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# Criteria for an efficient enforcement of standards in relation to cross compliance

Nitsch H. and Osterburg B.

Johann Heinrich von Thünen-Institut (vTI)/ Institute of Rural Studies, Braunschweig, Germany

**Abstract—** Cross compliance has been introduced in the EU partly to improve compliance with pre-existing EU legislation in the Member States. Considerable effort has been put into implementing this instrument and the corresponding control systems. This presents an opportunity to assess factors for an efficient enforcement of standards and discuss these with regard to cross compliance. The paper characterizes the enforcement system connected with cross compliance in the EU and implications of interactions with the national control systems for specialized legislation. Economic theories on mechanisms and the behavior, which form the basis of controls, are applied to cross compliance in order to draw conclusions on the implementation of controls and sanctions. The potential contribution of cross compliance to an efficient enforcement of mandatory standards is critically discussed. In view of the insecure future of direct payments any further development of cross compliance within the EU should aim at increasing the effectiveness of the enforcement of legal standards and strengthen national specialized control systems in the long term.

**Keywords—** Cross compliance, control theory, efficiency

## I. THE CONCEPT OF CROSS COMPLIANCE IN THE EU

The introduction of “cross compliance“ - linking the full receipt of direct payments to compliance with minimum standards for farming - has been a major element of the 2003 reform of the Common Agricultural Policy (CAP) in the EU, and its implementation is since mandatory for all Member States. From the recitals of EC Reg. 1782/2003 one can deduce the following main objectives connected to the implementation of cross compliance:

- To strengthen the application and enforcement of already existing standards in agriculture due to additional systematic controls and the deduction of direct payments as a sanction in case of detected non-compliance,
- To avoid the abandonment of agricultural land and ensure that it is kept in good agricultural and environmental conditions and to maintain the existing area of permanent pasture

According to the framework given by the EU, Member States are obliged to set standards in relation to the following three issues.

- Farming standards in relation to 19 EU regulations and directives (“Statutory management requirements” - SMRs, - according to EC Reg.1782/2003 Annex III)
- “Good Agricultural and Environmental Conditions” (GAEC) (EC Reg.1782/2003 Annex IV) in terms of soil conservation, minimum maintenance of land and retention of landscape elements
- An obligation on the Member States to maintain the proportion of its agricultural area under permanent pasture (EC Reg.796/2004)

Non-compliance of farmers with the requirements can result in a cut of direct payments. This mechanism of sanctioning is a core element of cross compliance.

As clear political statements have been made that “cross compliance is here to stay” (Fischer Boel, Brussels, 29 March 2007), public support in the EU will in the future probably be provided with some kind of environmental and other conditionalities. Accepting this political reality, the question is how to design and implement such conditionality mechanisms in an efficient way.

Cross compliance in the EU is connected with interactions at different political levels (see figure 1):

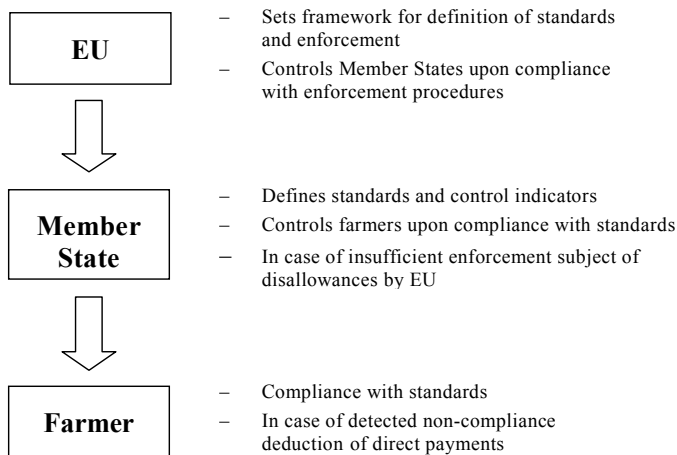


Fig. 1 Interlinkages between EU, Member States and farmers

Cross compliance allows for a system control by the EU, if and in what way Member States carry out controls of legislation derived from EU law and if these are consistent with the requirements aiming at a better and more harmonized enforcement. Insufficiently implemented procedures can result in disallowances, thus deductions of CAP payments allocated by the EU to the Member State. This mechanism completes infringement procedures before the European Court of Justice in case of inadequate implementation of EU-Directives in the Member States.

Member States themselves have to set standards applicable at farm level with SMRs directly stemming from nationally implemented EU legislation and standards for GAEC, which may as well encompass additional requirements beyond legal standards. Cross compliance as an instrument of agri-environmental policy thus lies between the national legislation and voluntary instruments such as agri-environmental measures. Whereas the latter aim at supporting desirable management practices via additional incentives and are characterized by a voluntary and thus limited participation of farmers, cross compliance focuses on controls and sanctions to enforce relevant standards area-wide [1]. But unlike environmental legislation, cross compliance depends on the existence of direct payments that are allocated directly to the

farmer [1][2][3]. As direct payments contribute a substantial share of farm income in the EU, as well standards beyond previously existing legislation obtain a quasi mandatory status via cross compliance [4].

The fact, that the EU only defines few concrete standards at farm level results in heterogeneous standards at the level of Member States even in case of SMRs (e.g. implementation of the Nitrates Directive can result in the designation of specific nitrate vulnerable zones or a nation-wide action program; objectives in Natura 2000 areas may be achieved by mandatory or voluntary measures). Considerable scope for a national implementation of cross compliance exists as regards the definition of requirements for GAEC, reflecting different priorities and conditions in EU Member States [5].

Member States are required to establish a system for controls and sanctions according to certain EU-guidelines e.g. concerning control rates and the calculation of reductions. They determine which administrations to appoint as Competent Control Authorities – either various specialized authorities or the Paying Agency.

The implementation of cross compliance in the Member States has been influenced by the necessity to comply with EU-requirements and considering national conditions and priorities, other existing instruments, existing administrative procedures and farmers' acceptance. For the effectiveness of cross compliance both, the setting of appropriate standards and their actual enforcement is crucial. Two general strategic approaches for the implementation of cross compliance in and within the EU Member States can be distinguished [6]:

- Cross compliance is used to achieve national policy objectives e.g. through the implementation of new and ambitious standards within GAEC or concerning the protection of grassland. Controls are implemented with a view to improve enforcement and using the competence of specialized authorities.

- The implementation of cross compliance is carried out formally correct, but using a minimalist approach just as far as to comply with EU-requirements. Standards for GAEC do not impose significant challenges for farmers. Limiting the administrative burden is in the focus of control procedures.

This paper does not deal with standard setting but will further look at the control system connected with cross compliance and implications of interactions with the national control systems for specialized legislation, the key question being, if cross compliance is an efficient mechanism to enhance enforcement of mandatory standards. Economic theories on criminality are used to understand the mechanisms and the individual behavior that form the basis of controls. If applied to cross compliance, conclusions on the implementation of controls and sanctions can be drawn.

## II. THEORETICAL CONSIDERATION ON THE ENFORCEMENT OF STANDARDS

### A. Basic concepts

A theory, which touches the issue of compliance and control, is the principal-agent theory and the problem of „moral hazard“ and „hidden action“. In economics, the principal-agent problem treats the difficulties that arise under conditions of incomplete and asymmetric information, which results in losses of effectiveness, e.g. when a principal (here: state) tries to steer the behavior of an agent (here: farmer). Agents may not always comply with given rules (“moral hazard”), and the principal does not have full insight in the actions of the agents (“hidden action”). The interaction between both is assumed to be shaped by strategic behavior.

Two main contrasting concepts related to the enforcement of standards can be distinguished [7][8]:

- Controls and sanctions aim at minimizing the loss of social welfare, which arises through non-compliance with standards. This can be achieved by minimizing the cost generated by such non-compliance minus the benefits of non-compliance and minus cost for control, conviction and sanctioning. This concept, which is based on Becker [9], implicates the possibility to “buy oneself off” by paying a fine.
- Awareness of rules and normative and social motivations, including moral principles and acceptance of reasonable and fair rules, are an important precondition for compliance [10]. Compliance with standards is expected to be higher when the rules are believed to be legitimate and fairly applied [11]. Thus, the main objective of enforcement mechanisms should be to strengthen the trust of citizens in “fair arrangements” and thus the legal framework.

The first viewpoint assumes rational and self-interested strategic behavior of individuals in order to maximize their benefits. The second approach focuses on the sense of justice of the actors and the common understanding of norms, instead of bringing the control and punishment system into perfection. Both, strategic behavior and cooperative elements based on common moral perceptions should be considered in relation to an enforcement of standards.

While setting appropriate standards with a regulative impact, information about and acceptance of these requirements is always a precondition of effective regulation, administrations resort to different types of controls in order to check the behavior of the addressees of rules. One can distinguish indirect controls (e.g. checking documentation or area size and land use by remote sensing) and on-the-spot controls with visual inspections of agricultural land, livestock or farm buildings and equipment. Controls due to suspicion or complaint take place depending on necessity, while planned systematic controls are carried out as a routine and for a selected control sample of farms. The risk analysis for the selection of this control sample determines the targeting and effectiveness of such a control. Especially concerning systematic controls, as they are required for cross compliance, the selection of control indicators and

their dependence from the period and the time of controls influences the probability of detection of non-compliances. While some breaches such as cutting down a registered hedge can be detected during a later control, some management measures e.g. related to the use of fertilizer or plant protection products can often only be effectively controlled at the time of the application or a little later. The control indicator as well influences the legal certainty in case a procedure is opened. If the farmer contradicts the accusation, the evidence of a breach has to be court-proof.

### *B. Enforcement strategies from the state's perspective*

The control of mandatory standards by the state aims at minimizing losses through non-compliance with standards, taking into account the administrative cost of enforcement. The objective function, which is based on Lippert [8], can be outlined in the following formula:

$$f(\gamma, \delta, F) = \alpha [D - (D + F) \gamma \delta] + KS \gamma \quad \min! \quad (1)$$

$\alpha$  = 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 ( $< F_{max}$ )

$\gamma$  = Control rate ( $0 \leq \gamma \leq 1$ )

$\delta$  = 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

For an effective control system both an abatement of  $\alpha$  and preventing breaches with severe consequences thus the detection of non-compliances of addressees (here: farmers) with high costs for the national economy D are important. To achieve an optimization, the variables control rate, probability of detection and height of sanctions can be varied.

An increase of control rates is limited by scarce administrative resources for controls. The EU prescribes a low minimum control rate for systematic cross compliance controls, however in case of a high

percentage of non-compliance the control rate has to be increased in the area concerned in the next control period.

Fines accomplish two functions, that are prevention and compensation of the damage caused by infringements. In case of administrative penalties, the sanctions cannot be increased indefinitely, but have to take into account the principle of proportionality concerning the created damage and the benefits of the non-compliance for the addressee. In case of the SMRs, which are both covered by legislation and by cross compliance, the sanction F is increased by an additional deduction of direct payments. Thus, regarding cross compliance, the comparably low control density is "compensated" by potentially high sanctions in order to enforce compliance with standards. Further on, keeping back direct payments as a sanction is less complicated than enforcing administrative penalties. While such an approach is possible within cross compliance, as sanctions are attached to voluntarily granted support payments, for the acceptance of enforcement systems such parallel sanctions can be problematic.

An increased probability of detection in order to improve the effectiveness of enforcement while the control rate remains constant is another important variable. Crucial are the choice of meaningful control parameters, a targeted selection of addressees and their control at a suitable point of time. This requires knowledge about risk factors that are linked to increased non-compliance with the relevant standards. Also, the severity of damages in case of breaches should be considered as part of the selection.

### *C. Conditions for a compliance with standards*

It is important to understand the conditions for compliance from the view of the addressee (i.e. the farmer). With thorough information about standards being assumed, the following formula, again derived from Lippert [8], illustrates these conditions combining benefit-cost calculation of compliance with personal moral convictions and considerations on social sanctioning (explanation of  $\gamma$ ,  $\delta$ , F see above):

$$KB - m - r \leq \gamma' \delta' (F + L) \quad (2)$$

KB = cost of addressee for compliance

m = Factor for ‚moral considerations‘ of addressee

r = Factor for risk aversion of addressee

L = Indirect/social sanctioning

$\gamma'$  = Expected control rate ( $0 \leq \gamma \leq 1$ )

$\delta'$  = Expected probability of detection in case of control ( $0 \leq \delta \leq 1$ )

For an observation of standards 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 besides strategic behavior regarding a maximization of benefits. Thus, a legal system for the enforcement of standards should aim to bring forward such factors, and avoid the weakening of cooperative approaches due to an inappropriate treatment of the addressee. Further on, it is noticeable, that compliance is not determined through the real rates of control and detection, but through the individual expectations in this regard. Thus, announcing a 10 % control rate, but realizing a 1 % rate, would be a rather cheap means to improve compliance, while an a priori public commitment to low control rates appears unwise.

### III. CHARACTERISTICS OF DIFFERENT CONTROL SYSTEMS

Minimum standards are set and enforced in various contexts. A difference can be made between controls in the framework of CAP support measures such as cross compliance, and specialized controls of compliance with national or regional legislation.

A high number of cross compliance requirements consists of previously existing legislation (all SMRs, some GAEC depending on Member State). This special legislation has to be enforced as well independently from cross compliance by specialized authorities. The introduction of cross compliance required the implementation of a parallel control system. Both control systems have different characteristics (see Table 1).

Table 1 Comparison of characteristics linked to controls within cross compliance and specialized controls

Cross compliance controls	Specialized controls
Systematic controls of 1% of farms receiving direct payments according to EU-framework	Controls according to national and regional rules (control rate can be higher, but partly few or no systematic controls)
Often highly integrated risk assessment and bundled controls	Control by specialist authority
Focus on indirect indicators	Control of limited number of standards
Cross checks can be relevant	Includes controls due to complaint or suspicion
Sanctions according to severity of breach, but as well depending on the height of direct payments	Administrative penalty oriented at principle of proportionality

#### A. Systematic controls within cross compliance

Cross compliance requirements have to be checked during systematic on-the-spot controls according to the EU framework. Inspections take place regularly for a defined percentage of farms (1 % as a rule), selected through risk-assessment. Notably, this minimum control rate can be understood as part of the EU's goal "cutting red tape" (lightening administrative burden), thus opportunities for a more strategic approach of keeping control rates intransparent have been missed. With such a low control rate, the choice of control indicators and the type of risk analysis for the selection of farms to be controlled is indispensable for an effective control.

The prescriptions of the EU for a bundled control of all standards a Competent Control Authority is responsible for, results in a dilemma for the Member States. They have the option on the one hand to employ only few control authorities, and thus have a rather low administrative effort for coordination, and carry out an integrated risk assessment over a high number of standards for one control group. On the other hand a selection targeted to high risk-farms according to single cross compliance requirements involves a higher number of different control authorities and increases the overall control rate. In cases where only the paying agency or very few Competent Control Authorities exist, a wide variety of standards has to be controlled in the same control

sample. In this case farms are being controlled for many requirements, which have not been the reason for their selection, and for which they might not present a significant risk. Additionally, in case of farms being chosen out of the control sample for inspection of the general eligibility for direct payments, these are preselected according to general risk factors related to support rules and not to the various standards to be controlled. According to a report from the Commission on the implementation of cross compliance, Member States have in many cases only used few specific risk criteria for the selection so far even if more information had been available [12].

Control indicators have to be accessible during a systematic control thus being independent from the time of the visit and easy to verify (even more so when inspectors are not coming from a specialized authority and have to assess standards in a variety of areas). On the other hand such criteria are often not directly meaningful in terms of the real environmental impact. The systematic cross compliance controls often rely heavily on such indirect indicators.

Any non-compliance with relevant standards, detected as a consequence of other kinds of checks or that come to the attention of the Competent Control Authority in any other way can result in sanctions according to cross compliance. The relevance of such so-called “cross checks” depends on the effectiveness of the specialized control system in the different Member States and the information exchange and cooperation between the different control authorities. Cross checks are highly relevant in creating a level playing field between Member States.

Although the percentage of payment reductions depends on the severity of a breach, the absolute amount of the sanction is based on the height of direct payments and thus the link to damages in case of infringements or to the cost of compliance is weaker than in case of administrative penalties.

#### *B. Characteristics of the specialized control system*

Within the specialized control system controls take place according to national or regional rules concerning control rates and the choice of farms. They are generally carried out by various specialized agencies and concentrate on a limited number of standards. Thus, farms can be selected in a more

targeted way concentrating on high-risk farms and vulnerable areas. Besides systematic controls, suspicions or complaints can be taken into account for spontaneous checks. Thus, as well control indicators that are dependent on the time of controls (e.g. compliance with time bans or distances for fertilizer application) can be applied. Still, control rates vary considerably, and not always are systematic controls in place. However, as no EU-wide reporting on national specialized controls is required, there is a lack of transparency on how exactly Member States carry out specialized controls.

#### IV. DISCUSSION

One can assume that it is a high interest of Member States to comply with EU-requirements related to cross compliance in order not to risk disallowances. This does not encourage an ambitious implementation either of standards or control procedures within cross compliance, implying the danger of considerable bureaucratic effort with little impact – and thus of inefficient use of scarce financial and administrative resources.

EU requirements result in a strong tendency for an integrated risk assessment and bundled systematic controls. Where no effective control system related to the SMRs has been established before, cross compliance practically introduces EU-wide minimum standards for systematic controls of existing mandatory standards and undoubtedly means an improvement of enforcement. As well, the structured procedures for cross compliance can yield in expertise for an optimization of the enforcement of specialized legislation.

Where relevant specialized legislation has already been controlled systematically, cross compliance results in additional controls and co-ordination between authorities, but not necessarily in any added value [5]. In the light of limited administrative resources the implementation of controls in the framework of cross compliance can even be an incentive to cut back or simplify the specialized control system. A possible replacement of specialized controls partly by highly bundled cross compliance controls might result in more systematic but less targeted controls. In cases where specialized controls

had been carried out in a more targeted way before, this would mean a weakening of such controls.

However, it is very 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 [5].

As long as direct payments exist, obligatory cross compliance will presumably remain a feature of the CAP, and in the short- and medium-term the enforcement of mandatory standards can be supported by this additional instrument. However, the impact of cross compliance always depends on the amount of the financial incentive. If direct payments are reduced, which is likely in the long term, the importance of cross compliance will decrease [1][3][13]. Thus, an effective enforcement of mandatory standards as well independently of cross compliance remains crucial.

While standards related to the agricultural area (GAEC) are in line with area-related direct payments, the inclusion of SMRs in the control system of cross compliance can be questioned, considering the potentially double control system and the risk of focussing on systematic controls in the framework of cross compliance rather than on optimizing the specialized control system. An interesting example is provided by Switzerland, where compliance with certain pre-existing legislation for water, environment and nature protection is a prerequisite for the reception of direct payments, but not part of the control system within cross compliance, which itself is focused on animal welfare and rather ambitious standards for land management such as Integrated Production or ecological compensation areas [14].

In view of the insecure future of direct payments as well as the European Commission's activity on "Better Regulation" any further development of cross compliance within the EU should aim at increasing the effectiveness of the enforcement of standards, that is to target high risk farms and to prevent especially breaches with potentially severe consequences, and at the same time strengthen specialized control systems with such characteristics. In order to sustain existing efforts of Member States in this respect, regular

specialized controls should be taken into account for the control rates for cross compliance, rather than replacing them with systematic cross compliance controls. This would however require EU-wide minimum standards for specialized controls (e.g. selection of farms through risk assessment). A more systematic integration of cross checks into control and enforcement of cross compliance and respective documentation and reporting would be a step forward in this regard.

The theoretical considerations above show as well that the legal system for the enforcement of standards should strengthen moral considerations, a precondition for this being an enforcement system perceived as "fair". Highly integrated systematic controls with a low control rate but potentially high sanctions may be problematic in this respect. Answers on a questionnaire on cross compliance by 184 German farmers point in the same direction and indicate a higher acceptance of selecting high-risk farms and targeted controls of requirements that are really relevant on their farms and where breaches could have potentially severe effects, than being controlled according to broad checklists as well on seemingly "irrelevant" standards. Further on, sufficient information about the standards is a precondition for compliance, understanding and cooperation. A high transparency is demanded in this respect.

Empirical analyses of control procedures are limited due to a lack of data, be it through strategic behavior of addressees, confidentiality of data or a hesitation to make information on controls and sanctions available. However, as a basis for an extensive evaluation and for any optimization of systems for the enforcement of standards such analyses would be highly desirable.

## REFERENCES

1. Latacz-Lohmann U, Buckwell AE (1998) Einige ökonomische Überlegungen zu Cross Compliance. *Agrarwirtschaft* 47 (11): 429-431
2. Russell NP, Fraser M (1995) The potential impact of environmental cross-compliance on arable farming. *Journal of Agricultural Economics* 46 (1) (1995): 70-79



3. Webster P, Williams N (2001) Environmental Cross Compliance – Panacea or Placebo? Paper prepared for presentation at the 13th International Farm Management Congress, Wageningen, The Netherlands, 7.-12.Juli 2002, at <http://ageconsearch.umn.edu/bitstream/7004/2/cp02we01.pdf>
4. OECD (2003) Agri-environmental policy measures: Overview of developments, Paris
5. Alliance Environnement (2007) Evaluation of the application of cross compliance as foreseen under Regulation 1782/2003. Part II: Replies to Evaluation Questions – 27/7/2007, at [http://ec.europa.eu/agriculture/eval/reports/cross\\_compliance/index\\_en.htm](http://ec.europa.eu/agriculture/eval/reports/cross_compliance/index_en.htm)
6. Nitsch H, Osterburg B (2007) Umsetzung von Cross Compliance in verschiedenen EU-Mitgliedstaaten. Arbeitsber. des Bereichs Agrarökonomie 4/07, FAL, Braunschweig
7. Bültmann A, Wätzold F (2002) Der Vollzug von Umweltrecht in Deutschland. Ökonomische Analysen und Fallstudien. Metropolis-Verlag, Marburg
8. Lippert C (2002) Zur Ökonomik der Kontrollmaßnahmen bei Lebensmitteln und Futtermitteln. *Agrarwirtschaft*, 51 (3): 142–155.
9. Becker GS (1968) Crime and Punishment: An Economic Approach. *Journal of Political Economy*, 76 (2): 169-217
10. Winter S, May PJ (2001) Motivation for Compliance with Environmental Regulations. *Journal of Policy Analysis and Management*, 20 (4): 675–698
11. Cohen MA (1998) Monitoring and Enforcement of Environmental Policy. Available at SSRN: <http://ssrn.com/abstract=120108> or DOI 10.2139/ssrn.120108
12. European Commission (2007): Report from the Commission to the Council on the application of the system of cross compliance. 29.3.2007. COM(2007) 147 final
13. Christensen T, Rygnestad H (2000) Environmental Cross Compliance: Topics for future research. Danish Institute of Agricultural and Fisheries Economics. SJFI - Working Paper no. 1/2000
14. Nitsch H, Osterburg B (2005) Cross Compliance (CC) in der EU und Ökologischer Leistungsnachweis (ÖLN) in der Schweiz : eine vergleichende Analyse. Arbeitsber. des Bereichs Agrarökonomie 7/05, FAL, Braunschweig.

Corresponding author:

- Author: Heike Nitsch
- Institute: vTI, Institute of Rural Studies
- Street: Bundesallee 50
- City: 38116 Braunschweig
- Country: Germany
- Email: [heike.nitsch@vti.bund.de](mailto:heike.nitsch@vti.bund.de)