



A Research Paper of the Cross Compliance Network

Efficiency of cross compliance controls – public administrative costs and targeting

Deliverable 18

By

Heike Nitsch, Bernhard Osterburg

Institute of Rural Studies
Federal Agricultural Research Centre, Germany

January 2007

The Cross Compliance Network is a Specific Support Action generously supported by the Community's Sixth Framework Programme.



Sixth Framework Programme

SSPE-CT-2005-022727

About the Cross Compliance Network

The Cross Compliance Network aims to develop our understanding of environmental cross compliance. A consortium of nine universities and research institutions from a range of EU Member States is consolidating research to date, undertaking new original research, identifying future research needs and fostering a network of cross compliance stakeholders.

The Cross Compliance Network is co-ordinated by the Institute for European Environmental Policy (IEEP) and consists of the following partner institutions:

Agricultural University of Athens (AUA), Greece

Applications des Sciences de l'Actions (AScA), France

CLM Research and Advice plc. (CLM), Netherlands

Federal Agricultural Research Centre (FAL), Germany

Institute for Structural Policy (IREAS), Czech Republic

Instituto Nazionale di Economia Agraria (INEA), Italy

Lithuanian Institute for Agrarian Economics (LIAE), Lithuania

The Royal Veterinary and Agricultural University (KVL), Denmark

This paper, along with all those published for this project, may be found on the project's dedicated website:

<http://www.ieep.org.uk/projectMiniSites/crosscompliance/index.php>

The project co-ordinator is Martin Farmer at the Institute for European Environmental Policy. He can be contacted by email at mfarmer@ieeplondon.org.uk or by phone on +44 (0) 20 7340 2683.

Acknowledgements

The following persons all contributed valuable information during the drafting of this paper:

Xavier Poux and Blandine Romain (AScA)

Justin Bartley (IEEP)

George Vlahos (AuA)

Wouter Tolcamp (CLM)

Jiri Moravec (IREAS)

Lone Kristensen (KVL)

Andrea Povellato and Deborah Scorzelli (INEA)

Romualdas Zemeckis and Jolanta Drozd (LIAE)

Citation and disclaimer

This report should be quoted as follows:

Nitsch, H and Osterburg, B (2007) Efficiency of cross compliance controls – public administrative costs and targeting, Deliverable 18 of the CC Network Project, SSPE-CT-2005-022727.

The views expressed in this report are those of the authors and do not represent those of the European Commission. The reader uses the information presented at their own risk.

Table of contents

1	INTRODUCTION.....	4
2	THEORETICAL CONSIDERATIONS ON THE ENFORCEMENT OF STANDARDS	7
3	EXAMPLES OF PUBLIC CONTROL EFFORT	11
4	TARGETING OF CONTROLS.....	20
5	DISCUSSION - ARE STANDARDS MORE EFFECTIVELY ENFORCED THROUGH CROSS COMPLIANCE?.....	27
6	RESEARCH NEEDS.....	31
	LITERATURE.....	32

1 Introduction

Background

First experiences of compulsory cross compliance have been collected in the Member States since its introduction in 2005. Representatives of a number of public administrations have emphasised the high bureaucratic effort required for controlling cross compliance (Nitsch, 2006). The reduction of bureaucracy is an important issue in the EU, and one against which cross compliance has to be measured. In addition, limited public budgets and limited staff numbers mean that an increase of administrative costs connected to controls might lead to a decrease of other efforts such as advice and technical support. On the other hand, cross compliance must deliver more than being simply implemented and administrated with a low effort: this instrument has been introduced into the CAP in order to lead to better compliance with existing and new minimum standards in agriculture. For this aim, the functioning of the control system is crucial, and its effectiveness (e.g. targeting of farms and control indicators) plays an important role. Thus, the underlying question this paper seeks to address is: what scope exists to optimise the control system related to cross compliance within the given framework of EU guidelines for minimum control rates, execution of controls and sanctions, given the existing administrative structures and the budgetary limitations in the Member States?

In order to try to assess the efficiency of cross compliance, information has to be collected on how cross compliance is applied in the different Member States (selection of farms, standards for systematic control, actual operation of control) in order to obtain a first estimate of the time and cost effort connected to cross compliance. A first report about administrative procedures for administration of cross compliance has already been produced within the Cross Compliance Network project¹, and gives examples of the differing procedures in the Member States involved in this project. Depending on the level of centralisation, different administrative levels are involved in implementing cross compliance. Responsibilities at regional and local levels and the kind of organisations involved with control differ a lot among and often within the Member States. While most of the countries considered in this paper seem to have opted for a central and integrated risk-assessment with bundled systematic controls at least for all environmental requirements, organisations responsible for carrying out the controls are situated at

¹ Nitsch (2006): Administrative arrangements for cross compliance. A research paper of the Cross Compliance Network [online]
<www.ieep.eu/projectMiniSites/crosscompliancencetworkproj/reports.php>

different administrative levels². In addition, the involvement of specialised authorities varies (see table 1). In most cases it is an aim to control all environmental requirements during one visit on a farm, even when different authorities are involved. This is different in France, where environmental Statutory Management Requirements (SMRs) and standards for “good agricultural and environmental condition” (GAEC) belong to different “domains” and in Denmark, where various specialised authorities carry out controls independently.

Table 1: Involvement of specialised control bodies in control of environmental requirements of cross compliance

Paying agency (PA) is CCA ³ and carries out control of environmental standards	Paying agency is CCA and delegates control to specialised bodies	Different specialised control bodies involved
Czech Republic Lithuania Lower Saxony, Bavaria (Germany ⁴) England (for most standards) France (only for GAECs and permanent pasture) Netherlands (only for permanent pasture)	Greece (to prefectures) Italy (to private control bodies) England (Nitrates, Sewage Sludge and Groundwater Directives to Environment Agency)	Denmark France Hesse (lower nature conservation and water protection authorities normally part of control teams) Netherlands

This poses the question about the impact of such different approaches. What are the benefits and drawbacks? Can “good administrative practices” be recommended? And, have existing specialised controls changed because of cross compliance?

Methods and sources

The paper builds on research already carried out within the Cross Compliance Network about “Administrative arrangements for cross compliance”, and expands on the issue of risk-assessment and control organisation. Where the overall costs and benefits of cross compliance cannot be determined, we tried to provide a first insight into the quantitative

² In most cases the authorities carrying out the inspection have branches at a regional level (e.g. the DDAF in France and lower administrations in Hesse in Germany at NUTS3, prefectures in Greece, regional branches of the Rural Payment Agency in England, Paying agency in the Czech Republic at NUTS2).

³ Competent control authority

⁴ Most Länder (NUTS1) in Germany base control of cross compliance on their existing control system and assigned the specialised authorities from the lower administration levels. Controls can also be carried out by the paying agency.

analysis of public administrative effort. The efforts for scheme set-up are not focussed on⁵, though are presumably high, but what is of greatest interest are the running costs, of which the main effort is on control. An appropriate risk-assessment for the selection of farmers to be controlled determines overall efficiency. Further information on the public administrative effort of implementing cross compliance has been contributed by all project partners, who researched public sources about the control of cross compliance and approached representatives of the paying agencies, the administrations dealing with the selection of farms and the organisations actually carrying out the controls for detailed information. The focus here is on the environmental requirements of cross compliance.

Structure of paper

A chapter about the theory behind efficient enforcement of standards provides insights into the considerations public administrations and farmers need to make concerning control and compliance with standards.

After presenting examples concerning the complexity of control indicators, control effort and aspects of coordination and data exchange, chapter 4 further analyses the selection process of farms to be inspected as a determining factor for the effectiveness of control, and interactions with specialised controls are considered.

Finally, the findings are discussed and proposals for future research priorities made.

⁵ According to Falconer and Whitby (1999) administration costs per unit are observed to decrease with time after implementation. The effect of the age of the scheme is related to the administrative learning curve and to economies made over time from fine-tuning procedures (Falconer et al. 2001).

2 Theoretical considerations on the enforcement of standards

More systematic controls and the reduction of direct payments as an additional sanction for non-compliance are expected to contribute to the implementation of EU legislation in all Member States. Economic theories on criminality can help us to better understand the mechanisms and the behaviour that form the basis of controls. If applied to cross compliance, conclusions on the implementation of controls and sanctions can be drawn.

Two main contrasting concepts exist: (the following remarks are based on Bültmann and Wätzold, 2002, and Lippert, 2002):

- Controls and sanctions aim at minimising the loss of social welfare, which arises through criminality (= non-compliance with standards). Social welfare can be maximised, if the cost generated by criminality minus benefits of non-compliance and minus cost for control, conviction and sanctioning are minimised. This concept, which is based on Becker (1968), implicates the possibility to “buy oneself off” with the monetary fine.
- Another perception (e.g. by Rawls, 1999) stresses that the main objective of enforcement mechanisms for ensuring compliance with legislation is to strengthen the trust of citizens in ‘fair arrangements’ and thus the legal framework. According to Cohen (1998), compliance with standards is expected to be greater when the rules are believed to be legitimate and fairly applied. Winter and May (2001) highlight the importance of awareness of rules and normative and social motivations, including moral principles and acceptance of reasonable and fair rules.

While in the first approach the rational and self-interested strategic behaviour of individuals in order to maximise their benefits is assumed, the second approach focuses on the sense of justice of the actors. Both strategic behaviour and cooperative elements based on common moral perceptions should be considered for the enforcement of standards.

The definition and the control of standards by the state aims at minimising losses through non-compliance with standards, taking into account the administrative cost of enforcement. The objective function can be outlined in the following formula:

$$f(\gamma, \delta, F) = \alpha [D - (D + F) \gamma \delta] + KS \gamma \quad \text{min!}$$

α	Degree of non-compliance ($0 \leq \alpha \leq 1$)
D	Damage in case of non-compliance for the national economy
F	Penalty in case of established non-compliance ($< F_{\max}$)
γ	Control rate ($0 \leq \gamma \leq 1$)
δ	Probability of detection in case of control ($0 \leq \delta \leq 1$)

KS Public cost for enforcement (control, sanctioning)
 $f(\gamma, \delta, F)$ Function of control rate, probability of detection and height of sanctions

The effectiveness of systems for control and sanctions can be measured by the degree of compliance by the target group and by the degree of preventing breaches with severe consequences. Besides an abatement of α , the detection of non-compliances of addressees (here: farmers) with high costs for the national economy D is important. To achieve an optimisation, the variables control rate, probability of detection and height of sanctions can be varied. If the enforcement cost exceed the prevented damage D plus the penalty F , which is paid to the state, it is not worth it to further increase the control rate in case of a fixed probability of detection and a fixed height of sanctions. In case of administrative penalties, the sanction cannot be increased indefinitely, but has to consider the principle of proportionality concerning the created damage and the benefits of the non-compliance for the addressee. A low probability of detection cannot just be compensated by increasing the threat of sanctions, as this is opposed to the coherence in the legal system and the principle of equality. An increased probability of detection in order to improve the effectiveness of enforcement while the control rate remains constant is another important variable. This means a need for a targeted selection of control parameters and the control of selected addressees at a suitable point of time. A targeted selection of the control sample requires knowledge about risk factors that are linked to increased non-compliance. Also, the severity of damages in case of breaches should be considered as part of the selection.

For agriculture, control parameters that are more or less independent from the time of control such as documentation, building and existing landscape elements have to be distinguished from criteria for landuse and livestock keeping that are variable. For example certain requirements concerning the application of fertilisers and plant protection can only be controlled on the spot at the respective point of time. But depending on the severity of an expected damage in case of non-compliance, control parameters should not be limited only to ones that are easy to control and independent of time.

It is important to understand the conditions for compliance from the view of the addressee (i.e. the farmer). In case of complete information the following formula applies (explanation of γ , δ , F see above):

$$KB - m - r \leq \gamma' \delta' (F + L)$$

- KB cost of addressee for compliance
- m Factor for 'moral considerations' of addressee
- r Factor for risk aversion of addressee
- L Indirect/social sanctioning
- γ' *Expected* control rate ($0 \leq \gamma \leq 1$)
- δ' *Expected* probability of detection in case of control ($0 \leq \delta \leq 1$)

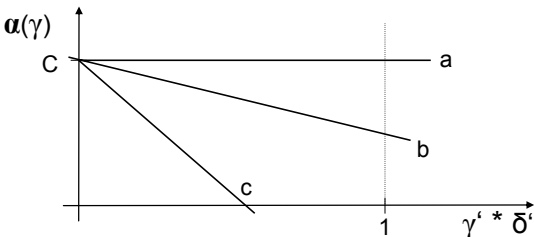
This formula means that the cost for compliance, taking into account a factor for moral considerations, has to be lower than the *expected* penalties together with the social sanctions in case of detected non-compliance. This shows the potentially high importance of individual moral considerations and of social sanctioning. Thus, a legal system for the enforcement of standards should aim to bring forward such factors, and avoid their weakening due to an inappropriate treatment of the addressee. It is noticeable, that compliance is not determined through the real rates of control and detection, but through the individual expectations in this regard.

From the formulas presented above the following function for the non-compliance α can be deducted:

$$\alpha = \alpha (\gamma', \delta', F + L, KB, I, m, r) \rightarrow \alpha = C - \beta \gamma' \delta' (F + L)$$

- I Addressees' level of information
- β Coefficient for reaction of addressees on the respective control intensity (control rate * detection)
- C constant of the maximum non-compliance without controls and sanctions

In this formula the addressees' level of information about the standards is added as a further element. Thorough information about standards is a precondition for compliance. In case (a) the level of information, cost for compliance and the factors for moral considerations and risk aversion (combined as the constant C) remain constant, the coefficient β explains the reaction of the addressee on the control intensity. Different β are presented in the following figure: in case (a) an increased control intensity ($\gamma * \delta$) does not result in a higher compliance (non-compliance α remains constant), because of high adaptation cost, missing information or missing technical possibilities. In case (b) compliance remains incomplete even when control and detection are at 100% (non-compliance $\alpha > 0$ when $\gamma * \delta = 1$), this might as well be because of missing technical possibilities or a prohibitively high cost of full compliance. One can assume that this is the case concerning requirements for animal identification and registration, as obviously technical and organisational limits play a role. In contrast, in case (c) non-compliance is reduced to 0 in the event of a medium control intensity. Here, from a certain control intensity on the deterrence of the control risk already results in full compliance.



In the case of the SMRs the sanction F is increased by an additional deduction of direct payments. Thus, the condition F_{max} , according to which the sanctions should be proportional, is not valid anymore (see above). The additional sanction is as well

dependent on the height of the direct payments and has the effect of a penalty. While an administrative penalty is oriented at a behavioural control and the principle of proportionality, the height of the direct payments and thus the possible deductions differ widely between farms. The difference can be even more pronounced when the land rent is deducted; another point is that even breaches in minor branches of a farm result in deductions concerning the full direct payments. In case of intentional breaches of cross compliance requirements, the deductions of direct payment exceed in many cases the administrative fines. The comparably low control density is “compensated” by potentially high sanctions, in order to enforce compliance with standards. Thus, cross compliance results in sanctions that are not proportional. The dominance of systematic controls using control parameters which are independent from the time of control additionally aggravates an optimisation of the enforcement system with cross compliance.

From these theoretical considerations the following conclusions can be drawn:

- The legal system for the enforcement of standards should strengthen moral considerations and social sanctioning, a precondition for this being a “fair” enforcement (e.g. appropriate and targeted controls, proportional sanctions).
- Sufficient information about the standards is a precondition for compliance. A high transparency is demanded in this respect, and as well concerning control parameters, which are necessary for self-control.
- Compliance with standards, where compliance is technically difficult or where costs are prohibitively high, cannot solely be enforced through increased sanctions or increased control intensity. Here the problems have to be analysed and if necessary R&D activities may be needed to solve technical or economic obstacles.
- As the *expected* probabilities of control and detection determine the farmers’ behaviour, the demand for full transparency, as suggested above, is explicitly not valid for control rates, times of controls and the selection of the control sample

3 Examples of public control effort

Running a control system requires effort in terms of time and cost. For carrying out systematic controls in relation to cross compliance such effort depends on the following parameters:

- Farm structure: number and size of farms
- Control criteria: complexity versus standardisation/simplification
- “Deepness” of control: e.g. percentage of area controlled on-the-spot; check of mere existence or validity of documentation, checking of all animals or only of a sample
- Travel time: more pronounced in case of central control authority and as well connected to the degree of bundling standards and the interaction with controls outside of cross compliance
- Time for coordination: number of control bodies involved; systems for communication (a centralised organisation at the paying agency bundles the enforcement in one place, but local or regional specialised authorities might be more familiar with the local circumstances)

Still, when trying to assess the control effort several problems are encountered.

There are only a few experiences of the analysis of public transaction costs in agri-environmental policies, as quantification and allocation of costs is often unclear. While information about the structure of the control system could be obtained by nearly all of the partners, the estimation of the actual control effort (time spent and costs) has shown to be rather difficult. Public administrations are themselves not keeping track of administrative costs of policies and cannot determine the time effort and running costs of cross compliance controls. Further on, financial and control issues are often considered as sensitive issues, which results sometimes in a certain reluctance to provide detailed information about risk assessment for the selection of farms or about exact control criteria. Different sets of standards are controlled in a bundled manner; sometimes controls of cross compliance are carried out alongside IACS inspections or controls according to national legislation. Thus it is often not possible to separate control efforts for cross compliance, let alone those for environmental standards. In the case of Denmark environmental SMRs and GAEC are controlled by five different control bodies, partly at the regional and local level, and it was not possible to obtain information from all of them. As well the size of the control area varies (e.g. NUTS2 level in the case of the Veneto Region in Italy, NUTS3 level in Hesse in Germany. In the latter case only two exemplary regions within Hesse have been covered). Thus, it is not possible to generalise findings and the research carried out in the Cross Compliance Network can only provide examples, highlight some issues and identify further research needs.

Control indicators

Information about the exact control criteria remains patchy. For example in the Czech Republic control indicators are stated in internal rules of the control commissioners but are not public. For Denmark, Greece, Germany, the Veneto in Italy, and England some details have been made available.

In many cases there is a high number of control indicators (e.g. 17 indicators for GAEC in Greece as well as in England, and even 23 in Veneto in Italy). The complexity of control indicators can be very different (see table 2).

Table 2: Number and complexity of control indicators in Veneto/Italy

Cross compliance standards	Total number of control indicators	Evaluation of overall complexity⁶
Wild Birds Directive	5	1
Groundwater Directive	7	2
Sewage sludge Directive	12	2-3
Nitrates Directive	9	2
Habitats Directive	5	1
Soil erosion	6	2
Soil organic matter	4	2
Soil structure	4	2-3
Minimum level of maintenance	9	2

In this case control of compliance with the Birds and Habitats Directives only relies on simple indicators, whereas control of standards connected to the Sewage Sludge Directive and requirements related to soil structure are rather complex.

Many control indicators connected to field inspections seem to exist in England and Greece. In Greece, 16 of the national GAEC standards are controlled through field inspection, whereas one is available through IACS data, and from the 38 national SMRs most have to be verified through area-related inspections. The question remains, if all of them are in all cases controlled in systematic controls or if some are only detected during cross-checks. Standards to be controlled in the field in England for GAEC alone are numerous (e.g. waterlogged soil, soil cover, requirements for semi-natural areas, public rights of way, grazing, encroachment of weeds, green cover, stone walls, buffer strips).

⁶ A three points scale for complexity was fixed: 1 for a simpler indicator (such as, documentation), 2 for intermediate difficulty (such as, simple field indicator, i.e. observation), 3 for complex indicators (such as, more technical observation and time consuming).

Standards controlled by the Department of Environment within the Danish Plant Directorate concern fertiliser records, harmony rules and catch crops. Control indicators are all based on documentation. Only the requirement to cultivate catch crops is always carried out in combination with a field control.

In Germany, a clear differentiation is made between systematic control and “cross checks”, which are an integral part of cross compliance controls (i.e. non-compliances detected in other ways, e.g. via specialised controls due to suspicion) (see table 3).

Table 3: Control criteria in Germany

Area	Nitrates Dir	Habitats Dir	Birds Dir	Ground water Dir	Sewage Sludge Dir	Plant protection	GAEC
Systematic on-the-spot controls							
Number of criteria	5	1	2	2	2		7
Point of control documentation area buildings/ equipment animals	5	1	2	2	2	1 1	1 6
Requirements without systematic controls							
Number of criteria	10	3	5	2	15	14	2
Point of control documentation area buildings/equipment animals	6 4	3	5	2	(6) (9)	13 1	2

Indicators, which are more or less independent from the time of control (e.g. documentation), are most suitable for systematic control. In Germany this can be seen for standards connected to the Nitrates Directive, where the systematic control solely relies on documentation, whereas indicators at field level (e.g. spreading slurry during the banned period, distances to water courses) or indicators connected to buildings or equipment (e.g. stationary constructions for storing solid manure) are not controlled systematically. This is different for GAEC, where most standards are inspected during the systematic control, but are connected to the area, and thus subject to a field inspection.

The challenge for the selection of control criteria is that indicators should be accessible during a systematic control and easy to verify (especially if inspectors are not coming from a specialised agency and have to assess standards in a variety of areas). This is the case e.g. for the use of documentation. On the other hand such criteria are not directly meaningful in terms of the real environmental impact. Thus, some requirements have to be controlled with more complex indicators that require more effort or knowledge. Still, due to a lack of detailed information it is not possible to analyse the differences between the

Member States in detail. As seen from these examples, there is a high variety of indicators in use, and this might impact on the control effort.

Examples of control effort

This issue has been approached by trying to estimate the time allocated to controls of cross compliance. As already mentioned above it is difficult to estimate this effort. In many cases additional controls are carried out at the same time (e.g. in France the control of GAEC is coupled with some eligibility controls for arable land; in Bavaria in Germany controls of environmental requirements can be carried out together with IACS controls and controls connected to agri-environment measures. The national paying agency in Lithuania controls, besides GAEC, eligibility for direct payments, agri-environment measures and less-favoured-area payments). In specialised authorities, inspectors often now carry out cross compliance controls in addition to their former duties (e.g. Denmark, Hesse/Germany, the Environment Agency in England). Sometimes temporary personnel are employed over the control period (e.g. for control of SMRs in France, Bavaria and Vogelsberg/Hesse in Germany).

Examples for control effort are provided for France, Germany, Italy and England. In Denmark, the Department of Environment of the Danish Plant Directorate carries out cross compliance controls concerning standards connected to fertilisation records, harmony rules and catch crops alongside the existing specialised controls. Here, cross compliance controls are not perceived as a big burden. However the situation may be experienced differently by the municipalities which are responsible for the majority of the cross compliance controls. In the Netherlands, the total costs for the central agricultural control service AID, which checks most of the requirements, for controls of cross compliance on 825 farms (i.e. preparation up to and including reporting to the farmer, policy advice, data exchange and reporting police reports) amounted to 2.2 million Euros in 2006.

In France the following standards seem to require the most effort:

- By far most time consuming is the check of animal identification (esp. in extensive farms or in cattle breeding, as animals are often outside and in different fields and sometimes difficult to approach, compared to dairy cows kept indoors).
- GAEC controls are included in IACS-controls, that were previously lead by the paying agency. The time for one control has been increased by the check of GAEC requirements (even if two out of the five standards were controlled before), mainly due to standards related to soil cover (if the control takes place outside the period of this obligation, a second visit might be required) and the verification of the existence of buffer strips.
- Although control of documentation can be very simple (e.g. mere existence of documentation), thorough inspection has proved to be largely time-consuming (e.g. if a fertilisation plan is verified).

- Whereas before cross compliance, reporting used to be computerised, control reporting now requires several forms to fill in and seems to be very time-consuming.

In **Bavaria in Germany** it has been an aim to centralise controls as far as possible. The Central Control Service of the *Staatliche Führungsakademie (FÜAK) Landshut* controls the “green area” (all environmental SMRs and GAEC) during one visit. Where there is an overlap, inspections are combined with IACS controls and controls related to agri-environment measures. Where possible, remote sensing is used for GAEC controls. It is an aim to carry out controls during the vegetation period from the beginning of May to mid-October. Some farms have to be controlled again in winter for soil cover, when at the time of control this standard could not be verified. The Central Control Service employs 100 “first” controllers on a permanent basis and 100 “second” controllers for the season. Controls are always carried out by two persons. There are 24 regional teams with four permanent inspectors each. FÜAK calculates that one controller inspects 3 to 3 ½ farms per week (together with preparation and control report). About one to 1 ½ hours per holding can be attributed to cross compliance (environmental SMRs and GAEC).

Another German example is **Hesse**, where the control is under the responsibility of the regional agricultural administration and other specialised authorities in the regions (mostly NUTS3 level). Information about the effort for the control of environmental cross compliance has been obtained for the regions *Vogelsberg* and *Darmstadt-Dieburg*. Control of environmental SMRs and GAECs is carried out during one control visit, predominantly in autumn, after results of the risk-assessment have been circulated to the coordinating persons at NUTS3 level. At least two inspectors carry out controls. The lower agricultural administration is always involved in the controls, depending on the characteristics of farms, and they are joined by representatives of the lower water protection and the lower nature conservation authority⁷. The estimations for the time effort to carry out such on-the-spot controls are as follows:

	Vogelsberg	Darmstadt-Dieburg
Preparation of control visit	~ 2 hours (through coordinator)	Meetings, processing of documents, examination of information, spreading of information can amount to ½ a day.
On-the-spot control⁸	for farm with 60 to 80 ha about 3 hours (most time is needed for control of the land); max.: 2 farms per day	Storage, control of documentation: ~ 1 h; control of area: depending on size of farm 2 h and more; control of 2-3 farms per day possible

⁷ In Darmstadt-Dieburg the lower nature conservation authority was present in about half of controls in 2006

⁸ But as in Hesse the systematic specialised controls connected to standards stemming from the Nitrates Directive have been integrated in the cross compliance controls this means less effort for such controls

The control itself (of environmental SMRs and GAEC) lasts about three hours, with most effort being attributed to the control of the land. Travel time amounts to at least one hour per farm.

In **Italy in the Veneto region** about 1000 farms are controlled for cross compliance each year with an average size of only 6ha in 2005. At AVEPA (the regional paying agency), five employees are involved in on-the-spot controls (selecting farms, coordination and control of specialised control bodies, which are contracted by AVEPA). Overall, it can be estimated, not more than two work units are specifically involved in cross compliance controls. The resulting cost can, very roughly, be estimated to be 70,000 Euros per year. While people at AVEPA work on a permanent contract basis, it seems that most of the employees at the specialised control body, actually carrying out the inspections have a short time contract within their own professional activity. An estimation of the time spent for one control visit is shown in table 4.

Table 4: Estimation of hours spent for different control issues for on-the-spot control of one standard farm in Veneto/Italy.

Control issues	Hours
Contact to farmer and photo-interpretation	0.50 – 1.00
Journey to the farm	1.50 – 2.00
Documentation controls	0.70 – 1.00
Fields visits	1.50 – 2.00
TOTAL	4.20 – 6.00

Naturally, the time varies with the kind of farm and nature of the applicable SMRs. For example, for a farm with different kinds of livestock, located in a nitrate vulnerable zone and containing Natura 2000 areas, the overall time spent for controls could amount to eight hours. It can be estimated that the workload for the on-the-spot controls of the specialised body corresponds to 2.4 full-time work units⁹. One on-the-spot control carried out by the specialised body costs between 110 and 140 Euros. Considering, that 1,021 farms have been controlled in 2005, the costs would amount to around 110,000 to 140,000 Euros.

The RPA in **England** (Rural Payment Agency as the sole CCA in 2005¹⁰) employs about 200 inspectors who are involved in conducting single payment scheme and cross compliance inspections in addition to other CAP scheme inspections. It carried out 1,200 inspections in 2005 (corresponding to 1% of claimants of the single farm payment). The

⁹ 4.20 hours for each farm control multiplied by 1,021 farms amounts to 4,288 hours. 1,800 hours correspond to one annual work unit.

¹⁰ Since 2006 two other CCAs (VMD (Veterinary Medicines Directorate) and SVS (State Veterinary Service)) exist.

Environment Agency (as delegated agency for control of the Groundwater, Sewage Sludge and Nitrates Directives) has approximately 150 officers involved in cross compliance inspections in addition to other CAP schemes inspections. RPA inspectors are mostly on full-time permanent contracts. In some cases the RPA will employ people on fixed-term contracts for specific pieces of work but not usually for on-the-spot inspections. RPA estimates that an average inspection takes 36 working hours in total. This figure does not include time spent by the Environment Agency. SMR standards usually take more time to check due to more complex control standards. Animal identifications take the most time to check particularly for cattle. Checking documentation also takes up a significant amount of time e.g. Nitrates Directive paperwork and livestock registers. The RPA estimates that checking the SMRs on animal identification, plant protection products, food and feed law, and prevention and control of TSEs¹¹ take up 24 hours of the total inspection process, thus, there remain about 12 hours for the other environmental SMRs and GAECs. Farm type is the most important factor in terms of inspection time. On average livestock farms take significantly longer to inspect than arable farms due to additional and time-consuming SMR standards. Farms chosen at random tend to take a similar amount of time to inspect as those chosen according to risk factors.

As a summary, the average control time clearly varies a lot depending on the type of farm (e.g. a control concerning plant protection products can last from 30 minutes to 4 hours in France) and its location, the number of requirements to be checked, or if a control has been preceded by a remote sensing analysis. Still, some general conclusions can be drawn:

- Animal identification is most time consuming to check, especially if animals are kept outside (depending as well if all animals are controlled or a representative sample, the latter being the case in Germany)
- Environmental standards only: checking area-related standards requires most effort (e.g. verification of buffer strips in France; sometimes second visit necessary to control soil cover in winter). Hereby the “deepness” of control differs: Whereas in France generally 50% of the UAA of a farm are controlled during the control visit, this is limited to about 10% of the area (with focus on certain characteristics, such as landscape elements, cultivation of summer cereal or land out of production) in the case of Hesse in Germany.
- Also, checking documentation can take a lot of time, if the content has to be verified.

Concerning the time needed to carry out a control, the different estimates are difficult to compare as, depending on the degree of integration, different sets of standards are controlled during one visit. Estimates for inspection times range from about 1 to 1 ½ hours for the on-the-spot-control of environmental cross compliance (besides other components of the control) per farm in Bavaria in Germany to an inspection time of about 12 hours for a high number of GAEC-standards and the Habitats and Birds Directives in

¹¹ Transmissible Spongiform Encephalopathies

England. The inclusion of animal identification and registration results in much higher effort (about 36 hours per farm for the RPA in England or 40 hours for the AID in the Netherlands, who controls most SMRs and soil organic matter). The average inspection time in the Veneto region has been estimated to be about 4.20 hours per farm; here the small size of farms might play a role.

It has to be recognised that in case cross compliance controls are included in the control rate for specialised controls, this in turn results in less effort for these controls (e.g. Environment Agency in England, control of animal identification in Bavaria, control of standards related to the Nitrates Directive in Hesse).

Data exchange and coordination

Effort is also required for data exchange connected to cross compliance controls, and information on the farms is needed before the control. The effort should be rather low where only a few control authorities are involved. This is especially the case, where the paying agency (with its regional units) is the main CCA and carries out controls itself, as in the Czech Republic, Lithuania, France (for GAEC) and in England.

The RPA in **England** performs the risk analysis centrally, issues the instructions for the control, and designs the control report forms and arranges meeting for all control bodies. The RPA is also responsible for the database, containing data registered in the control reports and used for the calculation of the sanctions. In **Greece and in Italy** the controls themselves take place at a lower level. The control bodies receive information on the selected farms and the control reports have to be returned back to the paying agency. In Veneto in Italy the rating of detected non-compliances takes place at the paying agency, and results are as well returned to its technical body as a feedback on the selection process. The inclusion of information on controls (number of inspected farms, sanctions, etc.) into the IACS-database is currently under discussion.

In the other Member States examined in this project, where several different controls can be involved there is often a central coordinating body, and central databases have been created to facilitate data exchange.

In **Germany**, although controls happen under the responsibility of the different Länder, consistent demands for control reports and guidelines for rating breaches were elaborated by a working group composed of representatives from the Federal ministry and from the Länder in order to ensure a uniform implementation. The Länder adapted this framework according to specific requirements resulting from their respective Länder legislation, and developed partly their own internal administrative system for processing. The central element for the communication between the involved authorities (paying agency and competent control authorities) is the *Zentrale InVeKoS-Datenbank* (ZID) (Central IACS-database, supervised by the FÜAK in Bavaria). It contains results of controls related to cross compliance as well as relevant non-compliances detected through other controls. Data on controls have to be entered into this database by the responsible authorities. Thus

a nationwide system is available in which all control reports are stored centrally. Different access rights allow authorities in charge of cross compliance in the framework of their competence to enter, recall and process information. The paying agencies retrieve the data from ZID. For the controls themselves, for example in Hesse, there is a central contact person at NUTS3 level, who receives the information on which farms have been selected. A meeting takes place between the different control bodies in order to organise the visits.

In the **Netherlands** the procedure of scoring and weighting is standardised for all the controls and a central administrative system facilitates data exchange. A so-called 'service level agreement' between the ministry and the AID, which controls most of the requirements, contains a protocol of data exchange in a digital application. Scores on compliance with the conditions, for instance can be entered and the data can directly be processed by the paying agency. In 2005 the motivation for the 'non compliance' still had to be completed by hand and had to be recovered by hand by the paying agency. The incorporation into the protocol now leads as well to better feedback to the farmers, as they receive more detailed information on what they have done wrong.

In France, although different control bodies are involved, the DDAF (devolved services from Ministry of Agriculture) has the role of coordinating authority at the NUTS3 level. It chooses the control sample, coordinates the process of reporting, processes the information, defines the sanction according to nationally defined procedures, and finally transmits the results to the paying agency ONIC, who ensures the information is given to the other paying agencies.

National guidelines for control reports and rating matrices seem to exist in all cases.

4 Targeting of controls

It is important to recognise that the efficiency of cross compliance is not only a matter of administrative cost but also of the effectiveness of the policy instrument as a whole. Above all, controls should be effective, thus being able to influence farmers' behaviour and predominantly target farms that are considered to be more likely not to comply with requirements, especially in cases with potentially severe environmental effects resulting from breaches. Appropriate targeting is even more important where there is a small control rate, indirect indicators are used and disproportional sanctions (which rather differ with the height of direct payments than in relation to the severity of the breach) applied (Osterburg and Nitsch, 2004).

The effectiveness of controls is dependent on the following parameters, and some of them might conflict with the aim of keeping public administrative cost low:

- Selection of farms and risk-assessment: criteria, weighting of criteria, degree of integration (the more requirements are checked within the selected control group the less targeted the risk assessment is towards single requirements).
- Control frequency: probability of being selected (even insecurity about control rate increases the subjective feeling of "threat").
- Suitability of control indicators (see above); verification might depend on time of controls.
- Interaction with other controls: e.g. impacts on specialised controls (in case of integration in cross compliance controls impact on control sample; reduction or increase of control rate).
- Specialist knowledge of inspectors.

Again several problems hamper an analysis of effectiveness. The collection of data on control and sanctions by the researchers has proven difficult. Normally only aggregate data on controls are available and data on breaches does not give information about the quality of the non-compliance and which specific standards have caused the problem. As normally only 1% of farms are subject to controls and the percentages of breaches are very low, the resulting small samples limit statistical analyses. Finally, the selection of farms through risk-analysis leads to "biased" samples, thus it is not possible to extrapolate the rates of non-compliance to the whole farm community and to compare the percentages of breaches with non-compliances before cross compliance and assess if cross compliance has resulted in a real change in the behaviour of farmers. Such an analysis would have to be based on the share of farms that has been chosen randomly, but such data is not available publicly and the sample would be even smaller. Thus, the analysis in this paper focuses on the selection procedure for the control sample and possible interactions with specialised controls.

Selection of control sample

The legal background for the control of cross compliance is set at EU-level. Whereas Member States have some flexibility in defining cross compliance requirements, the guidelines by the EU concerning controls and sanctions are rather strict. According to Reg. (EC) No 1782/2003 Art.25 Member States must carry out on-the-spot checks for the control of cross compliance and for this purpose may make use of their existing control systems. Reg. (EC) No 796/2004 lays down detailed rules for the control of cross compliance. Farms may be selected either from the pre-selected IACS-sample or among all farmers having submitted single payment applications. If justified, even those who do not apply for the single payment can be part of the control sample. According to Art. 45 farms shall be selected by the competent control authority following an appropriate risk-analysis. No prescriptions are made related to a randomly subsample.

Table 5 shows components of the selection of farms for the systematic controls for the Member States involved in the Cross Compliance Network.

Table 5: Selection of farms for controls: responsibilities, basis for selection, grade of integration of risk-assessment (environmental SMRs and GAEC)

	Organisation responsible for risk-assessment	Basis for selection	Integrated risk-assessment
Czech Republic	SZIF (PA)	All farmers with direct payments (DPs)	For GAEC
Denmark	Specialised authorities, (partly at local level)	All farmers with DPs	1. Birds and Habitats 2. Groundwater, Sewage sludge and Nitrate 3. GAEC
France	DDAF: devolved services from Ministry of Agriculture (NUTS3) select farms for environmental SMRs and GAEC (different body for farms with high animal numbers)	All farmers with DPs (GAEC: from 5% IACS sample ¹²)	1. SMRs environment 2. GAEC
Germany ¹³			

¹² This sample is determined through random and risk selection of remote sensing zones. All farms with more than 80% of their land in the zone are subject to an eligibility control by ONIC. The department selects additional farms in order to ensure the required minimum percentage is checked.

¹³ Procedures for the risk assessment have been outlined by the Working Group Cross Compliance, but as the control system is under the responsibility of the Länder, they can add own criteria and adapt the weighing of the different criteria. Some Länder split up the risk-assessment further, e.g. selecting farms separately for control of standards related to the Nitrates Directive (as e.g. in Lower Saxony).

Bavaria	Ministry of Agriculture (NUTS1)	From 5% IACS sample	All environmental SMRs and GAEC ("green area")
Hesse	For env. standards: regional council (<i>Regierungspräsidium</i>) Kassel (NUTS1) on behalf of the Ministry for every NUTS3 level ¹⁴	All farmers with DPs	All environmental SMRs and GAEC
Greece	OPEKEPE (PA) (NUTS1)	From 5% IACS sample	For all standards
Italy (Veneto)	AVEPA (PA)	From 5% IACS sample	For all standards
Lithuania	National PA	All farmers with DPs	For GAEC
Netherlands	Agricultural Inspection Service (AID)	All farmers with DPs	For all environmental standards
UK (England)	Each CCA. RPA for GAEC, environmental SMRs, animal registration and partly health, food and feed law. Environment Agency involved in controls ¹⁵	All farmers with DPs (for livestock 1% of farmers with livestock) ¹⁶	In 2005 for all standards

For the selection of farms for the systematic control of cross compliance requirements both options according to Reg. (EC) 796/2004 § 45, para. 2 and para. 3 are applied (see table 5) (in France farms without direct payments are explicitly included in the control concerning animal identification). In most cases, farms are chosen among all recipients of direct payments. In Greece and Italy the selection is based on the IACS-sample. In these cases the farms have already been pre-selected according to general risk factors. In France this is only the case for control of GAEC, as this domain is controlled by a paying agency together with eligibility controls for IACS. In Germany the situation differs between each respective Land.

The degree of integration of the risk assessment depends on how many requirements are controlled by the same authority. The prescription for a bundled control of 1% of requirements a CCA is responsible for, results in a dilemma for the Member States concerning a targeted risk assessment. In cases where only the paying agency or very few CCAs exist, a high number of standards has to be controlled in the same control sample. Thus a risk assessment for the selection of farms can only be very general.

Common criteria for a risk assessment are level of support payment, farm size, keeping of livestock, changes compared to the previous year, previous non-compliances, farm type, new applications, stocking density, cultivation of vegetables, the share of area taken out of

¹⁴ Regional councils in Darmstadt and Gießen for animal registration and diseases, and food and feed security

¹⁵ 12% of all RPA inspections are carried out based on referrals received from other agencies.

¹⁶ Only the random part is selected from the IACS control sample.

production or just the number of cross compliance requirements applicable on a farm (see as well Deliverable 11). In Denmark, the duty of farmers to send in a fertiliser balance enables a good risk-assessment in terms of the Nitrates Directive, as figures can easily be checked beforehand in an administrative check. Examples for further parameters are geographic criteria e.g. in France and England, thus some farms are selected because they are situated in areas e.g. with high groundwater pollution, and thus for these a higher risk is assumed. In Denmark there is no general procedure for risk assessment. Even within the same institution different risk assessment procedures have been used depending on the categories of standards in question. For the Danish Plant Directorate (Department of Environment) new issues will be included every year depending partly on the 'problems' recognised (e.g. the production of wheat with baking qualities, where more use of nitrogen is allowed). Adherence to a French public certification scheme ("*Agriculture Raisonnée*") is a reason for not being included in the risk analysis in France, although farms can still be selected randomly; this exemption is possible because all cross compliance requirements have been taken over by this system. In the Netherlands a balanced representation for different farm types in the control samples is aimed at. A random sample of 20-25% is not mandatory, but widely used (e.g. Czech Republic, France, Germany, Italy, Netherlands, England).

Many Member States favour an integrated risk assessment and bundled controls. Once selected because of a risk connected to one cross compliance requirement, a farm will be controlled for all other requirements that can be applied to the farm and for which a bundled control has been foreseen. In most of the Member States considered (Bavaria and Hesse in Germany, in Greece, in Italy, in the Netherlands and in England) this is the case for all environmental SMRs and GAEC, although these cover such different issues as protection of rare species and habitats, soil conservation and water pollution. In England, the Environment Agency is delegated to inspect standards connected to the Groundwater, the Sewage Sludge and the Nitrates Directive, but so far the control group has been the same. The RPA controls even more standards in the area of animal identification and food and feed law on the same farms. In France, environmental SMRs and GAEC belong to different control groups, and in Denmark there are separate inspections for requirements stemming from the Habitats and Birds Directives on the one hand, and from the Groundwater, Sewage Sludge and Nitrates Directives on the other (different aspects of the Nitrates Directive being even controlled by different bodies), and for GAEC, with this separation based on the existing control system. In the Czech Republic and in Lithuania only GAEC applies with each selected farm controlled on all applicable requirements.

Impacts on specialised control

Concerning SMRs, the difference cross compliance makes compared to previous controls of national legislation is connected to the systematic controls and the additional sanctions introduced with cross compliance.

Table 6 shows connections between cross compliance controls and controls of national legislation regarding the Nitrates Directive in some Member States.

Table 6: Interaction of specialised controls connected to the Nitrates Directive with cross compliance

Specialised controls independent from systematic cross compliance controls	Integration of systematic specialised controls and systematic controls of cross compliance ¹⁷
Netherlands Lower Saxony, Bavaria (Germany)	Denmark Hesse (decrease of specialised controls) France (increase) Greece (systematic controls only introduced with cross compliance) England (partly; EA can meet its targets for specialised controls through cross compliance controls, but still control additional farms; control now more systematic)

In many cases it has been stated that specialised controls continued independently of cross compliance controls, so in the Netherlands and in Bavaria¹⁸ and Lower Saxony in Germany (although non-compliances detected during specialised controls, which are relevant for cross compliance have to be reported to the paying agency with direct payments reductions as a consequence).

In several Member States specialised controls of national legislation have been integrated partly into cross compliance controls, meaning that the same farms are inspected at the same time¹⁹. This has different implications, partly resulting in an increased control rate concerning specialised controls: Controls related to the Nitrates Directive have only been introduced with cross compliance in Greece. In Italy, action plans for Nitrate Vulnerable Zones and the management plans for Natura 2000 areas are lacking, thus some aspects of these issues are now controlled via GAEC. When they will be implemented, specialised authorities will probably be involved in the control activities under cross compliance²⁰. In France cross compliance controls have been integrated with other controls, and as far as the Nitrates Directive is concerned, the number of controls has risen due to cross compliance, although the situation differs depending on the different départements (NUTS3) (some of these regions are not situated in a Nitrate Vulnerable Zone, others had already implemented control plans concerning more than 1% of farms).

¹⁷ inspections are carried out at the same time in the same control sample

¹⁸ for environmental standards only; concerning the other standards controls are accounted for the specialised controls

¹⁹ Different Sanctions can then be applied, depending if a breach only concerns (more ambitious) national legislation or represents a breach of cross compliance requirements.

²⁰ SMRs related to animal identification and registration are controlled independently by the local health agencies, not by the paying agency as is the case for cross compliance, and the procedure of selecting the sample differs. Still, a collaboration takes place in so far, that the national paying agency checks, where the control sample overlaps and receives control results by the local health agencies. Controls outside cross compliance are now carried out in a more systematic way, due to such information sharing.

In England, compliance with underlying legislation is still inspected by the relevant statutory bodies. Independent inspections by specialised bodies can result in prosecutions, referrals to the RPA or both if a breach of SMR or GAEC standards is discovered. Where cross compliance inspections enable these bodies to meet their internal inspection targets then this would be expected to happen in order to minimise duplication and minimise time wasted. For example, the Environment Agency, which inspects for Nitrate, Sewage Sludge and Groundwater SMRs uses cross compliance inspections to meet its targets where appropriate but is still able to inspect farms independently of the cross compliance inspections, for example, if a farm is not receiving the Single Farm Payment or is not chosen by the RPA for inspection. Previously, inspections did not have a random control element and inspections were focused on individual legal standards so it can be said that inspections are now more systematic.

But there are also examples where the number of systematic specialised controls has been reduced because of integration resulting from cross compliance. E.g. in Hesse in Germany before the introduction of cross compliance already about 2 to 2.2%²¹ of all farms receiving direct payments were checked during a systematic specialised control according to the fertilising ordinance, which implements the Nitrates Directive. Additionally, controls due to suspicion and complaint were carried out. The systematic controls have now been integrated into the systematic cross compliance controls, resulting in an effective reduction of the control frequency to 1% of farms. Additional controls for certain reasons are still carried out. All breaches of cross compliance requirements that have been detected outside of cross compliance control or as a follow-up have to be reported and can result in deductions of direct payments. This is in line with Art. 65 of Reg. (EC) No 796/2004, according to which all breaches detected during any control related to cross compliance or brought to the attention of the CCA in any other way are relevant. Thus, in all Member States the involved inspection bodies should report relevant non-compliance. In Germany the duty to report relevant breaches detected during national specialised controls is explicitly stated as an integral aspect of cross compliance control, as many standards are not inspected systematically and are only subject to such “cross-checks” (see paragraph on control indicators above). The impact of these checks clearly then depends on the design of the specialised controls.

In Denmark, where cross compliance controls are normally carried out by the specialised authorities as part of the control of national legislation, for many standards control rates are above 1% are resulting. There has been no reduction in the control rate of national legislation yet, however there is a discussion going on in the Danish Plant Directorate

²¹ The situation in Germany differs a lot between the Länder (whereas e.g. in Lower Saxony 3% of farms had been checked systematically in some other mainly southern Länder specialised controls had been limited mainly to controls due to suspicion already, as a high number of farms were checked on similar standards systematically through good farming practice as a precondition for participation in agri-environment measures, thus here the systematic cross compliance control can mean additional controls)

about a reduction of all types of control including the specialised national control to 1%. Generally, inspectors have made their control style more formal. They seem to have become more consistent and rule oriented (instead of results oriented) with more enforcement through formal rules than through negotiation and discussion. In addition, to the cross compliance control the different control authorities have a duty to report relevant infringements detected in connection to other types of control.

In cases, where no systematic controls of mandatory standards have been carried out before, the introduction of cross compliance has benefited the specialised controls. But if inspection targets for specialised controls that have previously been carried out in a targeted way, are now met via cross compliance, this can result in less concentration on the individual legal standards, especially where controls are highly bundled and consequently the selection process results in many farms being checked for standards they have not been selected for. Thus, while still complying with EU-requirements, there is the risk that the system of cross compliance controls, as defined in EU legislation and implemented by Member States, reduces the effectiveness of specialised controls.

5 Discussion - Are standards more effectively enforced through cross compliance?

Time effort for systematic on-the-spot controls, coordination and data-exchange

The average control time clearly varies a lot depending on the size and type of the inspected farm. Animal identification seems by far to be most time consuming to check, especially if animals are kept outside. If only environmental standards are considered, checking area-related requirements needs most effort (e.g. verification of buffer strips; the control of soil cover might require a second visit if not verifiable on the first). Controls of GAECs in England are very time-consuming compared with examples for other countries, a fact that corresponds to the high number of standards - many of them area-related - that have been defined. Still, the examples for time effort and subsequently costs cannot really be compared, as they are difficult to estimate and, depending on the degree of integration, different sets of standards are controlled during one visit, sometimes together with controls that fall outside of cross compliance.

The effort for coordination should be rather low where only few control authorities are involved, especially in the case, where the paying agency is the main CCA and carries out controls itself, as e.g. in the Czech Republic, Lithuania, France (for GAEC) and in England. Where several different control bodies are involved, there is often a central coordinating body, and central databases have been created to facilitate data exchange. An example is the central IACS-database in Germany as a nationwide system, where all control reports, as well of relevant non-compliances detected through other controls, are stored. Different access rights allow authorities in charge of cross-compliance to enter, recall and process information. National guidelines for control reports and rating matrices seem to exist in all cases. In Denmark controls are not coordinated concerning the time of the visit, but left to the discretion of the different specialised authorities. Still, all control reports have to be sent to the Paying Agency through a common data input/output system and the Paying Agency is then taking the decision about the sanction.

Integrated risk-assessment and bundled controls

One can assume that the implementation of EU legislation in single Member States has been unsatisfactory so far, this being one reason for the introduction of cross compliance. Still, it is questionable if cross compliance results in an effective improvement of enforcement. It is likely that cross compliance has contributed to a higher awareness level concerning mandatory standards, due to the threat of higher sanctions. The distribution of information in the course of the introduction of cross compliance and the activities around the accompanying farm advisory system have apparently been helpful as well in this respect. Still, the close link between the enforcement of mandatory standards and the administrative procedures concerning the allocation of direct payments comes with a high bureaucratic effort. Additionally, the resources for cross compliance are not necessarily

used in terms of such specialised legislation. Broadly applied and thus poorly targeted systematic controls can be seen as an inadequate and ineffective action of the administrations, and reinforce the possible resentment of some farmers towards cross compliance.

Many Member States favour an integrated risk assessment and bundled controls. The selection happens in many cases at the national level, and often through the paying agency. Farms are selected from the IACS-samples as well as among all recipients of direct payments.

A strongly integrated risk analysis means that farms are being controlled for many requirements, which have not been the reason for their selection, and for which these farms might not present a significant risk. For example, a farm might have been selected because of land in a Natura 2000 area, but in the context of an integrated control is also inspected on compliance with standards related to the Nitrates Directive, even when there is a very small related risk (e.g. the farm might be organic or has only a very low livestock density). Thus, if a high number of cross compliance requirements is to be controlled in the same control group, for each 'risk-area' only a small number of the farms is selected according to an increased risk. Additionally, in case of farms being only chosen from the IACS-control sample, these are preselected according to general risk-factors. In such a way the share of untargeted and "unnecessary" controls is further increased.

Replacement of specialised controls, partly by highly bundled cross compliance controls might result in more systematic but less targeted controls due to selection procedures and the fact that systematic controls often rely heavily on indicators that are independent from time. In cases where specialised controls had been carried out in a more targeted way before, this would mean a weakening of such controls.

How to improve efficiency?

Efficiency does not mean solely to minimise administrative cost but to optimise the impact of an instrument within given resources. Desirable effects of cross compliance are a high degree of compliance with the set standards and especially to prevent breaches with severe consequences. The above mentioned problem of an integrated risk assessment is less pronounced if more different control samples are chosen that take into account a meaningful grouping of risk areas. E.g. Denmark has chosen a decentralised system, where several single specialised authorities, within their area of responsibility, select and control farms independently. In England, which has been characterised by a strong bundling of the control sample, the Environment Agency will presumably be an independent CCA in 2007 in order to be able to carry out a more targeted selection concerning the requirements of the Groundwater, Sewage Sludge and Nitrates Directives. Less bundled controls mean a higher control rate, but the inspections themselves require less time as fewer standards are covered. The additional effort would mainly be connected to travel time. Through coordination, and using the same database for risk assessment, the

accumulation of several on-the-spot controls on the same farm in one year by different authorities can be avoided.

Targeting of controls is not only important for their efficiency, especially in case of low control rates, but as well to increase credibility and to justify the administrative effort for cross compliance. Farmers would probably better understand and accept the necessity and the reason behind targeted controls of requirements that are really relevant on their farms and where breaches could have potentially severe effects, than being controlled according to long checklists in order to fulfil the control rate. Extreme examples of apparently “irrelevant” controls have already been published in the farmers’ newspapers²², and this can endanger the acceptance of mandatory standards. In order to strengthen the factors moral considerations and social sanctioning, a necessity resulting from the theoretical considerations in chapter 2, the enforcement of standards has to appear as being “fair” for the farmers. This involves appropriate and targeted controls and proportional sanctions.

Still, EU prescriptions do not encourage Member States to detect many breaches, as a high number of non-compliances requires an increase to the control rate in the following year, even if this might be the result of a very effective risk assessment. Moreover, only a small part of the deducted direct payments remains in the Member State. Thus an increased control rate should only be calculated referring to farms chosen randomly, and the deducted direct payments could be made available to finance technical assistance linked to cross compliance in the respective Member State, such as information, advice and control.

The theoretical considerations on the enforcement of standards show that it is not effective if a low control rate is publicly announced (as the *expected* risk of detection of breaches is decisive). Thus, more flexibility should be allowed by the EU concerning control rates. For a more targeted control it should be left to the responsible authorities, as to which farm they control for which requirements. In this way they are able to focus on certain problem areas. In return it should be discussed if control rates could be decreased in cases of full compliance.

More flexibility, such as warnings (as it is possible in England) or a duty to obtain advice (as in Germany if limits for organic matter in soil are not met) in case of defined minor breaches, should also be discussed concerning sanctions. Especially in the area of animal identification, where by far most breaches occur and apparently farmers have difficulties to comply with the requirements, ideas concerning improved technical solutions and more flexibility should be considered. The introduction of EU-wide harmonised definitions of such ‘negligible’ breaches should also be discussed.

²² e.g. according to a report of a farmer in a German farmers’ newspaper, a pet goat of an organic farmer did not have an earmark, was not properly recorded and had contact with dairy cows

Control parameters that are more or less independent from the time of control (such as documentation, building and existing landscape elements) are very convenient for systematic controls, as they are always accessible and require less control effort and expertise. Thus, such indicators are widely used e.g. in France, by the Danish Plant Directorate and in the systematic controls in Germany. Still, a dominance of systematic controls using parameters, which are independent from the time of control, undermines an optimisation of the enforcement system with cross compliance. Depending on the severity of an expected impact in case of non-compliance, control parameters should not be limited only to those that are easy to control and independent of time. In any case, sufficient information about the standards is a precondition for compliance. A high transparency is demanded in this respect, and as well concerning control parameters, which are necessary for self-control.

Contrary to cross compliance, which by definition is linked to the existence of direct payments, mandatory standards from specialised legislation will always exist outside this system. Therefore an effective enforcement of such legislation should be ensured and be strengthened. In specialised controls, inspections due to complaint or suspicion and requirements that are less suitable for systematic controls play a more important role, but compliance with certain control rates is not easy to ensure. Cross compliance cannot totally replace the enforcement of mandatory standards through specialised authorities. In order to strengthen existing efforts of Member States in this respect, it should be considered to take such inspections into account for the control rates for cross compliance, rather than replacing them with systematic cross compliance controls.

The probability of a farm being selected during an integrated risk analysis is higher the more cross compliance requirements apply on the farm. This is especially the case for mixed farms, even when animal keeping only plays a minor role. The Netherlands try to avoid such an imbalance by considering an equal representation of different farm types in the control sample. In France and England geographic criteria are part of the risk analysis. An interesting approach is used in France, where farms certified according to the public quality assurance scheme '*Agriculture Raisonnée*' are not included in the risk sample. An open exchange between Member States about experiences with approaches and criteria and their weighing for the risk assessment is important in order to optimise the selection process.

6 Research needs

We see the need for further research on the following aspects of cross compliance:

- Further assessment of the administrative effort and the related costs of cross compliance for public administrations.
- More insight into real control indicators should help to improve our understanding of the value of controls.
- The impacts of controls and sanctions on compliance should further be analysed. The availability of micro data on controls and sanctions is a crucial issue here (e.g. in order to be able to distinguish farms selected through risk analysis and at random, and to assess the quality/severity of breaches).
- Knowledge about impact on farmers' management decisions should be improved. To what extent do farmers change their management practise due to the bigger awareness caused by the introduction of cross compliance control and the threat of additional sanctions.
- For the overall effectiveness of cross compliance the interactions of cross compliance with specialised controls and the resulting implications for compliance with mandatory standards should be further analysed.
- Research is needed on the optimisation of the selection process. Although the worries of Member States concerning disallowances can hamper an open discussion of problems and chances, an exchange between countries on suitable criteria for risk-assessment, experiences with different approaches and how to reach the relevant farms would be an important step.

Literature

- Bültmann A. and Wätzold F. (2002). Der Vollzug von Umweltrecht in Deutschland. Ökonomische Analysen und Fallstudien. Metropolis-Verlag, Marburg.
- Cohen M. A. (1998). Monitoring and Enforcement of Environmental Policy [online] < www.vanderbilt.edu/vcems/papers/enforcement.pdf >
- Falconer K. and Whitby M. (1999) The invisible costs of scheme implementation and administration - Countryside Stewardship: Farmers, Policies And Markets (Edited By Guido Van Huylenbroeck And Martin Whitby)
- Falconer K., Dupraz P., and Whitby M. 2001. An investigation of policy administrative costs using panel data for the English Environmentally sensitive areas. Journal of Agricultural Economics 52 (1): 83-103.
- Lippert C. (2002): Zur Ökonomik der Kontrollmaßnahmen bei Lebensmitteln und Futtermitteln. In: Agrarwirtschaft, Band 51, Heft 3, 2002, S. 142-155.
- Nitsch H. et al. (2005): Inventory of institutional arrangements of agri-environmental schemes in Europe. A report from the ITAES project [online] <<http://merlin.lusignan.inra.fr/ITAES/website>>
- Nitsch H. (2006): Administrative arrangements for cross compliance. A research paper of the Cross Compliance Network [online] <www.ieep.eu/projectMiniSites/crosscompliancencetworkproj/reports.php>
- Osterburg B. and Nitsch H. (2004): Environmental standards and their linkage to support instruments of the EU Common Agricultural Policy. Paper for the 90th EAEE Seminar "Multifunctional agriculture, policies and markets"
- Winter S. and May P. J. (2001). Motivation for Compliance with Environmental Regulations. Journal of Policy Analysis and Management, Vol.20, No.4, 675-698.