GREENING THE CAP:
DELIVERING ENVIRONMENTAL OUTCOMES THROUGH PILLAR ONE

Kaley Hart and David Baldock

Institute for European Environmental Policy

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SUMMARY

As a contribution to the debate on the design of the future CAP, this paper focuses on the European Commission's current proposals for 'greening' Pillar 1 and considers the ways in which a substantive 'greening' could be achieved in practice, while delivering the European Commission's objective of improving environmental outcomes across most of the EU farmed landscape. It concludes with a series of conditions that need to be met if the forthcoming legislative proposals on the CAP are to maximise their potential for delivering environmental outcomes through Pillar 1.

From an environmental perspective, the strategy of greening Pillar 1 raises a number of questions. Generally, environmentally sensitive agriculture is pursued best by using measures that are tailored and targeted to specific environmental needs and the locations in which action is required, with commitments by farmers covering several years. Carefully designed interventions of this kind tend to be more effective and efficient in achieving their objectives than annual broad brush measures of the kind that the European Commission has suggested are compatible with the rules of Pillar 1. This is the programmed approach that has long been applied through the agri-environment measure under Pillar 2 and there is considerable potential to develop it further. However, there is a limit to what can be achieved in Pillar 2 if the requisite budget is not increased substantially. Under existing arrangements this would involve larger commitments from both the CAP and Member States'. Given the recent Commission proposals for the MFF, this does not appear very likely for the period from 2014.

The 'greening' of Pillar 1, therefore, reflects the budgetary position as well as having the potential to offer significant opportunities to incorporate the environment as a central component of the CAP as a whole. However this approach does not come without significant risks. Much rests on the detailed design of the Pillar 1 options in terms of whether or not they will deliver a real greening of the CAP or turn out to be more of a greenwash.

The paper argues that the ultimate success of the Commission's greening proposals will depend on whether or not they meet a number of conditions. For real environmental benefits to be assured, the final policy design and subsequent delivery of the CAP as a whole will need to demonstrate that Pillar 1 provides a baseline of more sustainable land management and environmental delivery in agricultural areas and that the revised CAP as a whole delivers an increase in environmental outcomes compared with the status quo. This applies both within individual Member States as well as across the EU as a whole. Settling for the lowest common denominator should be avoided at all costs. In order to do so it will be critical that:

- a strong regulatory baseline and suite of minimum environmental standards which land managers must meet at their own cost is retained;
- the requirement to implement environmental measures under Pillar 2 is maintained and that resources allocated to these measures are at the very minimum maintained but preferably increased;
- the movement of funds from Pillar 2 to Pillar 1 should not be permitted;

- sufficiently robust greening options under Pillar 1 are introduced: given the Commission's initial proposals these should include:
    - a minimum of 5 per cent of agricultural land is put into ecological set-aside/environmental focus areas and that this option is designed in a way that allows for the delivery of a mix of in-field and field edge management;
    - semi-natural grassland is maintained and protected from ploughing up;
    - carbon rich habitats are maintained;
    - support to appropriate agriculture in Natura 2000 areas is provided but only where requirements are in place that align management with conservation objectives;
    - arable crop diversity options are adopted and are sufficiently demanding to deliver environmental benefits, while also reflecting good agronomic practice;
    - an option for soil cover is retained;
- Some degree of regional variation is allowed for in Pillar 1 green options to allow them to be tailored to reflect local conditions and increase their delivery of environmental outcomes;
- All Pillar 1 payments, including the green options, are accompanied by appropriate conditions and monitoring and enforcement requirements.

In addition the possibility of allowing multi-annual payments within Pillar 1 should be explored further as this would improve the ability of the green options to deliver environmental benefits in practice and ensure greater complementarity with agri-environment measures under Pillar 2.

The paper argues that if these conditions are not met, the Commission's claim that the delivery of environmental public goods is to become an increasingly central purpose of CAP support will be brought into question and that ultimately this could undermine the overall legitimacy of the CAP. It concludes that, with the CAP budget set to decline in real terms to 2020, the absence of a strong 'green' component within Pillar 1 and no additional funds for environmental delivery within Pillar 2 could represent a serious backwards step in the progress that has been achieved in making European agriculture more environmentally sustainable over the past 20 years.

1 GREENING THE CAP – THE CONTEXT

A combination of factors is driving the proposals for the reform of the CAP from 2014 onwards. These include a concern about the legitimacy of Pillar 1, an acceptance of the need to change the basis of Pillar 1 direct payments away from the current model; to reorient the CAP towards with the EU2020 objectives; as well as the need to find ways of addressing the environmental challenges facing Europe, not least meeting the EU's ambitious targets in relation to biodiversity and climate. At the same time there are constraints both internally, represented by pressures on the budget in many Member States, and externally, such as those represented by WTO requirements.

There have been some improvements in the state of the rural environment in recent years, for example in regional soil and water quality, as well as overall reductions in greenhouse gas emissions from agriculture, partly due to falling numbers of livestock. Nonetheless, significant environmental challenges and concerns remain. These challenges and the continuing declines in many environmental media, especially biodiversity, are well documented[1] and serve to illustrate the considerable efforts that are needed to address these issues and meet EU targets for 2020. The recent publication of the EU Biodiversity Strategy reinforces this message by highlighting the essential role that agriculture has to play in reversing biodiversity decline by 2020. The scale of effort also can be judged from recent estimates of the cost of delivering the environmental needs associated with rural land management (forestry as well as agriculture) through incentive schemes such as agri-environment. This appears far in excess of that which is currently available for that purpose, with some estimates suggesting that up to three times the current levels of funding would be needed[2].

It is clear from the Commission's Communication on the 'CAP towards 2020'[3] that it advocates the continuation of the two pillar approach. However, there is a lack of appetite in the Commission and many Member States for increasing the level of the budget for Pillar 2 beyond its current level. For national governments this is partly because one of the principles of Pillar 2 funds has always been that they require some degree of co-financing. Indeed, the Commission's Communication on the Budget for 2014-2020 proposes a decrease in the funding available for the CAP – both Pillar 1 and Pillar 2 - in real terms[4].

Instead, to meet demands from new Member States in particular and strengthen the provision of environmental public goods associated with agriculture, the Commission has put forward proposals for the future CAP[5] in which the emphasis is placed on making Pillar 1 payments more equitable in the EU-27 and potentially making them more sustainable politically by incorporating a series of 'green' options/payments into the current Single Payment Scheme. In an unprecedented joint letter from the Commissioners for Agriculture, the Environment and Climate in March 2011, the weight they attach to the 'greening' proposals was underlined. The letter stated that 'the greening component of direct payments is … particularly important given the broad territorial nature of the measures. These actions would be mandatory … to all beneficiaries of direct payments and, thus, have a wide application across the EU territory. The environmental as well as climate related benefits associated with the measures under consideration … are very considerable,

especially given their broad territorial coverage. 'Greening' the 1st Pillar will also facilitate the introduction of more ambitious environmental measures in Rural Development….'[6]

There is a considerable degree of scepticism amongst the informed policy community about whether or not 'greening Pillar 1', particularly on the simple one year only model proposed by DG Agriculture, is the most appropriate means of delivering environmental benefits, both in terms of the nature of the outcomes that might be achieved in practice as well as the efficiency of such an approach. From an environmental perspective, the more tailored the measures are to specific environmental needs and the more they are targeted at the locations in which action is needed, the more effective and efficient they are likely to be in achieving their objectives. This is the approach that has long been advanced (although not always achieved) through the agri-environment measure in Pillar 2, compulsory for all Member State to implement since 1992.

However, it is clear that the current suite of agri-environment schemes operating in the EU-27 is insufficient to deliver the scale of environmental improvements that are required. There are a number of reasons for this, including *inter alia* issues with scheme design, the scale of budget, targeting, implementation, availability of advice, administrative capacity, payment levels, etc. Notwithstanding the significant improvements that continue to be made to the design and implementation of existing agri-environment schemes in many Member States, there is a limit to what can be achieved if the Pillar 2 budget is not increased substantially, with larger commitments from both the CAP and Member States' budgets, both of which seem problematic at this juncture.

In contrast, the 'greening' of Pillar 1 has built up considerable political traction over the past six months and has the potential to offer significant opportunities to incorporate the environment as a central component of the CAP as a whole. Indeed the current proposals, if appropriately designed and implemented could:

- provide a strong and effective environmental baseline for all CAP support provided to land managers through cross compliance;
- increase uptake of basic environmental management across the majority of the farmed landscape both to support farmers who are already managing their land in environmentally beneficial ways and to incentivise others to adopt more sustainable farming methods; and
- provide a solid foundation on which more demanding agri-environment schemes under Pillar 2 can build;
- possibly release more funding for Pillar 2 measures by incorporating certain elements of current Pillar 2 measures and related expenditure in Pillar 1.

However this approach does not come without significant risks. In particular 'greening' could be seen as an attempt simply to legitimise a system of payments, whose primary purpose remains unclear. Unless well executed, this approach could be an inefficient means of delivering environmental benefits which would be delivered more effectively and efficiently through a multi-annual, flexible approach.

Therefore, in order to deliver their potential for the environment, the new Pillar 1 green options need to be sufficiently well specified and demanding in terms of setting outcomes and as robust as possible to withstand tough negotiation by Member State governments seeking to minimise their impact at farm level. The focus on finding options that are easy to administer and control and that are applicable to as many farmers and farming systems in the EU as possible could result in a watering down of proposals to the lowest common denominator, leading to 'greenwashing', rather than a true 'greening' of Pillar 1. Added to this, the varying Member State positions and the recent agreement on the 'Dess report' from the European Parliament suggests that fierce political negotiations can be expected once the legislative proposals are published later this year. Further watering down or unhelpful ambiguity could be introduced during this process.

This paper suggests which green payment options might be most appropriate within Pillar 1 from an environmental perspective given the Commission's current proposals, providing a commentary on the range of environmental benefits that they have the potential to provide and discussing the various factors that need to be taken into account if they are to deliver for the environment in practice. The paper concludes with a series of conditions that need to be met if the forthcoming legislative proposals are to maximise their potential for delivering environmental outcomes through Pillar 1.

2 GREENING PILLAR 1 - THE OPTIONS

A number of green payment options have been put forward by the Commission in their November Communication, including the maintenance of permanent pasture, ecological set-aside/ecological focus areas, arable crop diversity, green cover over winter and supporting agriculture in Natura 2000 sites. The detail of what these options might look like in practice has been and continues to be developed within the Commission. There have been inputs from environmental, agricultural and other stakeholders, including suggestions for additional options that should be included or variations to the options on the table. Paying agencies also have contributed their perspective in relation to the operational feasibility of initial proposals. In determining which options to include, a number of considerations need to be taken into account including the:

- potential environmental benefits that could be delivered within one year, given that multi-annual commitments appear unacceptable;
- agronomic feasibility – degree of fit with current farming operations;
- applicability to a large range of farming systems in the EU-27;
- ease of enforcement / control;
- cost to farmers and hence payment level; and
- relationship and compatibility with other CAP goals and/or measures;
- impacts on EU competitiveness.

Both original design and subsequent implementation are critical to the eventual success and effectiveness of the greening options. Ideally there needs to be some scope for options to be implemented in a way that reflects local conditions. However, there are trade-offs that need to be made between local specificity and detailed management conditions on the one

hand and, on the other, fairly straightforward generic options that are widely applicable, ideally to all those farming under similar conditions in all regions of the EU. All options must be simple to administer and enforce since they are in Pillar 1.

While it is clear that any options to be administered via Pillar 1 need to be simple, a balance will need to be struck to ensure that they deliver demonstrable environmental benefits. Some administrative detail seems almost certain to be needed, in the form of rules on the way that the options are implemented in practice (eg timing and type of operations). Furthermore, for environmental effectiveness the provision of extension services, support for farmers in the form of guidance and training, adequate enforcement, as well as monitoring and evaluation of outcomes are also important.

2.1 Possible options

The range of green payment options that would appear to be the most feasible to introduce under Pillar 1 in the light of the Commission's proposals and the conditions outlined above are set out below. There is a brief discussion of the management requirements they should include, their potential environmental benefits and the farm types to which they would apply. The selection of options chosen are those that appear to be frontrunners under the current policy debate and include those put forward by the Commission and those proposed in recent environmental NGO papers and by other stakeholders where relevant.

The options are divided into categories reflecting their scope.

2.1.1 Green payments applicable to all farm types

Ecological Set-Aside (Ecological Focus Areas)

Ever since it was first mooted in 2007 that set-aside, as a production control mechanism, was to be abolished, there have been a number of proposals developed about the sorts of measure that could be introduced in its place as a means of continuing to deliver the environmental benefits that set-aside had delivered, often inadvertently. These included benefits to biodiversity (birds, insects, mammals), resource protection as well as climate change mitigation and adaptation. They draw to varying degrees on the Swiss model with a fixed percentage of the UAA dedicated to an environmental use rather than agricultural production.

Specifically prioritising a minimum proportion (between 5 and 10%)[7] of agricultural land to be managed for the environment has the potential to deliver significant environmental benefits throughout Europe. It would include existing features such as hedgerows and buffer strips in place already. This option could apply to all farmland receiving SPS support or could be restricted to certain types of farmland, such as arable areas including temporary grassland or both arable and permanent crops. However, a simple obligation to dedicate a proportion of land to an agreed set of environmental uses is not sufficient. To be most effective, farmers would be required to choose a mixture of actions from a fixed list, both

in-field and field edge options, which in combination covered between 5-10 per cent of the farmed area.

This might include the introduction of areas of fallow land (land with no productive purpose), unploughed land, buffer strips, flower strips beetle banks, skylark plots, grass margins, the maintenance[1] of landscape features (including hedges, walls, terraces, ponds, groups of trees etc), as well as extensive grasslands or permanent crops managed with no or minimal inputs. Appropriate specification of details would be required, taking account of local conditions with respect to some parameters with decisions at the national or regional scale. In-field options (such as the use of over-winter stubbles etc) that are not *in situ* all year round would not be eligible under this option, although a payment for undertaking these options would be available under the separate soil cover greening option. Where actions, such as fallow land, are eligible for payments under other greening options, such as crop diversity, these areas would count towards the 5-10% requirement. Very small farms, for example those below 1-2 ha could be exempted.

This is one of five green payment options proposed in the Commission's November Communication, and is the one that has the most potential to bring about a significant beneficial change in management on farms across Europe. If implemented with suitable conditions attached (such as minimum widths for buffer strips or grass margins; cutting or ploughing dates stipulated for fallow or grassland etc), and adequate enforcement then this option could deliver significant benefits for biodiversity, particularly for arable farmland birds, but also for small mammals, insects, including pollinators, soil and water quality. It could contribute to climate mitigation due to reductions in fertiliser use on land not in production and carbon storage potential, if the area of land kept out of production is kept constant and not subsequently ploughed, as well as to adaptation.

2.1.2 Green Payments for all farms with permanent grassland

Permanent Pasture

The current Commission proposal amounts to a payment for retaining permanent grassland at farm level and should be seen within the context of the move to fully decoupled payments under the SPS. The value of permanent pasture for the environment has long been recognised and this led to the introduction of a safeguard being put in place under the 2003 CAP Reform 'to encourage the maintenance of existing permanent pasture to avoid a massive conversion into arable land', given its 'positive environmental effect'[8]. This provision has been carried through into the latest regulations concerning decoupled payments[9]. There are currently two permanent pasture elements in play under cross compliance. The first operates at the national level and stipulates that the ratio of the land under permanent pasture in relation to the total agricultural area should change no more than 10% compared to the baseline year[10]. The second is the compulsory GAEC standard for the 'protection of permanent pasture', which operates at the farm level and requires Member States to introduce conditions that protect permanent pasture, but without any

[1] The retention of landscape features would continue to be required under cross-compliance GAEC standards

requirements for minimum percentages to be maintained. The way in which this farm level GAEC is implemented is very variable between Member States.

The current definition of permanent pasture within the CAP[11] has severe limitations from an environmental point of view, however, as it does not distinguish between pasture that is truly permanent (rarely, if ever, cultivated or re-seeded and more likely to consist of semi-natural vegetation) from that which is reseeded periodically. To allow better targeting of policy, permanent pasture could be redefined to include only that which is genuinely permanent, ie never ploughed and that pasture which falls outside this definition could be classified as 'semi-permanent pasture' as proposed by EFNCP[12].

This distinction is important as support for these two different types of pasture will deliver different environmental benefits. In many parts of Europe there is considerable pressure on existing grassland to convert it to arable, particularly maize cultivation for livestock feed and bioenergy purposes, which creates new environmental pressures. Therefore, restricting the conversion of both semi-permanent and permanent pasture to arable will help to constrain soil carbon losses and is likely to have some impact on water quality and soil functionality, as long as the requirement is set at the individual farm level. However, protecting truly permanent pasture and maintaining it under management will deliver both these benefits to a greater degree and will ensure the maintenance of a significant biodiversity resource at the same time as many of these pastures consist of semi-natural vegetation and are of High Nature Value (HNV). The current national cross-compliance requirement on pasture protection operates only at a national/regional level and allows semi-natural grasslands to be ploughed or offset by improved pasture elsewhere, with a significant loss of biodiversity value and a reduction in the carbon stored. Consequently valuable semi-natural pasture can be lost.

To reflect the different levels of environmental benefit provided by these two categories of permanent pasture, two separate payments could be introduced within Pillar 1[13]:

a) **For all semi-permanent pasture**: this would combine the current national/regional cross-compliance requirement into a single farm level requirement that restricts the conversion of semi-permanent pasture to arable land to a maximum proportion of the total area of semi-permanent pasture on the farm on a pre-specified date (currently 2004). This would help constrain the conversion of more productive grassland to maize or other arable crops, thereby providing soil carbon benefits. Maintaining a proportion of grassland on the farm is also likely to help increase the resilience of land to flood events.

b) **Semi-natural pasture/vegetation**: this option would provide a payment to maintain semi-natural grassland, including scrubby and woody pasture where the land is grazed. This could include orchards with a permanent grass under-storey. Basic requirements would be that in general, no reseeding, over-seeding or application of inorganic fertiliser would be permitted and minimum management requirements, as stipulated by Member States under the standards of Good Agricultural and Environmental Condition, would apply. This option would maintain significant areas of biodiversity value in the EU (most semi-natural grassland can be classed as High

Nature Value farmland), would maintain existing stocks of soil carbon, would encourage the continuation of very low input farming systems, and by preventing the further scrubbing up of land, would help prevent the risk of fire, particularly in Mediterranean and other arid areas. The major drawback, currently, with this proposed option, concerns the question of defining semi-natural grassland habitats in all parts of the EU-27 currently there is no common definition and therefore there is the absence of a database of semi-natural grassland for all EU Member States, needed so as to determine a baseline against which implementation could be monitored as well as enforced. While many inventories do exist at the national level these are not currently in a common format. This could be overcome by investment in creating a common dataset supported by one-off surveys to fill any gaps in data that are found. In the meantime a GAEC standard to protect semi-natural grassland could be introduced, which would allow these differences in data availability and accessibility to be taken into account – see below. In addition more effective implementation of the EIA Regulations, as applied to agriculture[14] in Member States could help to improve the protection of semi-natural grassland.

2.1.3 Green payments available to some or all farms with cropped land (including permanent crops)

There are several measures possible:

Crop diversity

Introducing different crop types into the production system helps to maintain or improve the fertility of the soil as well as reduce soil erosion. Depending on the choice of crops, it should help reduce the build up of pests and weeds, thereby also helping to reduce the use of herbicides. Where leguminous crops are used, this could lead to a reduction in other agro-chemical inputs, especially fertilisers and therefore provide benefits for water quality and reduce nitrous oxide emissions. There may also be some benefits for soil carbon levels, but this will depend on how the crops are managed, i.e. whether or not the crop residues are ploughed back into the soil and the degree to which soil cover is maintained throughout the year (see soil cover option below).

To promote crop rotation and avoid the proliferation of monoculture cropping, this option would require a minimum number of crops in most regions (at least three, unless there are convincing reasons otherwise) of different types to be cultivated on holdings above a certain size at any given time. It would be stipulated that one crop should not cover more than 50 per cent of the arable area. Usually these would be in rotation. Fallow, leguminous crops and grassland would all count as one of the crops. Land under fallow under the ecological set-aside would count as one of the three crops. Although this would require some changes to cropping patterns in some regions of the EU-27, this is already good agricultural practice in some Member States, such as Germany.

This option would apply to all arable land, including on mixed arable/livestock enterprises, including those growing cereals, oilseeds and protein crops as well as other field crops such as vegetables, tobacco and cotton. The only field crop where this would not apply would be rice production, given its very specific production requirements. Where there was a case for

other exceptions, as may occur in certain regions, this would need to be established through a specified procedure, for example by allowing derogations for a reduced number of crop types required per holding, subject to proof that three crop types were agronomically unfeasible or excessively costly to cultivate.

Green Cover / Soil Cover

In order to avoid soil erosion and to minimise nutrient leaching and soil carbon losses, the introduction of a 'green cover' option has been proposed. To be effective, this would need to specify that soil should not be left without cover for more than a set number of weeks/days in a year with the dates depending on regional conditions. However, requiring such cover to be 'green', i.e. living vegetation, may limit the applicability of this option. Flexibility would be necessary to take account of locally specific issues, for example to tailor the measure for arid areas or for those under snow for significant periods. Taking the example of permanent crops in arid areas, in some places allowing natural vegetation may be problematic as it can compete with the crop for water (this has been raised as an issue, for example in Spain and Cyprus). In such situations it may be appropriate either to require the area to be covered by grass, which would then dry out in summer, or to mulch the soil with organic matter (prunings from the crops where this is appropriate for example) where this is not considered a fire hazard. For cropped land in arid areas, an alternative would be to stipulate that crop stubbles be left standing after harvest (no summer ploughing), with either grazing to reduce fire-risk or a stipulation for a ploughed strip around field perimeters to act as a fire break. Where green cover is appropriate however, a range of options should be permitted, including natural growth or sown cover, such as over-winter stubbles, leguminous crops or fallow.

If such types of soil cover are permitted, then this option should be applicable to all farms where soil is regularly cultivated – arable, horticulture, permanent crops etc. One cropping system where this would be difficult to apply would be rice production, although it may be possible to introduce a variation of this option specifically for rice production which involved the ploughing in of straw instead of burning it and prolonging flooding of rice fields after harvest until December, as explored through a project in Spain funded through LIFE[15]. These options, along with the introduction of vegetated strips along the edge of paddy fields, could also contribute to the ecological set-aside option in relation to rice production.

In addition to soil and water benefits, this option would contribute to reducing greenhouse gas emissions by helping to reduce soil carbon losses and increase the amount of carbon in the soil if green cover is used and ploughed back in. If nitrogen fixing crops are used as green cover there is also the potential to reduce the level of artificial nitrogen fertilisers, thereby reducing nitrous oxide emissions.

2.1.4 Green Payments to specific farming systems or farms within defined areas

Organic Maintenance

Evidence shows that organic farming provides a range of environmental benefits, including for biodiversity and soils as well as reducing levels of nutrient leaching (particularly nitrates). Emissions of greenhouse gases per hectare of farmland tend to be lower in organic systems

compared with conventional farms but can be higher per unit of output, for example, per kilogramme of meat produced because of the lower yields. The precise climate mitigation impact, therefore, will depend on the mixture of all practices used. It would be fairly straightforward to introduce a payment for maintaining organic production methods on land certified as organic under Council Regulation 834/2007. This payment would reward the provision of these benefits. Alternatively, certified organic producers could be automatically eligible for the 'greening' payments. Either option would be simple to administer given that all organic farms are registered and subject to monitoring. Payments to support farms that wish to convert to organic farming would need to continue to be provided under Pillar 2 of the CAP.

Natura 2000

To compensate farmers for any overall restrictions placed on their management activities as a result of land having been designated as part of the Natura 2000 network[16], it has been proposed that one of the green options under Pillar 1 should be for all farmers in Natura 2000 areas. While this would provide compensation on land potentially subject to more demanding environmental requirements and loss of management flexibility, in practice payments should only be made where farmers are subject to management prescriptions or conditions that have been determined under relevant legislation in order to maintain or bring the site into favourable conservation status, through management plans or legislation. Many regions still have not developed or implemented the necessary management requirements for Natura 2000[17] meaning that although the sites have been designated, no restrictions on management are established and current management may not be appropriate. If no such conditions are in place, farmers should not be eligible for the green payments or there is a significant risk that these would be made for farms undertaking potentially environmentally damaging activities. By restricting the payment in this way, it should also incentivise the introduction by Member State authorities of management plans or other means of establishing the relevant management requirements where these are not currently in place.

The inclusion of a payment under Pillar 1 should not detract from the need for payments for environmental management in Natura 2000 areas under Pillar 2 to reward positive and more ambitious management in these areas. This will be critical if favourable conservation status of these sites is to be achieved.

2.1.5 Summary of green payment options

The range of green payment options discussed would be compatible with the direction proposed by the Commission and would have the potential to deliver a wide range of environmental benefits across the majority of farming systems in the EU, allowing for some local variations. The degree to which they would to deliver these benefits in practice depends on some critical conditions being met, including the way in which the measures are designed and subsequently implemented in practice. Some of the key issues are discussed in the following sections.

The potential environmental benefits that these green options could deliver are set out in Table 1 and the farming systems to which they apply are in Table 2.

Table 1: Potential environmental benefits of different greening options

Option	Natura 2000	Pasture		Crop diversity	Soil Cover	Ecological Set-Aside	Organic Maintenance
		Semi-permanent	Permanent				
Biodiversity	✓	?	✓	✓	✓	✓	✓
Water Quality	?	✓	✓	?	✓	✓	✓
Water Quantity	?	✓	?	?	✓	✓	✓
Soil Functionality	?	✓	✓	✓	✓	✓	✓
Climate Mitigation	?	✓?	?	✓	✓	✓	✓
Climate Adaptation	?	?	?	?	?	✓	?
Landscape	✓	✓	✓	?	×	✓	?
Resilience to Fire	?	✓	✓	?	×	×	?
Resilience to Flooding	?	✓	✓	?	×	×	?

Key: ✓= Likely positive impact;
? = impact unclear – will be dependent on nature of requirements;
× = unlikely to have a beneficial impact

Table 2: Relevance of greening options for different farm types

Option	Natura 2000	Pasture		Crop diversity	Soil Cover	Ecological Set-Aside	Organic Maintenance
		Semi-permanent	Permanent				
Fieldcrops (cereals, oilseeds, protein crops)	✓	×	×	✓	✓	✓	✓
Rice[1]	?	×	×	×	?	?	✓
Horticulture	?	×	×	?	✓	✓	✓
Permanent crops (olives, fruit, citrus, vines)	✓	×	×	×	✓	✓	✓
Grazing livestock (including dairy and beef cattle, sheep, goats …)	✓	✓	✓	×	×	✓	✓
Pigs and Poultry	?	✓	×	×	×	✓	✓
Mixed	✓	✓	✓	✓	✓	✓	✓

[1] For rice production, variants of the options may be required to suit the specific production methods and where these are appropriate, they are described under the relevant option

Key: ✓= option applies
? = unclear if option applies
× = option does not apply

2.2 Nature of the payments within Pillar 1

The way in which the greening payments are incorporated within Pillar 1 is one of a number of critical factors that will determine whether or not they deliver a substantial increase in environmentally beneficial agricultural management practices.

They key principle is that all green payment options need to be mandatory, in those farming systems where they apply, for all those in receipt of direct payments. This would mean that the same rules would apply to all farmers with similar farm enterprises and farming types across Europe, with sufficient regional variations allowed to target actions to take account of local conditions. Other benefits of the mandatory approach are that it allows Member State authorities to calculate with some accuracy the allocation of their individual financial envelope year on year as well as providing a clear set of management actions that would not need to be supported under Pillar 2. Agri-environment schemes would focus on additional action beyond this level and would be expected, in aggregate, to be more ambitious environmentally than the present generation of schemes, with commensurably more funding allocated to them.

This would mean that all farmers would need to undertake all the green options that are relevant to their farming system, for which they would receive a set payment per hectare. A set proportion of the Member State envelope for direct payments would be allocated to green payments – as a minimum this should be 30 per cent, as proposed in the Commission's Budget proposals, although beyond this it is unclear how payments for these options would be operationalised in practical terms. Farmers would be required to undertake these green options in order to receive the remaining proportion of their direct payments. Failure to comply with the green options would risk farmers foregoing not only the green payments, but their full direct payment entitlement.

Any relaxation of the mandatory nature of these payments would significantly reduce the environmental benefits that would be provided, as well as introducing an unnecessary element of complexity in administering and managing the payments.

The budgetary allocation to Member States for these green payment options should follow the distribution of the relevant objectives in principle. This is particularly the case for options which are applicable only within certain areas, for example the Natura 2000 payment or payments for the maintenance of organic farming. In these cases, the distribution of the Pillar 1 budget would need to reflect the proportion of land that is designated as a Natura 2000 area or is projected to be certified as organic by 2020, to ensure that countries with a high proportion of such areas are not disadvantaged.

2.3 Member State and regional flexibility

As a general rule, the more that management options are tailored to local conditions, the better they will be at delivering the environmental benefits required. However, there is a trade-off to be made between local specificity in option design and the delivery of an EU-wide suite of management requirements that are consistent for each farming type in all 27 Member States and so can be readily monitored and enforced. Taking an EU-wide approach

limits the nature of the options that can be implemented as, not only must options be available for all farmers in all farming types as equitably as possible, but also the data on which implementation and control are based have to be or become available everywhere where remote sensing is not possible.

Providing Member States with the flexibility to design important aspects of the different options to suit the conditions in their territory is desirable, but introduces certain hazards. Safeguards would need to be put in place to ensure that the measures were designed appropriately to avoid a minimalist approach to implementation and that they were adequately controlled and enforced. This in turn would require a formal approval process to be put in place so that the Commission was confident that the options were being implemented in keeping with the spirit and essential elements of the requirements.

It may be that for those options where considerable Member State flexibility is needed in option design, for example in relation to the maintenance of semi-natural grassland where there is no EU-wide dataset identifying the habitat and where locally relevant limits on inputs need to be specified, that the introduction of a GAEC standard may be a more suitable route, at least in the short term. Transitional measures should not be ruled out.

2.4 Level of payment

There are two key issues that relate to the level of payment made for each of the green payment options. The first relates to the calculation of the standard per hectare rate and the feasibility of a standard rate for all 27 Member States. The second is the issue of capping payments and the question of whether payments should be degressive according to farm size.

The way in which payments are designed and payment rates calculated will need to take account of WTO Green Box rules to ensure that the risk of challenge is minimised. This means that care needs to be taken to avoid any reintroduction of payments linked to activities which are explicitly productive even if environmentally appropriate, since this would be a reversal of the move towards decoupling. This is especially important for the green payment options under Pillar 1 as these will be much more visible than the myriad of different payments under the environmental land management measures within the 88 rural development programmes developed under Pillar 2.

The purpose of the options will have a direct bearing on the way in which payments are calculated and subsequently notified under WTO Green Box rules. If they are defined as part of an 'environmental programme' under paragraph 12 of Annex 2 of the Agreement on Agriculture[18], then they should be limited to the 'extra costs or loss of income involved in complying with the government programme'. However if they are defined as 'decoupled income support' under paragraph 6, then the rules are different, and there are many more stipulations about eligibility criteria and factors to which payments must not be linked.

Payment rates for similar options now offered under agri-environment schemes vary significantly between Member States. This does not reflect simply the differences in gross margins for products and costs of management in different regions, but also a large

variability in the nature of the specific requirements of the option in question. Despite this variation, developing a more standardised system of payments for the green options under Pillar 1 should still be workable. Not only do the options proposed represent a more standardised, and often simpler set of requirements than those under agri-environment schemes, but the payment required represents one element of the total decoupled direct payments and therefore does not need to reflect the full cost of undertaking the action required necessarily.

In terms of capping payments, the Commission has proposed that decoupled direct payments should be capped beyond a certain size threshold. However, for payments that are based on the delivery of environmental outcomes there would not appear to be any rationale for capping as there is no evidence to show that environmental benefits necessarily decrease as the area managed for the provision of public goods increases. Indeed, this was recognised by Commissioner Cioloș, whose spokesperson has stated publicly that the capping proposals would not relate to the green payment options[19].

2.5 Control/Enforcement Issues

It is clear that the introduction of green options within Pillar 1 needs to be subject to adequate controls to ensure appropriate implementation and to allow enforcement action to be taken where this is necessary. To ensure the effective delivery of environmental outcomes in practice requires a considerable amount of data on farmland and environmental characteristics to be recorded on IACS forms and the LPIS. Checking and monitoring, that options have been implemented appropriately is a prerequisite for ensuring the delivery of environmental benefits. However, the extent to which these proposals will involve additional compliance checks is limited as the majority of the green options proposed are already either included within cross-compliance GAEC standards or agri-environment schemes and therefore compliance controls should already be in place. Ensuring that delivery is as simple and straightforward as possible is an important goal, but seeking simplification should not be at the expense of achieving useful environmental outcomes.

Improvements in technologies such as remote sensing and GIS have transformed the ease with which compliance checking can be carried out and allow a more risk based approach to compliance checking and enforcement on the ground. However, despite this, some caution is needed in terms of enforcement. Current experience with enforcement of cross compliance requirements has shown that an over strict interpretation of the rules can lead to perverse environmental impacts. There is a role, therefore, for some flexibility to be allowed at the farm level and rules should be interpreted in a way that allows the stated outcomes of the measure to be achieved.

2.6 Monitoring and Evaluation

Effective monitoring and evaluation is critical to assess the effectiveness and efficiency of measures of this kind in delivering their objectives and to allow them to be adapted and refined over time. Being able to demonstrate the effectiveness of greening measures will also be critical to securing public support in the long term. Monitoring and evaluation

requirements will, therefore, need to be put in place for Pillar 1, not just for the new green options but for all elements of Pillar 1 support to farmers, including cross-compliance. The absence of any requirements to monitor the impacts of measures such as cross-compliance and Article 68 measures currently is a major constraint on determining their effectiveness. It will also be important to monitor the interaction between green options under Pillar 1 and the environmental outcomes delivered in the future through agri-environment schemes, to ensure that their operation is synergistic and does not throw up any unexpected conflicts and that adjustments can be made if this is needed.

Although increased monitoring and evaluation requirements will require a greater administrative input for Member States, this is a necessary part of ensuring effective and efficient delivery and demonstrating good value for public money. This may be challenging for public authorities where currently there may be insufficient administrative and/or institutional capacity to deliver the new CAP system of payments at the scale required. Recognition of the need to invest in developing capacity in this area over time will be essential for the effective delivery of public goods in the long term. At the most basic level there is a critical need for appropriate data collection and recording mechanisms to be put in place that are consistent in all Member States so that sufficient information is available to inform the design, implementation, monitoring and evaluation of measures. For example, recording data such as livestock stocking rates and mapping the location of landscape features and semi-natural grassland will be extremely important to allow improved options to be developed in the future. An improved use of the Land Parcel Information System (LPIS) to record areas such as semi-natural grassland and landscape features would help in this regard. In some cases, the data are available, investment is simply needed to bring the relevant data together and make it accessible. In others more work is needed to make datasets compatible between Member States. However, technology has advanced significantly in recent years, making it much easier to record and share location specific information and there may be ways of assisting Member States develop state of the art delivery and monitoring systems through use of Technical Assistance funds under rural development policy.

3 IMPLICATIONS FOR CROSS-COMPLIANCE GAEC STANDARDS

The need for a strong environmental baseline to be maintained in line with the polluter pays principle remains a priority to underpin any support provided to farmers under the CAP.

Environmental cross-compliance requirements in relation to the Statutory Management Requirements broadly need to continue and in some places be strengthened through the introduction of new SMRs where appropriate[20]. However, the introduction of payments for green options in Pillar 1 has implications for the second element of cross compliance, ie the suite of standards of Good Agricultural and Environmental Condition (GAEC) that are in place in Member States[21]. Adherence with these is currently a condition of receipt of decoupled payments. A number of the green options for which a payment would be provided as part of a farmer's decoupled payment overlap partially with a number of GAEC standards in some Member States. In other words, specific payments would be introduced for some practices which already are required without payment under GAEC. This is

particularly the case with the options relating to crop diversity, soil cover and permanent pasture.

Where this is the case it would make sense to remove these options from the list of GAEC standards on three conditions:

- first, that it is mandatory that all farms for which the options are relevant undertake the required management;
- second, that there are adequate penalties put in place for non-compliance;
- third, that the standards are not removed from GAEC until an appropriate alternative option is formally confirmed as a mandatory paid green option under Pillar 1.

This adjustment would help to streamline and simplify cross-compliance. However, GAEC standards have some benefits that the paid green options do not have. Most notably the choice of their design and implementation lies with the Member States and they have the potential to be tailored more specifically to local conditions. With this in mind, it may be appropriate to introduce a number of very specific additional mandatory GAEC standards to allow Member States to introduce additional minimum management requirements that it might be more problematic to implement at the EU level. Such options might include a standard requirement for the 'maintenance of semi-natural grassland' or the 'maintenance of soils with high soil organic mater (i.e. peatlands).

A table outlining which of the current cross compliance requirements would become 'green payments', and which would remain as GAEC, together with proposed new GAEC standards is set out in Table 3.

Table 3: Proposed changes to GAEC standards under a 'green' Pillar 1

Current GAEC Standard C – compulsory O - optional	Retention as compulsory GAEC standard	Inclusion as green payment option	Comments
Minimum soil cover (c)	X / √	√	Important to keep as either GAEC or green payment option
Minimum land management reflecting site specific conditions (c)	√		
Retain terraces (o)	X		To add to 'landscape features' requirement
Arable stubble management (c)	√	√ Part of soil cover	GAEC standard becomes 'prohibition of stubble burning'
Standards for crop rotations (o)	X / √	√	Important to keep as either GAEC or green payment option
Appropriate machinery use (o)	√		
Retention of landscape features, including where appropriate, hedges, ponds, ditches, trees in line, in group or isolated and field margins (c)	√		add terraces to list
Avoiding the encroachment of unwanted vegetation on agricultural land (c)	X		Over zealous application has perverse environmental effects
Protection of permanent pasture (c)	√	√	Keep national/regional level restrictions and include farm level (semi-) permanent pasture as green option
Protection of semi-natural permanent pasture	NEW	√	New requirement to maintain extensive, semi-natural grassland to become green option OR GAEC
Protection of carbon rich soils	NEW		New requirement to maintain all carbon rich soils, such as peatlands etc.
Minimum livestock stocking rates or/and appropriate regimes (o)	X	√	To combine as part of green option to maintain extensive, semi-natural grassland
Establishment and/or retention of habitats (o)	X / √	√	To be part of the ecological set-aside option
Prohibition of the grubbing up of olive trees (o)	X / √		Too restrictive and narrow focus. Remove and include traditional orchards/olive trees etc within landscape features GAEC
Maintenance of olive groves and vines in good vegetative conditions (o)	X		To include within minimum land management if appropriate
Establishment of buffer strips along water courses (c)	√	√	Keep but allow this area to be part of the ecological set-aside option
Where use of water for irrigation is subject to authorisation, compliance with authorisations procedures (c)	√		

Key: **X = remove** **√ = keep** Source: elaboration from Hart *et al*, 2011[22]

4 ISSUES SURROUNDING ELIGIBILITY FOR PILLAR 1 PAYMENTS

For the greening Pillar 1 proposals to deliver to their full potential it is important that all land managers delivering benefits for the environment are rewarded appropriately and can receive the relevant payments. In this context there is evidence that the current eligibility criteria for direct payments can have a perverse effect by excluding farmers that are managing important habitats from receiving payments or incentivising actions that damage the environment. A number of issues have arisen either relation to eligibility criteria for receipt of direct payments, or in relation to the interpretation of certain GAEC standards which are working against the achievement of environmental goals. These need to be rectified within the new legislative proposals.

The first issue concerns the definition of what constitutes agricultural land; at present several areas with a high density of woodland or shrubs are excluded from receipt of direct payments[23]. This is causing a variety of problems in a range of countries, including, Bulgaria, Finland, Germany, Ireland, Latvia, Romania, Sweden and the UK, with significant areas of environmental value being excluded from receipt of direct payments. In Germany[24] areas of heathland with less than 50 per cent of grass are ineligible for decoupled payments and in Northern Ireland, areas of land with a high proportion of heather over 50cm high are excluded from the Single Payment Scheme. In a number of new Member States large areas of actively managed land with low grazing intensities have been deemed ineligible for payments. In Estonia, for example, 25 per cent of the total agricultural land is not registered under the Single Area Payment Scheme (SAPS) and in Bulgaria only a third of the 1.6mha of HNV farmland is eligible for SAPS[25]. This can also have knock on effects on the eligibility of important habitats for Pillar 2 agri-environment payments. For example, in the boreal region of Sweden, Finland and Estonia, some of the most valuable habitats are forested pastures and grazed forests, both of which are excluded from receiving agri-environment payments since they exceed the 50-tree/ha criterion for qualifying as agricultural land.

In addition, GAEC standards requiring farmers to avoid the encroachment of unwanted vegetation on agricultural land have caused some perverse effects. Evidence shows that in some cases this is interpreted in an overly stringent manner by national authorities, leading to farmers being required to remove bushes and other vegetation in order to be eligible for direct payments and agri-environment support.

Other rules that restrict access to direct payments included the size of farm, with very small farms often excluded, requirements surrounding the length of tenancy agreements as well as ownership issues in relation to common land. In relation to small farms, however these are defined (according to area or economic size), it may be more appropriate to roll out a simplified version of the green Pillar 1 options set out above so that farmers and administrations are not burdened with disproportionate requirements or costs.

The Commission's proposals for the future CAP suggest that direct payments should be restricted to 'active farmers' may also cause concerns in terms of the eligibility of environmentally valuable land for CAP payments. From an environmental perspective all those who deliver public goods associated with agriculture should be eligible for the green

options (and agri-environment options under Pillar 2), irrespective of whether they are an 'active farmer', an 'in-active farmer' or no farmer at all.

It is also proposed by the Commission that the same eligibility criteria for land managers should be required for Pillar 2 as for Pillar 1. However, unless some of the current concerns about eligibility in Pillar 1 are resolved this would create significant issues for the delivery of environmental outcomes under rural development policy. A number of important habitat types effectively would be excluded from receipt of payments for agri-environmental actions (eg heathlands, wetland areas, areas with a significant proportion of scrub/woody habitat, intertidal habitats etc).

5 ADVICE

The role of advice in a range of forms (encapsulating agricultural extension services, training, demonstration farms, written guidance etc) should not be overlooked. It has been shown to improve the effectiveness and efficiency of the delivery of environmental outcomes where used to support measures implemented currently under Pillar 2 of the CAP as well as to support the implementation of cross compliance, through the work of the Farm Advisory Service[26].

However the provision of advice, particularly in relation to improving environmental awareness and understanding is often viewed as an administrative cost rather than a long-term investment and a critical component of improving the sustainability of agriculture[27]. This way of thinking is starting to change and it will be essential to extend the availability of advice and training of land managers to cover the whole of Pillar 1, including the implementation of the green payment options. Farmers need help in adapting to the changing policy framework. This will help to increase the effectiveness of the CAP in achieving sustainability goals and the delivery of public goods and help demonstrate how market competitiveness and sustainability goals can be achieved in tandem. This will be particularly important in the Member States and regions with shorter histories of environmental integration into agriculture, a track record of low environmental performance, or those with specific environmental problems. The simplest way of achieving this may be through the extension of the Farm Advisory Service as well as enhanced support for advice and training under Pillar 2. However, to be effective this will also need to be complemented by stronger extension services in many Member States.

6 IMPLICATIONS FOR PILLAR 2 MEASURES

The introduction of green payments under Pillar 1 has implications for what can be funded under environmental land management measures, such as the agri-environment measure, the Natura 2000 measures or the measures for 'non-productive' investments under Pillar 2 of the CAP. The agri-environment measure in particular will remain critical to provide support for beneficial land management practices that are more demanding and costly than those required under Pillar 1. Land managers will need additional incentives to restore and recreate habitats and landscape features as well as providing the specific requirements needed for particular species. These types of actions often require significant tailoring to

the needs of the particular environmental issue being addressed as well as targeted at the correct location and cannot be achieved through broad brush measures, such as those envisaged under Pillar 1. In addition, any new payment regime for farmers in Natura 2000 areas under Pillar 1 should not be used as an argument not to target resources under Pillar 2 to support the specific environmental management needed to bring these sites into favourable conservation status.

Greening Pillar 1 offers opportunities to free up money currently used to pay farmers for basic environmental management under agri-environment schemes and to use this to fund more demanding forms of environmental management. In some regions, this will require the development of new agri-environment schemes and management options to offer farmers, in others it will allow for the expansion and further development of existing schemes. To allow this to happen, however, it will be essential that as a minimum the current balance of funding between Pillar 1 and Pillar 2 is maintained, taking account of the modulation funds that are transferred to Pillar 2. If the proportion of funds currently available to Pillar 2 were to shrink in the future, this would seriously risk the ability of Member States to deliver environmental outcomes and would bring into question the extent to which changes to the CAP were able to deliver net environmental benefits. The reference in the Commission's recent budget Communication that they will 'make proposals to permit flexibility between the two pillars' is particularly alarming in this respect, as it implies that some form of 'two-way' modulation may be permitted, including the option of moving funds from Pillar 2 to Pillar 1. Secondly it will be essential that the agri-environment measure in particular remains compulsory to implement in all Member States, as has been the case since 1992 and that a minimum proportion of the budget in individual Rural Development Programmes continues to be allocated to this measure, or a group of environmentally focused measures. Without such safeguards there is a risk that Member States could make minimal use of environmental measures within Pillar 2, arguing that sufficient action is being taken under Pillar 1.

However, as long as the Pillar 2 budget is maintained and the use of environmental measures is required, the greening options in Pillar 1 could free up money to allow the agri-environment measure to start to have a much more significant impact on reversing biodiversity decline, rather that simply reducing its decline, thereby playing an even more significant role in meeting the 2020 biodiversity target than is currently the case.

7 CONDITIONS FOR MEASURING THE ENVIRONMENTAL EFFICACY OF GREENING PILLAR 1 OPTIONS

Much rests on the final proposed detailed design of the green payment options under Pillar 1 in terms of whether or not they will deliver a real greening of the CAP or turn out to be more of a greenwash. However, this direction of travel has considerable backing from the Commission, from both the Agricultural Commissioner as well as the Commissioners for Environment and Climate and it will be important to make sure that the final proposals maximise the potential of this approach to deliver basic environmental management on the majority of farms in the EU-27. The introduction of green options within Pillar 1 cannot be seen in isolation from other elements of the CAP and will need to work within a broader framework of measures that include strong environmental regulation, cross compliance

requirements (including standards of Good Agricultural and Environmental Condition) as well as an adequately resourced Pillar 2. Greening Pillar 1 should not be seen as an alternative to these measures.

The ultimate success of the current greening proposals will depend on whether or not they are sufficiently ambitious as to address the challenges outlined here in an effective way. For real environmental benefits to be assured, the final policy design and subsequent delivery of the CAP as a whole will need to demonstrate that Pillar 1 provides a baseline of more sustainable land management and environmental delivery in agricultural areas and that the revised CAP as a whole delivers an increase in environmental outcomes compared with the status quo. This applies both within individual Member States as well as across the EU as a whole. Settling for the lowest common denominator should be avoided at all costs. In order to do so it will be critical that:

- a strong regulatory baseline and suite of minimum environmental standards which land managers must meet at their own cost is retained;
- the requirement to implement environmental measures under Pillar 2 is maintained and that resources allocated to these measures are at the very minimum maintained but preferably increased;
- the movement of funds from Pillar 2 to Pillar 1 should not be permitted;
- sufficiently robust greening options under Pillar 1 are introduced. Given the Commission's initial proposals these should include:
    - a minimum of 5 per cent of agricultural land is put into ecological set-aside/environmental focus areas and that this option is designed in a way that allows for the delivery of a mix of in-field and field edge management;
    - semi-natural grassland is maintained and protected from ploughing up;
    - carbon rich habitats are maintained;
    - support to appropriate agriculture in Natura 2000 areas is provided but only where requirements are in place that align management with conservation objectives;
    - arable crop diversity options are adopted and are sufficiently demanding to deliver environmental benefits, while also reflecting good agronomic practice;
    - an option for soil cover is retained;
- Some degree of regional variation is allowed for in Pillar 1 green options to allow them to be tailored to reflect local conditions and increase their delivery of environmental outcomes;
- All Pillar 1 payments, including the green options, are accompanied by appropriate conditions and monitoring and enforcement requirements.

In addition the possibility of allowing multi-annual payments within Pillar 1 should be explored further as this would improve the ability of the green options to deliver environmental benefits in practice and ensure greater complementarity with agri-environment measures under Pillar 2.

The proposals for greening Pillar 1 need to be sufficiently robust and demanding in terms of the outcomes they are intended to deliver if they are to withstand tough negotiation in the

Council and Parliament where some will seek to minimise their impact at farm level. If the proposals fall short of the kind of programme elaborated here, many will question the Commission's commitment to a real greening of the CAP at this stage. It will jeopardise the claim that the delivery of environmental public goods is to become an increasingly central purpose of CAP support, and ultimately has the potential to undermine the overall legitimacy of the CAP. With the CAP budget set to decline in real terms to 2020, the absence of a strong 'green' component within Pillar 1 and no additional funds for environmental delivery within Pillar 2 could represent a serious backwards step in the progress that has been achieved in making agriculture more environmentally sustainable over the past 20 years.

[1] European Commission (2009) *Composite Report on the Conservation Status of Habitat Types and Species as required under Article 17 of the Habitats Directive Brussels*, Report from the Commission to the Council and the European Parliament, 13.7.2009 COM(2009) 358 final; EEA (2009) Progress towards the European 2010 Biodiversity target, European Environment Agency: Copenhagen; EEA (2010) The European Environment: State and Outlook 2010, Synthesis Report, European Environment Agency: Copenhagen, Denmark

[2] Cao, Y., Elliott, J., McCracken, D., Rowe K., Whitehead, J., and Wilson, L. (2009) Estimating the Scale of Future Environmental Land Management Requirements for the UK, Report prepared by ADAS UK Ltd and Scottish Agricultural College for the Land Use Policy Group: London; Hart, K., Baldock, D., Tucker, G., Allen, B., Calatrava, J., Black, H., Newman, S.,Baulcomb, C., McCracken, D. and Gantioler, S. (2011) Costing the Environmental Needs Related to Rural Land Management, Report Prepared for DG Environment, Contract No ENV.F.1/ETU/2010/0019r. Institute for European Environmental Policy, London.

[3] European Commission (2010), The CAP towards 2020: meeting the food, natural resources and territorial challenges of the future, Communication from the Commission to the European Parliament, the Council, the European Social and Economic Committee and the Committee of the Regions Council and COM(2010) 672 final, 18.11.2010

[4] European Commission (2011), A Budget for Europe 2020, Communication from the Commission to the European Parliament, the Council, the European Social and Economic Committee and the Committee of the Regions Council and COM(2011) 500 final, 29.06.2010

[5] *ibid*

[6] Joint letter from Commissioners Cioloș, Potočnik and Hedegaard, Ref DC/AU/Do (11)297116, March 2011

[7] See for example, evidence from the UK at http://www.defra.gov.uk/statistics/foodfarm/enviro/observatory/set-aside/commissioned-set-aside-research/

[8] Council Regulation 1782/2003, recital 4

[9] Council Regulation 73/2009 of 19 January 2009 establishing common rules for direct support schemes for farmers under the common agricultural policy and establishing certain support schemes for farmers, amending Regulations (EC) No 1290/2005, (EC) No 247/2006, (EC) No 378/2007 and repealing Regulation (EC) No 1782/2003, OJ L30/16, 31.01.2009

[10] Article 3 of Commission Regulation 1122/2009

[11] Land used to grow grasses or other herbaceous forage natural (self-seeded) or through cultivation (sown) and that has not been included in the crop rotation of the holding for five years or longer (Article 2(c) of Commission Regulation 1120/2009)

[12] See EFNCP (2011), Proposals for 'greening' Pillar 1: Permanent Pasture Premium

[13] EFNCP (ibid)

[14] Council Directive 85/337/EEC (O.J. No. L175, 5.7.85, p.40) on the assessment of the effects of certain public and private projects on the environment, as amended by Council Directive 97/11/EC, Directive 2003/35/EC (O.J. No. L156, 25.6.03, p. 17)

[15] These measures were trialled and shown to provide environmental benefits under a LIFE project in Spain – see:http://ec.europa.eu/environment/life/publications/lifepublications/lifefocus/documents/agrienvironment_en.pdf

[16] The Natura 2000 network includes Europe's most important sites for biodiversity as established under the Birds and Habitats Directives

[17] For example, see the country files relating to the implementation of the Biodiversity Action Plans at http://ec.europa.eu/environment/nature/biodiversity/comm2006/bap_2010.htm.

[18] WTO Agreement on Agriculture: http://www.wto.org/english/thewto_e/whatis_e/tif_e/agrm3_e.htm

[19] See Agra Europe, 29.04.11, 'CAP greening to boost sustainability, says EU aide'

[20] For example in relation to the Water Framework Directive and the Directive on the Sustainable Use of Pesticides and potentially a future Soils Directive should this be agreed.

[21] in keeping with Article 6 and Annex III of Council Regulation 73/2009

[22] Hart K, Baldock D, Weingarten P, Povellato A, Pirzio-Biroli C, Osterburg B, Vanni F, Boyes A (forthcoming) What tools for European Agricultural Policy to encourage the provision of public goods, Report to the European Parliament Policy Department B, Contract: IP/B/AGRI/IC/2010-094

[23] See Article 2 of Council Regulation 73/2009

[24] DVL and NABU (2009) Integration naturschutzfachlich wertvoller Flächen in die Agrarförderung, DVL-Schriftenreihe „Landschaft als Lebensraum", Heft 16: Ansbach.

[25] BirdLife Europe (2011) The reform of the CAP towards 2020. Consultation document for Impact Assessment, BirdLife Europe's Response, January 25, 2011.

[26] ADE (2009) Evaluation of the Implementation of the Farm Advisory System Final Report – Evaluation Part December 2009, in collaboration with ADAS, Agrotec and Evaluators. Report prepared at the request of the European Commission; European Commission (2010) Report from the commission to the European Parliament and the Council on the application of the Farm Advisory System as defined in Article 12 and 13 of Council Regulation (EC) No 73/2009, Brussels, 15.11.2010, COM(2010) 665 final.

[27] see for example Foresight (2011) The Future of Food and Farming, Final Project Report. The Government Office for Science, London, (p.83).