this industry, which is the one that makes the greatest contribution to carbon capture. They also point out that the use of biomass for heating might significantly reduce the harmful impact of climate change, and therefore call for rural development funding for rural public institutions switching to heating systems based on bioenergy.

Parliament goes on to emphasise that the EU's position as the leading importer of agricultural produce results in a higher carbon cost than that generated by European farms, owing to the lower environmental standards often found in non-EU countries, coupled with long-distance transport emissions and deforestation. Accordingly, there is a need to inform consumers of the benefits of a healthy, balanced diet made up of high-quality regional and seasonal items produced by a sustainable agriculture, the carbon footprint of which could be differentiated from those of imported products. There is also a need to compensate European farmers fairly for their efforts to reduce emissions and to encourage local farms to diversify (inter alia by developing EU production of plant proteins). Parliament endorses the idea of **voluntary EU origin labelling** in the case of products originating entirely within the EU. It calls for the implementation of effective **control mechanisms on imports** from third countries and advocates full reciprocity between the criteria that have to be met by European producers to combat climate change and the requirements applying to imports from third countries, to avoid any loss in the competitiveness of Community products.

**Measures to help EU agriculture adapt to the effects of global warming**: the resolution states that the EU must develop a coherent strategy for agriculture to adapt to the two kinds of adverse climatic effects anticipated: overall global warming; and more marked variations in climate conditions resulting in an increase in extreme weather events. It states that CAP and its reform must focus on the management of resources including optimising water resource management, choosing crop varieties, particularly those selected for their ability to resist extreme weather events, and protecting the soil from water and wind erosion by ensuring organic matter content.

**Implications for the European agricultural model**: Members note that the current cross-compliance system, which was designed to ensure that agricultural producers meet very high standards in terms of animal welfare, animal health and environmental protection, has been problematic for farmers and has, in its current form, perhaps not been the best means of achieving the desired outcomes. They call in the next reform of the CAP, for **greater emphasis on more sustainable and efficient production models**, bearing in mind that these require public funding to enable farmers to cover the extra costs arising from the supply of 'public goods' of benefit to the whole of society (such as the preservation of rural areas, biodiversity conservation, carbon capture and food security). Parliament considers that, to enable European agriculture to contribute to food security and climate protection, an ambitious CAP must be maintained, including the system of direct payments from the Community budget and **simplified and fair payments for the EU as a whole**. It calls on the Commission to promote a more sustainable agricultural model in line with all the aims of the CAP, geared to producing sufficient, safe food and more respectful of environmental balance. Such a model must be based on a fair and legitimate farmer support system and must also enhance the role of the farming profession.

# EU agriculture and climate change

2009/2157(INI) - 01/04/2009 - Non-legislative basic document

PURPOSE: to evaluate the main impacts of climate change on EU agriculture.

CONTENT: the White Paper 'Adapting to climate change' lays out a European framework for action to improve Europe's resilience to climate change, emphasising the need to integrate adaptation into all key European policies and enhance co-operation at all levels of governance.

Complementing the White Paper, **this working document** summarises the main impacts of climate change on EU agriculture, examines adaptation needs, describes the implications for the CAP and explores possible orientations for future action. It aims at further engaging Member States and the farming community into a debate and action on adaptation needs that result from climate pressures.

The document stresses that climate change will require farmers to adapt while they are also called to reduce farm-level greenhouse emissions, and to improve agriculture's environmental performance.

Developing a progressively evolving and comprehensive response to climate change is needed to maintain the resilience and competitiveness of EU agriculture so that it can continue to play its role as supplier of high quality food and environmental and landscape services, as well as contribute to the sustainable development of EU rural areas. Climate change also brings an additional perspective to the challenge of food security.

According to the Commission, **possible orientations** for future action are as follows:

**1) Prioritising "no regret" measures**: in face of the inherent uncertainties, prioritising "no regret" options for adaptive action will ensure the most cost-effective approach. These are choices which help cope with a broad range of plausible changes and induce socio-economic or environmental co-benefits. In the agricultural sector this means enhancing resilience of the agricultural ecosystems by **more sustainable use of natural resources, in particular water and soils**.

By protecting the natural resource base on which agriculture depends the sector can better build resilience to climatic changes. Such responses will ensure that management decisions implemented over the next decades do not undermine the ability to cope with potential larger impacts later in the century.

As indicated in the White Paper, it is also necessary to **assess which requirements regarding water management should be further integrated into relevant CAP instruments**. Adaptation measures concerning agriculture can also be integrated in the national implementation of the Water Framework Directive and the Floods Directive.

**2) Strengthening the role of agriculture as a provider of ecosystem services**: taking into account the projected impacts of climate change on European hydrological systems, habitats and biodiversity, the maintenance of ecosystems through the management of agricultural land has a central role to play in contributing to overall resilience to climate change.

Agriculture can, for example, **assist in watershed management, protection of habitats and biodiversity as well as in the maintenance and restoration of multifunctional landscapes**. Among other, migration of species can be facilitated by establishing networks of wildlife corridors on agricultural land, and the water holding capacity of grazing land can be used to reduce the risk of flooding. The potential role of agriculture in providing such "green infrastructure" could be recognized and further enhanced.

Current agri-environmental measures contribute to this objective, but may not always sufficiently enhance connectivity between areas protecting biodiversity. In this context, the **applicability of rural development measures on a territorial scale beyond the level or individual farms could be considered** to help successful adaptation.

**3) Enhancing resilience of agricultural infrastructure**:agriculture as a production system is dependent on fixed assets (e.g., equipment, buildings, machinery) and infrastructure, which can be impacted by extreme events. The potential economic losses triggered by such events can become a serious concern to the sector, in particular because in agriculture the value of fixed assets tends to be significant compared to the average annual output and farm income.

Therefore **further developing preventive action** and developing instruments tailored to regional characteristics to cope with potential damage is necessary.

**4) Developing synergies between adaptation and mitigation**: agricultural activities are an important source of nitrous oxide and methane emissions, which contribute to global warming. In the EU, agriculture can contribute to climate change mitigation by reducing its emissions, by the production of renewable energies and bioproducts, and by storing carbon in farmland soils. To address the double challenge of reducing GHG emissions while at the same time coping with the changing climate, it will be necessary to ensure synergies between adaptation and mitigation as much as possible. Measures that provide co-benefits in terms of reducing emissions and increasing resilience of farming need to be identified and promoted. These include, among other, **soil and tillage practices** that help maintain and increase organic carbon in soils, and protection and management of pastures. **Organic farming** has potential for mitigation through its efficient nutrient cycles and soil management, and as it usually implies higher diversity and high level of knowledge of the functioning of the farm ecosystem, it is also likely to be more resilient to climate change.

Possible conflicts between objectives should be considered when deciding about appropriate measures, and trade-offs may in some cases be necessary. Member States may use rural development funds to implement these measures.

**5) Improving the adaptive capacity of farmers**: strengthening information and advisory support on climate-related matters to farmers and agricultural workers is key for motivation and preparedness to adapt. Various means are available such as dedicated courses, specialised press, use of communication technologies. It is also important to include climate change into educational systems for young farmers, farm workers and apprentices. **Farm advisory services** could be developed so that they can become an instrument for disseminating regionally-specific information and practical adaptive solutions enhancing farmers' skills to respond to future changes. The measures adopted in the framework of the CAP "Health Check" provide additional possibilities, within the rural development policy, for funding dissemination and training programmes, and for using farm advisory services.

**6) Facilitating co-operation between Member States**: development of national and sub-national programmes and policy thinking on climate change adaptation needs to be encouraged. **Exchanging approaches, experience and best practices** in adaptation options in the agricultural sector between the Member States can advance farming practices and production systems best adapted to expected climatic developments. A **technical working group** on agriculture, supporting the Steering Group on Impacts and Adaptation, proposed by the White Paper, will be set up by the end of 2009.The Commission initiative to establish a Clearing House Mechanism to serve as a platform for information exchange on climate change impacts and vulnerabilities, will need to include a part specifically dedicated for sharing national developments, projects results and best practices in the agricultural sector.

**7) Enhancing research on climate and agriculture**: improving and refining the spatial and time scales of the assessments of expected climatic impacts and vulnerability, and a better understanding of the interactions between agriculture and climate is essential. A recent Commission Communication on European agricultural research elaborates on the needs and directions for EU climate change research and innovation, including those for the agriculture sector (COM(2008)0862).

In addition, as rural areas are exposed to wider climatic risks and as significant parts of rural Europe are characterised by economic multifunctionality, it is essential:

- to reach an integrated understanding of the impacts of climate change on rural economies and societies is important. **Socio-economic research** on the climate challenge and its impact on rural sustainability could thus be enhanced;
- to emphasise the need for continuous agricultural research, at EU and national levels, for example on development of crops, varieties and herds better adapted to future conditions;
- to **support mitigation by research efforts** to further develop suitable and affordable technology and innovation;
- to integrate findings from the physical and agronomic sciences with local knowledge from farmers, so as to **develop robust adaptation strategies**, which, over a range of climate and socio-economic scenarios, can minimize the negative impacts of climate change. The Farm Advisory System can be an important tool also in this regard;
- **to strengthen the capacity of regional institutions** to use appropriate tools to address climatic changes (partnerships between national and regional research institutions, advisory services and social partners in agriculture as well as setting up of regional networks providing information to farm communities will help to design adequate site-specific strategies).

**8) Developing vulnerability indicators**: developing specific indicators for agriculture such as an index for adaptive capacity and vulnerability could be explored. The identification of vulnerability would need to be carried out at low spatial scale, on the basis of current sensibility to climate variability and natural hazards as well as scenarios of changes in weather patterns. Building a vulnerability indicator, including the aspect of adaptive capacity, will require a multi-dimensional approach combining climatic, environmental and socio-economic factor.

**In conclusion**: adaptation is a long-term process which needs to evolve over the coming decades according to the climatic trends and by building on a growing body of knowledge and practical experience. In this process, it is important to further **engage the farming community in the discussion** on adaptation needs and in sharing good practices.

In the context of the review of the Common Agricultural Policy after 2013 the need to ensure favourable conditions for the adaptation of agriculture and rural areas will need to be examined. Effective adaptation and adoption of new technologies, which contribute both to mitigation and the long term viability of farming, will require investments and planning efforts beyond the capacity of individual farms. **Public authorities will have a role to play** in supporting and facilitating climate change adaptation policies.