

A NEW CLIMATE IN THE CAP?  
A Stakeholder Conference  
*13th March 2007 Scotland House, Brussels*

# **Agriculture and the Kyoto Protocol targets: the case for more policy intervention?**

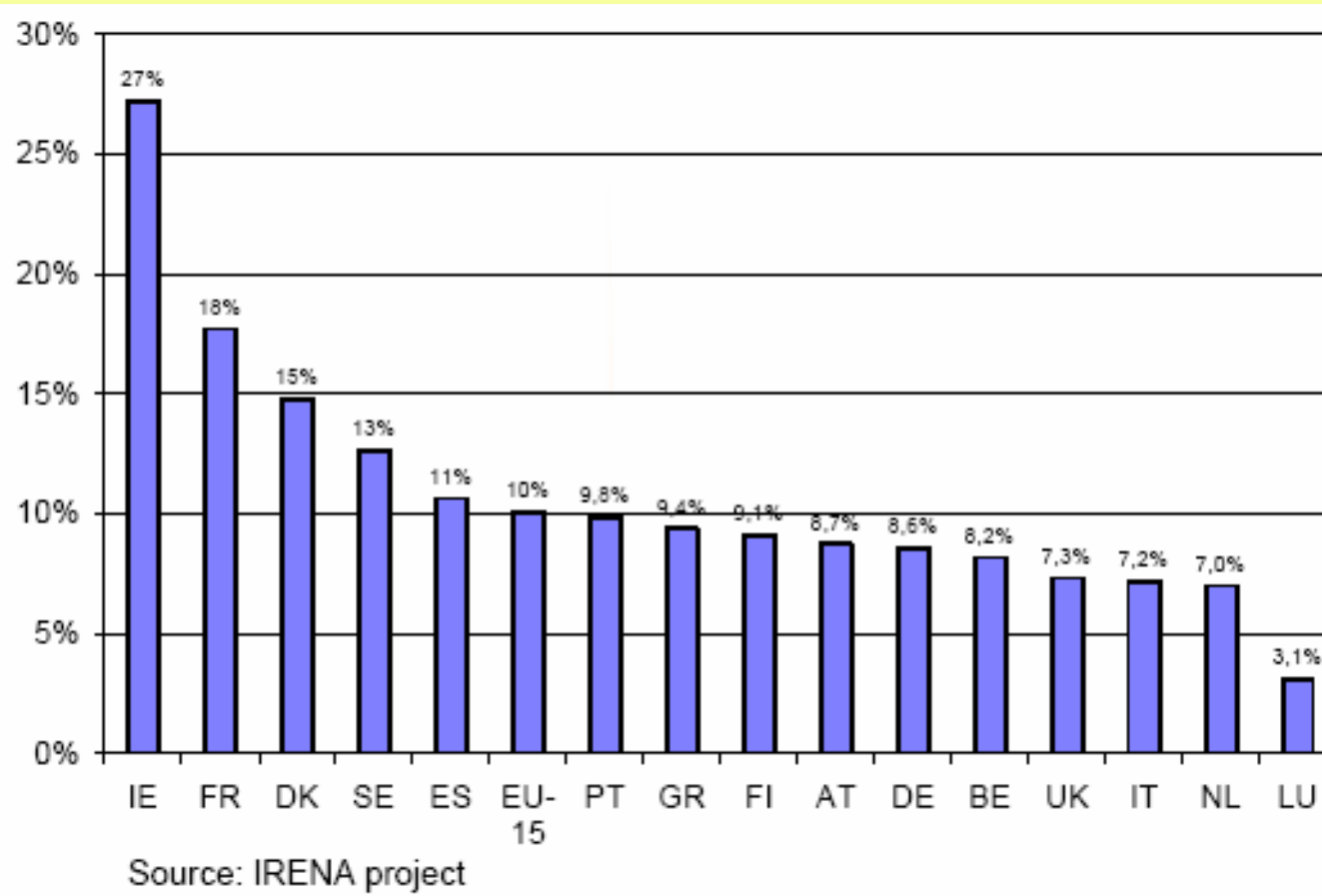
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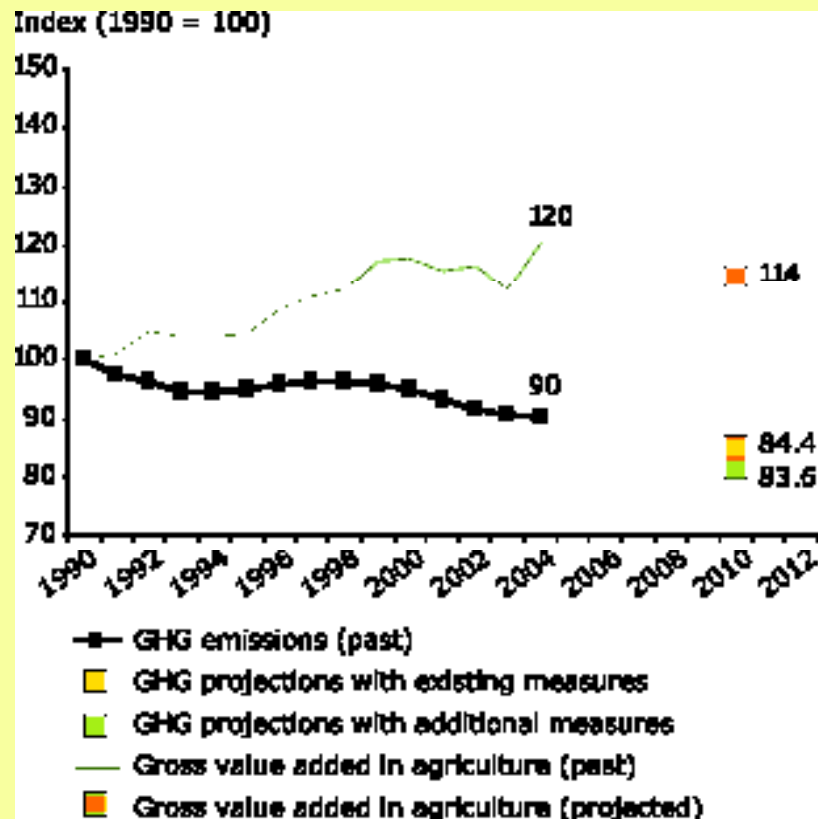
# THE CONTRIBUTION OF AGRICULTURE TO GREENHOUSE GAS EMISSIONS

- Agriculture is the third largest sector of greenhouse gas emissions, accounting for 9.2% of EU25
- The forestry sector, (as a sink for CO<sub>2</sub>) currently amounts to a reduction of the equivalent about 7% of total GHG emissions from the EU25
- GHG emissions from the agriculture sector experienced a decreasing trend (-10% from 1990 to 2004)

# Percentage of GHG emissions from agriculture at MS level



# GHG EMISSION REDUCTION



Current decreasing trend as a side effect of structural changes and CAP or environmental policies implementation. Almost no effects from any mitigation measures until now.

# GHG EMISSION REDUCTION

- 2003 CAP reform as the main driver in the following years if cross compliance rules really work to limit concentration and specialisation process at area level
- There will be shrinking effects on agricultural production driven by the 2003 CAP reform: N<sub>2</sub>O emissions should decline more than CH<sub>4</sub> emissions
- Considering the recent literature on possible policy measures:
  - a) CH<sub>4</sub> abatement seems to be cheaper than N<sub>2</sub>O abatement
  - b) the response to impose limits or tax seems positive for almost all the studies
- Synergies could be found between GHG reduction and other pollutants, both positive and negative

# CARBON SEQUESTRATION

- Lack of sufficient data and controversial findings (UK study from Bellamy et al, 2005) appears to jeopardise the possible positive contribution
- High risks of reversibility, that induce the release of carbon sequestered by the LULUCF activities, lead to consider this set of mitigation options more appropriate in the short-medium term that not in the long term
- High transaction costs are associated with the various mitigation options
- Positive side-effects in terms of other environmental and recreational benefits. Side benefits introduce the issue of how to assess the contribution of each environmental benefit



# CARBON SEQUESTRATION

## Election of activities under Art. 3.4

- 3 Member States have decided to account for cropland management (Denmark, Portugal and Spain)
- 2 Member States have decided to account for grazing land management (Denmark and Portugal)
- 14 Member States have decided to account for forest management (including 5 new MS)

# BIO-ENERGY FOR FOSSIL FUEL SUBSTITUTION

- Primary biomass potential is estimated to be technically available without harming the environment, but the interactions between bio-energy production, food self-sufficiency and other environmental objectives need to be further explored
- As a matter of fact the bio-energy options are materialising in most MS more as a response to energy policy targets (and to some other incidental reasons) than not to GHG targets
- Increasing competitiveness on land use at the expenses of more environmentally oriented land use seem to be the likely effects of these new energy options



# BIO-ENERGY FOR FOSSIL FUEL SUBSTITUTION

## Scenarios fo the future

- Literature in the recent years was affected by low oil price scenarios: most of the studies did not seem to find sufficient positive results
- The raising of oil price could have created the premise for more cost effective measures in biomass production sector
- The second generation biofuels seem to be very promising
- Full life-cycle assessment is needed to account the whole CO<sub>2</sub> balance of land use changes



# CONCLUDING REMARKS

- Different paths in terms of production intensity:
  - intensification with bio-energy
  - extensification with emission reductions and carbon sequestration
- In the first case environmental pressures has to be limited through clear rules for a sustainable crop management
- Further research is needed to improve technology (bio-energy and emission reductions) and to know more about the CO<sub>2</sub> balance of land use changes