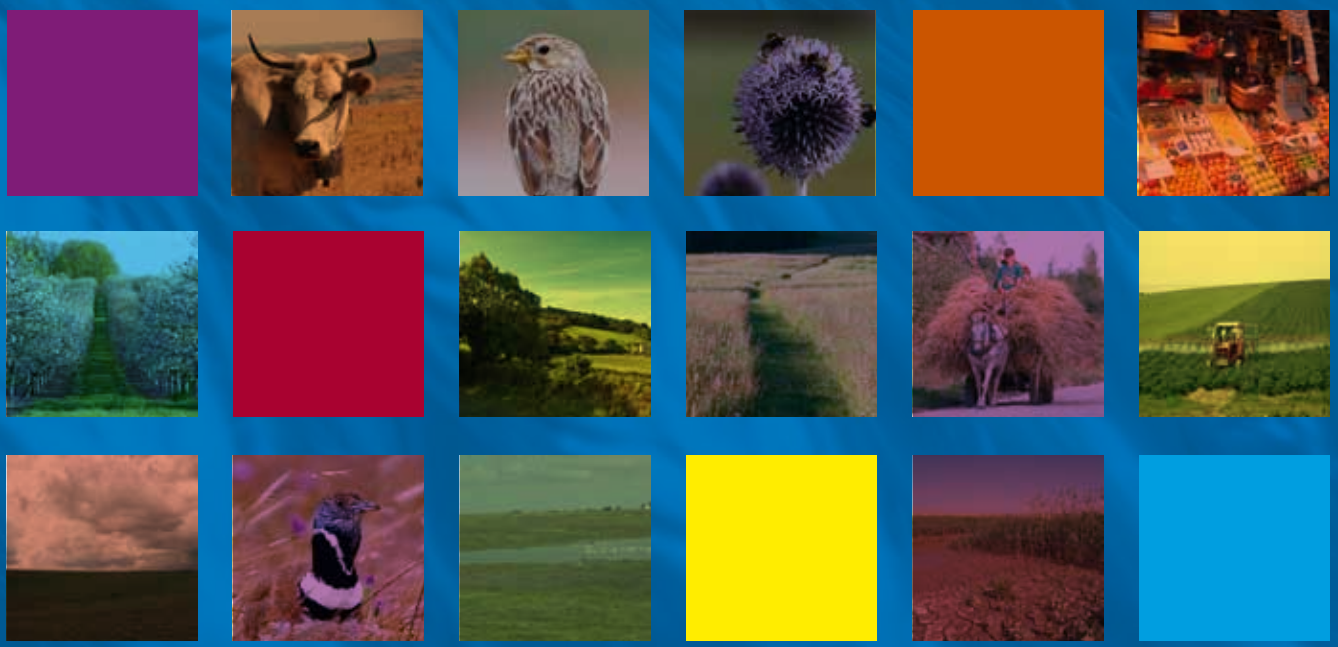
The Truth behind the CAP: **13 reasons** for green reform

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The CAP & Wildlife

Wildlife

Farmland covers almost half of the EU[1] and plays a key role in providing habitats for wildlife. Biodiversity has evolved around farming for centuries, with traditional agricultural practices providing crucial breeding habitats and feeding sites. Some species, such as the barn swallow[2], white stork[3] and the larks[4] have become virtually dependent on appropriately managed farmland[5].

However, the focus on increasing production in the past 50 years - partly driven by the Common Agricultural Policy (CAP) - has caused a shift to large scale, specialised and high-input/output systems. This shift has led to the loss and degradation of many important habitats and the increasing isolation of remaining habitat fragments. This loss is responsible for widespread biodiversity decline across the EU[6], with documented negative impacts on farmland birds, mammals, invertebrates and arable plants.

In new EU Member States, relatively healthy populations of plants and animals still exist due to the retention of many High Nature Value farming systems. However, this form of farming is under threat from intensification, non-agriculture development and abandonment. As the market does not reward biodiversity, public intervention is required to support farmers to farm with the needs of wildlife in mind.


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Facts & figures

- In 2010, the EU failed to meet its target of halting biodiversity decline in Europe. EU leaders have agreed a new 2020 target with agriculture identified as a key area for action[7].
- Farmland bird populations across the EU declined by 49% between 1980 and 2008[8].
- Due to significant and widespread changes in farming practices in the 20th century, seven species of arable plants are considered extinct in Britain and a further 54 are threatened[9].
- Roughly 25% of the EU's terrestrial network of protected Natura 2000 sites is farmland[10] and requires appropriate agricultural activity[11].
- Only 7% of agricultural habitat types in Natura 2000 sites are in favourable condition, compared to 21% of other – non agriculture - habitat types[12].
- Losses of grassland butterflies and other pollinators have been particularly severe. The European grassland butterfly indicator shows a decline of some 70% since 1990[13].

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 saving wildlife biodiversity they must support a fundamental CAP reform now.

For footnotes, please refer to separate reference sheet

The CAP & Wildlife

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Farmers stopping extinction- the aquatic warbler in Poland

The aquatic warbler is the rarest migratory songbird found in mainland Europe. Once widespread in fen mires and wet meadows, the aquatic warbler has disappeared from most of its former range due to drainage of its habitats. Poland boasts magnificent natural areas like the Biebrza Marshes and High Nature Value farmland across large parts of the country. This results in a high diversity of farmland birds, including 25% of the total world population of aquatic warblers.

Supported by an EU LIFE Nature grant which started in 2005, the BirdLife Partner in Poland (OTOP) has undertaken a comprehensive conservation programme for the aquatic warbler. The programme, which covers 42,000 hectares, has helped farmers to restore the species' sensitive mire habitat.

Well designed and targeted CAP measures (such as agri-environment schemes) can also be used to deliver wildlife benefit with wider rural development but 'best-practice' schemes are few and far between across the EU.

The common hamster brought back in the Netherlands[15]

Once widespread across Western Europe, the common hamster became extinct in the Netherlands in 2002. Conservationists trapped the last 15 and took them into a captive breeding programme to try to save the population. A number of hamsters were reintroduced later in 2002, and agri-environment scheme trials began to make the environment more hamster-friendly.

The first agri-environment attempts were not at all successful as the management contracts appeared to be too complicated and unpopular with farmers. As understanding of hamster requirements increased, management prescriptions could be changed accordingly. Currently, the schemes are in place in especially designated areas and require delayed mowing and restricted harvesting, provide food and cover in summer until hibernation.

Thanks to these schemes, the population grew rapidly between 2002 and 2009, and continues to increase, benefitting thereby not only hamsters but also other species like wintering birds[16].

Distorted subsidies work against public goods in Olive groves[14]

Olive groves represent one of the iconic landscapes of the Mediterranean. In traditionally managed groves, biodiversity tends to be high as structural diversity (trees, natural vegetation, dry-stone walls, etc.) provides a variety of habitats. The low use of pesticides allows rich flora and insect fauna to flourish; they in turn can support a high diversity of wildlife.

However, in recent decades many groves have undergone rapid land use change through intensification, heavily subsidised by the CAP. This led to the large-scale destruction of biodiversity rich olive groves, often featuring ancient trees, and their replacement with intensively managed, highly irrigated systems.

Although production-linked subsidies have been phased out of the CAP and ancient olive trees can now only be cut with permission, many of these valuable natural assets are in a state of neglect across the EU because the non-market benefits of traditional groves are not recognised nor rewarded.

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

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

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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

The CAP & Climate Change

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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 Europe, WWF

The CAP & Functional Biodiversity

Functional Biodiversity

Agro-ecosystems, biodiversity and the natural environment perform services that are critical for food production. Permanent grasslands, fallow areas and landscape features such as hedgerows, tree lines and wetlands provide valuable functions like water storage and filtration, nutrient cycling or soil protection[1]. In addition, they provide habitats for biodiversity which in turn provide agronomic services such as pollination, pest control through 'beneficial' insects and nutrient cycling and soil formation through living organisms in soil.

However, the ability of the natural environment to provide eco-system services on farmland has been seriously undermined by rapid changes to the farming practice across Europe, driven in part by the CAP. A shift to intensive, specialised and high-input/output systems has led to the loss of many habitats and landscape features, natural resource degradation and functional biodiversity decline.

Despite the clear value of ecosystem services provided by functional biodiversity and the natural environment, the market currently fails to reward those who properly manage the land. Policy intervention is therefore required to ensure farmers manage their land in ways which protect ecosystem service delivery.

Facts & figures

- At least 56% of European crop production depends on, or benefits from, insect pollination[2].
- For crops destined for direct human consumption, the annual economic value of insect pollination is estimated at €14.2 billion within the EU25 and €153 billion worldwide. The value for all crops is likely to be far higher[3].
- The EU Directive 2009/128/EC on the sustainable use of pesticides obliges EU farmers to apply Integrated Pest Management (IPM) from 2014. The protection and proactive use of natural predators (biological control) form an integral part of IPM.
- Each adult ladybird beetle will eat up to 5,000 Aphids in its 1-year lifespan[4].
- 90% of pests are prevented by the ecosystem service biological control[5].
- Services provided by soil organisms underpin soil stability and fertility. The costs of soil mismanagement are estimated at more than €1 trillion a year worldwide[6].

Recommendation

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If politicians are serious about protecting functional biodiversity and ecosystem services they must support a fundamental CAP reform now.

For footnotes, please refer to separate reference sheet

The CAP & Functional Biodiversity

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Environmental set-aside: a refuge for functional biodiversity

Hedges, small woods, ponds, etc. are very useful to help survival and enhancement of beneficial organisms (predators, pollinators)[7].

In the 1992 CAP reform, set-aside was made mandatory for production purposes but this measure became a *de facto* form of ecological infrastructure. This resulted in different types of fallow[8]. While the extent of environmental delivery, and the species most positively affected, depend greatly on the nature, position, scale and management of fallow land, numerous studies show that EU set-aside and similar fallows created by short-term land abandonment, has provided biodiversity benefits and has helped to reduce diffuse pollution and soil erosion[9].

After the abolishment of set-aside, a few European Member States offered farmers an option to apply for funded agri-environment schemes to be rewarded for establishing and maintaining such ecological infrastructures for 5-10 years and more. Nonetheless, a lot of the valuable ecological infrastructure was lost[10].

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Organic farming delivers clear benefits

In 2000, the Research Institute of Organic Agriculture released its findings from a 21-year long study[11] comparing organic and conventionally managed arable fields.

The study revealed that the density of arthropods was almost twice as high on organic fields which can be explained by both richer weed flora on organic fields and a lack of prey species on conventional fields. Organically managed soils also contained 30-40% more earthworms which are extremely important for enhancing soil fertility and structure.

While the CAP does provide some support for organic farming in Europe, this is limited to 2nd Pillar agri-environment schemes which receive a very small share of the overall budget. Due to the necessity of national co-financing, support is insufficient in some Member States. A better targeted organic basic premium with the possibility of organic top ups under the 2nd Pillar for special crops and features would be more helpful.

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Inadequate support for biological control

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The targeted use of specialist insect species to tackle pests is relatively uncommon in EU agriculture as most farmers tend to use pesticide applications. However, biological control is slowly spreading and, for instance, the release of the egg parasitoid wasp[12] to control the European Corn Borer[13] is an accepted method for maize[14].

The wasps (at a rate of 200, 000 per hectare) are usually distributed and released as parasitised eggs. In the field, hatched adult wasps lay their eggs into the Corn Borer eggs where the developing wasp larvae destroy them. To achieve sufficient results, release is repeated twice.

The European Commission[15] has highlighted the importance of informing farmers about alternative methods of pest control, particularly in the run up to 2014 when they will have to apply IPM. There is a clear role for the CAP's Farm Advisory System financed under the 2nd Pillar to help farmers better understand more sustainable and environmentally friendly forms of pest control.

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

The CAP & Food Consumption

Food Consumption

Europeans are consuming and often over-consuming increasing amounts of pre-processed foods high in sugar, salt, trans- and saturated fats and foods of animal origin. Substantial portions of our food also end up as waste, both at consumer level and along the food chain. This means that the European food system has a far bigger environmental footprint than necessary.

Current EU food consumption levels do not only have significant impacts on the environment but also cause serious health effects, such as obesity, cardiovascular diseases, metabolic disorder, cancer and diabetes[1].

Traditional approaches focus on individual behaviour as the problem and seek to change it. However, behavioural change depends on a sequence of changes: changes in information, attitudes, motivation, skills and resources, access and availability, social norms and cultural expectations. Purchases are strongly influenced by what is available, by price, by past experience and by marketing messages.

Public policies can play a significant role in stimulating, informing and empowering citizens and by ensuring sustainable production methods. While the rhetoric around the CAP emphasises good, healthy and secure food, in reality the CAP is not doing enough to promote healthy and sustainable food.

Facts & figures

- Around 33% of a household's total environmental impact in the EU is related to food and drink consumption[2].
- The main threat to maintaining progress in human development comes from unsustainable production and food consumption patterns[3].
- The number of overweight people worldwide has surpassed the number of malnourished people[4].
- Meat consumption in Europe is twice the world average; for dairy produce it is even three times. The total per-capita protein consumption (including vegetable sources) is about 70% higher than recommended[5].
- The production of 1 kg wheat requires 1,300 litres of water versus 3,300l for 1 kg of eggs, 3,400l for 1 kg of broken rice and 15,500l for 1kg of beef[6].
- Approximately 90 million tonnes of food, or around 179kg/per person per year, is wasted annually in the EU-27[7].
- 30-80% of adults in Europe are overweight or obese, causing 2-8% of health costs and 10-13% of deaths in different parts of Europe[8].

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 sustainable and healthy food consumption they must support a fundamental CAP reform now.

For footnotes, please refer to separate reference sheet

The CAP & Food Consumption

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Promoting reduced meat consumption

The livestock sector is responsible for the bulk of environmental impacts from farming, with nearly 33% of the earth's land now dedicated to feeding livestock. Increasing meat and dairy production is probably the biggest single cause of biodiversity loss[9] and livestock is estimated to account for 18% of global GHG emissions[10].

With world demand for meat and milk expected to double by 2050[11], changing consumption patterns is critical if these dire impacts are to be reduced. Excessive consumption of livestock products is also a major public health problem in the developed world and is becoming an issue in many developing countries.

However, government campaigns that promote healthy eating habits can be effective[12]. Germany's federal environment agency had issued an advisory that people should reserve eating meat for special occasions[13] and the Belgian city of Ghent is trying to convince citizens and restaurants to be vegetarian for at least one day per week by calling for Thursday 'Veggie day'[14].


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Information campaigns driven from the bottom up in Germany and the UK

In order to change consumption patterns, it is necessary for more sustainably produced food to be available and information (or labelling) campaigns should be set up to allow concerned consumers make informed choices.

Many private initiatives have been taken to ensure information comes to light. For example, since the popular Jamie Oliver television series "Jamie's School Dinners" and the launch of the "*Feed Me Better* campaign" in 2005, both the UK Government and the British public have come to understand that food plays a vital role in children's education[15].

In May 2006, the Community initiative of the Tollwood Festival and the Department of Health and Environment of the City of Munich started the pilot project "Bio für Kinder" (Bio for Kids). The goal of the project is to support Munich's child care facilities in the conversion to 100% organic food. They want to show together with committed entrepreneurs that "Bio for Kids" is feasible and affordable[16].


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Production of waste in the UK

It is estimated that 8.3 million tonnes of food and drink waste per year is generated by households in the UK. This is the equivalent to 330kg per year for each household in the UK, or just over 6kg per household per week[17]. The amount of food (including liquid and solid foods but excluding drink) wasted per year is 25% of that purchased (by weight).

The GHG emissions associated with avoidable food and drink waste is the equivalent of approximately 20 million tonnes of carbon dioxide per year, so reducing this waste has important climate change implications.

In addition, more than two-thirds of packaging waste is related to the consumption of food. The move towards purchase of pre-prepared and convenience food has resulted in large increases in the amount of packaging waste - on average more than 160kg per person per year in the EU-15[18].

Policy should ensure the pricing of products takes into account their external and often harmful impacts in order to give the right signals to consumers.

Prepared by: BirdLife International, European Environmental Bureau, Friends of the Earth Europe, Greenpeace, IFOAM EU Group, Pesticide Action Network Europe, WWF

The CAP & Genetic Resources

Genetic Resoureces

Agro-biodiversity deals with the variety of breeds and cultivated animal and plant species used by farmers for food, pharmaceutical and technical purposes. Genetic resources of both wild and domestic origin are crucial in order to be able to adapt to environmental changes.

However, during the past hundred years or so we have seen a steady decline in the amount of diversity found on farms with a trend towards the use of monocultures.

The food industry has driven the reduction of genetic diversity by prioritising productivity, efficiency and aesthetics, and disregarding other possibly important parameters such as nutritional value, ecosystem services delivered by a particular species and resistance to negative environmental effects.

By shrinking the genetic base of our food we are potentially weakening ecosystem resilience and increasing the vulnerability of our food systems to environmental challenges such as pests and diseases. Maintaining a 'bank' of genetic resources which current and future agricultural scientists can access is therefore extremely important.

Facts & figures

- Since the 1900s, about 75% of plant genetic diversity has been lost[1].
- 30% of livestock breeds are at risk of extinction with six breeds lost each month[2].
- Today, 75% of the world's food is generated from only 12 plant and five animal species[3].
- Of the 4% of the 250,000 to 300,000 known edible plant species, only 150 to 200 are used by humans. Three - rice, maize and wheat - represent nearly 60% of calories and proteins obtained by humans from plants[4].
- The top four seed firms control 56% of the global proprietary (e.g. brand-name) seed market[5].
- The EU is signatory to the International Treaty on Plant Genetic Resources for Food and Agriculture which has as its objectives the conservation and sustainable use of plant genetic resources for food and agriculture and the fair and equitable sharing of the benefits arising from their use.

Recommendation

The CAP needs profound change to support farming systems 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, including broad genetic diversity, must be effectively supported while those who harm the environment should receive no public money.

If politicians are serious about more sustainable agriculture they must support a fundamental CAP reform now.

For footnotes, please refer to separate reference sheet

The CAP & Genetic Resources

pic1: © Dorota Metera of Bioexspert, pic2: © Ian Britton

Community programme on promoting genetic diversity[6]

The Council Regulation (EC) No 870/2004[7] established a Community programme which aims at promoting genetic diversity and the exchange of information including close coordination between Member States and the European Commission for the conservation and sustainable use of genetic resources in agriculture.

It facilitates coordination of international initiatives on genetic resources, in particular within the Convention on Biological Diversity, the International Treaty on Plant Genetic Resources for Food and Agriculture and the FAO's Global Plan of Action for the Conservation and Sustainable Utilisation of Plant Genetic Resources for Food and Agriculture.

The budget allocated for this complements the actions co-funded under the Rural Development Regulation. Currently 17 actions are co-funded and have a maximum duration of four years.

These types of programmes are a first step towards the preservation of our genetic diversity in the EU but they should be more open to informal and small initiatives in order to help maintaining in situ banks of genetic resources.

Genetic diversity in Italian Rural Development Programmes[8]

Under the CAP's Rural Development Policy, Member States can offer agri-environment support for the rearing of local livestock breeds which are at risk of extinction and for the preservation of plant genetic resources which are adapted to local conditions and are at risk of genetic erosion.

In Italy, a number of regions have introduced these measures within their Rural Development Programmes. In Emilia Romagna, the "Mora Romagnola" (a breed of pig from that region) has been saved from extinction through CAP support and the local population has grown from 10 animals in 1997 to 600. Similar success has also taken place in the Piemonte Region, where the "sempione" goat has been saved[9].

Poor support for multi-species orchards in Poland[10]

For many years, Poland's farmers kept small orchards behind their houses, which provided them with a steady supply of fruit throughout the year: cherries and plums in the summer, pears and apples in autumn and walnuts in the winter. The trees, between 40 and 60 years old, are of diverse (some even forgotten) varieties, and have survived the communist years and intensification of agriculture. They are naturally highly-resistant to pests and diseases, require no spraying of pesticides and are highly valuable as a habitat for many species.

In 2009, the Polish Ministry for Agriculture and Rural Development introduced agri-environment schemes for organic orchards.

The scheme pays a total of €400 per hectare orchards of one species but only €200 per hectare is paid for mixed-species orchards. This measure effectively punishes farmers for keeping a diverse set of fruit trees which help preserve agro-biodiversity.

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

The CAP & Organic Agriculture

Organic Agriculture

Organic farming is able to produce wide-ranging benefits for the environment. Organic farming systems grow healthy plants without the use of synthetic fertiliser or agro-chemicals. By favouring mixed farming and enriched crop rotations, organic farming often displays greater habitat diversity than conventional systems and supports a greater range of wildlife. In general, soils are less compacted and more stable, thereby storing more carbon, less prone to erosion and more able to retain water.

Although organic farming is popular with many European consumers, its price can be a barrier. Whilst some of this is due to certification costs and higher labour demands, organic produce is also made more expensive as the negative outcomes of certain conventional practices - such as the cost of tackling nitrogen fertiliser pollution - are not reflected in the price of food.

Due to the market failure to reward the delivery of environmentally friendly public goods and to penalise many negative environmental effects from conventional farming, there is a clear case for intervention to support organic farming practices. There is also a need to encourage conventional farming to adopt more sustainable methods, which may include practices viewed as 'organic' such as wider crop rotation and the use of nitrogen fixing plants.

Facts & figures

- In 2009, organic farming accounted for 4.7% of agricultural land across the EU27. This area is steadily growing. The area under organic management differs considerably between Member States, from 18.5% in Austria to less than 2.46% in France[1].
- Nitrogen leaching from organic fields is up to 57% lower compared to conventional fields[2].
- Soil carbon sequestration rates on organically-managed arable land can range from 200kg to 2,000kg of carbon per hectare per year more than conventional farming[3].
- Organic management benefits a wide range of species with farms often having more diversity and larger populations than conventional farms[4].
- Organic farming practices in Umbria, Italy helped reduce soil erosion by an average of 6.8 t/ha/yr[5].
- The organic industry is one of the fastest-growing sectors of the food industry in the EU[6].

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 consistently harm the environment should receive no public money.

If politicians are serious about supporting more sustainable forms of farming, like organic farming, they must support a fundamental CAP reform now.

For footnotes, please refer to separate reference sheet

The CAP & Organic Agriculture

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Organic sheep farming in Wales

Lake Vyrnwy is an organic farm, owned by a water company and managed by the RSPB[7] (BirdLife in the UK). The farm's sheep graze on heather, natural herbs and grasses on the hills, and are managed sensitively to benefit farmland bird populations. Their natural diet is said to improve the flavour of their meat and customers can buy this directly from the farm.

High in the Welsh hills, Lake Vyrnwy is also the source of water for the people of Liverpool, a major city in England. The pollution control measures that have been implemented, combined with organic farming methods, ensure a strict protection of the quality of water in the surrounding environment. Agri-environment schemes have played a significant role in facilitating this positive land management.

The RSPB and Severn Trent Water are demonstrating that it is possible to run an efficient farm while benefiting local wildlife and people, and protecting an important source of drinking water.

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More wildlife on organic farms

In general, biodiversity is up to 50% higher on organically managed farms than on conventional farms[8]. Often, this can be directly linked to the rules which govern organic farming, such as the non-use of synthetic fertilisers and minimal use of pesticides.

However, other characteristics, common but not exclusive to organic farming, also play a major role such as lower livestock stocking densities; maintenance of hedges; field margins and other uncropped areas; encouragement of natural predators for controlling pests, and the use of mixed crop and livestock systems rather than monocultures. It is the absence of these beneficial factors, often driven by the CAP, on many intensive, non-organic farms that has accounted for much of the wildlife declines in the EU in recent decades.

Organic farms should be explicitly rewarded for the higher levels of environmental benefits they provide and conventional farming should be encouraged to adopt more sustainable methods, which are often associated with organic farming.

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Inconsistent support for organic farming across the EU

The European Action Plan for Organic Food and Farming[9] recommends full use of the CAP's Rural Development programmes for the support of organic farming. However, the level of support for organic farming varies considerably. In Sweden, payments for arable land in 2009 counted up to €555 per hectare (for potatoes and vegetables; for grain the amount is €144/ha), while in England it is just €66/ha[10].

In some Member States, intensively managed conventional agriculture receives more support than organic. In the Madrid autonomous region, the substitution of irrigated arable crops with irrigated tree crops (often intensively managed olive groves) receive an annual Pillar 2 payment of almost €900/ha while irrigated organic arable crops receive less than €250/ha, despite the increased environmental benefits and complexity of commitments[11].

The EU has formally recognised the benefits of organic farming and the role CAP should play. However, there is a clear need for the policy to secure fair and consistent support measures across all Member States.

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

The CAP & Grasslands

Grasslands

Grasslands provide highly valued habitats and offer an enormous range of benefits. They support a huge range of biodiversity above and below surface level, act as barriers to forest fires, protect water resources and store carbon.

The environmental value of grasslands depends on where they are and how they are managed. Re-seeded, fertilised grasslands tend to be more productive but also pose more environmental problems, whereas semi-natural habitat, subject only to low levels of grazing and/or mowing, have higher environmental values.

Grazing animals can also contribute towards decreasing EU dependency on feed imports and reducing livestock's ecological footprint as grassland is a basis for sustainable milk and meat production (including being more beneficial for animal welfare).

The most biodiverse grasslands are threatened by a variety of changes in land use including conversion to arable farming, comprising energy crops; intensification of management; overgrazing; land abandonment; urban development, or afforestation.

Currently land managers are poorly rewarded through the CAP for continuing the extensive management of semi-natural grasslands.

Facts & figures

- Grasslands store around 34% of the global stock of carbon in terrestrial ecosystems while forests store approximately 39% and agro-ecosystems approximately 17%[1].
- Semi-natural grasslands are unique in harbouring numerous habitat types from Annex 1 of the Habitats Directive, ranging from hay meadows to wood pastures and heaths. Of the 200 habitats listed as Natura 2000 sites, over 40 are grassland types.
- A recent assessment shows that only 7% of Natura 2000 grasslands sites are in favourable condition[2].
- At least 1,320 endemic plants inhabit grasslands in Europe[3].
- The European grassland butterfly indicator shows a 70% decline since 1990[4].
- CORINE 2000 estimates that the extent of grassland (including moors, heaths, etc.) in the EU27 is approximately 100 M ha.
- FAO data suggest a 12.8% decrease in the area of grassland in Europe between 1990 and 2003[5].

Recommendation

The CAP needs profound change to support the farming Europe needs in the 21st century. Public money must support public goods. Taxpayers must see the real value of the billions they invest in the CAP. Those who sustainably manage High Nature Value grasslands must receive a premium while those who harm the environment should receive no public money.

If politicians are serious about protecting grasslands and ecosystems, they must support a fundamental CAP reform now.

For footnotes, please refer to separate reference sheet

The CAP & Grasslands

pic1: © Andy Hay (rspb-images.com) pic2: © Johan Tillet

Bioenergy production drives grassland destruction

© Gerd OstermannNABU

Increased demand for energy crops is leading to the destruction of important grassland habitats in Germany[6]. Between 2003 and 2009, 226,000 ha of grassland were lost[7].

It is estimated that at least a quarter of this is due to conversion to maize. Ironically, the destruction of grasslands not only destroys important sites for biodiversity, but the overall carbon balance becomes negative, particularly for wet grasslands.

In one incident in the upland area of the Eifel, 30 ha of lowland hay meadow and calcareous fen were partially destroyed in a Natura 2000 area. Because of this breach in cross-compliance, the farmer received a one-off 5% reduction to payments but was not required to restore the site.

CAP reform should ensure land managers are required to restore protected habitats if they destroy them. Moreover, incentives to produce energy crops where these lead to increases in emissions must be removed, both from the EU's and Member States' energy policy.

Excluding grasslands from CAP support increases threat of neglect

© Ruben Holthuijsen

In Estonia, there is 1,124 M ha of agricultural land but around 25% is not registered to receive money under the Single Area Payments Scheme (SAPS). Traditional farming methods often involve animal grazing grasslands with high proportions of trees and bushes. These extensively grazed, wooded pastures are not compliant with SAPS rules.

In Bulgaria, approximately 1.6 M ha of farmland has been identified as being of High Nature Value, but just over 1 M ha is eligible for SAPs support.

The excluded land is typically semi-natural grassland in great danger of abandonment. The economic incentives for continuing traditional management are low. Given that these areas are productive in terms of public goods (i.e. biodiversity), funding must be available to allow and encourage their continuous management.

This should maintain income streams in areas otherwise at risk of depopulation and at risk of losing wildlife. Thus, eligibility criteria for support through the new CAP must include extensive farming systems.

A French example: a model for grassland support?

France has demonstrated how a relatively simple scheme could be used to better target direct payments. The agro-environmental grassland payments for farmers, PHAE 2 is a broad agri-environmental scheme that rewards farms maintaining a large proportion of grassland under low-intensity management.

The requirements of the scheme are:

- Between 50-75% of the UAA must be grassland;
- Stocking density 0.35-1.4 LU/ha;
- 20% of the surface maintained as biodiversity features;
- Fertiliser use has upper limit of 125 N/90 P/160 K kgha-1;
- Herbicide use not permitted.

The main problem is that these requirements reward maintenance of intensive, temporary grassland, not just semi-natural pasture. The amount of livestock in one area may be above the optimum level for biodiversity, and fertiliser use can remain high.

However, with some tweaks to the rules - e.g. the introduction of scaled payments depending on intensity of use - such a system funded through Pillar 1 of the CAP could incentivise the maintenance and better management of grasslands across the EU.

© Ivan Nemec

Prepared by:

The CAP & High Nature Value farming

High Nature Value farming

Farming in Europe ranges from some of the most intensive production systems in the world to very low-intensity, more traditional land uses, usually on poorer land. The concept of "High Nature Value farming" (HNV) developed from a recognition that the conservation of biodiversity in Europe depends on the continuation of low-intensity farming across large areas of the countryside[1]. HNV systems maintain Europe's most characteristic landscapes that are often the basis for thriving tourism industries and produce many of Europe's traditional regional speciality foods.

In contrast to intensive use of the land where opportunities for wildlife are reduced, in HNV systems the productive land itself supports a range of wildlife species, especially when it includes a high proportion of semi-natural[2] vegetation. HNV farmers face enormous challenges to the socio-economic viability of their farms[3]. This often leads to abandonment or intensification of the land. In these processes, the quality of grasslands diminishes, scrub invades grasslands and pollinators lose their food plants and habitats, posing threats to many species and ecosystem services.

Facts & figures

- Estimates suggest that over 30% of farmland in the EU may be HNV. In some countries the figure is over 50%[4].
- The majority of HNV farmland is found on naturally less productive land[5].
- Many species of conservation concern, such as chough[6], great bustard[7], pin tailed sand grouse[8] and lesser kestrel[9] are almost entirely reliant on the heterogeneous habitats maintained by low intensity farming. Declines in many other species have been linked to farming intensification[10].
- Populations of butterflies such as dingy skipper[11], orange-tip[12], large blue[13], and meadow brown[14] are also seriously declining. Their most important habitats are maintained by HNV farming[15].
- HNV farms have lower incomes than non-HNV farms[16], and often have a negative net income if CAP support is excluded (sometimes even with CAP support)[17].

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 maintaining HNV farming, they must support a fundamental CAP reform now.

For footnotes, please refer to separate reference sheet

The CAP & High Nature Value farming

pic1: © Toomas Kukk pic2: © Billy Clarke

Unfair competition and perverse subsidies in the Olive sector

Intensive, irrigated olive production causes major environmental problems in Spain, Greece, Italy and Portugal such as soil erosion and water stress which impact on other sectors[18]. Low input olive production on the other hand provides multiple public goods such as landscape diversity, biodiversity and reduced soil erosion and landslides.

The current system of CAP payments favours the more intensive systems. A farmer with intensive irrigated olives can receive around €1,000 per ha, whereas a low-input olive grove might receive only €100 per ha. Yet the most intensive production system also earns a far greater income from the market without CAP payments, whereas the production from low-intensity is not enough to cover labour costs. As a result of the low support they receive, the low input olive groves are abandoned, leading to a loss of biodiversity and increased risk of wild fires. CAP reform needs to ensure those farmers providing public goods have a fair income stream.

ADEPT project, Romania

Romania holds a large proportion of the HNV farmland in Europe. There are 3.8 million holdings (45% of the farmed area) classed as "subsistence farms", with an economic activity of less than €1,200 per year. The Romanian government has set up an ambitious scheme for supporting HNV farming through agri-environment payments. However, national rules exclude 1.9 million farms of under 1 ha from the scheme (and other CAP support).

The ADEPT project in Târnava Mare shows how a NGO-led local approach can maintain HNV systems. The ADEPT team works with farmers to bring them into support schemes and market their produce. They also work together with the government to improve the design of schemes.

Thanks to this dynamic approach, up-take of the HNV farming scheme is higher. In one municipality where ADEPT is active, 99 farmers joined the scheme in 2009, compared with three in a neighbouring municipality[19]. Rural development programmes should fund this local project approach to address the needs of HNV systems.

Machair LIFE+ project, Scotland

Machair is a coastal grassland habitat, extremely rich in biodiversity. Included in Annex 1 of the EU Habitats Directive, it supports internationally important populations of breeding and wintering birds, including waders, corncrakes (Crex crex) and terns (Sternidae). Over two thirds of the world's machair is in the crofting areas of Scotland.

Crofting systems are essential to conserving this unique habitat. They are typified by many of the features of HNV farming such as: low nutrient input; low stocking density; low yield per hectare; hardy, regional breeds or crop varieties; traditional harvesting techniques. The key threat to conservation in crofting areas is abandonment of activity.

The EU LIFE + scheme aims to increase the area of actively managed machair and expand the skills and knowledge base[20]. Management techniques such as late harvesting of arable crops are encouraged to increase biodiversity benefits. Such pilot projects should be built on in the new CAP to provide systematic support to HNV systems.

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

The CAP & Pesticides

Pesticides

Pesticides (a term used to cover herbicides, insecticides, nematicides and fungicides) are products designed to kill or repel pests. However, they can also harm people and the environment and strict controls are in place over the sale and use of pesticides in the EU.

Problems still arise from day to day use, overuse (e.g. the use of pesticides as a first resort rather than as part of integrated pest management), misuse (e.g. agricultural pesticides are frequently identified as the cause of illegal poisoning in birds of prey), and unidentified adverse effects (e.g. sub-lethal exposure to the neurotoxin pesticides neonicotinoids can impact on the foraging behaviour of pollinators[1]).

Although usually applied with a particular pest in mind, pesticides can also affect untargeted organisms and have indirect effects on others. The indirect effects of pesticides can be particularly devastating for biodiversity[2]. The effectiveness of modern pesticides is such that it is crucial we reduce their use to a minimum and ensure there is sufficient refuge habitat available within the farmed landscape to sustain our native biodiversity[3].

In fact, pesticides are indirectly subsidised by the public as their social costs (negative effects on human health, death of non-target organisms and pollution of the environment) are paid by society[4].

Facts & figures

- Studies in the UK and Germany conservatively estimate that the annual costs of pesticides for the environment and health amounts respectively to around €206m and €133m[5].
- Society is concerned about exposure to pesticides[6] where many pesticides are known for their carcinogenic or mutagenic properties[7]. The health effects of these risks are rising in society and a contribution of pesticides to these effects is likely[8].
- The number of multiple residues in food is rising; in one sample of grapes analysed in Germany 26 different pesticides were found[9].
- 84% of European crops rely on insect pollinators. In the UK, these services are worth around €513m (£440m) p.a. and the cost of replacing these services is estimated to be €1760m (£1,510m) p.a. compared with just €8.2-11.7m (£7-10m) p.a (<1%) to avoiding pollinator loss[10].

Recommendation

The CAP needs profound change to support the kinds of farming Europe needs in the 21st century. Public money must support public goods and production techniques and treatments that are friendly to the environment and to us. 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 lowering the health and environmental risks of using pesticides they must support a fundamental CAP reform now.

For footnotes, please refer to separate reference sheet

The CAP & Pesticides

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Combating diabotrica in maize

The profitability of maize as an agricultural crop, and the increase in intensive livestock production have led to the establishment of large areas of continuous maize cultivation (monoculture) in the EU, substantially increasing the risk of pest problems. On average, around 22% of the maize area is grown in monoculture, with this percentage reaching 65,5% in the Netherlands, and 43,4% in Italy[11].

The Beetle called Western Corn Rootworm is a soil-inhabiting pest whose larvae tunnels inside the root system of maize leading to serious yield losses. Adult Western corn Rootworm are strong fliers and have spread quickly across Europe. Monoculture of maize provides ideal conditions for an increase in Diabrotica populations.

Insecticides are already used to protect maize against crop pests: 570 tons of active substance (270 tons carbamates and 137 tons organophosphates) are applied to maize in the EU per year[12]. Switching from monoculture to rotation can break infestation cycles which would significantly reduce the need for pesticide application[13].

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French drinking water contaminated by French agriculture[14]

Without being aware of it, millions of French people are drinking water which contains aluminium, nitrates or pesticides in excess of legal thresholds. The situation is particularly acute in two departments of the famous intensive cereal-growing Parisian basin. Intensive agriculture has contaminated the groundwater so badly with nitrates and pesticides that numerous cities and villages cannot provide drinking water respecting legal thresholds.

In 2008, 17% of the population of Eure-et-Loir department received drinking water with pesticides above legal thresholds. French national data[15] shows that, in 2008, 5 million people received, at least one time per year, drinking water which did not comply with the regulation on pesticides. The alarming degradation of ground and superficial waters due to intensive agriculture has been denounced for decades in numerous official reports[16], but successive French governments have failed to challenge the existing agricultural model or enforce the polluter pays principle.

An integrated approach delivers pesticide reductions in Eure, France[17]

In response to similar issues as the one highlighted in the case study above, the chamber of agriculture of Eure has recently launched a project attempting to apply the concept of integrated production. This is aimed at testing to what extent it is possible for French farmers to reduce their pesticide use by 50% between 2008 and 2018.

A reference group, consisting of around 20 farmers, put into operation integrated production, introducing a number of sustainable agricultural techniques such as crop rotation (including introduction of legumes), selection of resistant varieties, and soil enrichment. After only two years the group achieved an overall reduction of pesticide use dependency of 50% (measured as frequency treatment index taking into account both toxicity and quantity of pesticides). Furthermore, all other environmental impacts were reduced by between 20 and 30%.

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Prepared by:

The CAP & Global Impact of EU Agriculture

The Global Impact of EU Agriculture

In the past, EU agriculture policies like the CAP have stimulated the production of surpluses which have often been dumped in third countries. Although some (not all) of these direct dumping problems have been mitigated, reforms only tackled part of the EU's global agricultural impact[1].

The EU also has a strong reliance on imported animal feed[2]*, especially high protein soybeans*[3] *for its intensive livestock production, and other commodities like maize*[4].

The amount of industrially produced food we eat can be linked to the destruction of rainforests, wildlife and rural communities in South America and beyond. This is accompanied by farming practices which have clear negative impacts on the animals' welfare[5]*. The European over dependence on imported feed also leaves European farmers vulnerable to fluctuating global market prices. This system is propped up by the EU's current trade and agricultural policies as factory farms get indirect subsidies through the support to cereals, the lack of environmental controls, the externalization of environmental costs and the lack of support for grazing systems*[6].

On top of that, the hidden subsidies for factory farmed products are bringing down prices and increase our consumption, which have health effects like obesity and heart diseases[7].

Facts & figures

- Protectionism and subsidies by industrialised nations cost developing countries around US$24 billion annually in lost agricultural and agro-industrial income[8].
- Since 1996, the land area used to produce soy for the EU market is roughly equal to the area of deforestation in Brazilian forests[9].
- The world market price of soy has had a direct impact on the rate of Amazon deforestation[10].
- Soil carbon represents 89% of agriculture's GHG mitigation potential but is being degraded through global land use change, driven in part by EU demand for key commodities[11].
- Livestock is responsible for 85% of total GHG emissions from the EU's agricultural sector[12].
- The costs for the EU from the excess of nitrogen in the environment is up to 320 billion euro a year, with the livestock sector consuming around 85% of nitrogen in crops harvested or imported into the EU[13].

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 the global impact of EU agriculture they must support a fundamental CAP reform now.

For footnotes, please refer to separate reference sheet

The CAP & Global Footprint

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Pat & Daphne Saunders case study[14]

The Saunders manage 566 hectares organically in the UK, with 350 milking cows and 700 cattle producing 1.8 million litres of milk per year and much of their own animal feed. A desire to reduce costs was a factor in choosing to go organic. Switching to organic production has saved more than £75,000 each year on fertilisers and pesticides and nineteen neighbouring farms have now followed their switch to organic.

Reducing soy feed within dairies is not straightforward as modern commercial breeds of dairy cows need a high-protein diet and soy can provide this cheaply. However, the Saunders have met this challenge by producing a range of feeds on their own farm including wheat, oats, barley, peas, beans, and other legumes. All silage is grown and stored on site and some organic EU soy is added to the winter feed.

Europe could have more of these good examples like the Saunders family if it was more serious about promoting mixed and organic farming in Europe and tackling its feed import problem.

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Environmental and economic advantages of a revival of legume crops in France

In January 2010 the General Commission for Sustainable Development in France published a study[15] assessing the environmental and economic advantages of reviving legumes in France. It found that production of legumes, not requiring nitrate fertilisation, would reduce agricultural GHG emissions from fertilisers. Moreover, legumes are a source of protein, so their production in France would enable a reduction of imported soybean meal for animal feeds. According to one scenario, an increase in arable land used for legumes from 3 to 7% would require reductions of 11 and 70% in the exports of cereals and rapeseed respectively.

This would suggest a change in agriculture policy is required to support more crop diversity in the EU, particularly for leguminous crops. It would require accompanying changes in the arable and animal farming sectors which would produce and utilise these legumes. The revival of legumes could compensate current levels of both nitrate fertilisers applied to our feed imports and national fertiliser production[16].

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Foston pig farm proposal

Pig farmers across the UK are struggling to cope with rising input costs and low farm gate prices and often small and family farmers are particularly vulnerable. Many fear that plans for Britain's largest pig mega-farm pose a further threat to the livelihoods of small farmers as the market would become flooded with cheap pig meat. Proposals for the 25,000 pig unit in Foston, Derbyshire, have raised questions with the local community about their environment, particularly about groundwater pollution, and animal and human health due to the feared increase for disease and high levels of antibiotic use on the farm. Should it go ahead, people fear the unit would undermine the livelihoods of small and family farmers with impacts for rural jobs in Derbyshire and beyond. Many people see that a sustainable and secure food future lies in diverse, small-scale, productive farms which provide more and better-skilled jobs[17]. EU policy makers should listen to these fears and try to help tackle the pressures that are pushing farmers in this direction while avoiding at all costs the direct or indirect subsidising of any type of unsustainable production.

Prepared by: EUROPEAN ENVIRONMENTAL BUREAU, Friends of the Earth Europe, GREENPEACE, IFOAM EU GROUP, Pesticide Action Network, WWF

The CAP & Soil

Soil

We depend on soil for our food, fibre, construction material, clean water, clean air, climate regulation, and even some antibiotics. Soil organic matter stores and releases the nutrients that sustain life on earth. Micro-organisms in the soil provide a balanced environment where plants can grow and are protected against diseases, contribute to water purification and help remove pollution and pathogens.

Appropriate agricultural practices (e.g. crop rotation[1]) can maintain and enhance organic matter in the soil and sustain the ecosystem services that good soil quality can provide. But unsustainable agriculture can accelerate water and wind erosion, drain soil organic matter and cause loss of soil fertility. Overgrazing by cattle and use of heavy machinery can cause soil compaction, suffocating soil life, and the mismanagement of soil worsens climate change by releasing soil carbon. Irrigation can lead to salinisation and water logging, which reduces soil quality and diminishes crop yields.

European agriculture is losing its organic matter. Production with high input of fertilisers, pesticides and energy gives a high yield, but also creates a net loss of organic matter[2] (this loss is accelerated by the high use of nitrogen fertilisers[3]). A radical shift in agricultural practices is needed.

Facts & figures

- As much as five tonnes of animal life can live in 1ha of soil[4].
- Soil holds 1/4 of all biodiversity on earth[5].
- Yearly economic losses in affected agricultural areas in Europe are estimated at around €53/ha, while the costs of off-site effects on the surrounding civil public infrastructures are estimated to cost €32/ha[6]. The overall cost of soil degradation in the EU is estimated at €38 billion/year[7].
- Worldwide it is estimated that 70% of all agricultural area (3,500 million ha) is degraded[8].
- 115 million ha, or 12% of Europe's total land area, are affected by water erosion. 42 million ha are affected by wind erosion[9].
- EU soils contain more than 70 billion tonnes of organic carbon, which equals around 7% of the total global carbon budget[10]. A loss of 0.1% of carbon from EU soils is equivalent to carbon emissions of 100 million extra cars, or about half the existing EU car fleet[11].

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 protecting our soils they must support a fundamental CAP reform now and adopt an EU soil Directive[12].

For footnotes, please refer to separate reference sheet

The CAP & Soil

pic1: ©Ariel Brunner, pic2: CSO Archive

The SoCo project - a blueprint for better stewardship of our soil

The European Parliament has requested the European Commission to carry out a project entitled "Sustainable Agriculture and Soil Conservation" (SoCo) which considers soil conservation through simplified cultivation techniques as a key element towards sustainable agriculture[13]. The project started in 2007 and was finalised in 2009. In addition to improving the knowledge on soil conservation agriculture and the related policy framework, the project covers dissemination activities to relevant stakeholders and policy makers in an EU-wide context.

The most successful recommendations presented by the SoCo project to address diverse aspects of soil degradation are the following[14]:

- Targeting water erosion by minimising the area of bare soil and adequate land management reflecting site-specific conditions
- Targeting soil organic matter and soil biodiversity decline through arable stubble management
- Improving soil quality on arable land through the obligation for the farmers to complete an annual Soil Protection Review.

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Counteracting soil decline through improved soil diagnostics in Finland

The decline in the soil structure is often not detected by farmers because conventional monitoring methods do not give sufficient information about the soil structure. Thus farmers are normally unaware of the consequences of their activities affecting soil structure.

To counteract this problem Finnish farmers get advice on soil structure. Advisors, together with the farmers, take soil samples in regular intervals to check soil structure. Farmers can undertake a simplified version of the "spade diagnostics" by themselves. This results in higher awareness and allows farmers to undertake measures to improve soil structure if necessary[15].

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Soil Erosion in the Czech Republic

Soil erosion is one of the most important environmental threats in the Czech Republic. The Research Institute for Soil and Water Conservation estimates that the annual soil loss is more than 21 million tonnes, valued at approximately 169 million Euro[16].

The most common type of erosion is caused by water, especially in the hilly and mountainous areas; in some regions (mainly lowland) also wind erosion can be a problem. 76,5% of the land is threatened by water erosion and 19,4% is threatened by wind erosion. In total 42% of agricultural land is in some way threatened by erosion (a third of that for water alone).

New GAEC (Good Agricultural and Environmental Condition) rules impose stricter conditions for the farmers, but only around 11% of the arable land and 17% of the total farmland are required to fulfil the conditions for reducing soil erosion[17]. Most farmland is not covered yet so further enlargement of the area under GAEC conditions is planned.

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

The CAP & Water Quality

Water Quality

Pollution from sewage has been reduced but agriculture is still a major source of diffuse pollution to European waters. Nutrients which leak from fertilisers into fresh and coastal waters is decreasing the amount of oxygen present in those waters. This can have impacts ranging from plant and wildlife loss to devastating blooms of algae which can wipe out life creating so-called dead zones.

Soil erosion is also a big problem: sediment build-up in rivers and lakes can smother invertebrates and fish eggs that rely on oxygen. These soils can also carry pesticides and nutrients into our waters.

Diffuse pollution is not just a problem for wildlife, it can also threaten domestic drinking water supplies, driving up costs of treatment and even causing some sources to be abandoned.

If applied appropriately, the Nitrates Directive[1] greatly reduces pollution but as agriculture is still a major source of pollution it must be tackled if we are to reverse biodiversity decline, supply safe drinking water and meet the targets of the Water Framework Directivev (WFD)[2].

Existing CAP safeguards are inadequate to protect our waters from these impacts and forthcoming reforms are a vital opportunity to address them.

Facts & figures

- Wetlands help to filter damaging nutrients and other pollutants. In many European countries, wetland loss exceeds 50% of the original area[3] which significantly reduces the capacity of the natural environment to cope with increased nutrients[4].
- Farming is responsible for over 50% of nitrogen in water and is a significant source of phosphates[5]. Excess levels of these fertilisers in water bodies lead to eutrophication which can lead to the loss of many species.
- Pesticides can have a devastating effect on aquatic biodiversity. There are also considerable clean-up costs to ensure drinking water standards are met.
- In England, diffuse pollution is the second most common reason for 'Sites of Special Scientific Interest' (many of which are part of the Natura 2000 network) being in unfavourable condition[6].

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 water quality they must support a fundamental CAP reform now and the full implementation of the WFD.

For footnotes, please refer to separate reference sheet

The CAP & Water Quality

pic1: ©WWF Vicente Bodas Riego, pic2: AW Ilia Ukolov Belarus Sporava Kakorytsa

© Melinda Seckington

Consequences for EU water customers

The cost of treating nutrients and pesticides in drinking water, necessary to meet vital environmental and health water quality standards, is ultimately passed onto water customers through their water bills while the cause of agricultural diffuse pollution is not tackled at the source and polluting farming continues to be heavily subsidised.

This means that citizens are paying both as tax payers and water customers to support polluting farming practices and address the impacts caused by it. This situation is typical of many Member States. In England, water companies spent £189 million removing nitrates and £92 million removing pesticides from their water supplies between 2004-05 and 2008-09[7].

The CAP must ensure that the impacts of farming on drinking water and the aquatic environment are minimised, making farming more sustainable. Citizens do not want to pay the bill twice.

© data from NASA processed by SMHI

Dead zones choking the Baltic Sea

The Baltic Sea is home to seven of the world's ten largest marine dead zones, where the sea's oxygen has been depleted by algae blooms caused by the build up of nutrients (eutrophication) – literally suffocating the sea. Due to its location and the way its waters flow (enclosed sea with limited water exchange with the Atlantic Ocean), the Baltic Sea is very sensitive to oxygen depletion[8].

Agriculture is responsible for a significant proportion of the nutrient load in the Baltic Sea and, when combined with the discharge of sewage water and drainage of wetlands in coastal areas, the impacts on the marine environment are severe, leading to large scale fish deaths and beach closures, for instance.

Dead zones can be reversed if diffuse pollution is tackled. The CAP must seek to encourage practices that minimise the loss of nutrients into the aquatic environment. Agriculture based on the principles of ecological recycling could lead to a decrease in the calculated nitrogen leaching by half as well as a significant reduction in the loss of phosphorus, an essential plant nutrient[9].

Well managed peatlands supply clean water to UK consumers

Peatlands provide a variety of ecosystem services such as habitat for biodiversity, carbon sequestration, recreational opportunities, as well as regulating water supply and purification. Often these services can be provided simultaneously.

The Sustainable Catchment Management Programme (SCaMP)[10] in the UK has developed an integrated approach to catchment management within two key areas of upland England. Both areas comprise largely open ground habitats, such as rough grassland and heather moorland.

The SCaMP project has been undertaken by the water company United Utilities, in partnership with the RSPB (the UK Partner of BirdLife). Although primarily set up to deliver government nature conservation targets and enhance biodiversity, it has also encouraged more sustainable farming practices among the company's farming tenants and contributed to water quality.

© Prof Simon Haslett

Prepared by:

The CAP & Water Scarcity

Water Scarcity

Throughout the EU, irrigation for agriculture has a major impact on the status of our waters and wetlands. These impacts are significant in Mediterranean countries where agriculture consumes more than two thirds of the total water used. The expansion of irrigation has been promoted by the CAP, through support for water intensive crops and funding of new irrigation infrastructure, often in water stressed areas.

While irrigation can raise productivity in the short term, it is often unsustainable in the long term and has caused significant impacts on the environment, especially groundwater where it can lead to depletion, pollution or salinisation of the water source.

Irrigation is often the main reason for insufficient water left to sustain rivers and wetlands. These valuable habitats deliver critical services such as water for drinking and industry, sustainable flood control as well as supporting tourism and leisure. The issue of water availability will increase in importance due to demographic shifts and climate change.

We must take the opportunity provided by the CAP reform to ensure water is used more sustainably in the future for the benefit of both people and the environment.

Facts & figures

- Agriculture accounts for around 24 % of total water use in Europe. This can reach up to 80% in some parts of Southern Europe[1].
- Water abstraction for irrigation is the second most important cause for low flow regimes in rivers and lowered groundwater levels[2].
- In Spain, around 13% of the irrigated area extracts water from over-exploited aquifers or those in danger of saltwater intrusion. Water abstractions by unregistered irrigators have contributed considerably to this problem[3].
- Water scarcity affects at least 14 EU Member States and concerns around 100 million inhabitants in the EU[4].
- The direct and indirect costs of drought can be very high. In Barcelona for example, the total losses of the 2007-2008 drought are estimated at 1,661 million Euros (for a one-year period), almost 1% of the Catalonian GDP[5].
- Due to climate change, annual rainfall is likely to decrease by up to 20% in the southern Mediterranean[6].

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 sustainable water use they must support a fundamental CAP reform now and the full implementation of the WFD.

For footnotes, please refer to separate reference sheet

The CAP & Water Scarcity

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Daimiel National Park

Daimiel National Park is an iconic Ramsar[7] wetland in Spain. Its environmental value is underpinned by the rich vegetation and bird populations which rely on water supplied by the aquifer in the Guadiana River basin.

For decades, this aquifer has suffered from over-abstraction of water because of the increasing irrigation (the maximum irrigated area was reached in 1989 with 208.000 ha and a water abstraction up to 550 hm^3/year) supported by CAP funding.

Uncontrolled and illegal irrigation of crops, such as sugar beet, have dried out more than 80% of the flooded area, causing a serious drop in groundwater levels and threatening the water supply the human population in the area.

To address the problem, water transfer and use of CAP tools to support traditional rainfed crops were tried. However, none of these measures have led to a reduction in water use. This problem can only be addressed through an in-depth reform of the CAP that prioritises the protection of water resources.

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Unsustainable irrigation in Portugal[8]

When it is orientated towards sustainable practices, funding measures can bring environmental benefits by improving the efficiency of water use in existing irrigation schemes.

However this is rarely the case and often money from the CAP is used to encourage unsustainable practices. Out of over €790 million invested in irrigation in Portugal, only €80 million is ring-fenced to improve the sustainability of existing irrigation systems, and no resources are allocated to the implementation of the Water Framework Directive.

Most of these funds will be used for the expansion of the irrigated surface, thus increasing water demand. For example, the Alqueva dam development (receiving €534 million of public support) will create 200,000 ha of new irrigated area in the Alentejo region, destroying EU priority habitats in the steppe (vast semi-arid grass-covered plains) and heavily transforming high nature value farming systems.

The new CAP must ensure money is spent on making current practices more sustainable rather than funding environmentally damaging practices.

Reconciling wetland restoration with extensive farming

The lakes of Nava, Boada and Pedraza in Northern Spain used to flood during the rainy season to form 5,000 hectares of wildlife rich wetlands. These valuable wetlands have now disappeared due to farming intensification and widespread irrigation supported by the CAP.

Since 1990, the Fundación Global Nature has undertaken a project to reconcile wetland restoration with extensive farming. The project includes land stewardship agreements with farmers to recover some parts of the wetlands and to create buffer strip areas with thistle crop. These actions directly benefit farmers as they get free grazing for the livestock and biomass production. The restored wetlands now support 200 species of wildlife.

This alliance between farming and wetland conservation has not just benefited the environment but also slowed down rural depopulation and allowed job creation (eco tourism etc.). It reinforces the idea that rural development based on nature protection should be promoted through a new CAP.

© D. Nye

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