



EUROPEAN PARLIAMENT

2009 - 2014

---

*Committee on Agriculture and Rural Development*

---

**2009/2157(INI)**

17.12.2009

# **DRAFT REPORT**

on EU agriculture and climate change  
(2009/2157(INI))

Committee on Agriculture and Rural Development

Rapporteur: Stéphane Le Foll

## CONTENTS

	<b>Page</b>
MOTION FOR A EUROPEAN PARLIAMENT RESOLUTION .....	<b>Error! Bookmark not defined.</b>
EXPLANATORY STATEMENT .....	<b>Error! Bookmark not defined.</b>

## MOTION FOR A EUROPEAN PARLIAMENT RESOLUTION

### on EU agriculture and climate change (2009/2157(INI))

*The European Parliament,*

- having regard to the Commission staff working document entitled ‘Adapting to climate change: the challenge for European agriculture and rural areas’ (SEC(2009)0417),
  - having regard to the Commission staff working document entitled ‘The role of European agriculture in climate change mitigation’ (SEC(2009)1093),
  - having regard to its legislative resolution of 14 November 2007 on the proposal for a directive of the European Parliament and of the Council establishing a framework for the protection of soil and amending Directive 2004/35/EC<sup>1</sup>,
  - having regard to its resolution of 12 March 2008 on ‘sustainable agriculture and biogas: a need for review of EU legislation’<sup>2</sup>,
  - having regard to its resolution of 4 February 2009 on ‘2050: The future begins today – recommendations for the EU’s future integrated policy on climate change’<sup>3</sup>,
  - having regard to its resolution of 12 March 2009 on ‘the challenge of deterioration of agricultural land in the EU and in particular in southern Europe: the response through EU agricultural policy instruments’<sup>4</sup>,
  - having regard to its resolution of 25 November 2009 on the EU strategy for the Copenhagen Conference on Climate Change (COP 15)<sup>5</sup>,
  - having regard to Rule 48 of its Rules of Procedure,
  - having regard to the report of the Committee on Agriculture and Rural Development (A7-0000/2009),
- A. whereas the climate change caused by the historical build-up of greenhouse gases (GHGs) in the atmosphere is an irrefutable scientific fact that will have a serious impact on ecosystems,
- B. whereas agriculture is directly affected, since it manages the land resources necessary to human survival,
- C. whereas agriculture, as the main source of two major GHGs (nitrous oxide and methane), is contributing to climate change while also being very vulnerable to its adverse impact,

---

<sup>1</sup> OJ C 282E, 6.11.2008, p. 281.

<sup>2</sup> Texts adopted of that date, P6\_TA(2008)0095.

<sup>3</sup> Texts adopted of that date, P6\_TA(2009)0042.

<sup>4</sup> Texts adopted of that date, P6\_TA(2009)0130.

<sup>5</sup> Texts adopted of that date, P6\_TA(2009)0089.

- D. whereas the proportion of the Union's GHG emissions produced by agriculture dropped from 11% in 1990 to 9.3% in 2007, *inter alia* as a result of smaller herds and more sustainable fertiliser use,
- E. whereas agriculture and forestry are the main economic sectors able to capture the CO<sub>2</sub> produced by human activities, to accumulate and store carbon in the soil by acting as sinks, and to fix carbon in plants through photosynthesis; whereas these sectors consequently have considerable potential to make a positive contribution to global warming mitigation efforts,
- F. whereas climate change has already had adverse effects on EU agriculture (including declining water resources and more frequent drought in the south, a significant increase in winter rainfall and flooding in the north, storms and the proliferation of insect pests and animal and plant diseases), and whereas the expected acceleration of such problems will have serious economic, social and environmental repercussions for the agricultural, forestry and tourism sectors,
- G. whereas the agricultural sector is capable of adapting with the help of farmers' know-how, a strong CAP and research and innovation developments,
- H. whereas the Union's objectives for the development of renewable energies have a direct bearing on agriculture,
- I. whereas the Union should be a leader in the fight against global warming,

#### **Contribution of EU agriculture to global warming mitigation efforts**

1. Affirms that EU agriculture can contribute to the Union's global warming mitigation objectives by finding ways to limit and reduce its GHG emissions, promoting carbon storage in the soil and developing the production of sustainable renewable energies; emphasises that, to this end, it is essential to foster the development of a different kind of agriculture better able to reconcile economic, social and environmental imperatives with the natural potential of each ecosystem;
2. Takes the view that organic farming and integrated pest management practices are among the ecologically effective systems needing further development; emphasises, however, the need to find ways to facilitate a transition to more sustainable agriculture in the case of the other systems used on most farmland;
3. Calls, in particular, for the future CAP to encourage – through the provision of information, training and incentives – practices that limit GHG emissions and/or fix carbon, including:
  - simplified 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 agroforestry, hedges, wooded areas on farmland, permanent or temporary grassland pasture systems and reforestation;
  - protection of carbon-rich land (peatland crop bans) and wetlands (growing suitable crops, such as reeds, as an alternative to drainage); and
  - farm modernisation (building insulation, energy-efficient equipment and the use of renewable energies);
4. Emphasises that, as well as being more environmentally friendly, such farming practices have a positive impact in terms of improved biodiversity and soil quality, water retention and efforts to combat erosion and pollution;
  5. Recommends introducing an effective forestry policy that promotes sustainable forestry management and production and does more to tap the potential of this industry, which is the one that makes the greatest contribution to carbon capture;
  6. Emphasises that nitrous oxide emissions can be cut significantly by making more limited and effective use of nitrogen fertilisers (precision farming), encouraging the use of organic fertilisers based on recovered waste (local biomass from intercropping, and forest waste), developing intermediate crops such as forage legumes and identifying new varieties with superior carbon and nitrogen capture potential;
  7. Calls for research on livestock feed and genetic selection of farm animals to be stepped up with a view to reducing methane emissions; also calls for the introduction of a food programme designed to reduce the Union's dependence on imported plant proteins for animal feed;
  8. Emphasises that better animal manure storage and application systems and the processing of such manure in biogas factories are currently some of the most promising ways of reducing methane emissions, particularly in regions characterised by high-density livestock farming;
  9. Calls for the speeding up of research and development work on the exploitation and utilisation of biomass found on farms (farm and forest waste), biogas from livestock farming and other sustainable agrofuels, provided that the latter do not jeopardise food security;
  10. Emphasises that the Union'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; takes the view that there is a need to inform consumers by means of appropriate carbon footprint labelling, 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);
  11. Emphasises that the Union must reinvest in the rural development policy in order to help disseminate new practices and foster the development of sustainable agriculture elsewhere in the world;

## **Measures to help EU agriculture adapt to the effects of global warming**

12. Emphasises that EU agriculture must now adapt to the effects of the climate change currently taking place and prepare for its negative net impact on many regions of the Union;
13. Takes the view that the CAP must offer financial incentives for EU farmers to implement the necessary agronomic adaptation measures in each region, including:
  - optimising water resource management (more efficient irrigation systems, hillside reservoirs, etc.);
  - choosing crop varieties and practising crop rotation according to considerations such as drought and disease;
  - protecting the soil from water and wind erosion by ensuring organic matter content;
  - planting hedges or wooded areas on the edges of farmland to retain water, limit runoff, act as windbreaks and provide shelter for crop auxiliaries such as pollinating insects;
  - monitoring and controlling insects and disease;
  - managing forests in such a way as to limit the risk of fire;

## **Implications for the European agricultural model**

14. Emphasises that the CAP will have to meet growing public demand for a more sustainable agricultural policy, while bearing in mind that global warming may jeopardise world food production capacity, including in Europe;
15. Takes the view that the ‘new challenges’ of climate change, water management, renewable energies and biodiversity were not fully taken on board at the time of the CAP Health Check, and that they should be addressed through all the CAP instruments, not just the ‘second-pillar’ subsidies;
16. Notes that the current cross-compliance system, which is based on a best efforts obligation rather than an obligation to achieve results, is both very complicated for farmers and inadequate as a response to environmental issues; takes the view that a new approach focusing on sustainable production models should be adopted, necessitating compensatory aid to cover the extra costs arising from these objectives (local eco-certification contracts) and pay for the services rendered to society through the supply of ‘public goods’ (such as the preservation of rural areas, biodiversity conservation, carbon capture and food security) that are not rewarded by the market;
17. Takes the view that climate change is forcing the Union to reinvent its development model; consequently calls on the Commission, in its future communication on CAP reform after 2013, to consider turning the CAP into an agricultural, food and environmental policy with fairer, more sustainable farmer support systems that enjoy greater legitimacy in the eyes of the public and which also restore meaning to the farming profession;
18. Also calls on the Commission to give thought to new support systems that promote carbon fixing in farm soil and biomass;

19. Considers it essential to strengthen risk and crisis management instruments and adapt them to increasing market volatility and growing climatic risks, and to introduce a genuine European policy on preventing and responding to natural disasters;
20. Emphasises, given the scale of the climate challenge and the necessary investment by the farming community in more sustainable modes of production, the need to retain a strong CAP with a commensurate budget beyond 2013 and to increase the resources allocated to agricultural research, in which farmers must also be involved;
21. Instructs its President to forward this resolution to the Council, the Commission and the Member States' governments and parliaments.

## EXPLANATORY STATEMENT

Climate change is an irrefutable fact. Global average temperatures have risen by nearly 0.8°C in a century, and most scientists expect global warming to speed up further by the end of the 21st century as a result of the historical build-up of greenhouse gases (GHGs) in the atmosphere. The IPCC estimates that temperatures will increase by between 1.1°C (best-case scenario) and 6.4°C, with numerous adverse effects on ecosystems, on a scale difficult to imagine at present.

Agriculture is directly affected, since it manages the land resources necessary to human survival.

It is responsible for a percentage of GHG emissions while also being very vulnerable to the effects of climate change. Agriculture accounts for 9% of the EU's GHG emissions, and the effects of global warming are already being felt, most notably increased drought in southern countries and the rising sea level in northern countries.

However, agriculture can also contribute to solving these problems. It has considerable potential to play an active, positive role in global warming mitigation efforts as part of a strong common agricultural policy geared to sustainable and economically viable development. It is also capable of adapting to the effects of the changes taking place, with the help of farmers' know-how, vocational training, the farm advisory system and research and innovation developments.

### **Agriculture's responsibility for climate change**

According to the European Environment Agency, agriculture accounted for 9.3% of total GHG emissions in the EU-27 in 2007 (including 5% of nitrous oxide emissions and 4.3% of methane emissions, but only a minimal proportion of CO<sub>2</sub> emissions), compared with 11% in 1990.

Nitrous oxide (N<sub>2</sub>O) is emitted by organic and mineral nitrogen fertilisers, while methane (CH<sub>4</sub>) comes primarily from livestock digestive processes and the storage and application of liquid manure.

The drop in agricultural emissions recorded in the EU since 1990 is the result of smaller herds, more sustainable fertiliser use and better manure management.

### **EU agriculture's contribution to mitigation efforts**

#### **– Internal aspects**

EU agriculture can make a threefold contribution to the Union's global warming mitigation objectives: finding ways to limit and reduce its own GHG emissions, promoting carbon storage in the soil and developing the production of sustainable renewable energies. To this end, it is essential to foster the development of a different kind of agriculture better able to reconcile economic, social and environmental imperatives with the natural potential of each

ecosystem.

- Soil conservation with a view to reducing and storing CO<sub>2</sub> emissions:

Agriculture and forestry are the main economic sectors able to capture the CO<sub>2</sub> produced by human activities, to accumulate and store carbon in the soil by acting as reservoirs, and to fix carbon in plants through photosynthesis.

The CAP must therefore encourage farming practices that limit GHG emissions and/or improve carbon fixation.

Organic farming and integrated pest management practices are among the ecologically effective systems necessitating further development. However, ways must also be found to facilitate a transition to more sustainable agriculture in the case of the other systems used on most farmland.

Such solutions do exist. In particular, the CAP must take account of experiments showing that practices (such as conservation farming) involving simplified cultivation techniques (such as reduced or no-tillage and leaving crop residues on the ground) provide plant cover and facilitate intercropping and crop rotation, thereby maximising photosynthesis and helping to enrich the soil with organic matter. This has been demonstrated, *inter alia*, by the SoCo project launched at the European Parliament's instigation. Such practices also have an economic benefit insofar as they reduce the use of energy and of certain inputs.

Additional solutions that should be encouraged include:

- the development of agroforestry, hedges, wooded areas on farmland, permanent or temporary grassland pasture systems and reforestation;
- the development of permanent pasture and areas of grass;
- protection of carbon-rich land such as peatland (through crop bans) and wetlands (by growing suitable crops, such as reeds, as an alternative to drainage);
- farm modernisation (building insulation, energy-efficient equipment and the use of renewable energies).

The future CAP should foster the development of such practices through the provision of information and training, incentive measures and investment in research, particularly given that they are also a means of limiting soil depletion, water scarcity and pollution and preserving biodiversity.

It is also time to introduce an effective forestry policy that promotes sustainable forestry management and production and does more to tap the potential of this industry, which is the one that makes the greatest contribution to carbon capture.

- Reducing methane and nitrous oxide emissions

Nitrous oxide emissions are the GHG emissions from farming with the greatest potential for reduction; they can be cut by making more limited and effective use of nitrogen fertilisers (precision farming), using organic fertilisers based on recovered waste (local biomass from intercropping and other organic waste), developing intermediate crops such as forage legumes

and identifying new varieties with superior carbon and nitrogen capture potential.

Methane emissions can be cut by improving:

– farming techniques (modified ruminant diets with increased fat rations, genetic selection, etc.). To this end, it is essential to step up research efforts and introduce a food programme that will also reduce the EU's dependence on imported plant proteins; and

– animal manure management (improving storage and crop application systems and processing such manure in biogas factories – one of the most promising ways of reducing emissions and developing renewable energies, particularly in regions characterised by high-density livestock farming).

- Renewable energy sources

The EU's objectives for the development of renewable energies have a particular bearing on agriculture.

There is a need to speed up research and development work on the exploitation and utilisation of farm biomass from farm and forest waste and livestock manure and the production of sustainable agrofuels, provided that the latter do not jeopardise food security.

#### – International aspects

The EU is the leading importer of agricultural produce, resulting 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. There is a need to inform consumers by means of appropriate carbon footprint labelling, 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).

The EU must also reinvest in the rural development policy in order to help disseminate new practices and foster the development of sustainable agriculture elsewhere in the world with a view to ensuring food security. In the fight against climate change, it also has a moral duty to all those regions that may be adversely affected by such change (drought, the rising sea level and other extreme climatic phenomena).

#### Measures to help farming adapt to global warming

In addition to global warming mitigation efforts, farming will have to adapt to the climate change currently taking place.

With the exception of some north European farms, experts agree that climate change will have a negative net impact on EU agriculture, especially in the south and south-east.

The CAP must encourage the main agronomic adaptation measures, namely:

- optimal water resource management (more efficient irrigation systems, hillside reservoirs, etc.);
- choosing crop varieties and practising crop rotation according to considerations such as drought and disease;

- protecting the soil from water and wind erosion by ensuring organic matter content;
- planting hedges or wooded areas on the edges of farmland to retain water, limit runoff, act as windbreaks and provide shelter for crop auxiliaries such as pollinating insects;
- monitoring and controlling insects and disease;
- managing forests in such a way as to limit the risk of fire.

### **Implications for the European agricultural model**

The CAP will have to meet growing public demand for a more sustainable agricultural policy, while bearing in mind that global warming may jeopardise world food production capacity, including in Europe.

According to the FAO, world food production will have to increase by 70% by 2050 in order to feed 9 billion people. The CAP, like the agricultural sector elsewhere in the world, will have to produce more while showing greater respect for natural balances.

For the time being, the CAP does not address environmental issues in a consistent manner or adopt a holistic approach. The ‘new challenges’ of climate change, water management, renewable energies and biodiversity were not fully taken on board at the time of the CAP Health Check. They must be addressed through all the CAP instruments, not just the second-pillar subsidies.

In addition, the current cross-compliance system, which is based on a best efforts obligation rather than an obligation to achieve results, is very complicated for farmers yet inadequate as a response to environmental issues. A new approach focusing on sustainable production models should be adopted, necessitating compensatory aid to cover the extra costs arising from these objectives (local eco-certification contracts) and pay for the services rendered to society through the supply of ‘public goods’ (such as the preservation of rural areas, biodiversity conservation, carbon capture and food security).

Climate change is forcing us to reinvent our development model. In order to regain legitimacy in the eyes of the public and restore meaning to the farming profession, the CAP must be turned into an agricultural, food and environmental policy with fairer, more sustainable farmer support systems coupled with regulatory instruments redesigned to cope with increasing market volatility and growing health risks.

Lastly, research efforts and the budgetary resources allocated to the future PAC after 2013 must be commensurate with the scale of the climate challenge and the necessary investment in more sustainable modes of production.