The CAP & Climate Change

Climate Change

Agriculture is one of the most climate-dependant human activities as it is very sensitive to climatic variations and has to permanently adapt to changes. Climate change will increasingly impact European agriculture as temperatures warm up and extreme weather events increase.

However, agriculture is not only a victim of climate change, it is also a major contributor to greenhouse gas (GHG) emissions. Agriculture is among the first emitters of the potent greenhouse gases, methane and nitrous oxide, mainly through digestive processes in livestock, manure and the fertilisation of soils. Agricultural soils and vegetation also store carbon which is emitted into the atmosphere as CO2 due to land use changes and certain management actions (conversion of permanent to arable pastures etc.).

The dominant resource-intensive monoculture model of agriculture, highly dependent on agro-chemicals, is a significant contributor to GHG emissions. Moving towards an environmentally sustainable agriculture industry which reduces the use of synthetic nitrogen fertilisers, builds soil fertility and increases soil carbon content and water-holding capacity (e.g embracing crop rotations and organic fertilising methods) will help both mitigation and adaptation to the changing climate.

Facts & figures

- Agriculture is responsible for 9.6% of EU GHG emissions, including 75% of the EU's nitrous oxide (N2O) emissions from fertiliser applications and 49% of the EU's methane (CH4) emissions[1].
- Globally, agricultural N2O emissions are projected to increase by 35-60% up to 2030 due to increased synthetic nitrogen fertiliser use[2]. Global livestock-related methane emissions are expected to increase by 60% up to 2030.
- Emissions from fertiliser production (as opposed to application) are not included in the statistics on farming-related emissions but are considered industrial emissions. They are however a key part of the GHG footprint of EU agriculture. Synthetic fertiliser production and distribution is responsible for 0.6-1.2% of total global GHG emissions[3]. In Europe, the N2O emission from nitric acid production (a fertiliser precursor) represents 11% of the total GHG emissions from industrial processes (in EU-15)[4].

Recommendation

The CAP needs profound change to support the kinds of farming Europe needs in the 21st century. Public money must support public goods. Taxpayers must see real value for the billions they invest in the CAP. Those who farm sustainably must be effectively supported while those who harm the environment should receive no public money.

If politicians are serious about decreasing Europe's GHG emissions they must support a fundamental CAP reform now.

For footnotes, please refer to separate reference sheet

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Preventing and reversing degradation of peatlands and peat soils

Peatlands and peat soils store vast amounts of carbon and are so-called "carbon hotspots" – a top priority for climate change mitigation[5]. Degradation of peatlands leads to the release of carbon and many peatlands are currently net sources of GHGs, often due to degradation or inappropriate management such as drainage and cultivation[6].

Restoring peatlands, by halting and reversing processes that lead to degradation, has the potential to cost-effectively reduce emissions and eventually turn them into carbon sinks. Often, restored peatlands can be kept in agricultural use, such as by allowing some extensive grazing.

Peatlands provide a number of crucial but often undervalued ecosystem services. For example, their capacity to filtrate pollutants is beneficial for water quality and peatlands are important habitats for wildlife[7]. Most experts agree that protecting and restoring peatlands is a 'no-regret' option for climate change mitigation.

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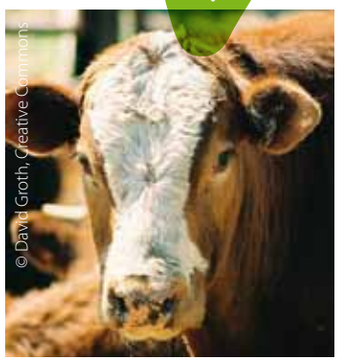
Reductions in livestock production and a move to extensive systems

A report by the Food and Agriculture Organisation puts livestock-related GHG emissions as high as 18% of the world total[10], while in Europe, meat and dairy products contribute about half the food GHG burden[11].

However, extensive livestock farming provides valuable benefits in addition to food production. Low input, semi-natural grasslands associated with extensive grazing store higher densities of carbon and produce less nitrous oxide than intensively-managed grasslands[12], while the lower stocking densities also result in less methane production. They also provide a range of other ecosystem services such as flood and fire prevention, and many important habitats and species are dependent on low intensity grazing.

At the same time the CAP should also include policy measures aimed at conveying a shift in the current EU consumption patterns, i.e. to consume less, in order to accompany the reduction in livestock products linked to the adoption of more extensive systems. These measures can be accompanied by health initiatives.



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Indirect impacts of soy cultivation for livestock feed

Many studies examining GHG emissions from different agricultural systems have been flawed because they have not considered the full environmental footprint. For example, soy cultivation for livestock feed is a key driver of deforestation overseas, itself a major contributor to climate change.

The EU accounts for a third of Brazil's soy animal feed exports, mostly for use in the pig, poultry and dairy industries[8]. However, the indirect impacts associated with feeding soy are rarely accounted for when comparing greenhouse gas emissions from systems. The indirect emissions from land-use change driven by agriculture are very significant - when these carbon losses are included, agriculture could be responsible for nearly a third of all anthropogenic GHG emissions[9].

Some mitigation measures proposed by the industry (e.g. more intensive livestock systems requiring high inputs of cereals and proteins) could actually lead to an increase in emissions, while also being extremely damaging to biodiversity.

Prepared by: BirdLife International, Butterfly Conservation Europe, European Environmental Bureau, Greenpeace, IFOAM EU Group, Pesticide Action Network, WWF