Potential for environmental cross-compliance to advance agri-environment objectives

Lone Kristensen and Jørgen Primdahl

Danish Centre for Forest, Landscape and Planning, The Royal Veterinary and Agricultural University, Denmark

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Authors mail address: lokr@kvl.dk, jpr@kvl.dk

Content

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1. Introduction

Cross-compliance is a relatively new policy instrument in the EC and has, until now, been used in different ways by the member states to advance agri-environmental objectives in connection with the Common Agricultural Policy (CAP).

This paper, partly based on presentations and discussions at a workshop held in Roskilde, Denmark, November 2003, is about the use and potential of environmental cross-compliance measures in a CAP context. The work is part of an EU concerted action project, "Developing cross-compliance in the EU – background, lesson and opportunities" and the objectives of the work package led by the Danish team are:
"To clarify the potential for using cross-compliance measures to advance agri-environment objectives in EU countries and to explore the relationship between such measures and voluntary incentives funded under the Rural Development EC Reg. 1257/1999"

Since the research proposal was approved and the project began, a substantive reform of the CAP has been approved (June 2003) including new and more extensive cross-compliance measures to be implemented from January 2005 (EC Reg. 1782/2003). Consequently, we have included analysis and discussions of the new cross-compliance measures in this report, although there is, understandably, no experience of the operation of these new measures yet.

First, we present the key concepts concerning countryside stewardship and agri-environmental objectives and discuss different definitions of cross compliance. Next, in chapter 3, we outline experience gained so far of operating cross-compliance measures as introduced by the Agenda 2000 reform. Chapter 4 presents the new measures to be implemented from 2005. Countryside stewardship issues and whole farm environmental plans are the subjects of chapter 5 and 6, in which we focus on agri-environmental schemes and similar measures. The purpose of these chapters is to provide an overview of the objectives and policy experiences relating to countryside stewardship. In the final chapter we discuss the potential for using cross-compliance to advance agri-environmental objectives, as they are defined in the following chapter.

2 Definitions of countryside stewardship and cross-compliance

2.1 Countryside stewardship – agriculture, environment and landscape

There is no clear, interdisciplinary terminology for environmental issues. We have used the word '**countryside stewardship**' (CS) to signify the protection, maintenance and enhancement of the countryside, which we in turn understand as the rural landscape, structured by a mixture of natural processes and human functions (see Huylenbroeck and Whitby (1999) and Wascher (2000) for similar definitions). Historically, almost all European landscapes are formed by agricultural and forestry activities, although rural landscapes are also shaped by the fact that people live there and visit them for recreational purposes and by their natural habitat functions. The importance of these different functions tends to vary from region to region. (Green, 2000; Primdahl et al., 2004). **Countryside stewardship policy** (CSP) is defined as any type of public intervention into owners' and users' decision-making concerning landscape protection, maintenance and enhancement.

Protection means, in this context, preventing undesirable changes to the environmental state, achieved either by legal measures or by incentives such as countryside stewardship schemes. **Maintenance** refers to situations where valuable parts of the landscape are dependent on continuous management practices such as grazing/mowing, hedgerow trimming, stonewall maintenance, woodland pollarding, thinning etc. In a countryside policy context, maintenance is usually ensured through incentive instruments although examples of maintenance requirements are found in regulatory measures, e.g. in the Danish Forest Act, in building regulations, and in situation where lack of maintenance is affecting neighbours and others negatively (hedge trimming, water body management, fire lanes etc.). Policy objectives related to **enhancement** are usually incentives such as planting schemes, clearing schemes, restoration schemes, and the like. Often enhancement schemes, for example measures to promote conservation of arable land to permanent grassland, depend on a subsequent continuous grassland management that is implementation of protection and maintenance schemes (Hodge, 2000; Primdahl et al., 2003). For all three types of issues training for land managers and information and advice are also relevant policy instruments – we return to this in chapter 6.

There is not, of course, any optimal landscape structure to be aimed at. Farmers and forest owners themselves will 'produce' a landscape based on their own

values and farming system in combination with the specific local conditions and various public policy interventions. The concrete 'landscape decisions' taken by the individual farmer may be production oriented, mainly market-based decisions. Or such decisions may be linked to the farm as a place or a property and based partly on culturally rooted traditions and functions related to the farm as a place to live, to visit or as a system of wildlife habitats. Such 'property decisions' may also be linked to investments in the farm property value. In situations where the owners and the producers are different people, the owners may be equally important for the landscape structures as the producers – or in certain periods and regions be even more important for the landscape dynamics, depending on the agricultural market/ business conditions and the specific policy situation (Primdahl, 1999). The resulting landscape may be seen as a sort of trade off between the farmer's individual desideratum and more collective objectives as they are reflected in legislation, support schemes and other public policies. This landscape is the L_{t0} situation on Figure 2.1. According to Bromley (1997), who was focusing on non-farming functions (termed amenity, habitat and ecological 'implications') the 'space' surrounding the more or less arbitrary situation at t_0 will be 'the bargaining space' for determining new policies and the balance between uncompensated regulatory

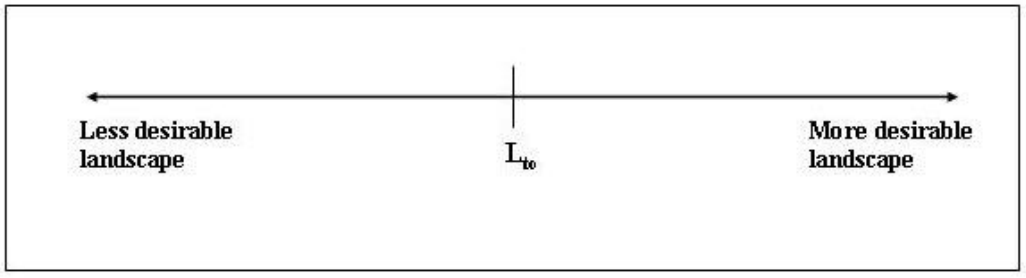
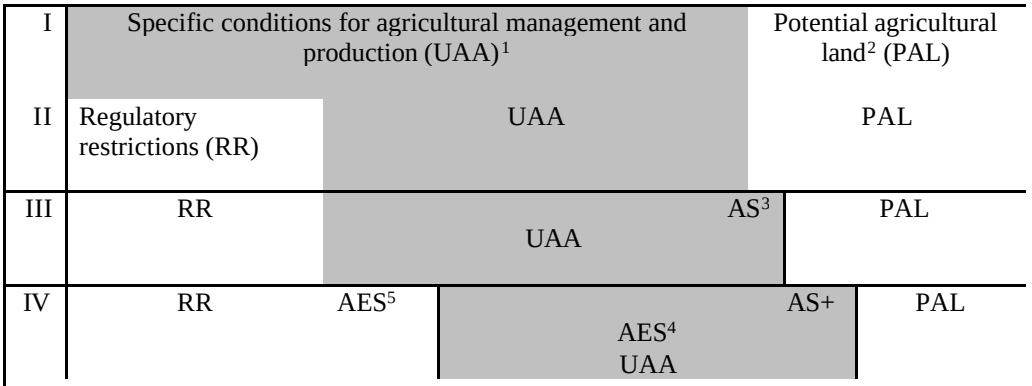


Figure 2.1 A landscape may be considered as a potential continuum of non-agricultural values and changes from the current situation (L_{t0}) may be considered less or more desirable from the community (Bromley, 1997).

measures and incentives. The degree to which demands for a desirable landscape are articulated from 'outside-stakeholders' (urban people for example) may influence this balance. It may, however, only be of limited relevance to see the bargaining space as a struggle between agricultural interests on the one side and urban interests on the other as indicated in Bromley's text. The contemporary European countryside is much more multifunctional and socially diverse than it was when agriculture was the dominant (or even the only) driving force.

Focusing on a specific area, countryside stewardship policies affect not only the quality of the landscape, but also the share of the farmed area. In Figure 2.2 we have shown how different policies affect the size of the utilised agricultural area within a given region. In this respect, it is important to recall that CSP is by no mean a new type of public intervention. Regulation of owner and user rights to natural resources have taken place for centuries and are among the oldest part of legislation (Hoff, 1997; Rackham, 1986). Seen in the context of a given region, regulatory measures will often limit the proportion of area available for agriculture (II-IV in Figure 2.2). Agricultural subsidies are on the other



1) The utilized agricultural area (UAA) in a situation where there is no policies involved
2) Potential agricultural land, but not economically feasible to utilize at the time given
3) Agricultural subsidy linked to production (e.g. price support, hectare and headage payments)
4) Agri-environmental scheme, less favorable areas scheme and other schemes with payments for farming on locations with difficult conditions for agriculture production
5) Agri-environmental scheme with payments for income forgone due to restrictions above the legislation

Figure 2.2 How the specific conditions (in time and space) for farming as part of a given area are affected by regulatory restrictions, subsidies and agri-environmental payments.

hand, to the extent they are linked to production, often expanding the agricultural area as they contribute to the improvement of the agricultural conditions (III). Agri-environmental schemes may be aimed at reducing environmental impact through restrictions on land-use or agricultural practices and thereby limit the agricultural conditions or they may be aimed at maintaining (usually extensive) agriculture in marginal areas, that is keeping a larger area in agricultural use than would be the case without such subsidies (IV). Less favoured area schemes function in the same way.

As will be shown in chapter 5, a large number of public countryside stewardship policies have been introduced in recent years in the EC. We see three main and inter-linked reasons for this development. First, there have been changes in

agriculture: new technologies, more open markets (within the EC), and a common agricultural policy which together have intensified European agriculture and resulted in severe impacts on water quality, soils, habitats, landscapes and other aspects of the environment. From the mid 1980s, environmental issues were increasingly put on the agricultural policy agenda. The Commission published the so-called 'Green book' announcing reforms and greening of the CAP (European Commission, 1985) and at the same time agri-environmental schemes (AES) were introduced, first as an opportunity for the member states, later with EC co-financing of 25 % (50 % in Objective 1 regions). In 1992 as part of the MacSharry CAP reform, AES were made obligatory for the member states with a 50% financed share from EC (75 % in Objective 1 regions). By 1998 about 20 % of the utilized agricultural land in the EC was under AES agreements (Baldock and Lowe, 1996; Buller, 2000).

A second driving force affecting the introduction of new countryside policies is a new urban-rural relationship, which is changing mutual dependencies between the city and the country. Among other things, this means that a given city is no longer dependent on the surrounding rural economy (including the surrounding food production). Instead, the city's dependency on the countryside has changed to ecological services and recreation such as water supply, clean air, waste reception, outdoor recreation opportunities etc. A growing number of hobby farmers with urban incomes and no or little economic dependency on agricultural production are also part of the new urban-rural relationship. The urban fringe landscapes, covering a significant share of European rural landscapes, have changed from being mainly production landscapes to consumptions landscapes, which have influenced countryside stewardship policies (Hoggart et al., 1995; European Commission, 1999; Vos and Klijn, 2000).

Finally, increasing wealth should be mentioned as a third factor. As societies become more affluent, they tend, according to economic theory, to increase demands for landscape assets and other environmental goods (Huylenbroeck and Whitby, 1999). Such a factor is, of course, closely linked to the two others, and the question of wealth may partly explain why some EU member states – especially in Northern Europe have a longer tradition for countryside stewardship policies than other less affluent countries. The OECD has collected a number of monetary valuation studies, which indicate that there seems to be a clear demand (measured as "willingness-to-pay") for landscape and wildlife conservations schemes within European countries and the US, although great variations occur between the individual studies (OECD 2001).

2.2 Cross-compliance –definitions, policy and legal aspects

Definitions of and approaches to cross-compliance

In general terms, cross-compliance can be described as a policy instrument that link two activities together for example linking eligibility for agricultural support payment (e.g. the direct payments of the CAP) to the undertaking of specific environmental activities. However in principal cross-compliance is not restricted to direct payments, but may also include attachment of environmental conditions to insurance schemes, loans etc. Neither are conditions solely environmental but can also relate to animal welfare and supply control, for example (Christensen and Rygnestad, 2000; Baldock and Mitchell, 1995). Within the agricultural policy domain, environmental cross-compliance has been the most widespread implemented cross-compliance measure until now.

In the legislation implementing the Agenda 2000 CAP reform, environmental cross-compliance refers to: (1) the attachment of specific environmental condition to the direct payment and (2) the application of sanctions in the form of reduction (withdrawal) of the direct payment in the case of non-compliance (EC. Reg. 1259/1999, article 3).

Similar definitions, although expressed more generally are widespread in the literature. Thus Dwyer et al. (2000) and Russell and Fraser (1995) define environmental cross-compliance as an attachment of environmental conditions to the receipts of agricultural support payment offered to farmers. Christensen and Rygnestad (2000, p. 4) propose an extended definition stressing the multi-objectives of cross-compliance measures: "The receipt of agricultural support is made contingent upon farmers undertaking specific environmental activities. And, the penalty for non-compliance with an environmental regulation is linked to the agricultural as well as to the environmental goal".

The key element of the concept of environmental cross-compliance, as defined above, is that it enables policy makers to use production-related agricultural support payment to generate incentives for modifying the (negative) external effects of agricultural production (Russell and Fraser, 1995).

Looking at the application of environmental cross-compliance as a policy instrument at least two approaches have been prominent. The so-called 'red ticket approach', which is a mandatory approach making eligibility for particular agricultural support contingent upon farmers' attainment of specified environmental or conservation standards is the most well known and most com-

monly applied type of environmental cross-compliance. Another approach is the 'orange ticket approach', which involves a combination of mandatory obligations and incentives to generate environmental benefits. Here the eligibility for agricultural support is contingent up-on farmers entering an otherwise voluntary environmental incentive scheme (Dwyer et al, 2000; Spash and Falconer, 1997).

In the US a third approach to cross-compliance has been applied, the so-called 'green ticket approach', which is a kind of bonus approach that makes farmers eligible for higher levels of agricultural support if they comply with or exceed a given set of conservation standards (Spash and Falconer, 1997; Baldock and Mitchell, 1995). A green ticket approach is not perceived as cross-compliance within the EC, rather as a pure incentive measure (Baldock and Mitchell, 1995).

In addition to giving Member States the option to attach conditions to pillar one CAP payments (EC Reg. 1259/1999), the Agenda 2000 reform made it obligatory for member states to define Good Farming Practice (GFP) standards, which farmers have to follow in order to be eligible for funding under certain measures of the Rural Development Regulation (EC Reg.1257/1999), the pillar two of the CAP. The Commission does not characterize this type of linking of activities as cross-compliance. According, however, to the basic definition of cross-compliance mentioned above, this type of arrangement may fall under the definition of cross-compliance, as it includes the linking of two types of activities and the receipt of funds is made contingent upon farmers undertaking specific environmental activities. The implication of this variant of cross-compliance is that it enables the prevention of environmental deterioration other than ones dealing with in the agri-environmental agreement.

According to Spash and Falconer (1997), cross-compliance is best regarded as a regulatory measure with economic incentive effects (page 25). Also Christensen and Rygnestad (2000, p. 17) regard cross-compliance as a regulation based on the following consideration: 'when the perceived cost of qualifying for support is less than the support received, farmers will choose to comply with cross-compliance conditions and the instrument operates virtually as regulation'.

According to Christensen and Rygnestad (2000) the policy goals of environmental cross-compliance can be both improving a positive externality and reducing a negative externality. For example, the policy concept can offer a posi-

tive incentive for farmers to improve wildlife habitats as well as to reduce pollution. This viewpoint will be further discussed in chapter 7 and 8.

Some policy aspects of cross compliance

From a policy analysis viewpoint there are different views of the potentials of using environmental cross compliance.

In an article published by Beard and Swinbank (2001) the EU Commissioner for Agriculture, Franz Fischler was quoted for the viewpoint that a continuation of direct payments to farmers will have to be maintained due to relatively high costs for European production partly because of the requirements of 'good agricultural practice'. Beard and Swinbank (2001) rejected this viewpoint and they put forward four arguments for not accepting the notion of making payments contingent upon environmental objectives. First, they did not believe that arable payments under Agenda 2000 would last long and it would therefore be meaningless to base environmental policy on cross compliance. Second, they saw extensive administrative costs linked to cross compliance and third they argued that there would be no reasons to expect the needs for environmental goods to coincide with conditions for payments. As a fourth argument against the use of cross compliance they mentioned the WTO process in which they found it unlikely that cross compliance could turn the unacceptable blue-box payment into a compliant green-box scheme. Although the CAP reform developed somewhat different than Beard and Swinbank (2001) were expecting, some of their analysis is in our opinion also of high relevance to the present situation, especially when it comes to the potentials of cross compliance as a means to implement environmental policies.

Spash and Falconer (1997) take another approach to the potentials of cross compliance. Their point of departure is that policies have secondary or 'side effects' in addition to their primary objectives and these 'cross-achievements' should be included when assessing a policy. In the case of negative 'cross-achievements' of a given policy – for example increased use of nitrate as a consequence of arable payments for example – additional constraints on farming may be linked to the payments that is cross compliance. In the conclusion they emphasize that "cross-compliance appears to be a potentially important agricultural policy tool and a step towards much needed integration' (Spash and Falconer 1997, p.39). However, they also point out some weakness of cross-compliance for example that it leaves little possibilities for more site specific actions because cross-compliance needs to involve standardised require-

ments. They also note that cross compliance may be particularly relevant in periods characterised by high levels of agricultural support.

Although we agree on many of the critical views mentioned in the two papers, we do – especially within as short or mid term perspective – find cross compliance to a useful instrument to integrate policy domains. In chapter 8 we discuss this in more detail.

Some legal aspects of cross-compliance

Cross-compliance as a concept and as used in Regulation 1782/2003 has a number of legal implications.

The type of environmental conditions that can be stipulated in relation to the payment of subsidies and which sanctions that can be imposed in the case of non-compliance are key questions from a legal point of view. A discussion of these questions may take the point of departure in traditional legal principles such as **legality**, **equality** and **proportionality**. These principles were explored, by Helle Tegner Anker, professor of Law at the Royal Veterinary and Agricultural University in Copenhagen, during the Roskilde seminar. The full paper can be seen in the annex 3.

According to Anker (2003) legal principles are designed to protect the individual against the abuse of power by the state. From a legal point of view cross-compliance conditions therefore must be clear, relevant, proportional and applied on an equal basis. For the farmer the consequences of action or inaction must be reasonably foreseeable and fair.

The **principle of legality** implies that a clear legal basis must exist for imposing requirements and sanctions upon the individual citizen. The more burdensome the requirements or sanctions are, the clearer the legal basis has to be. In a cross-compliance context, it must be clearly stated which laws and conditions should be met in order to impose the sanction of reduction or exclusion of agricultural subsidies. A requirement for a farmer to 'comply with all laws' does not give sufficient clarity.

The **principle of equality** is embedded in the idea that obligations and sanctions must be imposed on an equal basis in similar situations, however with the modification 'unless otherwise justified'. Traditionally, the principle of equal treatment has had a particular importance in relation to the Common Agricultural Policy. According to Anker (2003), the regulation 1782/2003 explicitly

allows for various national interpretations of the cross-compliance provisions and must therefore be seen as an exemption to the general rule that the same conditions apply everywhere. The question is then to what extent and at which level differentiation can be justified? Where differentiation does occur it must clearly be based on objective criteria.

According to Anker (2003) cross-compliance should not be used to impose new obligations on farmers at the individual level. It must be seen as a measure to primarily ensure compliance with already existing (specified) requirements and in a broader sense, perhaps also new, generally established conditions.

The **principle of proportionally** means, that only the appropriate measures necessary to achieve the objective should be applied. This refers to the requirements itself as well as to the consequences and sanctions of non-compliance. As the objective of the cross-compliance is to ensure a sound agricultural production as regards the environment, animal welfare and food safety, the requirements must therefore be relevant to the agricultural production. An example of an irrelevant requirement or condition could be conditions related to non-agricultural activities on the farm.

3 Experiences until now

The concept of environmental cross-compliance originated from the US - here known as conservation compliance - and was introduced for the first time into agricultural legislation by the passing of the Food Security Act in 1985. The act explicitly requires agricultural producers to comply with certain environmental/conservation standards in order to be eligible for benefits from selected Federal agricultural programs (Uri and Lewis, 1998; Heimlich et al., 2000).

In Europe cross-compliance was introduced during the 1990s in countries like Switzerland and Norway (Spash and Falkoner, 1997; Jäggi, 2003). In the EC, cross compliance was introduced first, albeit in a limited way, by the McSharry reforms in 1992 (Spash and Falconer, 1997) and later, by the implementation of the Agenda 2000 reform of the CAP passed in May 1999.

3.1 Experience with cross compliance in the US and Switzerland

The US

In the US there has been measures linking support schemes to erosion control (and farm production control as well) from the 1930s (Tarrant, 1992). In 1985 three different compliance measures were introduced through the Food Security Act: the 'conservation compliance', the 'sodbuster' and 'the swampbuster'. The aims of these measures were to control soil erosion by encouraging farmers to adopt appropriate management practices for arable land susceptible to erosion, to reduce incentives for converting grasslands on highly erodible soils to arable land and to prevent farmers from reclaiming wetlands (Dwyer et al 2000). For both the conservation compliance and the sodbuster program farmers have to produce a self-funded conservation plan and implement the plan in order to comply with the conservation provisions. The aim of the measures was to reduce the erosion to a substantial level, which is defined as an erosion reduction of 75 %. Non-compliance leads to the loss of eligibility for a range of Federal agricultural program payment, not only on the erodible land but also on the remaining farmland (Dwyer et al, 2000; Uri and Lewis, 1998; Heimlich et al. 2000).

The plans and the applied conservations systems are adapted to variations in climate, topography, soils, major crops and pre-existing production practices. In 1997, 1674 different conservation systems were identified indicating a considerable flexibility in conservation requirements (Heimlich et al. 2000).

In addition to the implementation of compliance measures targeting highly erodible land and wetlands, a subsidy program for the same types of areas was introduced. This program made it possible to offer farmers with high costs related to the meeting of the conservation compliance requirements 10-15 year contracts through the principle of competitive bidding (Heimlich et al. 2000, Potter, 1998).

An evaluation of US cross-compliance experience made for the French Ministry of the Environment (here quoted from Dwyer et al. (2000)) concludes that the most successful cross-compliance conditions have been those related to issues which are simple, clear and broadly accepted by farmers, such as the need to conserve vulnerable soils from erosion damage. It is further emphasized that good co-ordination between the different authorities responsible for promotion, monitoring and enforcement is essential to ensure a common understanding of the practical requirements of cross-compliance at farm level.

The issue of control and sanctions is stressed as central to the success of cross-compliance and the report recommends a two-stage procedure, which gives farmers an initial warning, with time to rectify breaches before penalties are applied. The evaluation also concludes that use of plans adapted to local conditions is seen as having been particularly valuable in the conservation compliance and sodbuster program despite such flexibility making monitoring and enforcement more complex.

Switzerland

Since 1993 **Swiss** agricultural policy has gone through a comprehensive reform, introducing mechanisms for lowering the prices of major agricultural products and the introduction of direct payments to compensate farmers for loss of income. In addition, a new framework for agri-environmental schemes was implemented. The largest schemes were in 1996 the schemes for promoting of integrated production and organic farming covering about 700.000 ha or 65% of the agricultural area (see figure 3.1) (Schmid and Lehmand, 2000).

The implementation of the new agricultural reform took place in two stages – the first in 1993 mainly separating price policy from income policy and the second in 1999 focusing on the elimination of price and sales guarantees. During the reform period from 1993 to 1998 agricultural incomes fell by 25 % owing to lower prices and approximately 14 % was compensated for by direct payments (Hofer, 2000).

The 1993 reform also introduced some cross-compliance demands, which have been in action since 1996. The cross-compliance rules prescribed that farmers had either to participate in ecological compensation schemes or produce renewable resources on at least 5-7% of their farm area.

In 1999 a new set of cross-compliance rules was implemented demanding requirement of compliance with a set of minimum environmental standards in order to be eligible for direct payment. The implementation of the new cross-compliance rules was a direct result of a referendum held in 1996 (Jäggi, 2003; Schmid and Lehmand, 2000).

The principle of the new Swiss agricultural subsidy system is a general direct payment system, which includes a payment system for hill areas and a system targeted the remaining areas. In addition to the general direct payment system a voluntary "ecological payment system" is implemented, see Figure 3.1 (Jäggi, 2003; OECD, 2003).

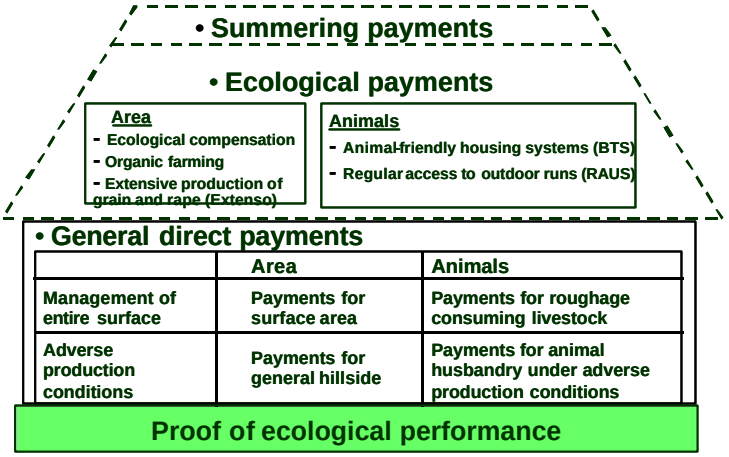


Figure 3.1 The Swiss direct payment system (Jäggi, 2003)

As mentioned above eligibility for general direct payment has since 1999 been dependent on farmers proving that they comply with a set of minimum rules; the so-called "proof of ecological performance". Farmers have to meet the ecological requirements on their entire business and the proof of compliance has to be certificated by an organisation approved by the cantonal authorities (Jäggi, 2003).

To meet the proof of ecological performance farmers must comply with six sets of rules:

- Animal friendly keeping of agricultural livestock
- Balanced fertiliser budget
- Appropriate proportion of ecological compensation areas
- Regular crop rotation
- Appropriate soil protection
- Targeted selection and use of plant chemicals

In more detail, these rules demand farmers to prove their respect of the existing statutory order on animal protection. The nutrient balance rules prescribe that the amount of nitrogen and phosphorus used must be calculated according to the needs of the plants grown and the level of potential production and that soil analyses have to be carried out every ten years in order to determine the nutrient reserves in the soil. An appropriate proportion of ecological compensation areas imply that all farmers have to have at least 3.5 % of the agricultural area covered by special crops (special crops are berries, fruit trees, outdoor vegetable, wine etc.) and 7 % of the remaining utilized agricultural area laid-out as ecological compensation areas. The rules prescribe that strips of at least 0.5 m must be left uncultivated along paths and 3 m strips must be left along rivers,

hedges, ponds, forest and wooded areas on river banks. In order to maintain the fertility of the soil and good quality of plants, a crop rotation system must include at least four crops every year and there are rules for the maximum proportion of the main crops e.g. 66 % cereals, 40 % maize and 25 % potatoes. The rules of soil protection lay down a soil protection index for all crops and the rules concerning chemical use on plants prescribes that equipment for plant protection has to be tested at least every four year and that plants should be treated according to regulations (Hofer, 2000; Jäggi, 2003).

The responsibility for control of the direct payment system has been delegated to the cantonal authorities, who, may do the control themselves or use the services of external organisations accredited for the purpose. The control includes a control of all farms which are applying for the first time, a control of all farms which did not meet the requirements when checked the previous year and a random control of at least 30% of the remaining farms (Hofer, 2000; Jäggi, 2003).

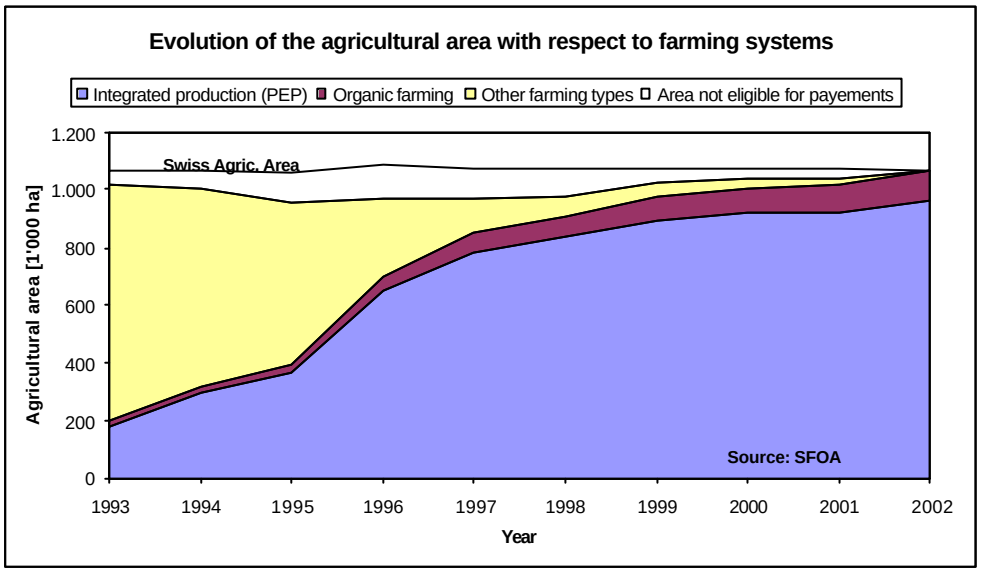


Figure 3.2 Development of the agricultural area farmed in agreement with the rules of organic or integrated production (proof of ecological performance), Jäggi, 2003.

The goal of the new farm policy was that 95 % of all farms fulfilled the ecological minimum requirement. In 2002, 90.3% of all Swiss farmers were producing in accordance with the rules of the proof of the ecological performance; the remaining farmers were producing in accordance with the rules of organic farming, see Figure 3.2 (Jäggi, 2003).

3.2 Cross-compliance under the CAP

Through the introduction of direct payments under the MacSharry reform in 1992, cross-compliance became a policy option in the EU. Cross compliance was partly seen as a policy instrument for the integration of agricultural and environmental policies, but it was also seen as an instrument to justify to the general public the extent of the existing financial support for the agricultural sector (Spash and Falconer, 1997).

Certain cross-compliance options were introduced by the 1992 reform, allowing member states to reduce or cancel eligibility for direct payments if farmers failed to comply with environmental conditions on set-aside land. Also, some possibilities existed for Member States to adopt a form of environmental cross-compliance in relation to headage payments for sheep and cattle (Spash and Falconer, 1997).

Besides the kind of cross-compliance measures included in the 1992 reform, which will not be further described here, experience of cross-compliance within the EC is mainly related to the Agenda 2000 reform. As mentioned earlier, this reform introduced two types of cross-compliance measures, an optional measure associated with the direct payments scheme (the Horizontal Regulation, EC Reg. 1259/1999) and a mandatory measure related to the Rural Development programme (EC Reg. 1257/1999).

The optional measure associated with direct payments is laid down in article 3 of regulation 1259/1999, which allows Member States to adopt measures to ensure that agricultural activities within the scope of the regulation are compatible with environmental protection requirements. Member States may decide whether they want to handle environmental problems by offering farmers an incentive to farm in a more environmentally friendly way, by introducing specific legislation or by linking direct payments to farmers' compliance with environmental standards.

There is no comprehensive overview of how Member States have handled the requirements of regulation 1259/1999, including compliance measures, despite regulation 963/2001 requiring Member States to deliver an "annual report" on the implementation of measures pursuant to regulation 1259/1999 article 3. However, in connection with a conference in Madrid in 2000 on 'Environmental Standards in Agriculture' a first overview of the Member States' implementation of the Agenda 2000 cross-compliance measure was made, reporting that **Austria, Belgium, Germany, Luxembourg, Portugal, Sweden** had

no intention to implement cross-compliance whereas **Denmark, the Netherlands, Finland, Spain, France, Italy, Republic of Ireland, UK, Greece** already had or had the intention to implement cross-compliance measure (Petersen and Shaw, 2000).

At the first seminar of the Concerted Action project held in Germany in June 2003 information on the implementation of cross-compliance was collected for the above-mentioned countries (except for Finland) with the intention to implement cross-compliance (Bergschmidt et al., 2003). This survey shows that these Member States have adopted very different starting points in their design of the cross-compliance policy, ranging from targeting the measure to very specialised production systems or practices to broader approaches targeting all farmers receiving direct payments. Except for the UK which has an extensive set of environmental requirements linked to set-aside areas, environmental requirement linked to the set aside measure is not mentioned in the following as many Member States has not declared these as cross-compliance. Countries with a broad approach are **Denmark, Greece, UK, Spain, and Italy,** whereas countries with a narrow approach are the **Netherlands, France and Republic of Ireland.** A summary of measures is given in box 1 and 2.

Cross-compliance in **the Netherlands** includes two measures and operates only with additional legislative standards. The measures target starch potatoes and maize production. For starch potatoes the environmental standards were (has been phased out):
Prohibition to use chemical deadening of foliage on 70% of the total area of starch potatoes per holding.
A proper registration all chemicals and quantities used on parcel with starch potatoes.

For maize production the standards farmers have to comply with are:
If herbicides are used in the period between sowing and July 15th, the herbal pest control must at least once have been mechanical
The use of herbicides is limited to a maximum of 1 kilo active substance per hectare
On the spot control is carried out and sanctions exist.

In **France** cross-compliance was implemented for all farms receiving direct payment for irrigated arable crops. The provisions refer to national regulations on irrigation. In 2000 only an authorisation or irrigation was required, but in 2001 it was further required that farmers used water meter counters at the withdrawal point. Both requirements are controlled and sanctioned

Republic of Ireland, see text

Box 1 Countries with a narrow cross-compliance approach (after Bergschmidt et al., 2003).

One country, **the Republic of Ireland** has made use of the orange ticket approach – making eligibility for agricultural support contingent on farmers entering an otherwise voluntary environmental scheme. In Ireland cross-

Denmark implemented cross-compliance for all arable payments and livestock premium in the beef sector. Selected parts of existing legislative requirements had to be complied with. All four conditions were controlled and breaches sanctioned. Conditions for arable payment were:
The preparation of a field and fertilisation plan.
The establishment of 2 metre wide non-cultivated buffer zones along rivers and lakes.
Conditions for beef premium were:
Preparation and submission of an account on the use of fertiliser and manure on the farm.
Limiting the use of fertiliser and manure to specific quota allocated to the farm.
In April 2002 the cross-compliance measure was abandoned for political reasons by the new liberal-conservative government.

Greece: In principle cross-compliance is implemented for **all farmers** receiving direct payments. Specific environmental requirements have been defined but no penalisation has been applied. Requirements include codes of Good farming practice concerning: crop rotation, fertiliser management, soil protection, fire protection, water use, pesticide use, livestock production and biodiversity and landscape.

In **Spain** compliance measures have been applied since 2003 (No information on monitoring, control and sanctions have been collected). For the **crop production** farmers have to comply with the following rules: Prohibition of stubble burning, respect of different set-aside rules, prohibition of soil cultivation in the direction of the slope, compliance with national/regional regulation on irrigation. **For livestock production** farmers have to comply with national/regional regulations on animal diseases, rules of minimum condition for manure storage vessels and prevention of run-off of liquid effluents, rules regarding prohibition of pasture burning

In the **UK** cross-compliance has been implemented for both the Arable Payment Scheme and all livestock schemes. For the **Arable Payment scheme** rules have been set out for set-aside areas. The requirements include: establishment of a green cover, cutting of the cover, sowing dates, prohibition to use the area for storage of manure and waste disposal, prohibition to destroy or remove landscape features (hedges, trees, ditches etc) on or immediately next to the site, prohibition on pesticide use. Farmers receiving payment under any **livestock scheme** have to comply with conditions designed to discourage:
Overgrazing leading to environmental deterioration
Damage caused by trampling and vehicle tracking during the process of supplementary feeding in winter
Monitoring, control and sanctions have been applied. However control of the overgrazing requirements has been very costly.

In **Italy** environmental requirements for cross-compliance is directed both at the arable and livestock sector and the requirements are focused on soil management aimed at the control of surface water run-off and animal waste management. In **the arable sector** farmers with grain, legumes, flax, hemp, tobacco, seed and rice have to ensure the maintenance side ditch, stable draining ditch and on sloping areas to create temporary gully drains perpendicular to the maximum slope. In the **olive oil sector** farmers have to ensure the maintenance of outlet rill and stable draining ditch. **In the livestock sector** slurry produced in-house has to be stored in naturally or artificially proofed reservoirs and the specific rules regarding the storage have to be respected

Box 2. Countries with a broad cross-compliance approach (after Bergschmidt et al., 2003)

compliance has been applied to the sheep premium in order to prevent overgrazing in the western part of Ireland especially on Commonage. These areas have largely been target under the Habitat and Wild Bird Directives in the designation of the Natura 2000 sites. The cross-compliance rules establish that farmers only can receive ewe premium, if they take part in the Irish agri-environmental scheme Rural Environmental Protection Scheme (REPS) or an alternative national scheme, which includes a farm plan specifying the number of animals permitted on the farm and eligible for payment in affected areas vulnerable to overgrazing. From 2003 framework plans have been established for the Commonages, setting the environmentally sustainable stocking regimes for each individual area. The stocking regime of the Commonage has to be reflected in the REPS plan for each individual farmer. The loss of ewe premium resulting from any reduction in the stocking density as a consequence of the Commonage framework plan may be compensated by the REPS scheme. The cross-compliance measure has been in action since 1998 and is evaluated as an effective measure in solved the overgrazing problems in Ireland (Rath, 2003).

The German seminar also gained experience on the linking of compliance with environmental requirements to agri-environmental payment under the Rural Development Program EC reg. 1257/1999. According to this regulation it is mandatory for Member States to require farmers to comply with the rules of usual Good Farming Practices in order to receive payment for measures according to article 14 (less favoured areas compensation) and article 23 (agri-environmental schemes) under the Rural Development Program. For measures according to the chapter I, II and VII (investment aid, young farmers, processing and marketing), compliance with environmental minimum standards is required. Standards of GFP can either be legally binding or formulated as recommendations for technical advice. According to EC reg. 445/2002 on the implementation of the Rural Development Program, Member States have to implement verifiable standards for the control of compliance with GFP and all standards shall represent at least compliance with general mandatory environmental requirements.

From the German survey which included experiences from **Austria, Denmark, England, Germany, Greece, Ireland, Italy (represented by the region Emilia Romagna), the Netherlands, Spain and Sweden** it was shown that categories of GFP most frequently implemented were related to the handling of fertilizer and pesticide (included in all the states GFP) whereas, for example,

soil conservation, biodiversity and landscape requirements were implemented less frequently. **Ireland and England** were the only countries to have implemented verifiable standards and standards based on legislation for biodiversity and landscape (Bergschmidt et al., 2003). This result was to some extent surprising as the aims of many of the agri-environmental schemes are the protection and enhancement of landscape and biodiversity. This may partly be related to the fact that regulations on biodiversity and landscape are less developed in many countries.

As mentioned above **England** is one of the countries with most experience of using biodiversity and landscape standards in GFP. In the English Rural Development Programme, GFP consists of three elements:

- Compliance with existing environmental legislation,
- A list of verifiable standards as preconditions for participation in all agri-environment schemes (AE schemes) and LFA payments and
- The Codes of Good Agriculture Practice

The Codes of Good Agricultural Practice are a mixture of recommendations, advice and obligations and has been distributed to all farmers joining an AE scheme and LFA payment. There is no control of the codes, but farmers are encouraged to follow them.

The list of verifiable standards is most often not based on the legislation, but is complementary to the environmental legislative requirements. The verifiable standards are defined and verified by DEFRA – the Department for Environment, Food and Rural Affairs.

Most often legislation on biodiversity and landscape are enforced by other authorities than DEFRA, but there is an exchange of information among the different authorities.

The verifiable standards, implemented in England for landscape and biodiversity include the following standards:

- Removal and destruction of any hedges or stonewall on the farm will not be permitted expect by special derogation, enforcement is through visual assessment of any recent damage during field checks
- Trimming of hedgerows on the farm must not be carried out between 1 March and 31 July, enforcement is through visual evidence

- Farmers are required to notify English Nature of any intended operation that are likely to damage statutory protected Sites of Special Scientific Interest. Checks will be made to see that any damaging operations that appear to have been carried out have had approval from English Nature
- In some cases supplementary feeding is permitted under the term of the agreement. Where it is permitted, the feed must be provided in such a way that the vegetation is not excessively trampled or poached by animals or rutted by vehicles used to transport feed.
- In relation to participants in agri-environmental schemes which involve livestock farming, there will be provisions to ensure that livestock are distributed across the farm in such a way that both overgrazing and under utilisation are avoided. In addition a minimum stocking density of 0.15 Livestock Units (LU) per ha will apply as a condition of receiving Payment under the Hill Farm Allowance Scheme. Under-utilisation is defined as "land where there is evidence of annual growth not fully utilised, or scrub or coarse vegetation is becoming evident and such changes are detrimental to the environmental interest of the site"
- Due to variations in the physical condition it is not possible to set a general maximum stocking density for semi-natural grasslands in England. In order to prevent overgrazing all farmers in the Hill Farm Allowance Scheme with a stocking density of 1.4 LU per ha or above will be subject to a physical inspection in 2001 or in the year in which this threshold is first exceeded and at least once every three years thereafter. Furthermore in areas where experience shows that over-grazing can occur specific high-risk farms will be selected for physical inspection. Over-grazing is defined as 'grazing land with livestock in such numbers as to adversely affect the growth, quality or species composition of vegetation' (Johnson, 2003; Bergschmidt et al., 2003).

The lessons learned from the English implementation of cross-compliance on biodiversity and landscape items within the Rural Development Programme are that control of compliance with the verified standards has been complicated partly because it has to be done in different time periods of the year to assess vegetation condition and partly because the control requires inspectors with specific knowledge.

In addition, it has been necessary to build up a complex administrative system to handle information from authorities responsible for the enforcement of the

legislation lying outside DEFRA's jurisdiction, which is most of the legislation concerning landscape and biodiversity (Johnson, 2003).

4 The new cross-compliance measures in the 2003 CAP reform

The new council regulations EC no. 1782/2003 establishing common rules for direct support schemes under the common agricultural policy require that all farmers participating in the new single payment scheme (article 3-8):

- Comply with certain statutory management requirements related to different EU Directives and regulations concerning: (1) the environment (2) animal and plant health and (3) animal welfare (Annex III).
- Comply with the rules of maintaining agricultural land in good agricultural and environmental condition. Annex IV sets a framework within which the Member States have to establish rules for maintaining land in good agricultural and environmental condition.

In addition, the Member States must establish an advisory system for farmers on land and farm management before January 1st, 2007. The advisory service shall cover at least the statutory management requirements and rules for the good agricultural and environmental condition. It is voluntary for farmers to participate in the advisory system. The member states shall give priority to farmers, who receive more than 15000 EURO in direct payment per year (article 13-16)

The following contains a brief and preliminary overview of selected member state approaches to the regulation. The member states are **Denmark, the Netherlands, Germany, UK, Portugal, Greece and Czech Republic**. The summary is based on key person interviews carried out from late October to mid November 2003, which is shortly after the new regulations were approved and published by the Commission. The complete note of the interviews can be acquired by making an approach to the authors (lokr@kvl.dk).

By the end of November 2003 all member states in question had started a process through which the implementation of the different EU directives and regulations is being analysed. Missing elements and specific steps in the implementation is being identified in order to make the legislation binding at the farm level. The process of defining minimums standards regarding good agricultural and environmental conditions was in most countries at the discussion stage and not even started in some countries. The preliminary survey shows that the level

of ambition regarding what to define as minimum standards varies among the countries.

Measures to protect and maintain permanent grassland has been a bigger discussion topic in most countries and a lack of records of the grasslands was a common problem mentioned. In some countries regulations already exist prohibiting the reclamation of semi-natural grassland e.g. in Denmark, in certain parts of Germany, Czech Republic, Greek and in the UK it requires Environmental Impact Assessment. The protection and maintenance of permanent grassland is anticipated to be a difficult task in most countries, with the exception for the Netherlands. Especially countries like Portugal and Czech Republic were expecting problems with permanent grassland protection in Annex 4 and Article 5

In November 2003 few countries have discussed how to implement the advisory system yet.

Even though the EC reg. 1782/2003 clearly states that the new cross-compliance measure shall not influence the existing agri-environmental schemes, the Member States in the survey were asked if cross compliance would affect such schemes. Referring to the statement in the regulation, most countries stated that the existing agri-environmental schemes would not be affected. However, in the German interview it was mentioned that the introduction of a regional grassland payment with maintenance requirement could put about 40% of the actual agri- environmental support into question.

5 Countryside stewardship – policy objectives

Countryside stewardship (CS) is related to cross compliance measures in different ways. In this chapter we focus on Countryside stewardship policy objectives and in chapter 7 and 8 we discuss in some detail the potentials of cross-compliance measures to pursue CS objectives.

Countryside stewardship schemes are relatively new as the Danish budgets for such schemes may indicate. In 1994, the budgets for Danish countryside stewardship incentive schemes added up to about 250 million DKK annually (€32 million (Primdahl 1996). More than half of the schemes were partly financed through EU funds and more than 90 % of the total budget was related to policies, which did not exist 10 years before. Countryside stewardship schemes

have developed during the 1980s and 1990s in many European countries for the reasons outlined in chapter 2[1]. Also regulatory instruments concerning countryside stewardship objectives have been introduced during the 1980s and 1990s including a considerable amount of national legislation relating to EC environmental Directives.

There is no systematic overview of the countryside stewardship policies within EC and there is no commonly agreed terminology either.

In a study of a wide sample of CSPs from 8 EC countries in 1995-96, the different objectives in each CSP were recorded. Of the 351 CSPs analysed the vast majority of the measures were voluntary (328), temporary (317)[2], and compensated (323). The types of objective are shown in table 5.1. It appears

Table 5.1 Frequency of different objectives occurring in 351 countryside stewardship policies (CSPs) in 8 member states. About one third of the CSPs has only one stated objective, half two or three (after Gatto and Merlo p.34).

Objective	No. of CSPs	% of total CSPs
Landscape conservation	131	37
Environment conservation	109	31
Wildlife conservation	164	48
Soil conservation	74	21
Recreation	35	10
Reduction of negative impacts	212	60
Quality labels	38	11
Afforestation of agricultural land	10	3

that reductions of negative impacts are the most frequent objective. This is interesting in a cross-compliance context since CC-measures may be more suitable to deal with protections than enhancements. Also conservation issues (wildlife, landscape, environment and soil) are dealt with to a great extent – but in ways exclusively oriented towards protection against negative changes.

[1] Even though most current countryside stewardship schemes are relative new, they do not just reflect growing agricultural budgets as such. In many ways the new agricultural policies may be seen as successors of former policies (partly national, partly EC) such as subsidies for drainage, reclamation, irrigation and other schemes aiming at the agricultural intensification

[2] Temporary policies refer to schemes, which give the farmer or landowner the possibility of backing out of the agreement if he decides to do so.

In another study of countryside schemes, correspondingly variations in scheme objectives and design were found. With 22 case study areas in 9 member states and Switzerland no less than 82 countryside steward schemes (agri-environmental measures as they were termed) were in operation under Reg. 2078/92. The schemes varied considerably according to restrictions, farm types in focus and areas targeted (Andersen and Primdahl, 1999). However, when it came to the specific agreements, the variations appeared to be rather modest. As it is seen from Table 5.2, almost all agreements had included regulations of the same four issues, namely pesticides use, mineral N-fertilizer, permanent grassland management and livestock density reduction. Besides these four issues, the agreements differed in other issues such as crop diversity, abandoned land, hedges, minimum livestock density and fallow land.

Table 5.2 Regulation issues found in agri-environmental policy agreements under EU Reg. 2078/92 (and similar schemes in Switzerland) in 22 case study areas within 9 EU Member States and Switzerland. (Source: Andersen et al. 1999, p. 156).

Regulation issues in AEP management agreements	Austria B	Austria B	Switzerland A	Switzerland B	Denmark A	Denmark B	Germany A	Germany B	Spain A	Spain B	France A	France B	Greece A	Greece B	Portugal A	Portugal B	Sweden A	Sweden B	Sweden C	Sweden D	UK A	UK B	No. of study areas
Pesticides use	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	22
Mineral N-fertilizer	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x		x	x	x	x	x	21
Permanent grassland	x	x	x	x	x	x	x	x			x	x			x	x	x	x	x	x	x	x	18
Livestock density reduction	x	x	x	x	x	x	x	x			x	x			x	x					x	x	14
Crop diversity	x									x			x		x	x							6
Abandoned land	x	x										x				x		x					6
Hedges	x	x									x										x	x	5
Minimum livestock density									x									x	x				3
Fallow land	x									x					x								3

Of the four most widespread issues the use of N-fertilizer and livestock density reduction are of relevance to the implementation of the Nitrate Directive (the first one and latter one) whereas the use of pesticides and grassland management – in some cases – may be related to the Habitat Directive and Birds Di-

rective included in Reg. 1782/2003, Annex3. In addition, grassland management may be of direct relevance to the newly proposed cross-compliance regulations included in Reg. 1782/2003. Finally, the issue of pesticide use may be of relevance to certain ground water protection areas.

6 Farm conservation plan experiences and training

As it appears from the previous chapters most of the EU countries have made use of cross-compliance under both pillar one and pillar two to reinforce existing regulations. Other cross-compliance options may, however be of relevance to use in order to reach goals and objectives which go beyond the existing regulations or which are difficult to reach through general regulation. In the following section we will focus on farm conservations plans and training as optional cross-compliance requirements.

6.1 Farm conservation plan experiences

Whole farm approaches have been used in different agri-environmental schemes such as the **Irish** Rural Environment Protection Scheme (REPS) under pillar two, which requires the preparation of an environmental plan for the whole farm as part of the agreement. The plan includes the specific management conditions the farmer has to comply with on the different land units of his farm with reference to eleven basic measures of the general REP programme. The farmer receives annual payments in the form of a single compensation payment per hectare up to the maximum of 40 hectares (www.agriculture.gov; Rath, 2003). Also the **Welsh** Tir Gofal Scheme and the **English** Environmentally Sensitive Area scheme are based on a whole farm approach, requiring the farmers to bring in all relevant areas under the contract. Further, these plans include the Good Farming Condition the farmers have to comply with – for example management requirements for specific landscape features. The farmers are paid according to the amount of land and number of landscape features, which are under agreement.

A whole farm approach was also taken in the **French** agri-environmental policy through the CTE scheme (Contracts Territoriaux d'Exploitation), which has the triple objective of maintaining and improving the economic, social and environmental contribution of farming to the rural areas. The idea of these contracts was that environmental and production objectives should be integrated into a single management plan. According to Lowe et al. (2002) this contract

type may be seen as means of promoting and funding agricultural multi-functionality and of reorienting agricultural policy towards a broader rural agenda. In this way, the French scheme differs from the above-mentioned schemes, which mainly have the objective of preserving and improving the state of the environment, nature and landscape. The majority of the CTE contracts are territorially or farm-type specific and are designed locally by different actors including farming community, environmental organisations, local government and local economic actors, through the Commision Départementale d'Orientation based on a national catalogue of 80 generic agri-environmental measures and more than 150 contract types (Buller, 2003). According to Buller (2003) the lessons of the CTE appear to be that it includes many characteristics, which makes cross-compliance measures as a distinct regulatory framework less important. These characteristics include:

- The need for a global approach to agriculture that encompasses its multifunctional and sustainable roles within the farm under a unified project
- The need for a policy instrument that operates more closely at the territorial level involving local actors in its construction and local circumstances
- The need for a contractual approach

The CTE scheme was introduced in 1999 and suspended again in September 2002 due to a relative low uptake in the first years and much higher scheme cost than anticipated (Buller, 2003). Although considered an innovative scheme the CTE schemes obviously did not manage to appeal to farmers. According to Lowe et al. (2002) it may have to do with the administrative complexity of the CTE scheme or/and the inability of the farmers to grasp its overall rationale.

Other types of whole farm approaches have been implemented in **Denmark** and **Sweden.** In **Sweden** nature protection and enhancement plans have been offered to farmers as part of the Swedish training programme (described in the following section). A nature plan is made for the whole farm including a record of all nature and cultural values and a management plan (prescription) for each of the values of the farms (Busck et al., 2000).

In **Denmark** two explicit agri-environmental schemes have been implemented to encourage farmers to produce a kind of farm plan: (1) a farm audit scheme, the so-called "green account scheme" and (2) a pilot scheme on nature protection and enhancement plans.

The over all aims of the concept of farm protection and enhancement plans are to give an overview of the existing nature and its quality, to communicate these values to the farming family, to discuss present restrictions and options and to make a plan for the future of the nature with respect to the farmers' interest (Tybirk, 2002).

The objectives of the green account measure are to improve the farmers' awareness of the consumption of resources on the farm, to get the farmer to set a target for the resource consumption and to make farmers actively work towards the targets set. As a minimum, the account has to include:

- A description of the farm
- Calculated balances for N, P and K (an input-output approach must be used and the balances must be at the farm level)
- Calculated 'treatment frequencies' for the use of pesticides
- The total consumption of water
- The total consumption of energy
- The distribution of water and energy consumption between animal and crop production

Additionally the farmers have to specify their targets for the balance of N, P and K and 'treatment frequencies of pesticides' and produce plans for how to reach the target. To ensure that the scheme has an environmental effect, farmers are not allowed using pesticides in 12 m zones along certain watercourses and lakes.

6.2 Training experiences

Training of farmers has been used to a limited degree in agri-environmental policies (Buller, 2000). However, in certain countries e.g. **Ireland** and **Sweden**, participation in training courses has been compulsory for farmers if they want to join an agri-environmental scheme. Additionally, voluntary training programmes, under the Rural Development Programme, have been set up in other countries for example in **Wales** and **France**.

In **Sweden**, an ambitious training programme has been implemented including training related to three of five implemented agri-environmental programmes: Conservation of biodiversity and cultural heritage values, Protection of environmentally sensitive areas, and Promotion of ecological farming. Twenty nine million skr (€3.1 million) equalling 6% of the total Agri-environmental program budget of Sweden was spent on these training programmes in 1999. This

allowed about 72,200 farmers and other persons to participate in the programme equalling the 83 % of the farmers in Sweden (one farmer can have participated in more than one programme in one year and the figure is not adjusted for that). The courses were open also to farmers not participating in an agri-environmental scheme (Busck et al., 2000; Primdahl et al., 2001).

The **Swedish** training programme includes several activities ranging from half and whole day courses, seminars and study trips to individual consultancy, visits to demonstration farms, news letters etc. The counties of Sweden were the main actors of the training programmes responsible for about 90 % of the money allocated for the training activities. The range of activities included in the 'Conservation of biodiversity and cultural heritage values programme' implemented by the counties is shown in Table 6.1.The remaining budget was spent by other organisations mainly for providing information on old husbandry breeds. It was free for farmers to participate in the courses, but they were not compensated for the time spent (Jordbruksverket, 2000b).

Table 6.1 Activities carried out under the County's training programme "the biodiversity of the fields" in 1999. One Swedish 'krone' (skr) equal to €0.11 (Jordbruksverket, 2000b)

Activity	Participants	Costs in skr
Whole and half days courses	17,670	10,558,000
Field and farm visit	3,990	1,227,000
Seminars	620	498,000
Study trips	360	238,000
Individual consultancy – farm plans	2,660	15,826,000
Short individual consultancy	690	871,000
News letters		193,000
Demonstrations farms		182,000
Expert assistance		139,000
Training of advisers	400	528,000
Others		3,334,000
Total	26,390	33,594,000

Different evaluations of the Swedish training programmes have been made, focusing on the effect of the programmes on the farmers' landscape behaviour. In summary, these results show for the Conservation of biodiversity and cultural heritage values programme that 85 % of farmers increased their interest (from little to very much) in the cultural landscape and its biodiversity and cultural values. Farmers with permanent grassland were found to have increased their interest 'very much'. On the question of whether farmers had changed or plan to change their conservation behaviour in the near future, 5 % answered that they had not changed anything and did not plan any changes, whereas, the remainder had made smaller changes (47 %) or more profound changes (31 %). 42 % answered that the training had influenced their change in conservation practise very much or much whereas 48 % said that training had only influenced their change in conservation practices to a minor degree. The evaluation also showed that participation in more than one course increased the probability of a change in conservation practice (Jordbruksverket, 2000a).

7 The relationship between cross-compliance obligations and voluntary agri-environment schemes

Countryside stewardship policy objectives and the relationship between these and cross compliance are the subjects dealt with in this chapter. First we deal with the potential for pursuing countryside stewardship objectives through cross compliance measures related to pillar one. Next we focus on agri-environmental schemes and cross compliance measures and finally we discuss the relationship between pillar one and pillar two in a cross compliance context.

7.1 Cross compliance and the pillar one measures

From a formal, logical viewpoint it could be argued that the distinction between an incentive scheme targeting certain environmental conditions on the one hand and an agricultural policy (with socio-economic objectives of various kinds attached to it) with environmental cross compliance measures built in on the other, is by no means clear. What is included in agri-environmental schemes in some Member States may be required through regulatory measures in others simply because environmental legislation differs considerably between the Member States.

It was argued during the Roskilde workshop that cross compliance measures are the most suitable means to avoid costs whereas benefits demanded by society and with no functioning market mechanisms are most efficiently obtained through incentive schemes. Such a distinction is in accordance with Bromley (1997) and Parris (2004).

Environmental costs and thus cross compliance may – in a countryside policy context – refer to either impacts beyond what is acceptable at a general level (for example nitrate leaching beyond certain threshold values) or to impacts caused by a concrete agricultural practice, which due to the specific local conditions are seen as unacceptable. In accordance with this distinction, environmental costs can spatially refer to either general or to specific reference levels. Both types of costs refer to human values, interpretations and objectives. They are in other words socially constructed and may be changing over time. What at one point in time are considered to be costs referring to specific locations may at another time be considered costs from a more general point of view. Furthermore, they are fundamentally political and not unequivocally defined – costs for some may be benefits for others. In the following we will consider "costs" as those defined as such by the society and with a clear position in relation to a reference level. Environmental costs may or may not be subject to specific regulatory measures or other kinds of public policy interventions, but they do not become "costs" before this reference level is defined.

Environmental benefits associated with agriculture can be defined as environmental impacts considered by society to be positive beyond general and specific reference levels. Reductions of environmental impacts and resulting improvements of environmental quality in ground water, lake, streams and coastal waters beyond stated reference levels are examples of such benefits. Restorations of former wetlands, plantings of new hedgerows, and digging of ponds are other examples of environmental benefits, which may be best achieved through incentive schemes.

The critical factor in the distinction between costs and benefits is the definition of the reference level, since the level may change over time as well as in space. The first happens continually when environmental problems are documented and appear on the public agenda. A special situation occurs where incentive measures such as agri-environmental schemes have been running for a decade or more. The original reference level may lose its legitimacy partly because the original payment may have been seen (by society) as payment for improvements, whereas the subsequent payments (in the next generations of agree-

ments) are given for protection, partly because the reference levels may have changed.

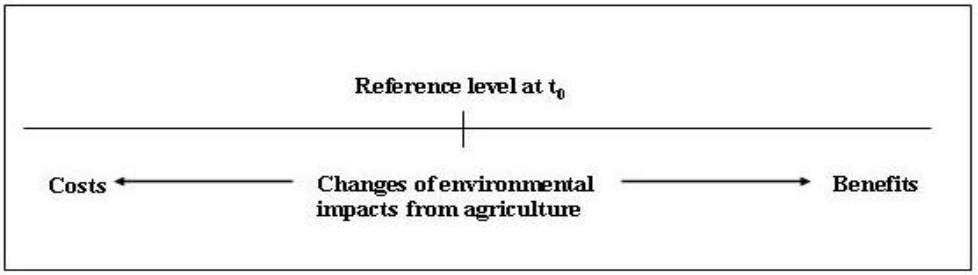


Figure 7.1 Environmental 'costs' and 'benefits' in a change situation (se also figure 2.1)

Spatial variations in reference levels appear where different places have different environmental sensitivity towards the same type of impacts. Designations and various forms of zoning may solve this problem. Variations do also occur where different areas are regulated through different policies due to different histories and socio-economic conditions.

Despite all the ambiguity and uncertainty concerning the specific definitions of 'environmental cost' it seems to be meaningful in a CAP context to view cross compliance mainly as an instrument to cope with costs leaving environmental benefits to pillar two incentive schemes. From the relatively limited experiences gained so far with cross compliance it seems to be environmental costs, which are largely included in cross compliance measures (see section 3.2).

Clearly, the 2003 CAP reform also refers to environmental costs when including compliance requirements with a number of EU environmental directives. When it comes to the other group of cross compliance requirements, those of good agricultural and environmental condition, it is less clear to what degree these also include environmental benefits. This is further discussed in the final chapter 8.

7.2 Cross-compliance and pillar two measures

As described in chapter 3 it has been a precondition for receiving financial support under pillar two that certain standards for good agricultural practice are defined and complied with.

In principle, agri-environmental schemes - which in a countryside stewardship context are the most relevant of the pillar two measures - are based on compensating incomes forgone due to restrictions attached to the incentive schemes (e.g. reduced levels of N-applications and reduced livestock density) or to requirements meaning extra work (e.g. requirements of grassland management). The payments allowed in the agricultural environmental schemes under pillar two must reflect these farming costs although an additional incentive of 20 % of the cost may be included in the payment.

Two questions are of relevance in this context: (1) to what extent are environmental costs included in these payments and (2) to what degree are cross-compliance measures linked to pillar one payments moving the baseline affecting the payments under the incentive measures?

Regarding the first question, it is evident that agri-environmental payments are given to compensate for restrictions, which are located on the cost side of the reference level, meaning that farmers get payments for not polluting or otherwise changing the environment within the limits of unacceptable impacts. This is done either because the authorities (and maybe also the farmers in question) responsible for the payments are not aware of this reference level (for example restrictions on farming practice on specific sites) or because the reference level in question is not included in the specified good agricultural practice standards. However it is unknown to what extent agri-environmental policies are used to deal with environmental cost or they are used to compensate for environmental benefits.

The answer to the second question is that new cross compliance measures – especially those referring to good agricultural and environmental condition will without doubt move the baseline for agri-environment payments. This will be the case for two reasons. First cross compliance measures mean that the reference point for 'costs' and 'benefits' will be moved for example for regulation of permanent grassland, because it is a new regulation in many countries. Second the marginal costs of following certain restrictions will be affected by the de-coupling built-in in the reform as a whole. Thus the income- forgone calculation of 'conversion agreement' may for instance be reduced because there is no longer an arable area payment to compete with. Or the opposite - payments will have to be raised due to extra costs of grazing because the headage premium is no longer there. Additionally, the new demands of good agricultural and environmental condition may reduce the 'cost calculation'. Seen from a countryside stewardship perspective the consequences of such changes of ref-

erence points and payment baselines are still unclear, although the reform as a whole may be seen as a positive step forward.

7.3 Relationship between pillar one and pillar two

There is the possibility for using cross compliance measures in combination with countryside stewardship schemes. At a general level this issue is about the relationship between different types of policies and to what degree these policies are supporting or distorting each other. With respect to the CAP it is evident that the arable area and the headage payments have been "competing" with countryside stewardship schemes such as agri-environmental schemes and afforestation schemes. Arable and headage payments have therefore in many cases 'prevented' farmers from signing agri-environmental agreements or sometimes even undermining the objectives behind the stewardship schemes (Linddal, 1998). An example of the former is the Danish water protection areas in which farmers are offered various kinds of extensification schemes aimed at reducing impacts from pesticides and nitrate leaching. The uptake of these schemes has been very limited, partly because farmers have been offered much higher payments for grain, rape and other crops payments which may even in some cases have resulted in environmentally negative impacts. In a study of the total agricultural support paid in two Danish regions in 1998/1999 it has been found that within designated environmentally sensitive areas (target areas for agri-environmental schemes) 87 % of the support was paid as arable area (81,%) and headage premiums (6 %) in one of the areas and 86 % in the other (71 % arable area and 15% headage). Set aside premiums were 8 % in both areas whereas agri-environmental schemes were equivalent to 5 and 6 % respectively. So even in areas where extensification (including conversion of arable land to grassland) is an objective the vast majority of payments are paid for arable farming (Andersen et al., 2003).

Another example of distorting relationships between pillar one and pillar two measures is the headage premium, which in many areas has resulted in severe over-grazing and resulting erosion problems. In parts of Ireland the problem has been approached by requiring farmers to enter agri-environmental schemes (setting standards on animal density and other measures beyond legislation) to be eligible for ewe premiums, as described in section 3.2.

Seen from a countryside stewardship perspective, many of the problems with pillar one payments will disappear or be reduced in the future as a consequence of the decoupling of payments and the new cross compliance measures. This is the case with over grazing linked to former beef and sheep premiums. To some

extent decoupling will most likely also lead to extensification of inputs and conversions from arable to grassland farming, if (when) the price level for agricultural products are declining as a consequence of the removal of price guarantee and other marked interventions.

However, there may still be some problems left concerning arable farming in sensitive areas which may not be solved through the cross compliance measures simply because the "reference level" is too "low" to solve the problems. In such areas it may – at least in principle - be a solution to require participation in countryside steward schemes as a prerequisite for receiving direct payments. However, it is not clear whether this is an option within the current regulations.

Finally, decoupling may cause problems with maintaining important semi-natural grasslands because the headage premiums have been a very important instrument in keeping such areas grazed, helping to protect biodiversity and valuable landscapes, preventing soil erosion, fire control etc. With premiums disappearing, grazing may in many areas become economically unfeasible, leading to abandonment. It is not clear to what degree the cross compliance measures in art. 5 and annex IV of Reg. 1782/2003 may prevent such developments and it is also unknown to what degree agri-environmental schemes may be able to 'replace' the maintenance-function of the headage premiums. Especially in Southern Europe there may be problems in finding the funds for increased agri-environmental budgets. In that case, cross compliance measures linking the new direct payments to participation in agri-environmental schemes may prove to be an inadequate solution

8. Cross-compliance as a means to advance countryside stewardship objectives – constrains and potentials

Cross-compliance measures open up new opportunities for pursuing countryside stewardship policy objectives and together with the 2003 CAP reform as a whole they must be considered as a step forward in advancing the stewardship of the European countryside. However, there are clear limitations. In this final chapter we outline the potential and constraint of cross compliance.

Potentials

We suggest that the three dimensions of the countryside stewardship: protection, maintenance and enhancement are related to the reference level (the status quo) and thus to costs and benefits for the society as shown in Figure 8.1

Cross-compliance seems to be a quite suitable instrument to prevent undesired changes of the environmental state related to agriculture - that is to **protect** the environment. This is due to two potential functions of cross compliance measures:

- They may make the implementation process more effective and
- They may integrate policy design (objective setting and measure design) from both environmental and agricultural policies and thereby avoiding contradictory policies/ advancing synergy between the two policy domains.

Environmental **enhancement** such as reductions of chemical inputs beyond the level of accepted impact (the reference level), conversion from arable to permanent grasslands, and creations of new landscape features is properly best ensured through incentives such as agri-environmental schemes. Opportunities to combine direct payments with requirements of participation in certain agri-environmental schemes exist in principle, although it is unclear to what degree this opportunity is available in the context of Regulation 1782/2003.

The third dimension – **maintenance** of environmental assets such as semi-natural grasslands for instance – is in practice not easily localised in respect to a reference level simply because the maintenance of certain features is related to a sort of agricultural practice, which is usually not regulated through regulatory instruments although examples exist – in forestry for example and in water system management as well. None the less, Reg. 1782/2003 contains provisions, which require the maintenance of permanent grasslands as a prerequisite for getting direct payments for permanent grasslands as part of the good agricultural and environmental condition requirements. It is however unclear where the bounds of possibility for this type of cross compliance are and exactly at what points agri-environmental incentive measures are needed. This is a major problem, because the cross compliance measures are developing as part of a new reform, which will cause major changes including significant irreversible changes of European semi-natural grasslands. It is therefore important that the 'grey zone' indicated in figure 8.1 should be reduced as much as possible during the process of implementing the regulation 1782/2003. Clear-cut statements

of objectives behind the management requirements, also at the EU level, may help to overcome this problem.

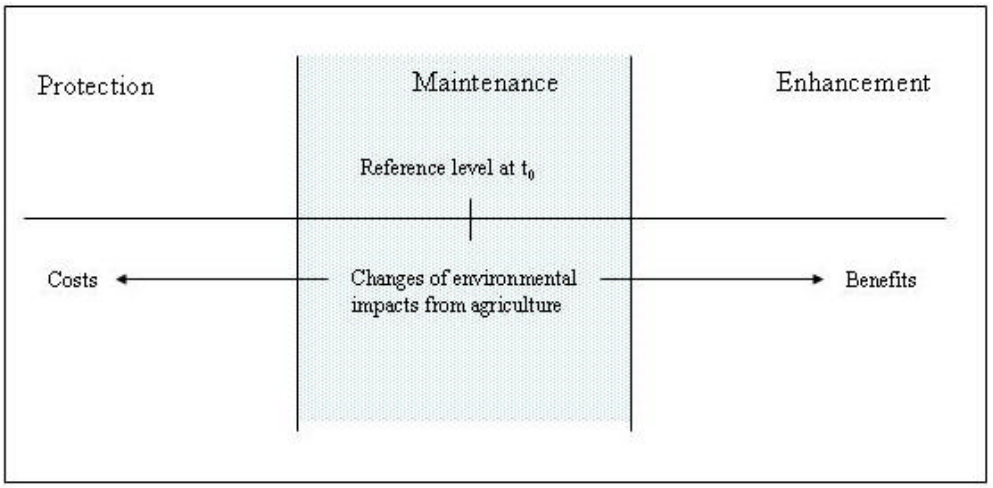


Figure 8.1 The three dimensions of countryside stewardship: protection, maintenance and enhancement in the context of a status quo reference level.

In addition, cross-compliance encourages the general sense of justice, because it prevents farmers from claiming economic support if they are not complying with legal requirements according to national legislation.

With cross-compliance it is possible in specific situations or within specific areas to couple the receipt of direct payment with the demand of taking part in otherwise voluntary agri-environmental schemes. This makes it possible to address very specific environmental problems and to compensate farmers for the restrictions, which has been put on him at the same time. Such a measure may be of relevance to use when compliance demand goes far beyond the reference level mentioned in figure 8.1, although such a linkage is not without complication.

A more widespread use of environmental cross-compliance increases the need for education and training of farmers, which is also partly the reason why the regulation 1782/2003 demand the member states to implement a farm advisory system offering farmers advise on processes related to the environment. Further more, compliance measures advance the possibility to reinforce more soft policy measures as training and education. Experience from Sweden shows that training increases the farmers' interests in nature conservation topics as well as change their landscape behaviour significantly.

Through cross-compliance measures it is also possible to promote the whole farm approach, which has obvious benefits from a countryside stewardship perspective. A range of experiences with the use of whole farm approach exists as described in section 6.1, although the different approaches have had varying attraction to farmers. This lack of attraction is assigned the complexity of the whole farm approach and the inability of the farmers to grasp its overall rationale. This suggests that a whole farm approach needs to be simple and clear and that farmers need to have an understanding of the rationale behind the concept. We are, however, convinced that a whole farm approach to countryside stewardship may very well show to be a way to combine costs and benefits and also a way to reduce the overall bureaucracy 'affecting' farm management (from both different public policy intervention as well as from private assurance schemes)

Constrains

As mentioned in section 2.2, cross-compliance as policy instrument presupposes the presence of certain support payments paid directly to the farmer. Additionally the support has to have a certain level; otherwise the incentive to receive support payment (take part in support program) will disappear. This will be the case if the compliance conditions are too high, seen from a farmer's perspective. Different productions sectors may also be differently dependent on direct payment and there will be different possibilities and constrains on what to ensure through cross compliance.

Seen in an ecological and countryside stewardship context, cross-compliance is linked to budgets, which are short-termed. Relying on such short termed budgets for the financing of costs related to long termed objectives and processes, as the protection and maintenance of the Natura 2000 network for example may to some extent be problematic. In a long term perspective is may also be highly problematic to start a process, which may in effect make countryside stewardship dependent on agricultural budgets.

It has also been questioned whether cross-compliance can solve more site-specific environmental problems, because a cost efficient cross-compliance needs to involve standardised requirements. However, as discussed earlier in this chapter, such more site-specific environmental problems can in principle (and to a certain extent) be solved by using an orange ticket cross-compliance approach.

As mentioned in previous chapters the success of a cross-compliance policy is highly dependent on effective control and enforcement mechanisms. Development of control systems may therefore be seen as a critical factor in the further elaboration of cross-compliance as policy instrument. So fare experiences have shown that control can be extremely resource demanding, especially when talking about landscape and biodiversity. On the other hand, private assurance schemes are growing fast and somewhat chaotic making it difficult for agriculture to deal with the different requirements in a rational way. Designed properly cross-compliance measures may be an instrument to integrate such key requirements in private assurance schemes and to rationalise control procedures.

The last item to mention is how to evaluate the effect and the efficiency of environmental cross-compliance. Aims and objectives constitute normally the point of departure for policy evaluations. However, in an environmental cross-compliance context aims and objectives are often very loosely formulated, which makes such evaluations difficult. This is especially true for Reg. 1782/2003 where the objective (among other things) is to 'ensure that all agricultural land especially land which is no longer used for production purposes, is maintained in good agricultural and environmental condition'. Very few countries have at the moment regulative measures covering items of good agricultural and environmental condition and by that no clear policy objectives exist. The lack of clear objectives at the EU level together with a missing clarification of the scope of the maintenance objectives makes effect evaluations and therefore also a full development of cross-compliance measures difficult.

9 References

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Appendixes

1. Roskilde workshop – programme

2. Participant list

3. Some legal aspect of cross-compliance.

Paper by Helle Tegner Anker, The Royal Veterinary and Agricultural University, Denmark

4. Cross-compliance and the French 'Contrats Territoriaux d'Exploitation'.

Paper by Henry Buller**,** University of Exeter, UK