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PBL Note

Greening the CAP

An analysis of the effects of the European Commission's proposals for the Common Agricultural Policy 2014-2020

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Main conclusions

The positive impacts of the proposals for the Common Agricultural Policy for greening Pillar I on farmland biodiversity and reducing greenhouse gas emissions will probably be small. Member States must assign 30% of their Pillar I budget to these measures, an total annual amount of 13 billion euros. The ecological focus area requirement is potentially the most effective measure. This effectiveness could be increased by tailoring the measures to local conditions and stimulating the realisation of a green infrastructure through regional coordination and cooperation. Halting farmland biodiversity loss is essential for meeting EU biodiversity targets. A well-designed greening component within the CAP could play a pivotal role in meeting these targets.

The livestock sector, more so than the crop sector, is associated with a range of persistent sustainability issues, such as animal welfare, the use of antibiotics and environmental issues. The present proposals, however, provide no incentive for substantial changes in this sector. Attributing 5% to 10% of the total CAP budget, in the coming budget period, to subsidise investments in improved animal housing systems and management practises, could provide a strong impulse towards making the livestock sector more sustainable.

The proposed reform would hardly change the impact of the CAP in developing countries. Developing countries would profit most from a further reduction in market distortions and from cooperation in development of CAP-supported innovations and technologies.

Main findings

Introduction

This report presents an analysis of the European Commission's legislative proposals for the EU Common Agricultural Policy (CAP) for the 2014–2020 period. The analysis was based on literature research and results from recent PBL studies. The first part of the analysis focused on the effects of the three proposed 'greening measures' targeted at farmland biodiversity and greenhouse gas emissions from agriculture. These three greening measures consist of creating ecological focus areas, crop diversification, and the maintenance of permanent pastures, as proposed within the framework of Pillar I direct payments to farmers. According to the proposals, Member States have to assign 30% of their budgets to direct payments for these measures. For the whole EU, this amounts to 13 billion euros, annually. We suggest alternative policy approaches that may be more effective to improve farmland biodiversity and reduce greenhouse gas emissions (Chapter 2).

The second part of the analysis looked at impacts of measures in Pillars I and II of the CAP proposal on the livestock sector and developing countries. Livestock, more than other agricultural sectors, is linked with sustainability issues and related public concerns, such as animal welfare and antibiotics resistance. The CAP could address these issues more than it does now. We investigated options to stimulate significant changes in this sector (Chapter 3). Finally, we looked at the impact of the proposed policy on developing countries (Chapter 4). As laid down in the Treaty on the Functioning of the European Union, 'the EU shall take account of the objectives of development cooperation in the policies that it implements which are likely to affect developing countries'. The CAP is one of these policies, as it may influence trade conditions for developing countries and food prices via EU production and market access.

Effect of the three greening measures

The effect of ecological focus areas depends strongly on their design

According to the proposals, farmers are to assign 7% of their land as ecological focus areas, and turn those areas into fallow land, landscape features, buffer strips or afforested areas. The actual effect will depend largely on the actual spatial implementation. The most favourable design, in terms of farmland biodiversity gains, will vary, depending on the local situation. Generally speaking, a regionally coordinated, more or less permanent green infrastructure would be optimal. However, in the proposals, the individual farmer has a large degree of freedom in implementing this requirement, including annual changes in the location of the ecological focus areas. Moreover, the actual implementation may offer several loopholes, such as renting marginal land nearby or even further away, which could render the whole measure almost ineffective.

The introduction of ecological focus areas will probably also lead to a reduction in greenhouse gas emissions within the EU, mainly as a result of a reduction in fertiliser use. As a consequence, EU agricultural production will be lower, too, leading to extra food imports and related greenhouse gas emissions, outside the EU.

If the ecological focus areas are being implemented as buffer strips, they may have additional environmental advantages, such as reducing the leaching and run-off of nutrients and pesticides into surface waters.

Crop diversification already common practise

The crop diversification measure would oblige farmers to grow at least three different crops, with the largest crop covering no more than 70% of the farm holdings' area and the smallest no less than 5%. Most arable farmers already grow three crops or more. It is estimated that the measure will only impact around 2% of EU arable areas. Therefore, this greening measure would not bring about substantial changes in farming practises, which also implies that the effect on farmland biodiversity and on reducing greenhouse gas emissions would be very limited.

Limited impact of measure to maintain permanent grassland

The effect of the greening measure that obliges farmers to preserve most (at least 95%) of their permanent grasslands is difficult to assess, as the amount of grassland that could be converted into arable land is uncertain. According to the European Commission's Impact Assessment, this potentially is the case for 30% of European grasslands. However, it is not very likely that such a large grassland area would be converted, in the coming years. Moreover, the proposals would leave room for farmers to convert up to 5% of their permanent grasslands. Therefore, the added value of the permanent grassland requirement will probably be limited. With respect to the main purpose of the measure – to reduce or avoid greenhouse gas emissions – should be noted that current agricultural greenhouse gas emissions are mainly related to livestock farming activities and not to changes in land use.

A more sustainable livestock production

The European livestock sector is faced with a number of challenges:

- reduction in the use of antibiotics, in order to inhibit the further development and dispersion of resistant pathogens;
- improvement of animal welfare;
- improvement of resource efficiency and reduction in emissions of greenhouse gases, phosphate and nitrogen compounds;
- increasing the added value for farmers, to increase their incomes.

Reforms not aimed at the livestock sector

The present proposals do not provide coherent incentives that stimulate rapid and substantial changes needed for a sustainable EU livestock sector. Current reform proposals only address the issues of animal health and animal welfare via rural development (Pillar II). Furthermore, the current option for Member States to dedicate up to 10% of the Pillar I budget to specific support measures – including those on animal welfare – is discontinued in the proposals. The reform proposals for Pillar II offer a wide range of opportunities to stimulate a transition towards a more sustainable livestock sector. In order to make this transition, farmers need to be rewarded for producing more sustainable products and following production methods. The central question is whether Member States will effectively use the opportunities brought about by the proposals. In order to achieve a substantial and effective change in livestock production systems, an average 5% to 10% of the total CAP budget would be needed to support investments in animal housing and management practises. This share would have to be proportional to the size of the livestock sector in Member States. Innovations will be needed to reconcile the sometimes conflicting challenges, such as simultaneously improving animal welfare and resource efficiency. For an effective approach regarding these innovations coordination between Member States will be necessary.

Effect on developing countries

The CAP proposals do not refer to development objectives

The current proposals do not refer to development objectives, nor do they imply a global scope of measures that have potential for synergy with development objectives. However, the EU treaties prescribe that development cooperation objectives must be taken into account in any policy that is likely to affect developing countries. This is particularly relevant for the CAP because changes not only influence farmers and consumers within the EU, but may also affect those beyond the EU, including in developing countries. The CAP still contains elements of price and market regulation, such as quota (for milk and sugar), coupled payments and export subsidies for several commodities. In combination with border measures, such as import tariffs, these regulations may influence trade positions of developing countries. Regulations may both benefit and harm the position of developing countries, as regulations differ per country.

Reform hardly changes the impact of the CAP on developing countries

The proposed changes to the CAP are expected to have minor effects on developing countries; in both a positive and a negative sense. In general, the influence of the CAP on world trade conditions has decreased over the last two decades, as the CAP has been shifted towards measures that are less trade distorting. This reduction in market distortion has offered more opportunities for the agricultural sector in developing countries, although effects have differed per country. Some developing countries that have free access to the EU market benefit from the CAP, because it keeps the EU internal market prices of certain commodities higher than on the global market.

The proposed changes to the CAP that are most relevant for developing countries consist of the introduction of the greening measures, changes in market measures, the possibility to install risk management tools for EU farmers, and changes in commodity policies (notably for milk and sugar). The greening measures are likely to have a limited effect on EU agricultural production and, thus, on the world market. The proposed changes to market support measures appear to be too small to have a significant influence on production and prices. Any distorting effect on world prices, caused by an enhanced risk management toolkit, is also expected to be small. Changes to commodity policies may affect certain developing countries. In particular, sugar producing countries with preferential access to the EU market may suffer from the abolishment of EU sugar quotas and the subsequent downward effect on EU sugar prices.

Policy implications

Without proper design and implementation, the proposed greening measures will hardly be effective in stimulating farmland biodiversity and reducing greenhouse gas emissions. Their effectiveness would be enhanced by tailoring them to local conditions and stimulating the realisation of ‘green infrastructure’ through regional coordination. An appropriate approach could be to set general objectives and conditions and to give maximum freedom for optimal implementation at a local level through farmers’ collectives. Farmers who do not wish to participate in such a coordinated approach could still fall under the proposed generic greening regime, with strict administrative procedures.

The persistent problems of sustainability in the livestock sector require a major change in production systems. The current CAP proposals have not seized the opportunity to actively support such a change. It would take an estimated 5% to 10% of the total CAP budget to support investments in improved animal housing systems and improved management practises, in the coming budget periods. This share should be in

proportion to the magnitude of the livestock sector in each Member State. Also investments are needed in research and development of innovative husbandry systems that combine improvements in animal welfare with a resource-efficient production. The budget for such investments could partially come from Pillar I (with no co-funding by the Member states required) and Pillar II (with co-funding).

Opportunities exist for a CAP that is more correlated with development objectives than that of the current proposals; especially, when seen in a broader context of trade policies, multilateral and development cooperation. This would require a focus on the global dimension of agriculture and food supply, as well as an approach that seeks synergies in the CAP reform with development objectives, rather than one that just applies the 'do no harm' principle. The CAP would be better aligned with development policy by a further decoupling of support and better targeting of direct payments to the delivery of public goods – thus reducing distortion of markets by direct payments.

1 Introduction

The European Commission published a set of legal proposals on 12 October 2011, for the Common Agricultural Policy (CAP), for the 2014–2020 period. The CAP is of prime importance because of two reasons. First, the CAP has (or could have) a significant effect on EU agriculture in the widest sense. Important aspects, such as farm income, the distribution and type of farming across the EU, land management and the delivery of public goods (including biodiversity and effects on climate) are influenced by the design of the CAP. Secondly, the CAP budget is very large; with a total of 420 billion euros as proposed for the 2014–2020 period, it would be around one third of the total EU budget.

1.1 Continuation of two-pillar structure

In the EC proposals, the present two-pillar structure of the CAP is to be maintained (see Table 1). The main instruments of Pillar I are direct payments to farmers and market measures. The most important aim of these payments is to provide 'basic annual income support to EU farmers' (EC, 2011c). For Pillar I, a total budget of 317 billion euros is proposed for a period of 7 years (2014-2020) (EC, 2011g). The Pillar I payments are almost completely financed by the EU.

Pillar II is directed at rural development. Member States have to draw up and co-finance multi-annual programmes under a common framework. The following six EU-wide priorities for Pillar II are set by the European Commission (EC, 2011f):

- fostering knowledge transfer and innovation in agriculture, forestry and rural areas;
- enhancing farm viability and competitiveness of all types of agriculture;
- promoting food chain organisation and risk management in agriculture;
- restoring, preserving and enhancing ecosystems that depend on agriculture and forestry;
- promoting resource efficiency and supporting the shift towards a low-carbon and climate-resilient economy in the agriculture, food and forestry sectors;
- promoting social inclusion, poverty reduction and economic development in rural areas.

The total EU budget for Pillar II, for the 7-year period, is 101.2 billion euros. Since Member States have to provide co-founding, the total budget spent within the framework of rural development programmes is significantly higher.

1.2 Goal and scope of this study

For this study, a first analysis was made of the potential impact of the proposals for the CAP reform on a number of themes. These themes are farmland biodiversity, emission of greenhouse gases, animal health and welfare, and policy coherence for development. Biodiversity and the reduction in greenhouse gas emissions, in the current proposals, are explicitly introduced as an objective of the direct payments. Animal health and animal welfare are subjects of great public concern.

1.3 Further timeline

These proposals will be discussed by the Agriculture and Fisheries Council and the European Parliament. The tentative timeline is that in December 2012 the Budget for Europe 2020 is to be adopted, while the CAP legislation will be finalised in spring 2013. This will mean that Member States will be able to finalise national implementation of CAP measures, which will be in force from 1 January 2014. The aim of the CAP reform is to contribute to the EU 2020 strategy, in terms of 'smart growth, sustainable growth and inclusive growth'.

Table 1

Main elements of the proposed CAP for the 2014-2020 period

	Pillar I	**Pillar II**
Mainly contributing to CAP objectives	Viable food production Sustainable management of natural resources and climate action	Sustainable management of natural resources and climate action Balanced territorial development
Main instruments	Annual direct payments to farmers Market measures	Multi-annual rural development measures, on contractual basis
EU budget (7 years)	317 billion euros	101 billion euros
Co-financing by Member States required	No	Yes
Main proposed changes	Introduction of greening measures (30% budget direct payments) New standards for cross-compliance More possibilities for coupled payments	New priorities, instruments More freedom in distribution of budget Change from 3 'axes' (thematic themes) to six priorities Enhanced risk management toolkit

2 Environmental impacts of greening Pillar I

2.1 Greening measures

In the legal proposals for the CAP after 2013, its present two-pillar structure is to be maintained: Pillar I for market measures as well as direct payments, and Pillar II covering rural development. According to the proposals, both Pillars will be modified. These modifications have several objectives, including increasing the contribution of the CAP to a more sustainable management of natural resources and climate actions.

Greening of Pillar I

The direct payments in Pillar I are mainly aimed to provide 'basic annual income support to EU farmers' (EC, 2011c). The annual EU budget of Pillar I is around 45 billion euros, which is a nominal figure over a period of 7 years (2014–2020) (EC, 2011g). Proposed changes to the CAP concern a reform of cross-compliance requirements and a new design for direct payments (Table 2). 'New good agricultural and environmental condition' (GAEC) will be added to cross-compliance (Table 2), and some management conditions that had perverse effects will be removed.

The most prominent change is the introduction of a greening component to Pillar I, with following three measures at farm level related to the eligibility of farmers to 30% in direct payments, rewarding them for their efforts:

- Crop diversification by growing at least three different crops, each covering an area of between 5% and 70% per farm holding. The legislative proposal does not promote crop rotation or specific combinations of crops, as the latter could be perceived as production support and hence distort trade.

Table 2

New design of Pillar I direct payments

Measure	**Description**	**Assumed main goal(s); in italic when stated by the EC**
Reform of cross-compliance	'New good agricultural and environmental conditions', concerning: groundwater, soil organic matter, wetlands Water Framework Directive Directive on sustainable use of pesticides	Increasing effectiveness, simplification Increased focus on the protection of wetlands and carbon-rich soils'
Greening of the first pillar	Mandatory, direct link with 30% of direct payments per farm	
Crop diversification	At least different 3 crops	Biodiversity, greenhouse gas emission reductions, environment Improvement of the resilience of soil and ecosystems
Maintaining permanent grassland		Biodiversity, greenhouse gas emission reductions, environment Environmental and climate benefits
Ecological focus areas on farms	7% of land (except permanent grassland)	Biodiversity, greenhouse gas emission reductions, *environment* Water and habitat protection
Basic Payment Scheme	National or regional flat rate per eligible hectare Redistribution of direct payment closing part of the gap between Member States	
Young Farmers Scheme	Mandatory, up to 2% of direct payments envelope	Socio-economic
Natural constraints support	Voluntary, up to 5% of direct payments envelope	Socio-economic, biodiversity
Coupled support	Voluntary, up to 5% (or 10%) of direct payments envelope	Socio-economic, biodiversity
Small Farmers Scheme	Mandatory, up to 10% of direct payments envelope; maximum of 500 to 1000 euros per farm	Socio-economic
Degressivity and Capping of income support (large farms)		Socio-economic

- Maintaining permanent grassland. This applies to grasslands that have not been reseeded for at least five years This requirement enforces – and in fact replaces – the GAEC standard that ensures the protection of permanent pasture (EC, 2009). Individual farmers are allowed to convert up to five per cent of their reference area, whereas national limits under current cross-compliance are defined by individual Member States and have no direct effect on individual farmers.
- Seven per cent ecological focus areas on all eligible arable land per farm – except permanent grassland and farms with less than three hectares of arable land. This condition may be met by setting aside arable land, left to lie fallow, or by using buffer strips, landscape features, afforested areas and terraces – if part of the eligible area of the farm. Consequently, there is overlap with GAECs. The conditions for payment are annual, and, therefore, non-contractual, ecological focus areas are not fixed in space or time.

Organic farms do not have to comply with these conditions to be eligible for payment. Agricultural areas that also have been designated as nature areas under the Birds and Habitats Directives have to comply, unless the measures interfere with Natura 2000 targets.

Relation between the greening of Pillar I and Pillar II

The greening measures in Pillar I have an annual, non-contractual basis and apply to all EU farmers in a generic way. This fits with the generic character of the Pillar I direct payments. There is a clear distinction with the rural development measures in Pillar II, which are based on multi-annual, location-specific contracts that are targeted to specific priorities. Six new EU-wide priorities for Pillar II are proposed (EC, 2011f). Restoring, preserving and enhancing ecosystems that depend on agriculture and forestry, is one of these priorities. In addition, prioritising the promotion of resource efficiency – in coherence with the Flagship Initiative for a resource-efficient Europe – and supporting the shift towards a low-carbon and climate-resilient economy is of importance for biodiversity. The preamble of the proposed regulations states that Member States should dedicate at least 25% of Pillar II budget to these two environmental priorities.

The annual EU budget for Pillar II is 14.5 billion euros, for the seven year period. Since Member States have to provide co-funding, the total funding of rural development programmes is significantly higher. Member States have to draw up and co-finance multi-annual programmes under a common framework. According to the proposals, 'it will be possible to adopt thematic sub-programmes, taking into account specific regional requirements in order to create particularly effective combinations of Pillar II measures with Pillar I greening measures.' In addition, all Member States are allowed to shift up to 10% of direct payments to Pillar II. However, Member States with direct payments of below 90% of EU average payments are allowed to transfer up to 5% of Pillar II funds to Pillar I.

2.2 Expected effect of greening measures on farming practices

Crop diversification

The greening of Pillar I will only have beneficial environmental impacts if it leads to actual changes in farming practices that are favourable to the environment. The greening requirement of growing at least 3 crops on a farm, will only impact 2% of EU arable area (EC, 2011e). As most European farmers already meet this requirement, the EU-wide effects of this measure will be limited and mostly restricted to specialised agricultural areas currently predominantly covered by mono-cultures. However, the

measure may counter potential negative developments; for instance, in the currently growing mono-cultured areas that service the increasing bio-energy demand. An example is the growing area used for maize cultivation for bio-gas production in northern Germany.

A larger part of the EU arable area may be affected if the requirement would be set for groups of crops, in stead of single crops. This is not yet clear for the EC proposal. Also, it is not clear how mixed cropping will be dealt with.

Permanent grassland

The impacts of the greening measures on the total grassland area may be positive, but will probably be limited. Only part of the grassland area is likely to be converted into arable land. The European Commission's Impact Assessment (EC, 2011c) shows that greening leads to opportunity costs for at least 30% of permanent grassland. This means that almost 70% is not likely to be converted; for example, because the soil is not very suitable for arable or forage production. For many farms, the possibility – as included in the legal proposals – to convert 5% of the reference permanent grassland area provides sufficient room to anticipate on the autonomous trend of increasing demand for food and bio-energy. Furthermore, farmers may anticipate on the coming regulations by ploughing their permanent pastures (which is allowed for 2012 and 2013 – before the reference year 2014), in an attempt to avoid the greening measure of having to maintain permanent grassland.

Ecological focus areas

According to the Impact Assessment (EC, 2011e), an ecological set-aside requirement of 7% in actual practice would lead to a set-aside of between 2.3% and 4.6%. This percentage is lower than the requirement, as currently fallow land is already considered ecological set-aside. However, part of this fallow land could be used in the future to meet increasing global demand for food and bio-energy. From this perspective, the effect of the ecological set-aside requirement could be larger than the assumed 2.3% to 4.6%.

In the legislative proposals (EC, 2011b), this greening measure has been modified from 'ecological set-aside' to 'ecological focus areas'. This would lead to a smaller area in set-aside of arable land than the proposed 7%, as it excludes permanent grassland and includes field margins, hedges, trees, fallow land, landscape features, biotopes, buffer strips and afforested areas. This is an overlap with cross-compliance: farmers are already stimulated to maintain these features, as they are part of the GAEC. In addition, there are certain loopholes, as a farmer with little ecological focus area could rent such areas from farmers in other locations with plenty of these areas, or even rent parcels of land from non-famers.

2.3 Expected effect on farmland biodiversity

EU objectives and trends

A sustainable management of natural resources is stated as one of the main objectives of the CAP towards 2020 (EC, 2010a). This CAP objective contributes to the headline target to halt the loss of European biodiversity by 2020, and is thus linked with the EU Biodiversity Strategy to 2020 (EC, 2011h). The CAP and the biodiversity strategy both aim at enhancing the provision of environmental public goods by farmers. The EU Biodiversity Strategy to 2020 also includes targets for a 100% increase in the number of habitat assessments and a 50% increase in the assessments of species, to

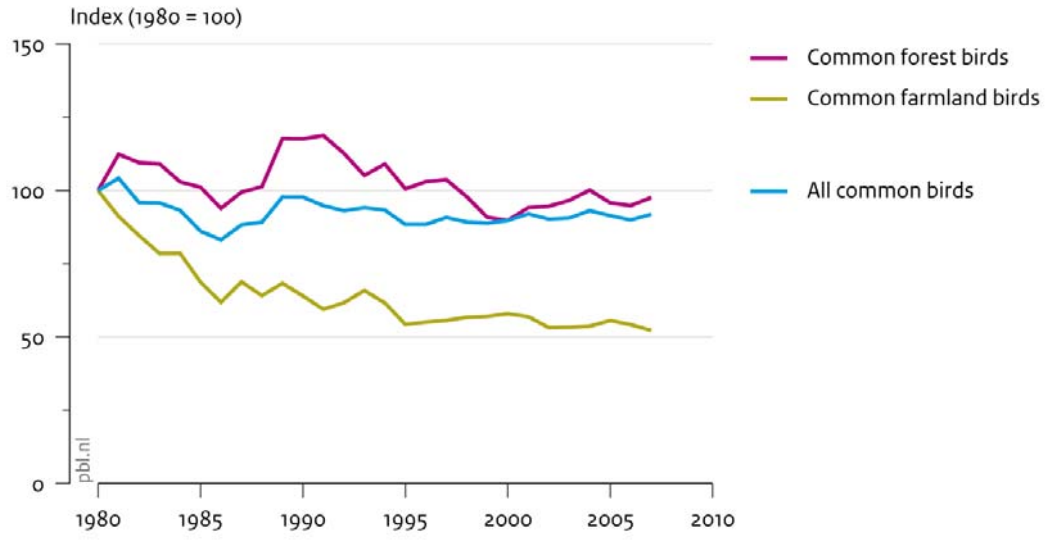
demonstrate improvements in conservation status compared to the baseline (EC, 2011h). The Biodiversity Strategy to 2020 states that the reformed CAP will be an important instrument in achieving EU biodiversity goals, through greening of Pillar I and new priorities in Pillar II. One of the six new key priorities aim to preserve and enhance agro-ecosystems (EC, 2011f).

Present-day European agricultural landscapes have developed over the centuries through interactions between farming and the environment. Both natural and agricultural species have adapted to the half-open, semi-natural conditions prevailing in extensively managed farmlands (Firbank, 2005). Agricultural ecosystems harbour a significant part of European biodiversity: half of the EU land surface is actively farmed, and 55 of the 231 habitats under the Habitats Directive require agricultural management (EEA, 2010).

Extensive agricultural landscapes, as well as the species they harbour, have been under threat due to the intensification of agricultural practices over the last decades, and in specific cases due to land abandonment (Bignal and McCracken, 1996; EEA, 2004; Strijker, 2005). Pressures, such as the use of external inputs (e.g. fertiliser and pesticides), decreasing crop diversity, simplification of cropping methods, as well as the homogenisation of landscapes, all have a negative impact on farmland biodiversity (Le Roux et al., 2008). Consequently, agricultural biodiversity is rapidly declining, as demonstrated by the common farmland bird index (EEA, 2009b), which has been proposed as one of the core effect indicators for the new CAP (EC, 2011g). Farmland bird numbers dropped by 20% to 25% between 1990 and 2007, whereas common bird populations decreased less (Figure 1). The aforementioned agriculture-related pressures also threaten biodiversity in surrounding natural areas, through water pollution, eutrophication, acidification, and desiccation. Nearly 30 species in the Habitats Directive and nearly 40 species in the Birds Directive are linked to agro-ecosystems (Miko, 2010).

Figure 1

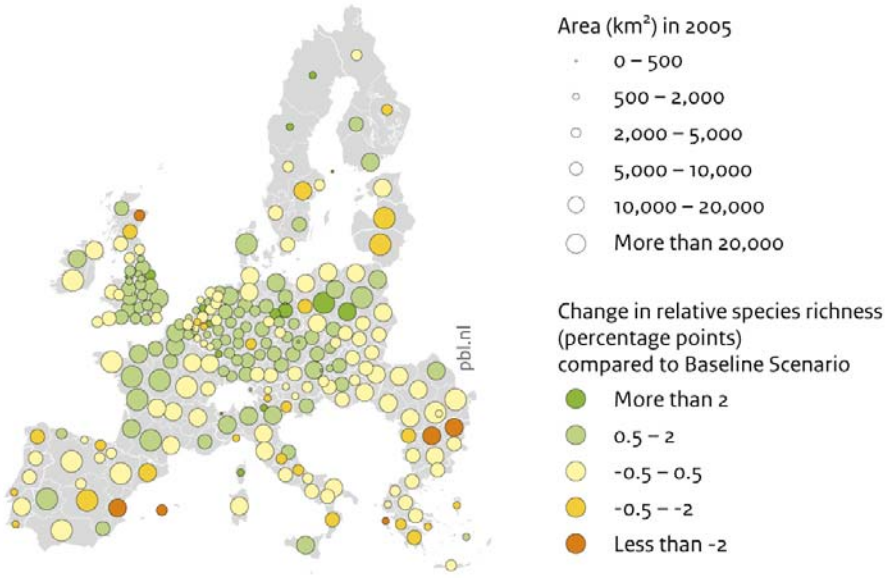
Populations of all common farmland and forest birds in 22 European countries



Source: EEA (2009b)

Figure 2

Effects of greening measures (Pillar I) on relative species richness of agricultural land, 2020



Source: Derived from the 'Greening scenario' minus 'moderate shift measures' from Van Zeijts et al. (2011). Changes are mainly caused by net 5% ecological set-aside of arable land.

Positive biodiversity impacts may be expected from ecological focus areas

The introduction of ecological focus areas may result in about one per cent more species richness on EU farmland by 2020. This one per cent increase is not absolute, but relative to a baseline scenario that does not foresee greening of the CAP (adaptation of PBL results from Van Zeijts et al. (2011)). Species richness is very much related to land-use type and land-use intensity. Changes in land use and intensity – under the influence of policy measures – are therefore a rough indicator of changes in biodiversity in farmland areas. When compared to the present situation, this would not result in an increase in agricultural biodiversity, but it would slow down the projected decline. On the 2020 time horizon of the PBL analysis, the proposed greening measures appear not very effective in extensively farmed regions in the southern part of the EU (Figure 2). This is mainly because most of the arable land in these areas is already under low or intermediate management. In addition, regions dominated by grassland would show little effect. Arable set-aside would slightly increase land-use pressures in the EU, leading to conversion of grassland into arable land and intensification of the use of remaining grasslands in some regions. Figure 2 shows negative impacts on species richness in Scotland and Bulgaria, but these could also occur in other regions. Overall, in most regions, farmland biodiversity would be improved by the implementation of ecological focus areas.

Management conditions for ecological focus areas as yet unclear

Legislative proposals are described in general terms, while the actual impacts on biodiversity depend very much on local conditions, details of regulations, and practical implementation. This would apply to some of the new GAEC standards as well as the

greening measures. For example, the ecological focus areas could be implemented in a random way, scattered over a region, sown with grass (no chemical inputs) and ploughed every year. This would barely contribute to biodiversity. Additionally, production loss associated with set-aside could provoke extra imports leading to impacts outside the EU, a net global loss in biodiversity as well as potential intensification on remaining arable land in the EU.

However, biodiversity could improve substantially if ecological focus areas would be implemented in such a way that they create a region-specific natural habitat for species under threat, organised on landscape level through multi-annual green infrastructure. Relevant boundary conditions concern shape and size of the areas (sufficiently large or broad), vegetation type (e.g. herbs or grains without chemicals), duration (multi-annual) and location. Preferably, ecological focus areas would be connected through a multi-annual green infrastructure, yielding associated positive effects on biodiversity through species migration from ecological stepping stones (Sutherland, 2004) and by establishing keystone structures, such as hedgerows and woodlands (Tews et al., 2004). This could be reached by combining the Pillar I greening measure and compensating additional costs and stimulating regional cooperation with Pillar II. Apart from contributing to biodiversity, ecological focus areas could deliver a number of ecosystem services (MA, 2005), such as good water quality, the recreational appeal of landscapes, and biological pest control.

For biodiversity, the added value of the greening measures related to permanent grassland is uncertain, but probably small

Maintaining permanent grassland – at least the extensively managed or older permanent grasslands – is important for biodiversity, due to the fact that these areas are often species-rich. However, impacts from the greening measures on the total grassland area, although limited, may be positive. For many farms the possibility, as stated in the legal proposals, of converting 5% of the reference permanent grassland area would provide sufficient room to anticipate the autonomous trend of increasing food and bio-energy demand. Furthermore, large areas of species-rich grassland are not or not very suitable for arable production and may not be likely to be converted, in any case (Section 2.2).

In addition, management requirements are lacking in the permanent grassland measure, as in the measure related to ecological focus areas. The legal proposals do not place any restrictions on management intensity, as is shown by the fact that intensively farmed, species-poor permanent grasslands also are eligible for greening payments. Hence, biodiversity in extensively managed grasslands could still be threatened by intensification.

Crop diversification is positive for biodiversity in mono-culture areas, but at EU scale the added value is negligible

The greening requirement of growing at least 3 crops on a farm, will only impact 2% of the EU arable area (EC, 2011e). As most European farmers already meet this requirement, the EU-wide effects of this measure will be limited and restricted to specialised agricultural areas predominantly covered by mono-cultures. In the future, these areas may expand, such as in mono-culture maize for bio-gas production, due to increasing bio-energy demand. In mono-culture areas, the biodiversity measure would increase both spatial and temporal heterogeneity (Benton et al., 2003), potentially increasing farmland biodiversity. A three-crop criterion for ‘groups of crops’, such as cereals or oil seeds, would increase the impact, substantially.

Better link between CAP payments and biodiversity performance, less risk of land abandonment

Effects on income changes would differ considerably between regions. Incomes in extensively farmed regions – in particular, those with grazing systems – would improve, while those in areas with intensive arable farming would decrease. The suite of Pillar I modifications – introduction of a basic rate, greening, natural constraints payments – may lead to a better link between CAP payments and biodiversity performance of farming systems. As regions with a risk of land abandonment often also are species-rich and extensively managed, the CAP changes may decrease this risk by providing the incentive to continue farming through increased support. Member States could influence this further using the natural constraints support in Pillar I. Land abandonment of semi-natural areas, however, is not necessarily bad news for biodiversity, as in a transition towards wilderness, biodiversity changes but does not necessarily decline. However, this process could take many decades, depending on migration of species and the impact of remaining agriculture in surrounding areas.

2.4 Greenhouse gas emissions

Objectives to reduce greenhouse gas have been set for 2020 and 2050

The European Commission's Communication on the CAP towards 2020 (EC, 2010a) names climate action as one of the three objectives set for the CAP. At EU level, there are two major objectives concerning a reduction in greenhouse gases. The first is the 2020 target, which aims at a reduction in EU greenhouse gas emissions of 20%, compared to the level of 1990. This reduction is expected to partly be achieved trough the Emission Trading Scheme and, partly, through actions by Member States within the framework of the Effort Sharing Decision (ESD) (European Union, 2009). This Effort Sharing Decision sets national ceilings for those sectors that do not fall under the ETS, which includes the agricultural sector. At EU level, the ESD is expected to deliver an approximate 10% reduction in emissions from the covered sectors, by 2020, compared to 2005 levels. Some emission sources, including land use, land-use change and forests, are excluded from the ESD.

The second objective is presented in the *Roadmap for moving to a competitive low carbon economy in 2050* (EC, 2011i), which sets indicative targets for the different sectors. The 2050 target for agriculture is a reduction in greenhouse gases of 42% to 49%, compared to the level of 1990. Compared to emission levels of 2005, this implies a reduction of around 30%.

Alongside climate mitigation, climate adaptation is often mentioned as being important for agriculture. The proposed Pillar I measures are not meant directly to contribute to climate mitigation, although according to the EC Impact Assessment, a positive side-effect is expected (EC, 2011d).

Present situation and trends

Direct agricultural greenhouse gas emissions in the EU are presently responsible for around 465 Mt CO_2 eq per year, being around 9% of EU greenhouse gas emissions (Lesschen et al., 2011). Around 55% of these emissions consist of methane, mainly from ruminants in the livestock sector, and 40% is nitrous oxide (Figure 3).The net carbon emissions from agricultural soils presently amount to approximately 20 Mt. This is the sum of soil emitted carbon, mainly from arable soils (amounting to around 50 Mt, annually), and soil sequestered carbon, mainly under grasslands and permanent crops (Schulp et al., 2008). Besides direct emissions from agriculture, more indirect emissions also occur, such as those connected with fossil-fuel use, electricity and the manufacturing of fertilisers.

In the 1990–2007 period, greenhouse gas emissions from the agricultural sector in the EU27 dropped by more than 20% (EEA, 2009a). The main reasons for these decreases were the shrinking stocks of farm animals – due to, for example, milk quotas and reductions in livestock numbers in central Europe – and a reduction in the use of nitrogen fertiliser. Emissions have stabilised in recent years.

It should be noted that the exact magnitude of agricultural greenhouse gas emissions is difficult to determine, since emissions from all main sources – methane from animals, nitrous oxide and carbon from soils – are difficult to measure. This leads to differences between various estimates, such as between official data from National Inventories (for which often standard factors are used) and those resulting from scientific studies.

Impacts of the greening of Pillar I

Greening measures may lead to a reduction of 2% in EU agricultural greenhouse gas emissions, but to an increase in these emissions outside the EU

With regards to the reduction in greenhouse gas emissions, the three greening measures are mainly aimed at increasing organic matter and, thus, the carbon content of soils, and at maintaining the carbon already fixed in soils. As already stated in Section 2.3 (on biodiversity) effects to a large extent will depend on the details of the regulation. Important aspects and uncertainties are:

- the way in which the ecological focus areas are implemented;
- behaviour of farmers in the absence of greening measures (would they convert grassland to arable land?);
- commodity prices; if commodity prices are high, permanent grassland is more likely to be converted to arable land.

It must be emphasised that the effect of increasing the soil organic carbon content in most cases would be only temporarily; as soon as land management changes, all the extra carbon stored could be emitted in a short period of time, undoing all the previous carbon gains. The same is true for converting permanent grassland into arable land; if grasslands would be ploughed a year later, the carbon would still be released.

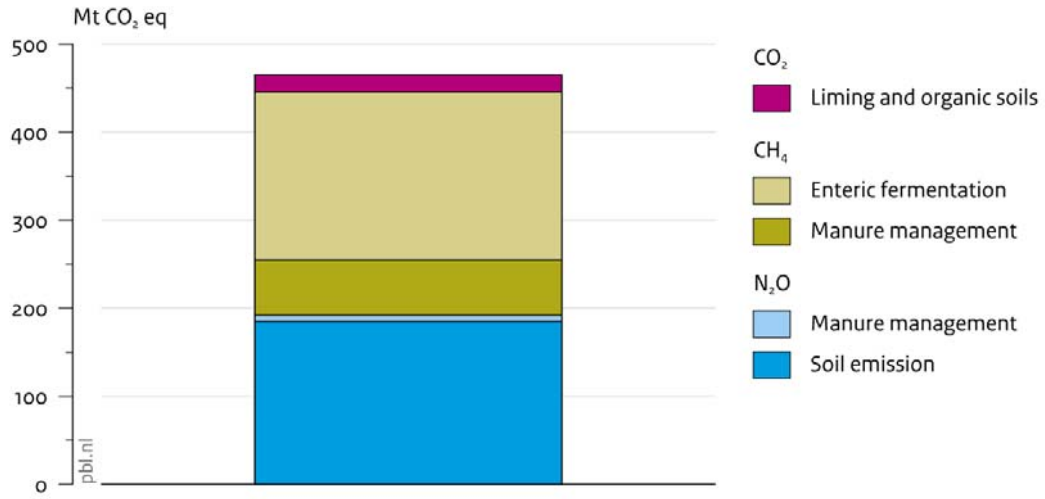
Van Zeijts et al. (2011) present model calculation of the effect of a number of greening measures. Although the assessed measures differ slightly from those proposed by the EC, the results can be used as an indication. The evaluation shows that the greening measures would have various effects.

The decrease in grassland areas between 2014 and 2020 would be 2.5% under a scenario with greening measures, and 3.1% under a baseline scenario without such measures being implemented. As a result of all projected land-use changes, annual carbon emissions from agricultural soils would be around 0.5 Mt CO_2 less than under the baseline scenario. It must be noted, however, that the greening measure assessed in the PBL report concerned a premium on grassland, not exactly corresponding to that of the proposal, which is effectively a ban on grassland conversions of more than 5% of a reference area.

The greening measures would not only have an impact on carbon emissions. Because of the ecological focus areas, the use of mineral fertilisers would be 4.5% lower, resulting in lower nitrous oxide (N_2O) emissions from soils. Emissions from the fertiliser industry could be lower as well, but these emissions are included in the EU Emission Trading Scheme. Due to a reduction in the number of animals and in animal production (e.g. -0.2% milk and -0.5% beef), methane and nitrous oxide emissions would be lower. This would lead to 0.9% less methane emissions and 2,0% less nitrous oxide emissions.

Figure 3

Greenhouse gas emissions from agriculture in the EU27, 2005



Source: Based on Lesschen et al. (2011) and Schulp et al.(2008). The carbon emissions represent a net value of emissions from arable soils and sequestration of carbon in grassland and permanent crops. Presently, carbon emissions only account for a small fraction of total greenhouse gas emissions from agriculture, but in case of large-scale conversion of grassland into arable land, these emissions could increase, significantly.

According to the report by Van Zeijts et al. (2011), the total estimated effect of the two evaluated greening measures (permanent grassland and ecological focus areas) would be around 7 Mt CO_2 eq annually, representing a reduction of around 2% in total EU agricultural emissions. However, there are major uncertainties related to these figures. These uncertainties include the manner of actual implementation of the proposed measures, the reaction of farmers to the measures, and uncertainties regarding natural processes. Another uncertainty concerns the effect of the predicted increase in land-use intensity.

Furthermore, it should be noted that the measures – notably the ecological focus areas – are expected to lead to an increase in imports, which, in turn, would lead to an increased production and to greenhouse gas emissions outside Europe. Although not quantified, this increase in emissions outside the EU may be of the same order of magnitude as the reduction in greenhouse gas within Europe.

2.5 Conclusions

The requirement of 7% in ecological focus area on each farm is probably the most effective of the three greening requirements, with respect to both biodiversity and greenhouse gas. Existing landscape elements would be better protected, and it is estimated that, with 7% ecological focus areas, farmland species richness would be 1% greater than without greening measures. The impact is uncertain, as it highly depends on how the measure is implemented. In any case, the greening of Pillar I would slow down but not halt biodiversity loss. Emissions of the greenhouse gas

nitrous oxide would decrease by about 2%, due to ecological focus areas. Impacts within the EU, however, would at least partly be offset by increasing production and, thus, biodiversity loss, and by increased greenhouse gas emissions outside the EU.

The requirement of maintaining permanent grassland, in principle, is an effective instrument to avoid carbon losses from agricultural soils. About 30% of permanent grassland areas could be converted into arable farming, leading to the emission of the carbon stored within these soils. However, in actual practice, only a small percentage is expected to be converted, between 2014 and 2020, probably falling within the allowed range of 5%. Therefore, it is questionable what the added value of this greening measure would be, compared to the grassland measure under the current cross-compliance regulation.

The greening requirement of crop diversification would have little impact. As most European farmers already meet this requirement, the EU-wide effects of this measure would be limited and mostly restricted to specialised agricultural areas that are currently predominantly covered by mono-cultures. The measure may counter future negative developments, but this is speculative. The added value of crop diversification is also questionable, compared with the current GAECs on crop rotation.

To be more effective, either for improving farmland biodiversity or reducing greenhouse gas emissions, the proposals for the greening of Pillar I would need to be improved or supplemented with targeted measures from Pillar II. Otherwise, the CBD targets for 2020 may not be met, with regard to species dependent on agricultural areas (CBD, 2011). Impacts could be increased through region-specific management conditions. For example, farmland birds would require broad, extensively managed strips of arable land. However, according to the ecological focus area requirement, farmers are free to meet this requirement by using only narrow strips of land. In addition, regionally coordinated measures that increase landscape heterogeneity through the construction of multi-annual green infrastructure would further increase farmland biodiversity.

Climate mitigation impacts from the greening of Pillar I would be limited, and are estimated to amount to up to 7 Mt of CO_2 eq, being a reduction of around 2% in total EU agricultural emissions. This reduction would be only modest because only some of the agricultural sources are covered in the greening Pillar I measures. Methane emissions may be reduced; for example, by modifying feed composition, feed additives, animal breeding, optimised manure storage, and by anaerobic digestion. Balanced fertilisation would reduce N_2O emissions and may even have net benefits for farmers. Soil management practises, such as systems with no or less tillage, would reduce the emission of soil carbon. Furthermore, reduction in food wastes and meat consumption would significantly reduce production levels and, thus, also emissions.

Neutralising threats on permanent (or species-rich) grassland could be an additional instrument or an alternative for a rigid implementation of the permanent grassland measure. Permanent grassland is being ploughed to meet the increasing global demand for food. The CAP itself also creates pressure in this respect, because of the demand for ecological focus areas. However, the most important policy-induced pressure seems to originate from the EU target for bio-energy. This target is inconsistent with the CAP requirement of keeping permanent grasslands in place.

The greening of Pillar I would provide few possibilities for targeting specific carbon measures and specific species, such as the most-threatened species on the red list, in specific areas. Pillar II measures are generally expected to be more effective, as they could be implemented in a targeted way, in multi-annual contracts and at optimal locations. Increasing budgets for agri-environmental measures, therefore, would benefit biodiversity. The minimum budget requirement of spending 25% on land

management measures could be increased. Furthermore, the co-financing requirement could be made less stringent for funds that are shifted from Pillar I to Pillar II.

Some on-farm measures, such as ecological focus areas, could be designed to have a positive impact related to multiple objectives. Measures aimed at improving conditions for biodiversity may also support ecosystem functioning, and, therefore, the provision of ecosystem services, such as carbon sequestration, water purification (by buffer strips), soil management, scenic values, and ecological pest control.

Differences between local and regional situations may be large with regard to type and intensity of farming, and biophysical and cultural features. These differences would not be captured by the generic greening of Pillar I. In addition, the proposed rural development programme (Pillar II), which would provide more freedom to Member States, also contains generic features, as it keeps strict accounting procedures in place. There are valid reasons for this, such as ensuring efficiency of expenditure and maintaining a level playing field. However, the approach remains rather top-down and has a risk of not being effective, rather than taking the local situation as a starting point, incorporating the wishes, ideas and capabilities of local communities, using persuasive power instead of obligations, and focusing on learning processes within the policy process (Hajer, 2011). The legislative proposals for the CAP still focus on regulation rather than providing objectives and a framework for Member States (and their regions) to seek effective measures for reaching those multiple objectives.

3 Sustainable livestock production

This chapter presents an assessment of the effect of the proposals on the sustainability of the European livestock sector. This economic sector is important for Europe's rural areas, as it produces meat, dairy products and eggs, products that are highly appreciated by consumers. Moreover, grazing livestock contribute to the conservation of cultural or semi-natural landscapes. However, as part of the total agricultural sector, livestock has a large share in related greenhouse gas emissions and in harmful emissions (related to the use of nutrients) to surface water and air (Lesschen et al., 2011; Westhoek et al., 2011). There are also important issues around animal welfare and public health associated with zoonoses and the use of antibiotics. The development of antibiotic-resistant bacteria has led to serious public health risks. All the above issues and their possible solutions are interconnected (Westhoek et al., 2011). This chapter addresses the question of whether the CAP proposals contain incentives for farmers to make a transition towards a more sustainable livestock sector.

3.1 EU objectives and policies

Clear EU policy objectives have not been identified for the broader issue of sustainable livestock production, nor for important aspects such as animal welfare and health. Human responsibility towards animals is included in Article 13 of the Treaty of Lisbon (TFEU), recognising that animals are sentient beings. Currently, there is EU legislation on farm animal housing, in particular, for laying hens (Directive 1999/74/EC), calves (Directive 91/629/EEC), pigs (Directive 2001/88/EC and Directive 2001/93/EC)) and chickens kept for meat production (Directive 2007/43/EC). The use of barren battery cages for laying hens will be banned from 2012 onwards. There are also regulations on the transport, slaughter and culling of animals.

Important aspects that threaten animal health are the possible outbreaks of epidemic diseases such as FMD, classical swine fever, avian influenza and Q fever. Outbreaks may have a large impact on society, in terms of harm to animal health and welfare, and – in some cases – impact on human health and the economy. The EU Animal Health strategy is based on the principle that prevention is better than cure (EC, 2007).

The widespread use of antibiotics is reason for concern among public health officials, mainly because of the development of resistant bacteria strains. The prudent use of antimicrobials in veterinary medicine is one of the principles of the European Commission's *Action plan against the rising threats from Antimicrobial Resistance* (EC, 2011a).

For most of the environmental issues EU-wide policies exist, such as the Nitrate Directive, the Water Framework Directive, the NEC Directive (ammonia) and the Effort Sharing Decision on greenhouse gas emissions, but these contain no sector-specific targets for the livestock sector. As these are all directives, Member States are responsible for the actual design and national implementation of policies.

3.2 Present situation

Conventional types of animal housing often cause discomfort to farm animals

Most farm animals in the EU are kept in conventional housing systems, causing various forms of discomfort to animals (Leenstra et al., 2007), as a result of poor indoor air quality, too smooth and often wet flooring, lack of space and stimuli offered by their environment, concentrated feed (leading to boredom) and disease. Some livestock is also routinely being subjected to animal unfriendly interventions, such as beak trimming, tail docking, tooth clipping and castration. Some progress in reducing animal discomfort has been made, as in more group housing for calves and sows, and the forthcoming battery cage ban for laying hens. In many countries, retailers and farmers have set up production systems that provide better animal welfare. However, at present, only a limited number of animals is kept in improved animal friendly systems.

Increasingly serious health problems because of antibiotic-resistant bacteria

The widespread use of antibiotics in both human and veterinary medicine not only has brought advantages; it has also caused the development of antibiotic-resistant bacteria, such as meticillin-resistant staphylococcus aureus (MRSA) and extended-spectrum beta-lactamase (ESBL). Although the use of antibiotics growth promoters have been banned in the EU, antibiotics are still being used on a large scale as a curative drug in livestock production. Many bacteria have become resistant to various types of antibiotics, partly related to the use of antibiotics in livestock production (EFSA and ECDC, 2011). The zoonotic bacteria that are resistant to antimicrobials may put the effective treatment of infections in humans at risk.

Large impact of livestock sector on the environment

Livestock production in various ways leads to the emission of greenhouse gases (Chapter 2). The share of the EU livestock sector in the total European greenhouse gas emissions is more than 10% (Lesschen et al., 2011; Westhoek et al., 2011). Because of different policies (CAP and nitrogen policies), greenhouse gas emissions from agriculture have decreased over the last 20 years (EEA, 2009a). The agricultural sector is also a large source of emissions of nitrogen and phosphate. Nitrogen is lost in

various ways to the environment, in the form of ammonia to air and nitrate to groundwater. A large share of nitrogen losses is related to the livestock sector.

3.3 Current and proposed instruments in the CAP

Current instruments: mainly of cross-compliance and as part of rural development programmes

Current CAP measures stimulate animal welfare in two ways. As part of cross-compliance regulations, farmers must follow minimum EU standards as provided in the general farm directive (Council Directive 98/58/EC). For pigs and calves, farmers must comply with current EU directives. It must be noted, however, that the cross-compliance regulation only applies to farms that receive direct payments. Many specialised farms, especially those with intensive livestock production, receive only some or none of these payments and therefore do not have to comply with this regulation.

The current option in Pillar I (Article 68) for Member States to dedicate a maximum of 10% of their national ceilings for the single payment scheme to specific support is not included in the proposals. This 'specific support' would include measures addressing animal welfare and the marketing of agricultural products.

The current strategic guidelines provide opportunities to Member State farmers who want to invest in general modernisation, or specific improvements in animal welfare (European Union, 2006). This is further elaborated in certain measures, such as in Measure 121 (modernisation of farm holdings) and Measure 215 (animal protection payments).

Proposals contain no concrete additional measures to improve animal welfare, but do offer opportunities

The present proposal for Pillar I does not contain additional measures directly aimed at improving animal health or welfare. This in spite of the fact that the European Commission's communication on the CAP (EC, 2010a) states that 'In addition to single market concerns, several other objectives are better addressed at trans-national level, e.g. [..], cross-border environmental problems, and global challenges such as climate change, water management and biodiversity, animal health and welfare, food and feed safety, plant health and public health as well as consumer interests'.

The proposal for Pillar II contains a number of opportunities to encourage farmers to change their farm practices towards more sustainable and resource-efficient farm management. In the new proposals for Pillar II, a single measure which 'should cover all types of physical investments' is being introduced 'in the interest of simplification but also of allowing beneficiaries to design and realise integrated projects with increased added value' (EC, 2011f). Regarding animal welfare there is the possibility 'to adopt high standards of animal welfare by providing support to farmers who undertake actions to adopt higher standards of animal husbandry'. This possibility is more or less similar to that in the existing Measure 215.

3.4 Observed and estimated effect of CAP measures

Current rural development programmes have a limited effect on improving animal welfare

The current framework of rural development contains a number of measures which are more specific with regard to livestock and animal welfare. These are:

- modernisation of farm holdings (Measure 121), with a 7-year budget of almost 10 billion euros (10% of the total Pillar II budget);
- complying with rules based on EU legislation (Measure 131, 0.1% of the budget) and animal protection payments (Measure 215, 0.4% of the budget).

Subsidies available for the modernisation of farm holdings apply to all agricultural sectors. Modernisation not necessarily leads to higher animal welfare. In Germany, even the opposite effect was found. In 40% of pig housing facilities, built with subsidies based on this measure, the welfare of the pigs deteriorated (Bergschmidt and Schrader, 2009).

The possibility currently offered within Pillar I, Article 68, to support investments in improved housing systems will be terminated. It seems that, presently, only the Netherlands utilises this possibility.

Possible effect of the proposal is difficult to assess

It is difficult to assess the possible effects of the CAP reform proposals on the livestock sector; in particular, on animal health and welfare. The proposed simplification of support, could have a positive effect on the development of integrated solutions, as stated by the European Commission (EC, 2011f). This simplification is achieved by covering all types of investments within a single measure, instead of having a variety of measures, as was the case in the 2007–2013 CAP period. But, of course, much of the effect on the livestock sector will depend on the implementation by the Member States.

3.5 Opportunities for the CAP to guide the livestock sector into a more sustainable direction

There are many reasons for the CAP to invest in making the EU livestock sector more sustainable. Notably, the widespread use of antibiotics should be addressed, but also progress can be made concerning animal welfare and environmental issues. Since many potential solutions are interrelated, the different issues should be treated in an integrated way (Westhoek et al., 2011). In some cases, there may be synergies, such as between the reduction in greenhouse gas emissions and nutrients, or in the case of more robust animal breeds also between improving animal welfare and health. In other cases, there are trade-offs, such as between improved animal welfare and environmental aspects, mainly as a result of higher feed use leading to increased environmental pressure and land use for feed crops. Innovations can help to mitigate these tensions between different sustainability aspects, reduce production costs and enhance farm incomes. Farm incomes can be improved if consumers are prepared to pay slightly higher prices for meat, eggs and dairy products that are produced under conditions of higher animal welfare and lower environmental impact.

Organic production is not the only way forward; improved conventional systems may reconcile conflicting demands

One of the difficult questions to answer is that of which direction a more sustainable livestock production should take. Many people immediately think of organic livestock production, but these production systems have two related dilemmas. When expressed

per unit of meat or milk, organic production has a higher resource use and often also higher greenhouse gas emissions. Because of the higher resource use (land, labour, animal feed), organic products are usually more expensive than those that have been produced by conventional systems. A middle course might be the introduction of 'intermediate' concepts, which combine significant improvements in animal welfare with limited increases in resource use and production costs. Although these systems already partially exist (mainly in the form of free-range systems), innovations and further development is still possible. There are already a number of market concepts around these 'intermediate segments', mainly free-range, which already have a significant market share in some countries (Oosterkamp et al., 2011). Therefore, when designing programmes within the framework of the CAP for improving livestock production systems, there should be room for multiple ways and visions of livestock production. Moreover, these programmes should aim for a transition towards developing markets for meat, eggs and dairy aimed at consumers who appreciate the added value of improved production conditions.

Significant investments are needed if a real transition is to be achieved

If a larger percentage – say 5% to 10% – of the total CAP budget (Pillars I and II) would be used for subsidising investments in sustainable animal housing and husbandry systems (with conditions and performance beyond current legal requirements), livestock production in the EU would gradually, in 20 to 30 years time, become more friendly to the environment and the animals, while public health risks would be reduced. The report 'Evaluation of the EU Policy on Animal Welfare and Possible Policy Options for the Future', written at the request of the European Commission, also suggests to make wider use of Pillar II programmes to stimulate practises that go beyond minimum standards (Rayment et al., 2010). That report points at the fact that Member States are ultimately responsible for setting priorities within rural development programmes. Given the fact that Member States must co-finance these programmes, they may not accept the implementation of mandatory measures. This problem could be avoided by lowering the co-financing needed or even by abandoning it.

In addition to the CAP, there are other routes to improve animal welfare, such as by raising standards within the EU, as well as for non-EU countries exporting to the EU, to do so at a higher (EU) level (OIE/WTO) (Rayment et al., 2010). EU legislation on animal health could be adapted as well; for example, aimed at reducing the use of antibiotics.

3.6 Conclusion

The current proposals for the CAP 2014–2020 address the issues of animal health and animal welfare only via Pillar II. The present option for Member States to dedicate up to 10% of the Pillar I budget to specific support measures (including animal welfare support) is discontinued in the proposals. In principle, the proposals for Pillar II offer a wide range of opportunities to stimulate a transition towards a more sustainable livestock sector. However, the central question is whether Member States will use these opportunities. At the very least subsidies could be restricted to include only farmers who invest in farming systems with increased performance on several sustainability aspects, and not only economic efficiency. A more ambitious policy could dedicate an average 5% to 10% of the total CAP budget to investments in more sustainable and animal friendly housing systems. In all fairness, such a percentage should be proportional to the size of the livestock sector in the various Member States.

4 The CAP and policy coherence for development

4.1 EU objectives and trends

Policy coherence for development: a basic principle of EU policy

The Treaty on the Functioning of the European Union prescribes that 'the EU shall take account of the objectives of development cooperation in the policies that it implements which are likely to affect developing countries'. This is particularly relevant for the reform of the Common Agricultural Policy (CAP), as it may influence trade conditions for developing countries and food prices via EU production and market access. This is acknowledged by the EU.

The preparation of a CAP reform that takes into account food security and development objectives in a balanced manner is one of the targets in the European Commission's Policy Coherence for Development Work Programme 2010-2013 (EC, 2010c).

The EU policy framework to assist developing countries in addressing food security challenges (EC, 2010b) states that 'Reform of the Common Agricultural Policy has enhanced coherence, and future reforms will continue to take global food security objectives into account'.

CAP market distortion has decreased over the last few decades

European agricultural policies are important to developing countries because they influence international trade conditions, world prices and price volatility. Historically, the CAP has been heavily criticised for its trade-distorting effects, which were deemed particularly harmful to developing countries. High price volatility, for example, hampers long-term investments in sustainable agricultural practices; especially, by small farmers in developing countries who lack the capacity to build stocks and have no buffer to survive periods of low prices. In the last two decades, however, the strongest trade-distorting CAP measures, such as coupled payments and export subsidies, were largely replaced by decoupled payments and rural development support. These are believed to be less trade distorting (OECD, 2011). In 2006, the EU committed to fully abolish export subsidies by 2013, as part of a WTO deal (WTO, 2005). To date, export subsidies have remained in place, because of the current stalemate in the Doha negotiations.

4.2 Expected impacts of CAP proposals

Reform will hardly change the effects of the CAP on developing countries

Model-based analysis by the PBL together with a literature review suggest that the proposed CAP reform will hardly change the impact of CAP on developing countries (Van den Berg et al., 2012 (forthcoming); Matthews, 2011). The proposed changes with respect to the most distorting instruments are only minor, and the level of direct payments remains largely unchanged. Other changes, such as greening measures, are likely to have only a limited effect on agricultural production in Europe (Section 2.2) and, thus, on the world market. According to Tangermann (2011), the proposed 'risk management toolkit' under the CAP has the potential to create new market and trade distortions', but he expects that budgets spent on this will be limited and, therefore, so will the effects.

In some developing countries and for some commodities the impact of the proposed CAP reform may be larger. For instance, the proposed abolishment of sugar quotas and consequent downward effect on sugar prices will hurt countries that produce sugar and have preferential access to the EU market (Matthews, 2011; Nolte et al.,

Policy coherence not easily defined

Discussion about a CAP that would be more coherent with development objectives is often hampered by the lack of a clear definition of such a development-friendly CAP.

One reason for this is the huge variation between and within developing countries. The extent to which changes to the CAP would affect developing countries depends on their degree of self sufficiency in food supply, commodities they produce and consume, competitiveness of local agriculture, trade relations with the EU, and the potential to take advantage of market opportunities. For example, many developing countries have free access to the European market but do not have the capacity to significantly expand agricultural production (Faber and Orbie, 2009). Some others have developed a strongly one-sided agricultural sector to take full advantage of access to the profitable EU sugar market, but they are now facing a backlash from a decrease in EU price support for sugar and increased competition with other suppliers. The effect of changes to the CAP could mean that food-importing countries would benefit from subsidised products from the EU. The urban population would profit from lower food prices, but their farmers would argue that unfair competition prevents them from developing a sustainable agricultural sector.

This discussion could perhaps be clarified if coherence is understood in a structural sense, rather than in terms of short-term benefits or disadvantages; as policies that increase or at least do not decrease opportunities for developing countries to develop a sustainable agricultural production system will increase food security and stimulate economic growth.

Coherence in relation to policy always refers to the interplay between policies. In the case of agriculture, this concerns not only the CAP and development cooperation, but also trade, multilateral cooperation (e.g. WTO, FAO), (bio)energy, food safety and intellectual property rights. These contextual factors may dominate any changes to the CAP.

2012). This may not be an example of incoherence, but rather of adjustment to formerly distortive policies (see text box).

4.3 Opportunities for a CAP that is coherent with development objectives

The CAP reform proposals do not explicitly refer to development objectives, despite the obligation to take these into account. Nor do they explicitly mention a global scope in measures that have potential for synergy with development targets, such as innovation partnerships on productivity and sustainability, or impact monitoring. To be more coherent with development objectives, CAP reform requires a more integrative approach towards the global dimension of agriculture and food supply. This approach should utilise potential synergies with development objectives, rather than merely ‘do no harm’. This cannot be fully achieved by CAP reform alone, but also requires adaptations to related policies, as indicated in the text box.

Nevertheless, there are opportunities for more coherence within the scope of the current CAP reform:

- First and foremost, CAP measures should not exacerbate price volatility, which could be the case with the remaining export subsidies and market intervention mechanisms, as well as with the proposed enhanced risk management toolkit.
- As stated in previous chapters, direct payments could be better targeted at delivering public goods, such as reducing greenhouse gas emissions and increasing (agro) biodiversity. This would also reduce the market-distorting effect of direct payments.
- Phasing out instead of reintroducing coupled support would enhance market opportunities for some developing countries.

- Innovation and technology development stimulated by the CAP could also be directed to developing countries; for example, with respect to soil conservation and restoration, and good practices in agricultural water management within the framework of the proposed European Innovation Partnership on Agricultural Productivity and Sustainability.
- Finally, a monitoring and reporting mechanism could be set up, to identify impacts of CAP measures on developing countries in the broader context of other EU policies, as proposed in the study by Klavert et al. (2011). This would provide feedback and could lead to adjustment of the policies and measures that would be shown to be harmful, and provide a basis for evidence-based decision-making.

4.4 Conclusions

The proposed CAP reform would hardly change the impact of the CAP on developing countries, except perhaps for a few commodities in some developing countries that have preferential access to EU markets. Despite the legal obligation for the CAP to take the objectives of development cooperation into account, the proposals do not refer to development objectives. Nor do they mention a global scope in measures that have potential for synergy with development objectives. There are a number of opportunities to improve policy coherence for development: 1) further reducing export subsidies, market intervention and carefully designed risk management toolkits to avoid destabilising effects on volatility; 2) targeting of direct payments to the delivery of public goods; 3) the phasing out of coupled support; 4) direct the stimulation of innovation and technology by the CAP also to developing countries; and 5) the implementation of a monitoring and reporting mechanism to detect impacts of CAP measures on developing countries.

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