

## CLIMATE CHANGE

Climate change has been the hottest topic for some years, mainstreamed in the main policies at EU level, and culminating with the United Nations Climate Change Conference in Bali in December 2007, where the Bali Roadmap was adopted. As a result of the Conference, the EU's top priority is to come to a comprehensive and ambitious new international agreement on climate change by the end of 2009.

For land managers and landowners, the impacts of climate change are mixed (a little warming does not necessary harm), but mostly negative, such as higher CO<sub>2</sub> concentration, increase of droughts, floods and storms, often accompanied by an increased spread of plant and animal diseases, the combination of factors hence leading to greater volatility to manage.

### Context:

The EU produces around 22% of global greenhouse gas (GHG) emissions.

In order to address climate change, the Kyoto Protocol (agreed on 11 December 1997 at the 3<sup>rd</sup> Conference of the Parties in Kyoto, entered into force on 16 February 2005) establishes an international policy context for the reduction of carbon emissions (the EU has agreed to a cut by 8% from its 1990 emission levels by 2008-2012) and increases in carbon sinks. It entails the principle of financial and technological transfers to land management projects and initiatives (through forestry and farming) that sequester and protect carbon stocks through the *Clean Development Mechanism* (CDM) and *Land-Use, Land-Use Change and Forestry Mechanisms* (LULUCF).

In December 2002, the EU created an emissions trading scheme (EU-ETS, became operational in 2005) in an effort to meet these tough targets through the first and biggest market enabling companies to trade carbon dioxide emissions into the atmosphere.

It means that quotas were introduced in six key industries (energy, steel, cement, glass, brick making, and paper/cardboard) as well as a system that punishes MS that fail to meet their obligations, starting from a fine amounting € 40/ton of carbon dioxide in 2005, and rising to € 100/ton in 2008.

### Towards a low carbon economy:

At a time where the term "low carbon economy" (i.e. an economy which has a minimal output of GHG emissions into the biosphere) is at everyone's lips, **all sectors** of

society have the responsibility to reduce their own GHG emissions and to think carefully about their potential impacts on climate change and conversely what impact will climate change and global warming have on their activities. **European Landowners and land managers have therefore a crucial role to play!**

In 2007, the **EU Commission** has proposed an **Energy package** including a Renewable Energy Roadmap that included a unilateral 20% reduction in GHG emissions by 2020 and a separate Strategic Energy Technology Plan (SET Plan) was also proposed in order to support the 20% targets by increasing the use of 'clean' or low GHG-emitting energy technologies. Financing issues related to this Plan have been delayed until November 2008.

**On 23 January 2008:** the EU Commission has proposed a new bouquet of measures: the so-called **Climate change and energy package**, which includes

- An updated Emissions Trading System to create a borderless ETS to drive cuts in GHG emissions from big industrial emitters with an EU-wide CO<sub>2</sub> cap
- Specific, binding national targets so that member States know exactly what they have to do outside the ETS, in sectors like transport, buildings, agriculture and waste.
- New rules to stimulate carbon capture and storage (CCS)
- A new approach through a Directive proposal to actively promote renewable targets, again including binding national targets.
- New state aid rules.

The rural world is aware of its share of responsibility in terms of contribution to climate change - as farming is the source of 2 powerful greenhouse gases (methane and nitrous oxide) which must be reduced-, **but also of its unique role in mitigating climate change through good land management practices** (i.e leverage effect).

The rural environment and European forests are significant tools for climate change mitigation thanks to the production and supply of carbon-saving renewable energy (including "2<sup>nd</sup> generation and beyond" biofuels) and of sustainable building materials (timber or hemp for eco-building), as well as their carbon storage capacity in soil and trees (see CALM project).

Unfortunately, the interest in carbon sinks varies between countries. **For ELO there is a clear need for developing a common position taking into account the wide range of social and economic benefits that land-use projects could provide.**

For the past few years, ELO has been - and still is - actively promoting the use of alternative energies, through for instance converting estates' use of fossil fuels energy to renewable energy sources such as biomass, wind turbines, hydro electrical, solar, etc. **It is important to recall that there is not only one type of renewable energy but a real bouquet enabling combinations.**

During 2007, ELO promoted actively these activities on the occasion of the various events that it organized in the EU 27, namely on the occasion of ELO's participation at the Irish National Ploughing Championship that took place in Tullamore (Ireland) on 25-27 September 2007 in the tent of the EU Commission, during the Green week in Brussels (May 2007), etc, as well as through its position papers and various articles published in the press. ELO has also worked in collaboration with its partners to find environmental friendly low carbon solutions.



### **SPECIAL FOCUS ON CARBON SEQUESTRATION**

For ELO: Carbon Sequestration has to be rewarded in accordance with its significant contribution to emission reduction targets.

In 2005, ELO, the CLA together with the University of East Anglia launched a research project monitoring the greenhouse gas impact of land management activities: the CLIO/CALM project. This study, which was published in 2006, investigates more specifically the carbon sequestration capacities of farms and forests on private estates in Europe.

CALM means Carbon Accounting for Land Managers. It is a publicly available, fully-free, on-line, business-based calculator of annual flows of GHG emissions and carbon sequestration from a defined land-based business. It follows the widely used and internationally agreed Intergovernmental Panel on Climate Change (IPCC) methodology for business to understand, quantify and manage their GHG emissions.

The methods used for the national GHG inventory have thus been adapted for application to individual businesses.

CALM will enable farmers and land managers to assess their level of emissions and sequestration and then consider remediation measures taking into account for example energy efficiency, fertiliser use efficiency, manure systems, renewable energy.

ELO already actively promotes concrete measures :

- > Enhance water resources through building of reservoirs
- > Adapt cultivation practices (no-tillage) and cropping
- > Livestock management through prevention of heat stress and diseases
- > Mitigation of soil erosion by maintaining vegetation cover
- > Conversion to uneven-aged, mixed species forests with continuous cover and replacement of individual tree species (better suited to the site and climate)
- > Greater investment in sea defences and coastal management techniques
- > Careful management of native biodiversity and effective control of alien invasive species + management and creation of habitats at lower altitudes (including wetlands and along the migration routes)
- > Economic and sectoral diversification (ie tourism, sustainable hunting/angling...)

These management systems are public goods and environmental services which should be supported by the EU. **The carbon calculator will be available on ELO's website in 2008.**