

Interactive comment on “Co-operative agreements and the EU Water Framework Directive in conjunction with the Common Agricultural Policy” by I. Heinz

I. Heinz

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Thanks to Referee 4 for reading and commenting the manuscript.

In particular, the paper does not cite and does not refer to enough literature. The theoretical background does not appear enough:

(Author's answer:) Further references have been incorporated that deal with more systematic investigation of the impacts of CAs on water quality: project (Bach, M. et al., 2007). By using the regression analysis applied to 11 water works regarding the nitrate pollution of groundwater a trend of decreasing or significant slowing down of nitrate concentration could be proved in 5 cases. In further 3 cases, a decrease of

nitrate concentration could be observed. As the authors point out, CAs are definitively a successful instrument for groundwater protection, even though the long time required to determine improvements in water quality currently does not allow to obtain similar results from other cases. (Page 1603, line 20. Added sentence:) Another study assessing systematically the performance of CAs was carried out. (Page 1615, line 19. Added reference:) Fohrmann, R.: Entwicklung eines einheitlichen Verfahrens zur Erfassung und Bewertung der Auswirkungen von Vereinbarungen zwischen Landwirtschaft und Wasserwirtschaft auf die Gewässerqualität in Nordrhein-Westfalen. Mülheim an der Ruhr, IWW Journal 27, 2007, 10-11. In this study covering an about 20,000 ha agriculturally used area statistically significant influences could be found. (Added reference:) Kooperation Land- und Wasserwirtschaft im Einzugsgebiet der Stevertalsperre (Hrsg.): Bericht über die Ergebnisse der Beratung in 2006. Coesfeld, 2007. (Added reference:) Institute for European Environmental Policy, 2005: <http://www.ieep.eu/projectminisites/crosscompliancenenetworkproj/index.php>

Sect. 2. How was the research conducted?

(Author8217;s answer:) The main sources are the case studies carried out in the research project: Heinz, I., Brouwer, F., Andrews, K. and Zabel, T.: Co-operative Agreements in Agriculture as an Instrument to Improve the Economic Efficiency and Environmental Effectiveness of the European Water Policy. Research Project, funded by the EU-Commission. Contract no. ENV4-CT98-0782, 2002b. (Page 1598, line 14. Added sentence:) In this project, around 50 case studies across 15 EU Member States were carried out. (Page 1599, line 11. Modified sentence:) As the case studies mentioned above showed, CAs provide the opportunity to influence effectively the behavior of farmers. (Page 1600, line 27. Modified sentence:) In the following, a few examples of CAs investigated in the EU research project mentioned above will be described (most of them updated to 2006 figures). (Page 1600, line 7. Added sentence:) All these information can be collected by questionnaires at water catchment areas (Heinz et al., 200b). (Page 1600, line 18. Modified sentence:) It is noteworthy that in Germany

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nearly 90 (Page 1600, line 26. Modified sentence:) In the water sector, CAs are seen as an effective instrument to prevent the exceeding of statutory limits, or to reverse the increase in pollution before it can reach a level which would exceed such values (Heinz, 2004). (Page 1604, line 22. Modified sentence:) Another example is the Environmental Steward Scheme (ESS) of 2005 that aims to enhance biodiversity and where farmers are financially supported (Harris, 2006).

Sect. 4. You use the polluter-pay principle in quite a different way than the usual one:

(Page 1608, line 20. Added sentence:) This does not mean that the polluter pays principle is turned on its head. In CAs, farmers usually have to meet statutory rules prescribed in mandatory regulations. Site-specific commitments going beyond these rules are financially supported. There are cases, where advisory services provided by water companies for free are sufficient (Heinz et al, 2002b).

Specific comments

(Page 1604, line 23. Modified sentence:) All these initiatives contribute to less pollution in areas of agricultural usage; (Page 1618, Table 1. Added reference:) Source: Brouwer et al., 2003, p. 25. (Page 1619, Table 2. Added reference:) Source: Heinz, 2004. (Page 1620, Table 3. Added reference:) Source: Directive 2000/60/EC of 23 October 2000. (Page 1621, Table 4. Added reference:) Source: Council Regulation (EC) No 1782/2003 of 29 September 2003 establishing common rules for support schemes under the common agricultural policy and establishing certain support schemes for farmers.

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