

Through the green smokescreen



How is CAP cross compliance
delivering for biodiversity?



Through the green smokescreen

How is CAP cross compliance delivering for biodiversity?

Prepared by
Luigi Boccaccio¹, Jenna Hegarty¹ and Ariel Brunner²

¹ *The Royal Society for the Protection of Birds, The Lodge, Sandy, Beds, SG19 2DL, UK*

² *BirdLife International European Division, Avenue de la Toison d'Or 67 (2nd floor), B-1060 Brussels, Belgium*

With contributions from

Johannes Frühauf	BirdLife Österreich (BirdLife in Austria)
Edita Difova & Miroslava Dikova	Bulgarsko Druzhestvo za Zashchita na Ptitsite – BSPB (BirdLife in Bulgaria)
Martin Hellicar	BirdLife Cyprus (BirdLife in Cyprus)
Irina Herzon	BirdLife Suomi (BirdLife in Finland)
Carole Attié	Ligue pour la Protection des Oiseaux – LPO (BirdLife in France)
Florian Schöne & Rainer Oppermann	Naturschutzbund Deutschland – NABU (BirdLife in Germany)
Ioulia Drossinou	Hellenic Ornithological Society –HOS (BirdLife in Greece)
Patrizia Rossi	Lega Italiana Protezione Uccelli – LIPU (BirdLife in Italy)
Lāsma Irša	Latvijas Ornitologijas Biedrība – LOB (BirdLife in Latvia)
Boris Maderic	Slovenská Ornitologická Spoločnosť - SOS (BirdLife in Slovakia)
Andrej Medved	DOPPS-BirdLife Slovenia (BirdLife in Slovenia)
Ana Carricondo	SEO/BirdLife (BirdLife in Spain)
Katrina Marsden	The Royal Society for the Protection of Birds – RSPB (BirdLife in the UK)

November 2009

Pictures used for the cover: Ben Hall (rspb-images.com), Circle_brainforbes37/flickr, John Carey & Circle_steffe/flickr

Executive summary	4
1. Introduction	6
1.1 Background and recent policy changes	6
1.2 Objectives	7
1.3 Scope and methodology	8
1.4 Structure of the report	8
2. Inherent problems of the cross compliance system	9
3. Targets and monitoring	11
4. Enforcement and penalties	12
4.1 The extent of cross compliance checks	12
4.2 The penalty system	12
4.3 Reporting	14
5. Guidelines for a meaningful implementation of environmental cross compliance requirements	15
5.1 Statutory Management Requirements (SMR)	15
5.1.1 Council Directive 79/409/EEC of 2 April 1979 on the conservation of wild birds	16
5.1.2 Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild flora and fauna	21
5.2 Good agricultural and environmental condition (GAEC)	23
5.2.1. Minimum soil cover	23
5.2.2. Minimum land management reflecting site-specific conditions	24
5.2.3. Retain terraces	26
5.2.4. Arable stubble management	26
5.2.5. Standards for crop rotations	28
5.2.6. Retention of landscape features, including, where appropriate, hedges, ponds, ditches, trees in line, in group or isolated and field margins	28
5.2.7. Minimum livestock stocking rates or/and appropriate regimes	31
5.2.8. Establishment and/or retention of habitats	32
5.2.9. Avoiding the encroachment of unwanted vegetation on agricultural land	33
5.2.10. Prohibition of the grubbing up of olive trees	35
5.2.11. Protection of permanent pasture	36
5.2.12. Maintenance of olive groves and vines in good vegetative condition	38
5.2.13. Establishment of buffer strips along water courses	38
5.2.14. Where use of water for irrigation is subject to authorisation, compliance with authorisation procedures	40
6. Conclusion	41
7. References	43

Executive summary

Cross compliance was introduced in 2005 as the set of rules farmers receiving subsidies under the EU Common Agricultural Policy (CAP) must respect. BirdLife believes cross compliance has great potential as a tool to improve environmental standards on EU farmland by ensuring that all farm payments are subject to robust baseline environmental standards. Indeed, cross compliance is often presented as a key tool for addressing environmental problems on EU farmland, and used as the main justification for the 38 billion Euro annual subsidy to EU farmers. This study reviews the cross compliance system, in conjunction with the Single Payment Scheme (a subsidy accounting for approximately 57% of the CAP budget), in order to determine its current value for biodiversity conservation, guide the implementation of cross compliance provisions across Member States and support its contribution to the achievement of EU targets on biodiversity conservation. The analysis is based on examples and data on the implementation of cross compliance from a selection of Member States across the EU, collected by BirdLife Partner organisations in their respective countries.

The survey highlights a number of structural weaknesses affecting the current system of cross compliance and the Single Payment Scheme, which prevent these instruments from delivering effectively for biodiversity and the environment. There is a need to develop clear policy objectives, targets and mechanisms in order to monitor and evaluate the system's impacts in line with the principles of efficiency and effectiveness. Such clarity is needed to understand the relationship between the Single Payment Scheme, cross compliance and the "polluter-pays principle".

The implementation of cross compliance is left to Member States and no Commission approval is required for the national standards. In addition, the European Commission has not provided official guidance to Member States on how to translate cross compliance requirements into obligations applicable at farm level. These factors have led to minimal implementation of cross compliance in most Member States, with many obligations being too general to be clearly applicable or allowing common bad practice.

Clarifying the environmental outcomes required from the cross compliance system is needed to improve the operation of controls and payment reductions. The penalty system must be made an effective deterrent to environmentally damaging behaviour and the system reshaped to incentivise and support farmers in improving environmental performance.

This report also recommends that Member States should be required to consult stakeholders from civil society when designing cross compliance standards and make information on the enforcement of the system available to the public. There is also a need for comprehensive and consistent reporting to the Commission by Member States. Without these changes, the system will remain largely inaccessible and unaccountable to taxpayers.

In conclusion, the current system fails to deliver value for taxpayers' money. The underlying lack of logic in the current direct payment system, with no link between subsidies received and public goods delivered must be urgently addressed. Ensuring that cross compliance requirements are transposed into clear obligations, which are relevant to environmental protection and biodiversity conservation, and that payment reductions are effectively enforced, would prevent current misuse of the system and establish a credible baseline for a future Common Agricultural Policy (CAP). Disappointingly, recent Member States' proposals for CAP simplification actually head in the opposite direction, favouring even looser rules and further weakening of controls.

BirdLife's earlier report (2005) on cross compliance concluded that the policy *"has the potential to improve protection for farmland wildlife across Europe and can make agricultural subsidies better value for money for European taxpayers"*. As the deadline for a fundamental reform of the CAP approaches, we are disappointed that little progress has been made in realising this potential, and we urge all players to act on these findings while there is still time. In the short term, the Commission must at least ensure the respect of the rules written into the current regulation. There is also significant scope to ensure that each Member State's Farm Advisory System provides clear and applicable advice, which enables farmers to meet the requirements of cross compliance and use the system to positively benefit biodiversity.

However, considering how most of the above-mentioned problems are rooted into the Single Payment Scheme, it is unrealistic to expect that they could be solved by minor reviews of the system. A profound reform of the CAP is needed in order to realign the whole policy to an effective delivery of public goods. To a large extent, and despite important delivery shortcomings, Rural Development policy already offers most of the principles that a reformed policy should be based on.

1. Introduction

1.1 Background and recent policy changes

The European Union is committed, through the Convention on Biological Diversity and its own Sustainable Development Strategy¹, to halting biodiversity loss by 2010. It pursues this, and other environmental targets, through the integration of environmental objectives into EU policies and their associated budgets.

As farmland covers over 50% of the EU, the Common Agricultural Policy (CAP) plays an extremely important role in influencing how land is managed and environmental objectives achieved. The CAP is also the main financial instrument available for achieving ambitious environmental goals, representing roughly 40% of the EU's €139 billion budget. The CAP sits under Heading 2 of the EU budget, named *"Preservation and management of natural resources"*, and should therefore significantly contribute to halting biodiversity declines and enhancing environmental quality.

However, agricultural intensification over recent decades, partly driven by the CAP, has led to a widespread and significant decline of farmland biodiversity across the EU (Donald et al 2006; Luoto et al. 2003; Reidsma et al 2006), and other environmental problems (Stoate et al. 2009). Although the policy incentive to over-produce was largely removed as part of the 2003 CAP reforms, there remained a clear need to improve the policy's environmental performance.

With this in mind, the 2003 CAP reforms introduced a number of new environmental dimensions, including the mandatory cross compliance system². Cross compliance requires those in receipt of direct payments (the Single Payment Scheme and certain environmental payments under the CAP's Pillar 2) to respect certain rules. These reflect existing pieces of EU legislation (referred to as Statutory Management Requirements - SMR) and basic good farming standards (known as Good Agricultural and Environmental Condition - GAEC) and cover a range of issues from environmental protection, animal registration and welfare to soil protection, habitat maintenance and more recently water. Cross compliance came into force on 1 January 2005 in the old Member States, while many provisions are yet to come into force in the new Member States.

In 2008, the Commission undertook a small-scale review of the CAP, including some significant changes to cross compliance, referred to as the 'Health Check'. In the same year, the European Court of Auditors (2008) assessed the effectiveness of cross compliance in meeting its objectives. Despite the direct relevance of the report's findings to the reform process, the information was not made available to stakeholders engaged in the Health Check debate and publication was delayed until after the CAP review was completed. Member States and the Commission were therefore able to make changes to the cross compliance framework whilst avoiding specific recommendations for change from an independent auditing body.

Despite evidence that the EU 2010 biodiversity target will be missed (EEA 2009), with agriculture sharing clear responsibility for this failure³, the outcome of the Health Check was marginal for biodiversity. The following changes were made to cross compliance and will bring mixed results for biodiversity conservation:

- Provisions from the Habitats Directive have been lost relating to the indiscriminate killing of wild species and controls over the introduction of non-native species;
- Provisions have been lost from the Birds Directive relating to hunting and indiscriminate killing methods (including poisoned baits)⁴;

1. Council Document No 10917/06: Review of the EU Sustainable Development Strategy (EU SDS) – Renewed Strategy

2. Council Regulation (EC) No 1782/2003, replaced with Council Regulation (EC) No 73/2009 following the 2008 'Health Check' review of the CAP.

3. The Commission's report on the conservation status of habitats and species (COM(2009)358 final) highlights that the conservation status of habitat types and species associated with agriculture is particularly unfavourable compared to other habitats and species.

4. Specific provisions against deliberate killing of wild birds have been retained from the Birds Directive.

- Several previously compulsory GAEC standards have become optional at Member State level: Retaining terraces, including standards for crop rotations, appropriate machinery use and minimum livestock stocking rates;
- Two new compulsory standards have been introduced: the establishment of buffer strips along water courses and compliance with irrigation authorisation procedures;
- Three new optional standards have been introduced: the establishment and/or retention of habitats, prohibition of grubbing up of olive trees and the maintenance of olive groves and vines in good vegetative condition;
- Mandatory set-aside was abolished as part of the Health Check however the new GAEC requirement that could help retain its positive effects for biodiversity is optional.

1.2 Objectives

This study provides an assessment of the cross compliance system and its value for farmland biodiversity. The report focuses on biodiversity conservation; other environmental issues, such as resource protection, are covered only insofar as they are immediately relevant to farmland biodiversity. Other objectives of cross compliance are beyond the scope of this study. The aim is to guide the implementation of cross compliance provisions across Member States to ensure the system contributes to the achievement of EU targets on biodiversity conservation.

The complexity of cross compliance and the difficulties associated with it are well documented (European Court of Auditors 2008; IEEP 2004; Swales et al. 2007) and in 2005, BirdLife conducted its own analysis of the system's ability to drive positive change in European land management (BirdLife International, 2005). This study highlighted some of the fundamental flaws facing the newly launched policy, including poor basic protection for birds and habitats across Europe's farmland, inadequate protection for landscape features and a failure to prevent the loss of biodiverse permanent grassland. As this study will highlight, in the four years the system has operated, these issues have become even more evident. In some cases, changes have been made to improve matters (the Health Check expanded the definition of landscape features) but in others, the flaws have been ignored or worsened (illustrated by the removal of valuable provisions from the Birds and Habitats Directives).

These issues can be resolved in the longer term by remodelling the CAP along the lines of the present Pillar 2 (i.e. moving from an entitlement based system to one based on clear public goods agreements specifying beneficiaries' commitments and their reward), and through robust implementation of existing European legislation.

Whilst cross compliance is a relatively new policy instrument in the EU, it has been in place in Switzerland since 1998, delivering substantial benefits for biodiversity (Aviron et al 2009). As long as Pillar 1 direct payments remain in place, cross compliance is a pragmatic way to deliver tangible and significant environmental benefits by linking public subsidies to ecological requirements.

There remains, therefore, a strong need for appropriate technical guidance on the implementation of cross compliance by Member States in the interests of biodiversity and environment protection. This study presents options for optimum implementation of current cross compliance. As the CAP is reformed along the lines identified above, some of these options should move into the legislative baseline and others may more appropriately be rewarded through Rural Development approaches.

The new cross compliance conditions, introduced as part of the CAP Health Check, must be implemented in Member States by 1 January 2010 (2012 for buffer strips). The timing of this study, therefore, should assist Member States and the Commission in defining the standards to be im-

plemented. The report also assesses whether cross compliance mechanisms, associated with payment entitlements, are effective and efficient tools to achieve sustainable land management and halt the loss of biodiversity.



Figure 1. Environmental cross compliance has been in place since 1998 in Switzerland, delivering important benefits for biodiversity.

© Luigi Boccaccio, RSPB (BirdLife in the UK).

1.3 Scope and methodology

Birdlife International collated data on the implementation of cross compliance rules across the EU. The survey was co-ordinated by the RSPB (BirdLife in the UK) and carried out in January-August 2009, gathering case-study examples from 12 Member States⁵.

1.4 Structure of the report

Chapters 2, 3 and 4 explore the structural principles behind cross compliance and its operational rules, while current, and optimum implementation of SMR and GAEC is presented in chapter 5. General conclusions and policy recommendations are presented in chapter 6.

5. Austria, Bulgaria, Cyprus, Finland, France, Germany, Greece, Italy, Latvia, Slovenia, Spain, UK.

2. Inherent problems of the cross compliance system

“Cross-compliance has two objectives. The first is to contribute to the development of sustainable agriculture. This is achieved through the respect by the farmer of the rules relating to the relevant aspects of cross-compliance. The second objective is to make the CAP more compatible with the expectations of society at large. There is now a growing body of opinion that agricultural payments should no longer be granted to farmers who fail to comply with basic rules in certain important areas of public policy. The Commission is convinced that achieving these two objectives will help to ensure the CAP’s future.” Commission’s report COM(2007)147 final.

“Cross Compliance is a central part of our reformed CAP. Direct payments will only be acceptable to the public if people can see that our farmers are being rewarded for carrying out vital tasks in the countryside.” Mariann Fischer Boel, Commissioner for Agriculture and Rural Development⁶.

From the sources quoted above, it is clear that cross compliance was, at least in part, introduced to justify and improve public acceptability of CAP direct payments, in particular the Single Payment Scheme, which accounts for a large majority of the CAP budget. The Single Payment Scheme is not linked to any clear objective and beneficiaries receive public money without any stated goal. Though payments are now decoupled from production, historical patterns of payment persist in the old Member States, which results in the majority of resources being diverted to highly productive farm businesses. This disadvantages those who have historically practiced extensive and environmentally sensitive agriculture and who are often more constrained by cross compliance obligations (e.g. registration and identification of livestock, retention of landscape features).



Figure 2. Rules on registration and identification of livestock are posing a disproportionately higher burden on extensive livestock farms, which usually receive lower Pillar 1 payments than less sustainable intensive farms.

© Luigi Boccaccio, RSPB (BirdLife in the UK).

The Commission report cited above highlights another inconsistency affecting cross compliance. The respect of *“basic rules in certain important areas of public policy”* should, in principle, reflect the rule of law and as such be enforced through appropriate sanctions. Following this logic, respect of general legal obligations should be a pre-condition to access to public payments.

By contrast, the cross compliance system is enforced only as an attachment to a number of voluntary instruments, e.g. the Single Payment Scheme. With the exception of extremely rare cases, a breach of cross compliance does not result in exclusion from CAP payments. Contrary to the Commissioner’s statement, direct payments do not reward their beneficiaries *“for carrying out vital tasks in the countryside”*, as they are not based on any clear objectives for delivering societal benefits.

The European Commission claims that the cross compliance system reflects the *“polluter-pays principle”* as the cost of complying has to be born by the beneficiary⁷. In reality however, the single

6. EC press release 29 March 2007: <http://europa.eu/rapid/pressReleasesAction.do?reference=IP/07/440>

7. http://ec.europa.eu/agriculture/envir/cross_com/index_en.htm

payment scheme could be more accurately considered as compensation for the respect of cross compliance, especially as “polluters” still receive the majority of their single payment (see chapter 4). As cross compliance is not tied to objectives for the delivery of societal benefits, neither can it be presented as a ‘beneficiary pays’ policy tool.

Cross compliance seeks to limit the environmental damage caused by beneficiaries of CAP payments. However, the CAP payments which have potentially the worst environmental impact are excluded from cross compliance. These support schemes are found under Axis 1 and Axis 3 of the CAP’s Pillar 2, and include a number of measures (e.g. modernisation of farm holdings, diversification) that often subsidise damaging operations such as land consolidation, replacement of ditches by underground piping, enlarging highly unsustainable livestock enterprises and changes to land use for biofuel production (BirdLife International 2009).

The cross compliance system gives Member States little incentive to rigorously transpose SMR and GAEC, for robust enforcement of obligations.

As highlighted in chapters 4 and 5, cross compliance obligations and operational rules are defined at a generic level by EU regulations, with many key elements left to be defined by Member States. However, there is no approval process by the European Commission, with the result that national implementation is extremely poor in most cases, and there are clear inconsistencies between Member States (European Court of Auditors 2008). By contrast, national and regional Rural Development Programmes must be approved by the European Commission, which in most cases leads to significant improvements in the quality of programmes and better consistency with EU legislation.

Furthermore, article 25 of Regulation EC 73/2009 stipulates that only 25% of money generated from the enforcement of cross compliance can be retained by Member States: the rest must be returned to the European Agricultural Guarantee Fund. This deters Member States from robust implementation and enforcement as the more a country takes cross compliance seriously, the more money it effectively “loses”.

Up to now, the Commission has applied a clearance of accounts for insufficient implementation of cross compliance for Estonia and the UK in 2008, and Austria, Germany, France, Ireland and Portugal in 2009⁸. Although the reductions can relate, in some cases, to significant sums (approximately €71 million for France), it could be argued that the risk of possible Commission scrutiny (and subsequent budgetary reduction) is worth taking when compared to the guaranteed and much higher loss of funds through cross compliance payment reductions.

Another weakness of cross compliance is the lack of any obligation for Member States to consult and involve civil society stakeholders in the decision making process on the national implementation of EU rules. By contrast, the Partnership Principle has been formally introduced into Rural Development policy in the current programming period. A survey commissioned by DG AGRI (Swales et al. 2007) revealed that only 11 out of 25 Member States carried out an open stakeholder consultation on the definition of obligations arising from GAEC. Environmental authorities and civil society should be consulted not only when defining national rules implementing cross compliance, but also when national and regional governments assess the opportunity of agreeing derogations on specific issues.

Several of the weaknesses of cross compliance are too deeply embedded to be wholly addressed by amendments to the current legislative framework. Instead, as identified above, the environmental objectives of cross compliance would be better secured through fundamental reform of the CAP for the next budgetary period, aligning the policy to the delivery of public goods and applying the principles of Rural Development policy.

8. Commission Decision of 8 December 2008 (No 2008/960/EC) and Commission Decision of 24 September 2009 (No 2009/721/EC).

3. Targets and monitoring

Article 27 of Council Regulation 1605/2002 (EC, Euratom) on the Financial Regulation applicable to the general budget of the European Communities states that:

"Budget appropriations shall be used in accordance with the principle of sound financial management, namely in accordance with the principles of economy, efficiency and effectiveness. [...] The principle of efficiency is concerned with the best relationship between resources employed and results achieved. The principle of effectiveness is concerned with attaining the specific objectives set and achieving the intended results."

With respect to these provisions, the cross compliance system and Single Payment Scheme meet neither the efficiency nor the effectiveness principles. Council (EC) Regulations 1782/2003 and 73/2009 do not establish any specific objective or expected result for cross compliance or the Single Payment Scheme. In addition, according to paragraph 3 of Regulation 73/2009, beneficiaries who do not respect cross compliance obligations should have their public subsidies reduced or withheld. In reality, this occurs in a limited number of cases (see chapter 4).

Moreover, Article 27 of Council Regulation 1605/2002 establishes that:

"Specific, measurable, achievable, relevant and timed objectives shall be set for all sectors of activity covered by the budget. Achievement of those objectives shall be monitored by performance indicators for each activity and information shall be provided by the spending authorities to the budgetary authority."

"In order to improve decision-making, institutions shall undertake both ex ante and ex post evaluations in line with guidance provided by the Commission. Such evaluations shall be applied to all programmes and activities which entail significant spending and evaluation results disseminated to spending, legislative and budgetary authorities."

As highlighted by the European Court of Auditors (2008), the objectives of cross compliance are not defined in a SMART (i.e. specific, measurable, achievable, relevant and timed) manner. In principle, objectives should be translated into clear targets, performance indicators defined and monitored, and policy instruments evaluated. However, none of these key requirements are fulfilled by cross compliance or by the Single Payment Scheme. Their objectives are sparsely defined in EU legislation, there are no targets, impacts are not monitored and no formal evaluation has been carried out.

The result of this weak framework is that many Member States have failed to transpose cross compliance requirements into operational obligations for farmers. The absence of clear requirements effectively means land managers are prevented from delivering positive change through cross compliance (see chapter 5).

In contrast, Rural Development policy has been significantly improved by Council Regulation EC 1698/2005 and the introduction of the Common Monitoring and Evaluation Framework. This includes indicators at a range of levels and foresees obligations for ex-ante, mid-term and ex-post evaluations of the policy's implementation.

All aspects of the CAP should be aligned to these principles, including in particular: clarity of objectives, a robust system for independent monitoring and a mechanism to feed the results of evaluation into a review of policy instruments.

4. Enforcement and penalties

4.1 The extent of cross compliance checks

Commission Regulation 796/2004 stipulates that at least 1% of Single Payment Scheme recipients must be subject to on-the-spot checks. Of this 1%, 20-25% have to be selected randomly, while the rest should be selected based on risk analysis. The 1% minimum requirement is not sufficient to ensure effective enforcement of cross compliance, especially when considering the number of requirements to be checked. In order to establish a credible control system, this rate should be raised to at least 5%, while maintaining a minimum 20% of random checks.

Ineffective control system

Greece

The farm structure is, on average, of 6.3 land parcels per holding⁹. This is compounded by the remoteness of many farms, located on mountains or islands. Given the extremely low number of inspections, most parcels are not inspected during the commitment period.

Despite the number of requirements, their technical complexity and the difficulty of checking each requirement in the right period of the year, there is no requirement for public authorities to share information on infringements relevant to cross compliance. For example, statutory bodies enforcing environmental law are not required to transfer information to the authority in charge of cross compliance inspections. This means that authorities most able to detect environmental infractions do not “use” cross compliance as a deterrent, while authorities enforcing cross compliance are often unable to detect environmental infractions due to lack of capacity or specialist expertise.

4.2 The penalty system

When cross compliance infringements are detected, the sanction, if applied at all, is a reduction in CAP payment. The amount deducted is not proportional to the severity of the infringement, but to the size of the payment. As the cost of compliance may be higher than the potential reduction in many cases, there is also no deterrent effect (European Court of Auditors 2008).

The general rule laid down by Commission Regulation (EC) No 796/2004 (article 66.1) is that for non-compliance resulting from negligence a reduction of 1-5% should be applied, the actual reduction depending on the extent, severity and permanence of the infringement. Given the lack of guidance on how to implement these criteria, a 1% reduction is being applied to the majority of non-compliance cases. A 0% reduction is very often applied, with Member States sending warning letters or inviting beneficiaries to remedy the non-compliance. From 2008, Member States have had the option of not applying reductions of €100 or less. This is likely to further limit the number of reductions actually enforced as in many Member States the large majority of calculated reductions is below €100 (European Court of Auditors 2008).

If more than one breach is detected under the same standard or thematic area, they are considered as one single breach (article 66.2). For example, a beneficiary could, at the same time, remove a hedgerow, plough up a permanent pasture and grub up olive trees and yet only face one count of non-compliance as all these operations are related to one GAEC standard, “*Minimum level of maintenance*”. Even in the case of multiple (non deliberate) breaches across different standards or thematic areas, the maximum reduction cannot exceed 5% (Commission Regulation (EC) No 796/2004 article 66.3).

9. From FADN-RICA Farm Accounting Data Network 2006.

In cases of repeated non-compliance with the same requirement, the level of payment reduction is multiplied by factor of 3 (article 66.4). This potentially powerful disincentive is undermined however as the reduction can never exceed 15%. Even if repeated non-compliance for one requirement is verified together with non-compliance for another requirement, the reduction cannot exceed 15% (article 66.5). For example, in France, if a beneficiary declares an area as “surface of environmental cover” that is actually covered by an unauthorised crop, the payment is likely to be reduced by 1%. Only after 5 years of non-compliance, could the breach be considered as intentional and the payment reduced by more than 15%.

In the same way that breaches of different SMR or GAEC standards are not considered multiple cases of non-compliance when they belong to the same issue or thematic area, it is clear that Member States are applying similar interpretations to the issue of repetition.

Repeated breaches are under-counted

UK (Scotland)

The “Notes for guidance” document (point 218) states that “if in 2005 a farmer removes a hedge and in 2006 removes a dyke, this wouldn’t be considered to be a repeat since the breaches relate to different boundary features, i.e. different standards”. This provision ignores the fact that both features are protected under the same GAEC standard. In practice, this rule significantly reduces the possibility of repetition. If a farmer removed all the hedges from his farm, he would have to replace them, and then destroy them again in order for the breach to qualify as repeated non-compliance.

Reductions beyond 15% can be applied only in case of intentional non-compliance (article 67). However, the regulation does not clarify the criteria on which to define “intentional” (European Court of Auditors 2008). The percentage of reduction to apply to each standard in case of non-compliance has been defined and published only by a minority of Member States. Where official information is publicly available, it seems clear that many breaches that are based on intentional actions are in fact qualified as negligence.

Intentional breaches are considered as negligence

France

Breaches of the Birds & Habitats Directives are not considered intentional, nor is burning of stubble. Examples of “unintentional” non-compliance include unauthorised water abstraction or ploughing up of grasslands without asking for permission¹⁰.

An important environmental issue not addressed by cross compliance is restoration of damage. Once a landscape feature has been destroyed for instance, the relevant EU regulations do not provide any requirement to restore it. The penalty mechanism, based on a payment reduction for one year, is not a sufficient deterrent to avoid environmental damage, especially as the profits generated by non-compliance are likely to be higher than the payment reduction. For example, a farmer destroying a protected permanent grassland to plant wheat will only risk a one-off, and relatively small, reduction of the annual payment but will be able to grow wheat and produce a profit in that and subsequent years.

According to the Commission report COM(2007)147, the large majority of non-compliance cases (68% in 2005) are sanctioned with a 1% payment reduction, while only 6% of “sanctions” exceeds 5% reduction. Only a small minority of non-compliance cases are considered intentional. A number of Member States do not apply payment reductions of 15% or more¹¹, while Estonia seems to be the only Member State fully applying the whole range of reductions (Swales et al. 2007). Statistics

10. Online documents available at: http://agriculture.gouv.fr/sections/thematiques/europe-international/politique-agricole-commune/module_pac_dpu/la-conditionnalite/ (accessed on July 2009).

11. In 2005: Belgium, Czech Republic, Hungary, Italy and Portugal.

also show that a remarkable percentage of inspected beneficiaries (over 17% in Spain in 2007, over 40% in Finland, France, Greece, Luxembourg and Slovenia in 2005) is found to be non-compliant.

The Commission report (2007) also highlights that, in 2005, in the Member States applying full cross compliance (both SMR and GAEC), 71% of payment reductions related to the identification and registration of cattle (mainly missing ear tags). This suggests that the environmental GAEC and SMR requirements, which are more complex and difficult to inspect, may be less well checked during inspections. This trend has been confirmed by the European Court of Auditors (2008).

4.3 Reporting

The reporting performance of many Member States is extremely poor (European Court of Auditors 2008). Statistics on breaches of cross compliance are publicly available in only few Member States (Swales et al. 2007), and the level of detail is insufficient to correlate the standard to which the non-compliance refers and the percent reduction applied. In addition, information on the actual amount of reductions, in absolute terms, is never reported. Another problem is the non-comparability of data between Member States, as each one reports information in a different manner.

In order to improve transparency to taxpayers, there is an extremely urgent need to establish rules for a standardised and detailed reporting of information on the enforcement of cross compliance. The level of detail should include, for each cross compliance requirement:

- number of beneficiaries found in non-compliance;
- number of beneficiaries found in breach, but with 0% reduction applied;
- reduction applied, both in percent and in absolute terms;
- number of cumulated and repeated non-compliance, with corresponding reduction.

In addition, data on non-compliance should be published in accordance with new transparency rules. This public scrutiny would help drive improved environmental delivery through the cross compliance system.

This analysis of cross compliance enforcement clearly demonstrates that the “penalty” mechanism based on payment reductions is intrinsically flawed. The emphasis needs to shift to making sure the policy secures higher environmental and other standards. Indeed the Commission itself suggests there is a need *“to make the CAP more compatible with the expectations of society at large. There is now a growing body of opinion that agricultural payments should no longer be granted to farmers who fail to comply with basic rules in certain important areas of public policy”* (Commission report COM(2007)147 final).

The rules regulating payment reductions are too complicated and undermined by numerous loopholes. It is time for a profound simplification of the system, with cross compliance environmental standards relevant to land management being transformed into eligibility rules for any CAP payment, and significant non-compliance leading to complete exclusion from payments and where appropriate, real sanctions according to the relevant legislation.

5. Guidelines for a meaningful implementation of environmental cross compliance requirements¹²

In this chapter, two SMRs directly relevant to biodiversity conservation (the Birds and Habitats Directives) and most GAEC standards are analysed, describing for each standard:

- I. objectives and scope;
- II. status of current implementation;
- III. technical guidelines for appropriate implementation, based on scientific evidence (where available) and expert judgment.

5.1 Statutory Management Requirements (SMR)

The statutory management requirements consist of 18 EU directives and regulations encompassing environmental protection, animal identification and registration, plant, animal and public health, and animal welfare. Implementation of this aspect of cross compliance depends on the transposition of these pieces of EU legislation into national and regional law. Therefore, EU-wide consistency in the implementation of SMRs can be extremely difficult, especially in the case of directives, given their objective-based nature and low level of detail. The absence of prescriptions, directly applicable at farm level, and of guidance from the Commission, has been highlighted by the European Court of Auditors (2008).

Birds & Habitats are not transposed into obligations applicable at farm level

Cyprus

The cross compliance document distributed to farmers simply describes the obligations that arise for the State under the directives, without making it relevant at the farm level. There is no reference to the need to comply with management stipulations for Natura 2000 sites.

This chapter focuses on two directives, the Birds and Habitats Directives, which are the only SMRs explicitly related to biodiversity. Although these two directives have been in place for 30 and 17 years respectively, their implementation, and therefore their transposition into cross compliance, is still unsatisfactory, even in the old Member States. Requirements are usually too vague to be implemented and verified at farm level satisfactorily (European Court of Auditors 2008).

While it is necessary to lay down detailed and appropriate management objectives for farming activities in Natura 2000 sites, to be implemented by regulatory (i.e. mandatory) legislation, Member States should compensate farmers through specific payments under the current Rural Development legislative framework. Compensative payments should, however, cover only commitments linked to Natura 2000 objectives and going beyond GAEC standards and other legislative requirements.

Prescriptions related to the Bird and Habitats Directives have been excluded from the cross compliance inspections or not appropriately checked.

Birds and Habitats Directives are excluded from cross compliance inspections

France and Netherlands

Parcels of land are not visited as part of the cross compliance checks for the Birds and Habitats Directives, even when such parcels are located in Natura 2000 areas (European Court of Auditors 2008).

12. This report focuses on cross-compliance requirements that are directly relevant to farmland biodiversity.

No significant infraction of Birds and Habitats Directives found across 4 Member States

Finland, France, Greece, Slovenia,

In 2005 and 2006 in Finland, France, Greece and Slovenia, despite 11,633 checks for the Birds Directive and 14,896 checks for the Habitats Directive, no infringement was detected (European Court of Auditors 2008). This degree of 'compliance' is likely to reflect inadequate or absent requirements for these directives rather than successful policy outcome.

Checks on Birds and Habitats Directives are inappropriate

Finland

A survey by the European Court of Auditors (2008) revealed that "checks were only carried out at farms where it was known that there were protected species, and a visual check while measuring the parcels to see if 'anything looked wrong'" was the sole verification for the obligations arising from these directives.

Available information shows that the respect of obligations arising from the Birds and Habitats Directives is often not checked during on-the-spot inspections; consequently, detected non-compliance is anecdotal (European Court of Auditors 2008; Swales et al. 2007).

5.1.1 Council Directive 79/409/EEC of 2 April 1979 on the conservation of wild birds

The following articles are included in cross compliance:

"[...] preserve, maintain or re-establish a sufficient diversity and area of habitats for all the species of birds referred to in Article 1" (3.1).

"The preservation, maintenance and re-establishment of biotopes and habitats shall include primarily [...] upkeep and management in accordance with the ecological needs of habitats inside and outside the protected areas" (3.2.b)

"The species mentioned in Annex I shall be the subject to special conservation measures concerning their habitat in order to ensure their survival and reproduction in their area of distribution. [...] Member States shall classify in particular the most suitable territories in number and size as special protection areas for the conservation of these species [...]" (4.1).

"Member States shall take similar measures for regularly occurring migratory species not listed in Annex I [...] as regards their breeding, moulting and wintering areas and staging posts along their migratory routes [...]" (4.2).

"In respect of the protection areas referred to in paragraphs 1 and 2 above, Member States shall take appropriate steps to avoid pollution or deterioration of habitats or any disturbances affecting the birds, in so far as these would be significant having regard to the objectives of this Article. Outside these protection areas, Member States shall also strive to avoid pollution and deterioration of habitats" (4.4).

Article 1 covers all wild bird species native of the European Union. Article 3.1 implies that land managers must conserve or re-establish a sufficient diversity and surface of habitats for all wild bird species, including common farmland birds, across the wider countryside. Article 3.2.b states that these habitats must be managed to match the ecological needs of birds. The second sentence of Article 4.4 adds that land managers outside designated Special Protection Areas (SPAs) should avoid pollution of habitats.

For designated SPAs, the first sentence of Article 4(4) has been replaced by Article 6(2) of the Habitats Directive (see chapter 5.1.2). This requires the avoidance or deterioration of the habitats of the bird species for which the SPA has been designated as well as significant disturbance to those species.

The objectives that must be achieved through the respect of these SMR in the wider countryside are therefore:

- conserving;
- creating;
- managing a sufficient degree of habitat diversity and area through agricultural activities, and
- avoiding pollution and degradation of habitats.

To date, these objectives of the Birds Directive have been largely ignored by Member States and not been transposed into national legislation. The need to conserve the habitat of wild birds beyond SPAs is also not addressed in the national implementation of cross compliance.



Agricultural landscapes can best support farmland birds if land management ensures a sufficient diversity of crops, a well-connected network of ecological infrastructures (e.g. hedgerows and ditches) and a stable or increasing surface of semi-natural grassland and traditional orchards. In addition, these landscape features must be appropriately managed to achieve the conservation objectives of this SMR. BirdLife proposes that the following issues should be addressed on all farmland including that outside Special Protection Areas:

- Minimum soil cover, allowing a sufficient quantity of food resources throughout the year (the technical implementation of this requirement is described in chapter 5.2.1);
- Appropriate management of arable stubble, representing an important feeding habitat in intensive agricultural landscapes (see chapter 5.2.4);
- A meaningful crop rotation, necessary to maintain a minimum amount of feeding and nesting habitats for wild birds (see chapter 5.2.5);
- Retention of landscape features, to conserve the feeding and nesting sites that already exist in the agricultural landscape (see chapter 5.2.6);
- Appropriate management of grassland habitats, supporting a sufficient quantity and diversity of food resources (mostly insects and seeds) and availability of nesting habitat (see chapter 5.2.8);
- Ensuring a sufficient quantity of suitable habitat across agricultural landscapes; if a landscape does not have a sufficient extent of suitable habitats, this prescription requires the creation of new habitats (see chapter 5.2.9);

- Maintaining open habitats that have a value for wild birds, and avoiding the propagation of invasive alien species that can negatively affect habitat quality (see chapter 5.2.9);
- Protecting permanent grassland, which represents a valuable habitat for wild birds. Semi-natural grassland is perhaps the most important agricultural habitat, and therefore should be strictly protected, to avoid intensification or conversion to other land uses. The value of intensive grassland for birds is lower, nevertheless important, especially if arable habitats dominate the surrounding landscape (see chapter 5.2.11);
- Establishing buffer strips of sufficient width to avoid any negative impact of agricultural activities (see chapter 5.2.13) on ponds, ditches, wetlands and water courses, which are key biotopes for bird conservation;
- Conserving ancient hollow olive trees in Mediterranean landscapes, as they have a value as nesting sites for a number of wild bird species (see chapter 5.2.10 and 5.2.12);
- Protecting traditional orchards. These farmland habitats are characterised by a low tree density (maximum 160 trees/ha) and old growth (diameter beyond 30 cm, measured at 1.30 m height). Traditional orchards support a number of once common bird species that are now dramatically declining across Europe, including the turtle dove (*Streptopelia turtur*), the little owl (*Athene noctua*), the hoopoe (*Upupa epops*), the wryneck (*Jynx torquilla*), the spotted flycatcher (*Muscicapa striata*), the pied flycatcher (*Ficedula hypoleuca*) and the red-backed shrike (*Lanius collurio*). Forbidden operations should include the grubbing up or densification of orchards. Prescriptions on management of the soil cover are described in chapter 5.2.1;
- Maintaining the quality and number of nesting sites on farm buildings connected to agricultural activities. Where wildlife is present, maintenance and restructuring works should not be carried out during the nesting period of most bird species (1 March – 31 July, to be appropriately extended to match the exact period in each country/region). Traditional buildings in rural areas are an important nesting habitat for a number of species of endangered or declining species, such as the common kestrel (*Falco tinnunculus*), the lesser kestrel (*Falco naumanni*), the white stork (*Ciconia ciconia*), the barn owl (*Tyto alba*), the little owl (*Athene noctua*), the Eurasian roller (*Coracias garrulus*), the barn swallow (*Hirundo rustica*), the red-billed chough (*Pyrrhocorax pyrrhocorax*) and the tree sparrow (*Passer montanus*), many of which are included in Annex I of the Birds Directive;
- Avoiding mowing, pruning or trimming of landscape elements and land not used for agricultural production during the nesting period of most bird species (1 March – 31 July, to be appropriately extended to match the exact period in each country/region);
- Restricting the use of rodenticides on farmland to when alternatives (trapping, preventative measures etc) have been ineffective and ensuring rodenticides used outdoors are covered i.e. using bait boxes. “Second generation” rodenticides should be allowed only if the relevant health authority certifies resistance to “first generation” rodenticides¹³ in the concerned area, and applied indoors. This rule is needed to avoid direct poisoning of wildlife, as well as secondary poisoning of raptors and vultures;
- Avoiding habitat pollution and negative effects of pesticide use on non-target organisms by respecting Integrated Pest Management principles.

5.1.1.1 Management requirements for Special Protection Areas

The process of designation of Special Protection Areas (SPAs) on land is nearing completion in many Member States, but progress is still needed in some of the new Member States. The main conservation tools that specifically apply to SPAs are:

- Measures introduced by SPA management plans or in other relevant planning documents;
- Article 6 procedures of the Habitats Directive regarding deterioration of habitats as well as avoiding the potential negative impact of plans or projects.

13. Active ingredients: warfarin, coumatetralyl, chlorophacinone and diphacinone. These rodenticides pose reasonably low risks of secondary poisoning, in contrast to “second generation” rodenticides (e.g. bromadiolone, difenacoum, flocoumafen or brodifacoum), which are highly toxic and pose unacceptable risks of secondary poisoning of scavengers and predators.

The implications for farmland management arising from both tools will be described in chapter 5.1.2. Specific conservation needs can vary considerably across different SPAs, and therefore most conservation prescriptions should be tailored at local level and included in the SPA management plans. Management should take into account time and spatial patterns of mowing or harvesting operations (Broyer 2003; Tyler et al. 1998).



Figure 4. Mowing from outside to the centre of a field can harm ground nesting birds and other wildlife, as animals get “trapped” in the last unmown pocket of grass.

© Slavko Polak, LIFE project “Kosec (*Crex crex*)”, DOPPS-BirdLife Slovenia (BirdLife in Slovenia).



Figure 5. Mowing from the centre of the field outwards is more wildlife friendly as it allows animals to escape into the vegetated field margins.

© Andrej Medved, LIFE project “Kosec (*Crex crex*)”, DOPPS-BirdLife Slovenia (BirdLife in Slovenia).

5.1.1.2 Cross compliance and wildlife persecution

“[...] Member States shall take the requisite measures to establish a general system of protection for all species of birds referred to in Article 1, prohibiting in particular: (a) deliberate killing or capture by any method; (b) deliberate destruction of, or damage to, their nests and eggs or removal of their nests”; “(d) deliberate disturbance of these birds particularly during the period of breeding and rearing, in so far as disturbance would be significant having regard to the objectives of this Directive”(5).

This SMR prohibits the deliberate killing of, or significant disturbance to, wild birds, but contains specific derogations for legal activities such as hunting, research etc.

Legal game shooting is an important business for many farms, with land management reflecting this (such as patches of game cover, feeding sites etc). Although the Commission asserts that hunting and game keeping are non-farming activities, and therefore not relevant to the scope of cross compliance, these activities are clearly central to many farm business and the relevant legislation should therefore form part of the cross compliance system. Birds of prey are on many occasions persecuted by illegal deliberate killing, destruction of nests and disturbance during the breeding period. These actions take place predominantly on hunting estates and livestock farms, or their surroundings, in order to tackle real or presumed damage to livestock or competition for game.

Infringement of hunting law is excluded from cross compliance, even if carried out on land receiving CAP payments

France, UK (Scotland)

Hunting is not considered an activity linked to land management, and therefore any breach of hunting law does not represent a breach of cross compliance. This despite the fact that hunting and farming are often integrated into estate management from both an economic and functional point of view.

Species protection is completely excluded from cross compliance

Italy (Sardinia)

The only cross compliance requirement linked to the Birds and Habitats Directives is the Appropriate Assessment. Species protection has been completely ignored, although the use of poisoned baits against predators of livestock and game has nearly driven to extinction the griffon vulture (*Gyps fulvus*) and caused the failure of an attempt to reintroduce the lammergeier (*Gypaetus barbatus*) in 2008.

Protection of birds of prey is insufficiently enforced by cross compliance

UK

Persecution of birds of prey is a widespread problem, mostly associated with management of game shooting estates, which are at the same time among the largest recipients of CAP payments. Of the 85 people convicted of offences relating to bird of prey persecution between 1996 and 2008, 64 were gamekeepers (RSPB 2009a).

Modelling suggests England and Scotland's moors managed for high intensity (i.e. driven) red grouse (*Lagopus lagopus*) shooting could potentially support 500 successfully breeding pairs of hen harriers, yet in 2008, there were just five (Thompson et al 2008). Scottish Natural Heritage (Whitfield et al 2008) concluded that illegal persecution associated with land managed for grouse shooting is the biggest single factor limiting the recovery and expansion of the golden eagle (*Aquila chrysaetos*) population.

In 2006, a record £ 107,650 in payments was withheld by the Scottish Government following a police enquiry on a shooting estate. Poisoned baits and traces of a banned pesticide and a poison were found in the estate. In general protection of birds of prey is insufficiently enforced by cross compliance. In the UK over the last 3 years, only 1 case of payment reduction was associated to non-compliance with the Birds Directive¹⁴, despite 22 cases of confirmed persecution of birds of prey in 2008 alone (RSPB 2009a; RSPB 2009b).



Figure 6. Buzzard killed by poisoned rabbit bait.

© North Yorkshire, October 2007 (rspb-images.com).

14. Rural Payments Agency, cross compliance statistics for 2006, 2007 and 2008 available at: <http://www.rpa.gov.uk/rpa/index.nsf/UI/Menu/9B27CED347D543A58025721B003EC086?Opendocument>

In many cases, illegal killing or disturbance to wild birds is not carried out within the farm boundaries, but in its surroundings. It is crucial that infringements of fauna protection legislation are considered in cross compliance and appropriately checked by inspectors.

Disappointingly, following the 'Health Check' review of the CAP, Article 8 of the Birds Directive, covering indiscriminate killing methods, has been removed from cross compliance. Reference to Article 15 of the Habitats Directive, covering the same issue but for mammals, has also been deleted. At the moment, protection of fauna beyond birds is not in the scope of cross compliance at all, even though illegal persecution of mammal carnivores is as widespread as persecution of birds of prey and arises from the same reasons, intrinsically linked to farming activities and land management.

5.1.2 Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild flora and fauna

The following articles are included in cross compliance:

"For special areas of conservation, Member States shall establish the necessary conservation measures involving, if need be, appropriate management plans [...], and appropriate [...] measures which correspond to the ecological requirements of the natural habitat types in Annex I and the species in Annex II present on the site" (6.1)

"take appropriate steps to avoid, in the special areas of conservation, the deterioration of natural habitats and the habitats of species as well as disturbance of species for which the areas have been designed, in so far as such disturbance could be significant in relation to the objectives of this Directive" (6.2)

Article 6(1) requires Member States to establish necessary conservation measures for Special Areas of Conservation (SACs), either via specifically designed management plans or via measures integrated into other planning tools. To date, progress in the preparation of management plans or other appropriate measures has been very limited, with most of Natura 2000 sites (both SACs designated according to the Habitats Directive and Special Protection Areas (SPAs) designated according to the Birds Directive) lacking any specific conservation measures. A major weakness is the lack of measurable targets and mandatory prescriptions within management plans.

Article 6(2) requires appropriate steps to be taken to avoid the deterioration of habitats and habitats of species, and the significant disturbance of species. It is meant to be anticipative in its action.

Consequently, cross compliance requirements related to this SMR are missing or difficult to identify for farmers and inspectors alike.

Management obligations for farmers in Natura 2000 sites are unclear

Cyprus

References to Natura 2000 are vague, general, and formulated in terms of the State's obligations, rather than farm-level management requirements. Though there is a general mention of the obligation for farmers to comply with (yet-to-be-prepared) management plans, references are rather confused; Natura 2000 sites are equated to SPAs, while proposed Sites of Community Importance (future SACs) are not mentioned.

Member States should define SMART conservation objectives to deliver the site's contribution to favourable conservation status for the species and habitats concerned. The ecological needs of habitat types in Annex I and species in Annex II (or Annex I of the Birds Directive) should be adequately covered. This requires sufficiently detailed stipulations, directly applicable to farming activities.

As a minimum rule, all the management criteria described for the Birds Directive (see chapter 5.1.1) should be included in the management plans of farmland Natura 2000 sites and should be respected at the farm level. In addition, prescriptions related to specific habitats and species should be introduced.

5.1.2.1 Appropriate Assessment and conservation priorities of protected sites

"Any plan or project not directly connected with or necessary to the management of the site but likely to have an impact thereon [...] shall be subject to appropriate assessment of its implications for the site in view of the site's conservation objectives [...]. The competent authority shall agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the site concerned [...]" (6.3)

"if, in spite of a negative assessment of the implications for the site and in the absence of alternative solutions, a plan or project must nevertheless be carried out for imperative reasons of overriding public interest [...]" (6.4)

Article 6(3) of the Habitats Directive establishes the need for an Appropriate Assessment of any project or plan likely to undermine the conservation objectives of Natura 2000 sites (i.e. both SPAs and SACs). This rule does not only apply to projects taking place within the physical boundaries of Natura 2000 sites, but also to projects that, although taking place outside of Natura 2000 sites, are likely to have an impact on the conservation objectives of Natura 2000 sites located in the surroundings. The trigger for an Appropriate Assessment is whether the action is likely to significantly affect the Natura 2000 site's interests.

As an indication, the following agricultural projects or plans, if undertaken within Natura 2000 sites, or likely to affect the conservation objectives of Natura 2000 sites, should undergo Appropriate Assessment:

- land reparation and consolidation;
- expansion of irrigation or drainage infrastructure, or its non-routine maintenance;
- expansion or upgrading of roads;
- change of farming system (e.g. from arable to permanent crops);
- ploughing up of permanent grasslands and natural habitats (native scrubland, heath, forest, sand dunes etc);
- building of glasshouses or other agricultural buildings;
- introduction of new pesticides or significant change in the frequency/quantity of their use;
- changes in grazing regimes that are likely to undermine the conservation of the SPA or SAC.

5.1.2.2 Cross compliance and plant species protection

Member States shall take the requisite measures to establish a system of strict protection for plant species listed in Annex IV (b), prohibiting: *"(a) the deliberate picking, collecting, cutting, uprooting or destruction of such plants in their natural range in the wild"* (13.1).

Annex IV includes a long list of protected plant species. In order for this requirement to be applicable to land managers, Member States should identify what species are present in farmland in a given country/region. Detailed rules should be laid down on:

- types of grassland and other agricultural habitats that cannot be ploughed;
- mowing dates to allow flowering of threatened species;

- tools to protect rare arable weeds, such as mandatory untreated and unploughed (or ploughed partially every few years) buffer strips and set-aside plots.

Endangered plant species are not protected

Italy

Article 13.1 of the Habitats Directive, requiring a strict protection of endangered plant species listed in Annex IV, is not implemented under cross compliance.

5.2 Good agricultural and environmental condition (GAEC)

GAEC consists of 15 standards listed in Annex III to Council Regulation EC 73/2009. These standards cover environmental issues grouped into 5 areas:

- soil erosion;
- soil organic matter;
- soil structure;
- minimum level of maintenance;
- protection and management of water.

Unlike SMRs, GAEC standards have been introduced by the cross compliance system (with Council Regulation EC 1782/2003) and are not based on other EU legislation requirements.

The 'Health Check' review of the CAP introduced a distinction between "*compulsory standards*" and "*optional standards*", the latter being compulsory for a Member State if they were already in place before 1 January 2009 or if national law addressing the standard is applied in the Member State. However, the rationale for this distinction is not provided in the regulation. Many optional standards cover issues of crucial importance for biodiversity and soil protection, e.g. crop rotation, appropriate livestock stocking rates and establishment/retention of habitats. Therefore, this chapter will apply the same level of priority to both optional and compulsory standards, which address environmental issues.

GAEC standards are defined in the EU regulation mainly in terms of the environmental issue to be covered and the farming practices to be taken into account, without any prescription or guidance on how to translate them into obligations applicable at farm level. The purpose of this chapter is to highlight recurrent loopholes in the implementation of each standard, and to formulate technical guidelines to translate the standards into obligations applicable at farm level. It is worthwhile to mention that GAEC standards should not be enforced in case of conflict with land management operations framed within agri-environment agreements, site-specific management plans and other nature conservation projects.

5.2.1. Minimum soil cover

What is this standard about?

The aim of this standard is to ensure a minimum soil cover to avoid soil erosion. Problems may arise:

- If fallow agricultural land is tilled or sprayed with non-selective herbicides;
- If arable land remains without a green cover for too long; this can occur between the first tillage after crop harvesting and the establishment of the subsequent crop;
- In orchards, where the frequency and spatial pattern of tillage or herbicide treatments impedes the development of a green cover. Soil degradation caused by tillage and herbicide treatments is one of the main environmental problems linked to tree orchards and vineyards (Martínez-Casasnovas & Ramos 2006; Gómez et al. 2004; Le Bissonais et al. 2002).

How is it implemented and enforced?

Some aspects of this standard are implemented under other standards, but are generally poorly executed.

No obligations to maintain a minimum soil cover

Cyprus

In direct opposition to the aim of this standard, farmers are obliged to plough fallow land, tree orchards and vineyards at least twice a year and there is no obligation to maintain minimum soil cover. In this case, national implementation of cross compliance actually increases soil erosion and damage to biodiversity.

Requirements for a minimum soil cover are too weak

Spain

Although inversion ploughing is forbidden, tillage is still allowed during summer after harvesting of arable crops, placing at risk soil and valuable stubble habitat.

In olive groves, there is an obligation to leave grassy strips only in the case of total herbicide applications. However, these strips can be temporary, without any prescription about the minimum duration. Many farmers till the whole surface in order to avoid this obligation leading to increased soil erosion. No rule applies to working groves on slopes below 10%.

Fallow and set-aside plots can be tilled (only "minimum tillage" is allowed) or treated with herbicides without any real restriction. A former obligation on reasonable use of herbicides has been deleted.

How could it be translated into technical rules?

- a. Agricultural land that is not in production should maintain a permanent green cover. This prescription applies to land that is left fallow. The vegetation cover should be maintained and managed according to GAEC 10 (avoiding the encroachment of unwanted vegetation).
- b. Arable land without an established crop should not remain without green or stubble cover for more than 60 consecutive days. This period is counted from the first to the last tillage operation or total herbicide treatment.
- c. In tree orchards, a maximum of 1 tillage or 1 herbicide treatment per year should be allowed, unless undertaken using strip or spot patterns. On the rest of the surface and at other times, the vegetation cover should be managed by mowing, trimming or grazing.

5.2.2. Minimum land management reflecting site-specific conditions

What is this standard about?

The objective of this standard is to minimise soil erosion through appropriate land management. Excessive soil erosion is associated with unsustainable practices that often have negative effects on biodiversity. Particularly worrying are the consequences of soil erosion on aquatic ecosystems (Stoate et al. 2001).

The main drivers of erosion are:

- land cultivation on steep slopes, an issue in arable crops and orchards. Ploughing across the slope minimizes erosion by inhibiting water's ability to run down the slope; however, beyond a certain slope, any tillage is detrimental to soil conservation;
- overgrazing in grassland. (SoCo Project Team 2009; Zachar 1982).

Soil erosion can be minimised by reducing the slope length (e.g. terracing), increasing vegetation cover (e.g. living mulches or grassland conversion) and appropriate tillage techniques (e.g. contour tillage). These types of operations have, in general, a significant potential for benefiting farmland biodiversity.

How is it implemented and enforced?

Farmers are required to undertake damaging operations

Italy (most regions)

Farmers are required to maintain their drainage networks in good working order. Due to the lack of safeguards on timing and spatial scale, this obligation can harm aquatic biodiversity. In some regions (e.g. Emilia-Romagna) this standard does not apply to Natura 2000 sites, however ditches can host considerable biodiversity outside of Natura 2000. In intensively farmed landscapes, ditches can be the only microhabitat available to wild species.

Requirements to prevent soil erosion are insufficient

Italy

Farmers managing arable land on slopes are required to excavate temporary drainage ditches every 80 m, perpendicularly to the slope. On high slopes, this is not feasible (for safety reasons) nor is it sufficient to avoid soil erosion if no permanent vegetation is left, especially during the rainy season.

Obligation for soil erosion prevention apply only to extreme slopes

Cyprus

This standard is translated into an obligation to use contour ploughing and to maintain a green cover during the rainy season. However, this applies only to slopes beyond 10%, which is too high to prevent soil erosion¹⁵.



Figure 7. Extreme soil erosion following crushing and ploughing of limestone grassland and continuous cropping of durum wheat. Alta Murgia national park and Natura 2000 site, Italy.

© Courtesy of Mariano Fracchiolla.

How could it be translated into technical rules?

- Soil should not be tilled down the slope. Contour tillage decreases the susceptibility of soil to erosion.
- If slope exceeds 5%, fields should be divided, at appropriate intervals, by strips of permanent vegetation having a minimum width of 5 m, not tilled or sprayed with herbicides. This strip can include other landscape features, such as hedgerows, ditches or dry-stone walls.
- Soil should not be tilled at all or sprayed with total herbicides if slope exceeds 15%, unless land is appropriately terraced, and terraces have a maximum slope of 5%, respecting the other conditions listed above.
- Limits should be placed on livestock density if average farm slope exceeds 5%. Where appropriate, lower stocking densities and pasture rotation rules should be established to avoid soil erosion, depending on local pedo-climatic and morphological conditions.
- Land managers should take additional specific action in cases of apparent soil erosion.

15. Contour ploughing alone stops being an effective anti erosion measure on slopes steeper than 10%, while it can reduce erosion by up to 85% on a 3% slope (SoCo Project Team 2009).



Figure 8. Strip cultivation on hill slopes is an effective soil conservation technique.

© Tomasz Wilk, OTOP (BirdLife in Poland)

5.2.3. Retain terraces

What is this standard about?

Terraces are important for soil conservation. Dry-stone walls also represent important micro-habitats and refuges for wildlife. Levelling terraces involves landscape simplification and larger field sizes, which negatively affects biodiversity and soil conservation. This is an issue in re-plotting projects.

How is it implemented and enforced?

This standard has been appropriately transposed in most Member States. However, there are a few exceptions showing poor implementation.

Terraces are not sufficiently protected

Austria

A derogation option allows terraces to be removed for re-plotting projects

How could it be translated into technical rules?

Terraces should not be removed. While protection of terraces should be enforced under cross compliance, their active maintenance involves significant costs for the land manager, and should therefore be supported through Rural Development measures.

5.2.4. Arable stubble management

What is this standard about?

The objective of this standard is to conserve soil organic matter through appropriate arable stubble management. There is a considerable overlap with GAEC 1 (minimum soil cover). Stubble burning is an environmental problem in a number of Member States, especially in Mediterranean countries and Bulgaria. It leads to loss of organic matter, damage to soil life and increases the risk of the fire spreading to forest, grassland and other habitats. In some cases (e.g. many Italian regions), burning of stubbles is still permitted under cross-compliance.

How is it implemented and enforced?

Stubble burning is permitted even in Natura 2000 sites

Italy (Puglia)

Burning of stubbles is permitted, although with some time restrictions, even in Natura 2000 sites. The required compensatory measures are: organic fertilisation (without any need to maintain the organic matter balance), direct drilling, or cultivation of legume crops.

Easy derogations allow stubble burning

Spain

Stubble burning is, in principle, not allowed under cross compliance, but a derogation for control of plant pest/diseases is used on quite a regular basis. For example, in 2008, in most of Castilla y León (a region larger than Hungary) a derogation was given to control rodents.

Stubble burning is forbidden but widely practiced

Greece

The relevant GAEC standard stipulates that residues from arable crops should be incorporated into the soil or grazed. The burning of stubble is only permitted in exceptional cases and never in Natura 2000 sites. Special permission from local agricultural authorities and the fire brigade is needed. Despite this, many farmers still burn arable stubbles and unwanted vegetation. This practice results in soil degradation, increased risk of erosion and negative effects for biodiversity. As Mediterranean vegetation is fire-prone, especially during summer months, stubble burning increases the risk of fire getting out of control.



Figure 9. Stubble burning is a widespread practice, threatening wildlife conservation.

© Courtesy of Carlos Ponce, SEO/BirdLife (BirdLife in Spain)



Figure 10. Arable crop stubble is an important habitat for wildlife, such as the great bustard *Otis tarda*.

© Courtesy of Carlos Ponce, SEO/BirdLife (BirdLife in Spain)

How could it be translated into technical rules?

Stubble burning should be completely banned, without any possibility of derogation. Other prescriptions concerning minimum soil cover are described in chapter 5.2.1.

5.2.5. Standards for crop rotations

What is this standard about?

The objective of this standard is to conserve soil organic matter through crop rotation. Simplification of crop rotations is among the main factors leading to negative environmental impacts in arable systems (Stoate et al. 2001). Crop rotation is critical to ensure habitat diversity, and for an ecological management of soil fertility, pollination, weeds, pests and diseases. Therefore, an appropriate crop rotation can reduce the need for fertilisers, herbicides and pesticides. Crop diversity can be a valuable tool to buffer the risk of crop failure connected to extreme climate events and pest outbreaks. In a scenario of further market liberalisation and unpredictable fluctuations of agricultural commodity prices, crop diversity could help managing risks related to extremely low prices.

How is it implemented and enforced?

Many Member States or regions do not have any specific requirement on this standard. Where a rule is in place, it is of negligible environmental value.

Meaningless crop rotation standard

France

Continuous cropping is allowed if cover crops are used or if stubble is appropriately managed.

Italy (Friuli Venezia Giulia)

Continuous cropping of the same cereal species is allowed for up to 5 years. In addition, derogations are granted if a sufficient amount of organic matter is added to the soil.

UK (Scotland)

An optimal use of organic material is considered a valid alternative to crop rotation.

How could it be translated into technical rules?

Ecologically-sound requirements should be set for arable systems, aiming to avoid the negative environmental impacts of continuous cropping, and to create a suitable crop mosaic for wildlife. In particular, crops belonging to the same botanical family should not be repeatedly cultivated on the same field.

5.2.6. Retention of landscape features, including, where appropriate, hedges, ponds, ditches, trees in line, in group or isolated and field margins

What is this standard about?

The objective of this standard is to ensure the retention of landscape features, thus avoiding the deterioration of habitats. Landscape features support ecosystems services (pollination, pest regulation, water quality, soil fertility, microclimate regulation etc), as well as the aesthetic value of landscape.

The loss of landscape features is among the main components of agricultural intensification, and has detrimental effects on biodiversity (Grashof-Bokdam & van Langevelde 2005). The structure and ecological functioning of both field margin features (such as hedgerows, dry-stone walls, ditches, lines of trees) and in-field features (trees/shrubs in groups or isolation, stone piles, ponds) should be protected. Damage may arise from: removal of the feature, soil cultivation too close to

the feature, inappropriate trimming/coppicing/mowing, drainage, agro-chemical treatments. However, while there is an unquestionable need to protect landscape features, it is important to avoid unwanted perverse effects, such as creating an unreasonably higher burden for nature-friendly farming, or discouraging the creation of new landscape features, because of increased restrictions acting as deterrents. If implemented without consistency with other GAEC requirements (especially GAEC standard on *“Establishment and/or retention of habitats”*) and with some Rural Development measures (e.g. agri-environment payments and non-productive investments), this standard could even work against biodiversity protection.

In particular, it is important that the GAEC standard on *“Establishment and/or retention of habitats”* is implemented by laying down a sufficiently high requirement for the Environmental Priority Area, e.g. BirdLife’s proposal for a minimum 10% EPA (see chapter 5.2.9). Farms that are intrinsically rich in landscape features could easily fulfil this requirement, and therefore the GAEC standard on *“Retention of landscape features”* would not pose significant additional burden on these farms. In addition, Member States should make available Rural Development measures providing effective incentives for biodiversity-targeted management and for restoration/creation of landscape features.

How is it implemented and enforced?

Inconsistent implementation

UK (England, Scotland)

In Scotland, field boundaries are protected through this GAEC standard, which prohibits “damaging” field boundaries and sets dates for hedgerow cutting (not between 1 March to 31 July). However, “damage” is not defined, therefore in practice, land managers are generally not considered in breach unless they are actually removing the hedgerow. This GAEC standard is better implemented in England, as damage is defined as not ploughing or applying agrochemicals within 2 m of the centre of a hedgerow.

Wetland protection is not enforced

UK (Scotland)

Several cases of wetland drainage have occurred in recent years. Drainage is often carried out, for example, on moorland used for grouse shooting. This is covered, in principle, by existing GAEC 16 in Scotland (non productive landscape features), but protection of temporary wetlands is not enforced.

Protection of landscape features is not implemented

Cyprus

The prescription protecting remnants of natural vegetation within farmland is too vague to be applicable.

Protection of landscape features not sufficiently detailed

Spain

The recently approved official text for the implementation of this GAEC standard does not include requirements on avoiding damage that may be caused by inappropriate management (e.g. mowing, trimming, pesticide applications).

Ditches are not protected

Finland

Though margins are required and protected under cross compliance, ditches are not. Once ditches are piped (as part of re-parcelling projects or enlarging field size, or in order to remove unwanted marginal vegetation), the margins are also removed.



Figure 11. Destruction of landscape elements in Scotland: removal of Hedgerow.

© (rsfb-images.com)



Figure 12. Man made desert resulting from rock grinding and landscape elements removal in Puglia, Italy

© Courtesy of M Fracchiolla

How could it be translated into technical rules?

As a minimum rule, this standard should apply to the following features:

- a. hedgerows;
- b. ditches;
- c. trees and shrubs, isolated, in group or in line; trees to be protected would include both native species and traditional fruit-tree species - e.g. white mulberry (*Morus alba*), black mulberry (*Morus nigra*), common medlar (*Mespilus germanica*), azarole (*Crataegus azarolus*), service tree (*Sorbus domestica*), carob (*Ceratonia siliqua*), pomegranate (*Punica granatum*), jujube (*Ziziphus jujuba*);
- d. dry-stone walls;
- e. stone outcrops and stone piles;
- f. ponds, springs and wetlands, including temporary wetlands occurring on a regular annual basis.

The protection regime should include the following prescriptions:

- g. Landscape features should not be removed, either totally or in part. The only admissible derogation is for traditional fruit trees, which can be grubbed up only to be replaced with other traditional fruit trees;
- h. The surface where temporary wetlands occur on a regular basis (e.g. lasting for at least 30 days, at least once every 3 years) should be permanently protected;
- i. Soil tillage, setting fire, applying fertilisers, pesticides or herbicides should be forbidden up to a buffer of 1 m from the edge of the feature (see chapter 5.2.14 for buffer zones along ditches, ponds and wetlands). Localised herbicide treatments should be permitted to control invasive alien species (see chapter 5.2.10);
- j. Maintenance works on landscape features and their buffers (including trimming, mowing, coppicing, dredging, re-profiling) must not take place during the main breeding season for

- birds (1 March – 31 August, to be appropriately extended to match the exact period in each country/region);
- k. Trimming hedgerows, trees, shrubs and reeds should not be carried out more often than once every 2 years;
- l. Coppicing should not take place more often than once every 5 years;
- m. Coppicing and trimming should not take place on more than 1/2 of the whole surface of hedgerows, shrubs and trees during the same year.

In order to avoid deterrent effects on the uptake of certain Rural Development measures, Member States could decide to exempt from the protection regime all landscape features created after 1 January 2010.

5.2.7. Minimum livestock stocking rates or/and appropriate regimes

What is this standard about?

The purpose of this standard is to ensure a minimum level of maintenance of grassland habitats, and avoid their deterioration. A minimum livestock load is needed to prevent ecological succession, such as excessive growth of shrubs on grassland. However, if not matched by 'appropriate regimes', such as a limit to maximum livestock load, this provision would not be effective in limiting habitat deterioration. In areas with extreme seasons (e.g. cold winter in northern Europe and high mountains, dry summer in southern Europe), keeping livestock on grassland during the wrong season may lead to habitat degradation.

How is it implemented and enforced?

This standard has been transposed into national cross compliance requirements in many cases, but predominantly concerns minimum stocking density.

Difficulties setting appropriate grazing levels

UK (Scotland)

For both overgrazing and undergrazing, the official guidance document states that land will not be considered in breach if: *"it is capable of recovering by anytime during the growing season in the following calendar year"*. This implies that only the most damaging cases of overgrazing or complete abandonment are likely to be considered as breaches under this GAEC. A balance needs to be struck between an effective measure that will have some effect on grazing levels and being overly prescriptive across the country when appropriate grazing levels can only really be determined at the field level.

How could it be translated into technical rules?

Minimum and maximum limits to stocking rates should be set. As a general indication, depending on climate, soil and topography, minimum stocking density should not be lower than 0.05-0.2 LU/ha of grassland. Under Commission guidance, Member States should define a maximum stocking density, with the objective of avoiding grassland deterioration. The occurrence and abundance of natural grazers (e.g. deer, geese, rabbits) should be taken into account in defining appropriate thresholds.

In areas with a season when grass is not, or scarcely, available, this GAEC standard should include additional prescriptions to avoid damage to grassland, by reducing livestock loads or excluding grazing on grassland during these periods.

Maximum limits are needed to avoid significant damage to soil, water resources and grassland overgrazing, but are not sufficient to conserve or restore species-rich grassland. This last objective should be pursued via specific CAP tools (e.g. agri-environment schemes), which provide additional payments for land managers.

5.2.8. Establishment and/or retention of habitats

What is this standard about?

A new addition to cross compliance following the Health Check, this standard was primarily introduced to allow Member States to retain the environmental benefits of set-aside. The set-aside scheme, obliged arable farmers to keep a percentage (generally between 7-10%) of their utilised agricultural area out of production, and although designed as a tool to regulate cereal prices, provided some valuable environmental benefits. These included water and soil protection as well as support to farmland biodiversity¹⁶ (Bracken & Bolger 2006; Whittingham et al. 2005). Following an increase in cereal prices, the mandatory set-aside rate was set at 0% in 2007 with the instrument finally being abolished in 2009. Though implemented in different ways across Member States, set-aside provided small plots of uncultivated land evenly distributed across the countryside. Long-term (non-rotational) set aside was, in certain circumstances, particularly important for rare plant species and short-term (rotational) set-aside provided seed resources for wintering passerines. These habitats are crucial to support biodiversity in agricultural landscapes dominated by intensive arable systems. It has also been argued¹⁷ that a tool to retain the ecological benefits of set-aside could help address the widespread decline of the domestic bee (*Apis mellifica*) by providing more food resources and insecticide-free areas for the bee itself, or by supporting wild pollinators, which could buffer the negative ecological effects of bee decline. In Switzerland, a requirement to dedicate a certain percentage of the farm to wildlife-friendly farming has been built into cross compliance since 1998 and is delivering tangible results (Aviron et al. 2009). BirdLife believes that, in order to have significant positive effects on biodiversity, at least 10% of farmland should be managed for nature conservation as a primary purpose (Holzgang et al 2005; Illner 2009; Jenny et al 2003; Oppermann 1993; Oppermann & Spaar 2003; Oppermann et al 2008; Oppermann et al 2009). It is important to point out that while the GAEC standard on “Retention of landscape features” could potentially pose a higher burden on extensive farms that are rich in landscape features, the minimum 10% EPA requirement would counterbalance this effect. In practice, extensive farms could fulfil this requirement with very little (if any) effort, while highly simplified farms would be required to create new habitat.

Therefore, both standards should be implemented in a consistent manner, and the EPA requirement needs to be sufficiently high to ensure that extensive farms are not penalised by the standard on “Retention of landscape features”.

How is it implemented and enforced?

First step in the right direction, but still more derogations than requirements

France

A welcome provision for a minimum of 3% “surface of environmental cover” (SCE) is in place under GAEC. However, this does not apply to grassland systems, horticulture and tree crops. In addition, small farms are exempted from this requirement, although the definition of ‘small farms’ also includes middle-sized farms. Further derogations apply to industrial crops. Management prescriptions are weak, as the required non-mowing period is only 40 days and SCE declared as grassland are also exempt from this requirement.

Irrelevant obligations

Spain

The “habitat maintenance” standard lists a number of obligations, none of which are directly relevant to habitat conservation, e.g. prohibiting the disposal of sub-products or residues from farming activities, applying fertilisers or pesticides on water-logged soils, on soil covered by snow or on water bodies, and rules on storing slurry and manures on livestock farms.

16. <http://www.defra.gov.uk/foodfarm/policy/sustainfarmfood/implement/documents/hlsag-interim-report-0804.pdf>.

17. E.g. the Slovenian government.



Figure 13. Agricultural desert in Hungary. Public subsidies cannot support biodiversity delivery if a proportion of farmland is not sympathetically managed.

© Szabolcs Nagy

How could it be translated into technical rules?

BirdLife believes that each farm should manage at least 10% of its agricultural area as ‘Environmental Priority Area’ (EPA). Member States should define the appropriate level of administrative division at which this requirement has to be fulfilled within each farm, in order to avoid a situation in which plots in marginal areas could account as EPA for farms running their core business in geographically distant intensive agricultural areas.

Suitable habitats established and specifically managed under agri-environment measures could account for this requirement. In practice, this GAEC standard would require farmers to have at least 10% of *any suitable* wildlife habitat on their farms, while agri-environment measures would support *targeted* schemes for establishment and retention of *specific* habitats.

The minimum 10% EPA requirement would pose negligible (if any) restrictions on extensive farms, while encouraging intensive and simplified farms to enter agri-environment agreements. In order to ensure effective implementation of this standard, sufficient agri-environment funding and appropriate options should be made available to land managers.

All habitat types that are not treated with agrochemicals could account for the EPA requirement, e.g.:

- a. all landscape elements listed above in chapter 5.2.7, including their buffers;
- b. fallow plots, with land being undisturbed for at least 10 consecutive months (see GAEC 1.b);
- c. unimproved semi-natural grassland;
- d. old orchards with permanent weed cover.

Maintenance works on EPAs (including soil cultivation, trimming, mowing, coppicing, re-profiling) should not take place during the main breeding season for birds (1 March – 31 August, to be appropriately extended to match the exact period in each country/region). Localised herbicide treatments should be allowed to control invasive alien species (see chapter 5.2.9).

5.2.9. Avoiding the encroachment of unwanted vegetation on agricultural land

What is this standard about?

The purpose of this standard is to “ensure a minimum level of maintenance and avoid the deterioration of habitats”. Some valuable habitats depend on appropriate agricultural management to prevent ecological succession (to another habitat type) and a loss of biological diversity. Invasive alien plant

18. Environment Council conclusions of 25 June 2009. Commission Communication “Towards an EU strategy on invasive species” COM(2008) 789 of 3 December 2008.

species are another example of unwanted vegetation. The threat posed by invasive alien species to native biodiversity, and the importance of its control, have been officially recognised by the EU¹⁸.

How is it implemented and enforced?

In many Member States, farmers are forced to perform blanket vegetation control on a yearly basis, often with a set date. This is generally harmful to biodiversity: Oppermann et al. (2009) highlight the decline of biodiversity caused by uniform mowing regimes at large scale. Clearance of 'unwanted' vegetation from pasture also encourages cutting during the breeding season, with harmful effects on wildlife.

Control of vegetation encroachment leads to damage to wildlife

Austria

Control of vegetation encroachment by mowing is often carried out during the breeding period of birds and other grassland wildlife.

Habitats formally protected by EU law are destroyed to meet cross compliance requirements and eligibility for CAP payments

Bulgaria

In order to access the single payment and Axis 2 support, farmers are required to clear all trees, bushes, shrubs and stones from their land. This can lead to the destruction, even in Natura 2000 sites, of important habitats, such as juniper formations (protected under the Habitats Directive). The problem is caused by the lack of clarity in the national implementation of this standard and inadequate training of cross compliance inspectors.

The new specification of this GAEC standard only allows up to 20% of grassland to contain bushes, and this refers to Natura 2000 sites, protected territories and officially mapped HNV areas only. In addition, an act of the Ministry of Agriculture states that grasslands are not eligible to the single payment if they contain more than 50 trees per hectare, despite the fact that trees often provide alternative fodder and can be an intrinsic part of extensive livestock systems. This provision results in farmers cutting trees in order to receive CAP payments.

The most important habitats being damaged by these requirements are: Endemic oro-Mediterranean heaths with gorse (Habitats Directive code 4090), Subcontinental peri-Pannonic scrub (code 40A0, also identified as priority habitat), *Juniperus communis* formations on heaths or calcareous grasslands (code 5130) and Arborescent matorral with *Juniperus* spp (code 5210).

Frequent herbicide use is prescribed to control unwanted vegetation

Cyprus

Provisions for the management of weeds and invasive vegetation stipulate that herbicides should be applied "at least twice a year". This blanket prescription could negatively affect biodiversity and resource protection by requiring herbicide treatments when there may be no actual need.

In the new Member States (e.g. Bulgaria and Latvia), the use of arbitrary baseline years to determine the areas eligible for support means that recently restored grassland habitats are not eligible for support and protection.



Figure 14. Removal of shrubs to meet the GAEC standard on “avoiding the encroachment of unwanted vegetation” and to fulfil conditions for eligibility to the Single Payment Scheme. In Ponor, Bulgaria, these requirements are being misinterpreted by national authorities and inspecting bodies, leading to damage of protected habitats.

© Georgi Popgeorgiev, BSPB (BirdLife in Bulgaria).

How could it be translated into technical rules?

- a. Land that is no longer used for agricultural production should not be sprayed with herbicides¹⁹ and should be mown at least once every 5 years, but no more than once a year. No more than 50% of the area should be cut in one single year. Mowing on non-productive land must not take place during the breeding season for birds (1 March – 31 August, to be appropriately extended to match the exact period in each country/region).
- b. Shrub and tree encroachment impeding access to underlying grass/soil should not be permitted on more than 1/3 of the land parcel surface. Below this threshold, encroachment should not be considered a breach of cross compliance. Trees and shrubs that allow access to underlying grass (or soil) should not be considered as encroachment of unwanted vegetation.
- c. Invasive alien species should be controlled and their spread prevented. This should be achieved by mechanical operations or localised herbicide applications. As an indication, at least the following species should be tackled²⁰: *Acacia dealbata*, *Ailanthus altissima*, *Ambrosia artemisiifolia*, *Amorpha fruticosa*, *Campylopus introflexus*, *Carpobrotus edulis*, *Cortaderia selloana*, *Echinocystis lobata*, *Fallopia japonica*, *Hedychium gardnerianum*, *Heracleum montegazzianum*, *Impatiens glandulifera*, *Opuntia ficus-indica*, *Paspalum paspaloides*, *Prunus serotina*, *Rhododendron ponticum*, *Robinia pseudoacacia*, *Rosa rugosa*.

5.2.10. Prohibition of the grubbing up of olive trees

What is this standard about?

Olive trees, in general, do not have a specific environmental value. However, ancient olive trees are an important cultural and aesthetic feature of the Mediterranean region. In landscapes often dominated by urban areas and intensive agriculture, including new intensive olive plantations, ancient hollow olive trees can represent key nesting sites for a number of birds species, such as the scops owl (*Otus scops*), the little owl (*Athene noctua*) and the hoopoe (*Upupa epops*). They are increasingly sought after as ornamental plants, leading to widespread grubbing up for sale to gardeners.

How is it implemented and enforced?

In some Member States, national or regional legislation (e.g. Puglia in Italy) poses strict limitations on grubbing up of ancient olive trees. However, this is often not transposed into cross compliance.

19. Herbicide treatments for well-documented nature conservation purposes should be allowed.

20. Most of these terrestrial plant species have been identified as among the worst 100 alien species by a European expert group (<http://www.europe-aliens.org/index.jsp> accessed on 23 July 2009).



Figure 15. Ancient olive trees in Apulia, Italy.

© Luigi Boccaccio, RSPB (BirdLife in the UK)

How could it be translated into technical rules?

Olive trees should be defined as ancient if they have a trunk diameter of at least 1 m, measured at a height of 1.30m from the ground level. If the trunk is fragmented at 1.30 m, its theoretical diameter should be calculated by summing up the diameter of all its parts. Trees with lower diameter, but peculiar shape, could be included.

Grubbing up of ancient olive trees should be strictly forbidden under cross compliance. Non-routine maintenance could be supported through Rural Development measures.

5.2.11. Protection of permanent pasture

What is this standard about?

This standard requires Member States to ensure that the ratio of the land under permanent grassland in relation to the total agricultural area does not decrease by more than 10%, relative to a reference year²¹. In principle, this rule does not pose any direct obligation on individual farmers, as long as the proportion of permanent grassland is maintained at the national level.

How is it implemented and enforced?

Despite being perhaps the most important GAEC standard for biodiversity, climate change and resource protection, this aspect of cross compliance has been poorly designed, implemented and enforced. An intrinsic weakness is that it is not able to monitor and avoid changes, in absolute terms or in the surface of permanent grassland. In addition, the fact that a 10% change is allowed and the ecological quality of grassland is not considered have been heavily criticised by the European Court of Auditors (2008). Significant losses of permanent grassland, even in Natura 2000 sites, have been recorded in a number of German Länder, e.g. up to 7.54% in Schleswig-Holstein & Hamburg from 2003 to 2008 (Oppermann 2008). Cases of destruction of semi-natural grassland have also been reported in other Member States, including France, Italy, Hungary, Latvia, Slovenia and UK, although no evidence has been systematically collected.

Farmers are required to damage semi-natural grassland

Cyprus

The standard relevant to permanent pasture states that farmers should 'improve' grazing habitats through fertilisation, sowing and removal of rocks, with specific mention of the need to remove natural vegetation and carry out additional sowing of grass species.

21. Reference years are: 2003 for the old Member States, 2004 for Malta and Slovenia, 2007 for Bulgaria and Romania and 2005 for the other new Member States.

Semi-natural grassland can be damaged

Spain

There is a formal obligation not to plough or burn grassland, however, burning is possible after authorisation, while ploughing and reseeded do not require any authorisation.

Semi-natural grassland is insufficiently protected

UK (England)

Semi-natural grassland is directly protected by the UK (England) regulation 2/2006, transposing Directive 85/337/EEC (the “Environmental Impact Assessment Directive”). This regulation sets a minimum threshold of 2 ha, beyond which all projects must undergo an EIA. However, the Lowland Grassland Inventory, currently being updated by Natural England (the statutory agency for nature conservation) indicates that a considerable proportion of semi-natural grassland occurs in parcels below the 2 ha threshold, including priority habitats identified by the national Biodiversity Action Plan. In addition, the definition of semi-natural habitats is too restrictive, being based on plant assemblages and ignoring other taxa of conservation interest. A number of cases of destruction of semi-natural grasslands have been recorded by environmental NGOs over the past 4 years.

A critical issue concerns the biological quality of permanent grassland. While this GAEC standard sets limits to a reduction in the surface of grassland, it does not prevent semi-natural grassland of high ecological value being replaced by species-poor grassland by means of ploughing, fertilisation and reseeded. The ecological services provided by these two types of grassland are extremely different: species-rich semi-natural grasslands host much more biodiversity and are much more effective in accumulating carbon (Tilman et al. 2001).



Figure 16. Permanent grassland ploughing in Germany.

© NABU (BirdLife in Germany)



Figure 17. Arable crops, such as maize, are replacing permanent grassland in the Natura 2000 site “Obere Kyll und Kalkmulden der Nordeifel” near Birgel (Rheinland-Palatinate). This, along with destroying valuable habitat, is causing evident impacts on soil and water.

© Gerd Ostermann, NABU (BirdLife in Germany)

How could it be translated into technical rules?

At the farm level, the conversion of semi-natural permanent grassland into other land uses should be forbidden. This would also include agricultural improvement of the grassland through fertilisation, reseeding and soil cultivation.

At Member State level, the total surface of permanent grassland (including high input grassland) should not decrease in absolute terms, unless Member States can prove that this is due to conversion of grasslands into more valuable habitats.

There is an urgent need to record semi-natural (i.e. permanent and unimproved) grassland on IACS²² as a specific land use category. IACS is a relatively sophisticated and robust process for recording land use down to individual land parcel level, but it currently misses the opportunity to classify grasslands beyond being “temporary” or “permanent” (more than 5 years old). Unfortunately, the latter includes highly improved and semi-natural grassland. Grasslands should be defined as semi-natural if they have not been cultivated by means of soil tillage, reseeding and application of synthetic agrochemicals (except for localised herbicide treatments) for at least 5 years.

5.2.12. Maintenance of olive groves and vines in good vegetative condition

What is this standard about?

The purpose of this standard is to avoid deterioration of olive groves and vineyards. However, no evidence is currently available on the detrimental environmental effects arising from abandonment or under-management of tree crops. While conventionally managed orchards generally imply a high use of agro-chemicals, abandoned or extensively managed orchards can represent important habitats for many species.

How is it implemented and enforced?

Abandoned olive groves can be important refuge habitats

Italy (most regions)

Although abandoned olive groves can often represent the only semi-natural vegetation left in intensively managed agricultural landscapes, farmers are required to prune olive trees at least once every 5 years and to cut suckers, bramble and weeds at least once every 3 years.

How could it be translated into technical rules?

This standard is not relevant to habitat conservation. It also represents an unfair burden for managers of olive groves or vineyards, as managers of grassland or arable land have simpler minimum maintenance requirements (i.e. periodical mowing). Therefore, this GAEC standard could be deleted without any risk for the environment. Specific prescriptions for soil management in orchards are suggested under chapter 5.2.1, while chapter 5.2.9 deals with avoiding encroachment of unwanted vegetation on agricultural land.

5.2.13. Establishment of buffer strips along water courses

What is this standard about?

The primary purpose of this standard is to protect water against pollution and agricultural run-off. The EC regulation stipulates that buffer strips should respect “at least the requirements relating to the conditions for land application of fertiliser near water courses, referred to in point A.4 of Annex II to Directive 91/676/EEC [the ‘Nitrates Directive’], to be applied in accordance with the action programmes of Member States established under Article 5(4) of Directive 91/676/EEC”. This implies that restrictions to application of fertilisers near water courses, currently in place only in Nitrate Vulnerable Zones designated according to the Nitrates Directive, should be extended to the whole territory.

22. The Integrated Administration and Control System is a computerised geographical database including information on agricultural land parcels, payment entitlements, aid applications, farmers submitting applications and a control system (European Council Regulation 73/2009).

Buffer strips along water courses are a key tool to enhance water quality by reducing losses of nitrogen and phosphorous, sediment transport and pesticide drift. They can therefore also improve habitat conditions for aquatic species. Even narrow buffer strips can support diversity of terrestrial plants, while benefits for terrestrial animals depend on width and structural diversity (for a comprehensive review on this issue see Boatman et al. 2008).

Protection of all water bodies, including minor ditches and temporary watercourses is an important issue (Herzon & Helenius 2008) as they play a key role during heavy rain events, when the risk of soil erosion is higher.

How is it implemented and enforced?

Although this is a new standard that will enter into force in 2012, it was already included in the GAEC of some Member States before the last middle-term review of the CAP ('Health Check').

Buffer strips not properly implemented

Finland

A 60cm wide grass margin must be left along all main ditches and water courses. In addition, to qualify for the agri-environment payment, the margins have to be extended to a minimum 100cm along main ditches and 3-10 m along larger watercourses. It is not permitted to treat the margins with herbicides and fertilisers. As roughly 90% of the farmers in Finland take part in agri-environment schemes, the larger buffer strip requirements cover the majority of Finnish farmland.

In practice, it is difficult, if not impossible, to determine which of the ditches belong to the 'main ditch' category. It is a technical term largely used in connection to establishing drainage systems, and is defined by the order of waters entering the system; for example, most brooks running through farmland have been converted into ditches. This difficulty leads to a clear misinterpretation of the law by farmers and inspectors.

Kuussaari et al. (2008) confirmed that out of 950 studied margins, half the margins along main ditches were narrower than 100 cm, and at least 40 margins were narrower than 60 cm. Of the margins along water bodies, half were narrower than 3 m. About 15% of all margins had been clearly affected by herbicides. Often one side of a ditch has a margin which is 1-m wide, while the other side of is 40-50 cm. On many occasions, the margin is not only narrow but also broken, with soil falling in the ditch. There is no scientific evidence that 60 cm is an adequate width to protect water courses nor is there justification to restrict protection rules to main ditches only.

In some Member States or regions (e.g. Germany, UK-Northern Ireland), the whole territory has been designated a Nitrate Vulnerable Zone under the Nitrates Directive (91/676/EEC). Therefore, there will probably be no specific implementation of this requirement. However, existing rules do not contain any specific provision to avoid damage to wildlife, such as ground nesting birds, and this should be rectified.



Figure 18. Uneven and narrow buffer strips are ineffective to protect water courses from high-input farming.

© Irina Herzon, BirdLife Suomi (BirdLife in Finland)

How could it be translated into technical rules?

Although more research is needed to determine the optimum width of buffer strips in any given context, existing research studies (Syversen 1995; ADAS 2009) indicate that, in order to provide effective pollution control, buffers should not be less than 5 m in width and could extend to 12 m. Member States should therefore implement at least 5 m buffer strips of permanent vegetation along all water courses, unless the evidence suggests a wider strip should be used. Buffer width should be informed by up-to-date scientific information, taking into account slope, soil type, crop type, the level of diffuse pollution risk and how the buffer will be managed.

Therefore, buffer strips should be established along all permanent water courses and water bodies (rivers, streams, drains, dykes, ponds and wetlands), including temporary water courses and wetlands that may be dry for part of the year.

Soil cultivation, burning and application of agro-chemicals should not be permitted on buffer strips. Vegetation on buffer strips should not be mown, trimmed or coppiced during the main breeding season for birds (1 March – 31 July, to be appropriately extended to match the exact period in each country/region). Localised herbicide treatments to control invasive alien species should be allowed (see chapter 5.2.9). Grazing should be allowed, unless there are specific water pollution or soil erosion problems.

Buffer strips, as a cross compliance requirement, are being introduced to address water quality issues. However, they can also bring significant biodiversity benefit if managed appropriately. Support through Rural Development measures should therefore be made available to land managers to enhance the ability of buffer strips to deliver for biodiversity.

5.2.14. Where use of water for irrigation is subject to authorisation, compliance with authorisation procedures

What is this standard about?

The purpose of this standard is to manage water use in agriculture. If the use of water in a particular area has to be authorised, farmers will have to comply with the relevant authorisation procedure. Although this standard is very welcome and could limit CAP payments going to farms using water illegally, authorisation is unfortunately only required in a limited number of cases. In addition, authorisation alone does not guarantee that the use of water for irrigation is sustainable i.e. if a maximum water allocation is not set at the farm level and if the allocation is not appropriately calculated to ensure sustainable water use.

In order to make this GAEC standard effective, Member States should extend the requirements for authorisation to all water-stressed basins. This authorisation should be based on water allocations, which should be calculated using sustainability criteria.

How could it be translated into technical rules?

The phrasing of this GAEC standard in EC regulation 73/2009 is very clear and its scope well-defined. It should therefore not require additional technical guidance to be translated into domestic technical rules.

6. Conclusion

Our survey has highlighted structural weaknesses affecting the current system of cross compliance and the Single Payment Scheme, which prevent these instruments from delivering for biodiversity and the environment. The shortcomings of the cross compliance system were largely forecast in our 2005 report and can be summarised as follows:

- lack of clear environmental objectives and targets;
- lack of reporting, monitoring and evaluation of policy outcomes;
- lack of guidance to Member States on how to translate requirements into obligations applicable at farm level - the Commission does not approve national transposition of cross compliance rules;
- limited transparency and no obligation to involve stakeholders from civil society in national implementation;
- exclusion of certain CAP payments with potentially serious environmental impacts from the scope of the policy;
- insufficient and ineffective controls;
- inadequate provision to share information on breaches of relevant legislation across different public authorities;
- inconsistent payment reductions which are usually small and not proportional to the environmental damage;
- failure in securing proper protection of permanent pasture;
- failure in excluding serious polluters from receiving taxpayers' money;
- disproportionately higher burden on extensive farming systems that deliver significant public goods²³.

As a result of these weaknesses, most Member States have transposed cross compliance standards related to environment protection in such a way that they would not significantly interfere with farming and minimise additional work for administration of the €38bn payment system. However, cross compliance rules on animal identification, disease notification and animal transportation, which potentially place a disproportionate burden on extensive livestock systems, have been transposed in a stringent way.

The priority for Member States is formal compliance with EU regulations, rather than delivering against concrete environmental objectives. For example, the national implementation of the Birds and Habitats Directives has not been improved to identify obligations applicable at farm level, while many existing obligations have not even been included into cross compliance. In most cases, standards for Good Agricultural and Environmental Condition have been translated into undemanding prescriptions, allowing common bad practice and permitting beneficiaries to derogate from requirements.

Paradoxically, especially in the new Member States, rules on eligibility of land to Single Payment Scheme and the GAEC standard on avoiding the encroachment of unwanted vegetation are instead rigidly enforced, thus leading to habitat destruction.

Most of these problems are rooted in the Single Payment system (which is based on arbitrary entitlements), to which cross compliance appears to be simply an appendage, used to justify ongoing farm payments. Therefore, it is unrealistic to expect that all of these shortcomings could be solved by a minor review of the current system.

Nevertheless, some issues need to be urgently addressed in order to ensure some value for public money spent in direct payments, and to ensure that CAP beneficiaries are not damaging the environment. The Commission should lay down minimum mandatory standards to guide Member

23. In the old Member States, this is compounded by a generally lower Single Farm Payment, compared to more intensive farming.

States on the implementation of SMR and GAEC requirements that are essential to achieve EU environmental objectives. The Commission should also operate a much more effective application of rules on payment reductions. Member States should take a much more proactive approach in designing and enforcing cross compliance obligations. There is also significant scope to ensure that each Member State's Farm Advisory System provides clear and applicable advice, which enables farmers to meet the requirements of cross compliance and use the system to positively benefit biodiversity.

Recent proposals for CAP simplification, which have been put forward by some Member States²⁴, are a move in the wrong direction. They aim to reduce EU Commission control and weaken environmental requirements for beneficiaries of taxpayers' money. The most recurrent proposals focus on less detailed reporting, reducing the number of on-the-spot checks and random controls, deleting some SMR and GAEC, including the permanent pasture rule. Instead of bringing the urgently needed improvements to these policy instruments, Member States are seeking deregulation, less accountability and no transparency to taxpayers.

Enormous amounts of public money are used to finance the CAP. These funds should be used to support the delivery of public goods and meet the environmental targets defined by the EU itself. Taxpayers have the right to know, in sufficient detail, how their money is spent across the European Union.

A profound reform of the CAP is needed, in order to realign the whole policy to the principles underpinning much of Rural Development policy:

- *Partnership principle* - civil society should be involved in decision-making;
- *Contractual base* - All payments should be based on a clear agreement between the beneficiary and society, spelling out the public goods that the beneficiary is expected to deliver in exchange for the payments;
- *Transparency* - all relevant data about public payments and beneficiaries' commitments should be made public;
- *Strategic approach, programming and Commission's approval* – the framework laid down by EU regulations should be implemented in the form of national and regional programmes, which have to be based on an independent analysis of needs; approval by the Commission will ensure consistent implementation across the EU;
- *Public money for public goods* - all payments should clearly secure the delivery of specific public goods. It must be clear what a payment is trying to achieve and results should be quantifiable and measurable against secure baselines;
- *Monitoring* - it is essential that there should be a sound system of monitoring of the performance of the schemes to ensure the targets are sensible and achievable and results acceptable. This will guide the further adaptation of the schemes over time at all levels, from the farm to the overall policy;
- *Accountability* - beneficiaries should be fully accountable for complying with the terms of their agreement, but even more important, national and regional authorities responsible for the spending should be fully accountable for the achievement of agreed EU objectives and the use of taxpayers' money.

Biodiversity loss, climate change and conservation of water resources, whilst continuing to produce sufficient food, are large-scale challenges that need to be addressed with consistent action at EU level. Europe's farmers can rise to these challenges, but only if they are working within high-quality policy frameworks supported by appropriate budgetary resources. The CAP has a vital role to play but meaningful reform of cross compliance is needed to make progress in the right direction.

24. Council of the European Union (27 April 2009), Note 9103/09 (AGRI 192) Submission by the Danish, German, Estonian, Irish, French, Latvian, Lithuanian, Netherlands, Polish, Romanian, Finnish, Swedish and UK delegations: A gross list with proposals regarding simplification of the Common Agricultural Policy

7. References

- ADAS 2009. Evaluation of cross compliance. Prepared for Defra Agricultural Change and Environment Observatory.
- Aviron S, Nitsch H, Jeanneret P, Buholzer S, Luka H, Pfiffer L, Pozzi S, Schüpbach B, Walter T & Herzog F 2009. Ecological cross compliance promotes farmland biodiversity in Switzerland. *Frontiers in Ecology and Environment* 7: 247-252.
- BirdLife International 2005. Good Natured? Cross compliance as an environmental baseline for Europe's farmed countryside.
- BirdLife International 2009. Could do better. How is Rural Development policy delivering for biodiversity?
- Boatman N, Ramwell C, Parry H, Jones N, Bishop J, Gaskell P, Short C, Mills J & Dwyer J 2008. A review of environmental benefits supplied by agri-environment schemes. *Land Use Policy Group*: 66-72, 172-176.
- Bracken F & Bolger T 2006. Effects of set-aside management on birds breeding in lowland Ireland. *Agriculture, Ecosystems & Environment* 117: 178-184.
- Broyer J 2003. Unmown refuge areas and their influence on the survival of grassland birds in the Saône valley (France). *Biodiversity and Conservation* 12: 1219-1237.
- Donald PF, Sanderson FJ, Burfield IJ & van Bommel FPJ 2006. Further evidence of continent-wide impacts of agricultural intensification on European farmland birds, 1990-2000. *Agriculture, Ecosystems & Environment* 116: 189-196.
- European Commission 2009. Report from the Commission to the Council and the European Parliament. Composite Report on the Conservation Status of Habitat Types and Species as required under Article 17 of the Habitats Directive. COM(2009) 358 final.
- European Commission 2007. Report from the Commission to the Council on the application of the system of cross-compliance. COM(2007) 147 final.
- European Court of Auditors 2008. Is cross compliance an effective policy? Special report No 8.
- EEA, European Environment Agency 2009. Progress towards the European 2010 biodiversity target.
- Gómez JA, Romero P, Giráldez JV & Fereres E 2006. Experimental assessment of runoff and soil erosion in an olive grove on a Vertic soil in southern Spain as affected by soil management. *Soil Use and Management* 20: 426-431.
- Grashof-Bokdam CJ & van Langevelde 2005. Green veining: landscape determinants of biodiversity in European agricultural landscapes 20: 417-439.
- Herzon I & Helenius J 2008. Agricultural drainage ditches, their biological importance and functioning. *Biological Conservation* 141: 1171-1183.
- Holzgang O, Kery M & Heynen D 2005. Comeback beim Feldhasen dank ökologischem Ausgleich? Schweizerische Vogelwarte, Sempach.
- IEEP 2004. The Development and Implementation of Cross Compliance in the EU 15: An analysis. A report for the RSPB.
- Illner H 2009. Ökologischer Landbau: Eine Chance für Feldvögel in der Hellwegbörde. *ABU-Info* 31/32: 30-37.
- Jenny M, Josephy B & Lugin B 2003. Ökologische Aufwertungsmaßnahmen in Ackerbaugebieten und ihre Auswirkungen auf ausgewählte Vogelarten. In: Oppermann R & Gujer HU (Editors) 2003. Artenreiches Grünland bewerten und fördern – MEKA und ÖQV in der Praxis. Stuttgart (Ulmer). S. 151-155.
- Kuussaari M, Heliölä J, Tiainen J & Helenius J (Eds.) 2008. Importance of the agri-environmental scheme for the biodiversity and landscape. Monitoring under MYTVAS-project 2000–2006. Finnish Environmental Institute, Helsinki.
- Le Bissonais Y, Montier C, Jamagne M, Daroussin J & King D 2002. Mapping erosion risk for cultivated soil in France. *CATENA* 46: 207-220.

- Luoto M, Rekolainen S, Aakkula J & Pykälä J 2003. Loss of plant species richness and habitat connectivity in grasslands associated with agricultural change in Finland. *AMBIO: A Journal of the Human Environment* 32: 447-452.
- Martínez-Casasnovas JA & Ramos MC 2006. The cost of soil erosion in vineyard fields in the Penedès-Anoia Region (NE Spain). *CATENA* 68: 194-199.
- Oppermann R 1993. Nahrungspotentiale einer Landschaft für Wiesenbrüter und Konsequenzen für die Grünland-Extensivierung. – Verhandlungen d. Ges. f. Ökologie, Bd. 22: 221-227.
- Oppermann R & Spaar R 2003. Artenreiches Grünland – Lebensraum für Wiesenbrüter. In: Oppermann R & Gujer H 2003. Artenreiches Grünland bewerten und fördern. Stuttgart (Ulmer), 128 - 133.
- Oppermann R, Neumann A, Huber S 2008. Die Bedeutung der obligatorischen Flächenstilllegung für die biologische Vielfalt. Naturschutzbund Deutschland (NABU).
- Oppermann R, Beil M, Gelhausen J, Brunk I, Haack S, Unset C, Helmecke A, Hötter H, Rasran L, Blew, J, Voigt N, Kollmar P, Poschlod P & Römermann C 2009. Common Agricultural Policy: cross-compliance and the effects on biodiversity. Institut für Agrarökologie und Biodiversität (IFAB).
- Reidsma P, Tekelenburg T, van den Berg M, Alkemade R 2006. Impacts of land-use change on biodiversity: an assessment of agricultural biodiversity in the European Union. *Agriculture, Ecosystems and Environment* 114: 86-102.
- RSPB 2009a. Birdcrime 2008: offences against wild bird legislation in 2008.
- RSPB 2009b. The illegal killing of birds of prey in Scotland in 2008.
- SoCo Project Team 2009. Final Report on the Project Sustainable Agriculture and Soil Conservation (SoCo). European Commission.
- Stoate G, Boatman ND, Borralho RJ, Rio Carvalho C, de Snoo GR & Eden P 2001. Ecological impacts of arable intensification in Europe. *Journal of Environmental Management* 63: 337-365.
- Stoate C, Báldi A, Beja P, Boatman ND, Hrzon I, van Doorn A, de Snoo GR, Rakosy L & Ramwell C. 2009. Ecological impacts of early 21st century agricultural change in Europe - A review. *Journal of Environmental Management* – in press: 1-25.
- Swales V, Arblaster K, Bartley J & Farmer M 2007. Evaluation of the application of cross compliance as foreseen under regulation 1782/2003. Part 1: descriptive report. Alliance Environnement.
- Syversen N 1995. Effect of vegetative filter strips on minimising agricultural runoff in southern Norway. In: Silkeborg DK, Krenvang B, Svendsen L & Sibbsen E (eds) Proceedings of the International Workshop, Neri report 178: 19-31.
- Thompson D, Thirgood S, Amar A, Smith A & Redpath S 2008. Towards reconciling raptor conservation and game management aspirations. Presentation to Scottish Natural Heritage Species Management Conference.
- Tilman D, Reich PB, Knops J, Wedin D, Mielke T & Lehman C 2001. Diversity and productivity in a long-term grassland experiment. *Science* 294: 843-845.
- Tyler GA, Green RE & Casey C 1998. Survival and behaviour of Corncrake *Crex crex* chicks during the mowing of agricultural grassland. *Bird Studies* 45: 35-50.
- Wischmeier WH & Smith DD 1960. A universal soil-loss equation to guide conservation farm planning. *Transactions of the International Congress on Soil Science* 7: 418-425.
- Whitfield DP, Fielding AH, McLeod DRA & Haworth PF 2008. A conservation framework for golden eagles: implications for their conservation and management in Scotland. Scottish Natural Heritage Commissioned Report No. 193.
- Whittingham MJ, Swetnam RD, Wilson JD, Chamberlain DE & Freckleton RP 2005. Habitat selection by yellowhammers *Emberiza citrinella* on lowland farmland at two spatial scales: implications for conservation management 42: 270-280.
- Zachar D 1982. Soil erosion. Elsevier: 547 pages.

The BirdLife European Partnership



Austria



Belgium



Bulgaria



Cyprus



Czech Republic



Denmark



Estonia



Finland



France



Germany



Greece



Hungary



Ireland



Italy



Latvia



Lithuania



Luxembourg



Malta



The Netherlands



Poland



Portugal



Romania



Slovakia



Slovenia



Spain



Sweden



United Kingdom



BirdLife International is a global Partnership of conservation organisations that strives to conserve birds, their habitats and global biodiversity, working with people towards sustainability in the use of natural resources. The BirdLife Partnership operates in more than 100 countries and territories worldwide. BirdLife International is represented in 42 countries in Europe and is active in all EU Member States.

Avenue de la Toison d'Or 67 (2nd floor)
B-1060 Brussels, BELGIUM
Tel. +32 (0)2 280 08 30 · Fax +32 (0)2 230 38 02
E-mail: europe@birdlife.org · <http://europe.birdlife.org>



The RSPB speaks out for birds and wildlife, tackling the problems that threaten our environment. Nature is amazing – help us keep it that way. We belong to BirdLife International.

www.rspb.org.uk

