

Risk Governance: Communication Strategies for Coexistence with GMOs (Genetically Modified Organisms)

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Introduction

The cultivation of GMO implies various impacts on whole landscapes. In accordance with the definition of OECD (2003) GMO cultivation is a systemic risk. The main reasons for that are the unpredictability of the extent of the potential harm and the probability of damage occurrence as well as the possibility of long-term and/or long-distance impact on land use systems (Renn & Keil 2008). As a result high ambivalence regarding the potentials and risks of GMO cultivation is to be noted. This ambivalence dominates the current discussion and perception processes.

Within Europe the Directive 2001/18/EC requires the coexistence of conventional farming, ecological farming and GMO-farming. Consequently strategic approaches are needed to handle coexistence, especially at the local and regional level. In theory a discourse strategy regarding the coexistence of different forms of production, including communication of risks and participative cooperation, constitutes an adequate way for handling the diversity in attitudes towards GMO and interests in specific regions (RRAC 2009). This reflects new forms of conflict handling and problem solving using a governance approach. A mix of informal and formal regulations and multiactor involvement are the central aspects ([Assmuth, Hildén & Benighaus 2010](#); more general: Benz 2009).

This article presents the following points based on our experiences a) to which extent is it possible to develop and implement in reality such a cooperation and communication strategy b) what are workable approaches for developing rules of coexistence and c) how to define requirements for government agencies and policy makers at different levels. Our first experiences of such a discourse involving local administration, conventional and ecological farmers in the Brandenburg region Märkisch-Oderland will give indications for options of developing such a process as a general applicable tool.

The Brandenburg region Märkisch-Oderland: first experiences with GMO-farming

The model region Märkisch-Oderland is situated near Berlin in the eastern part of Brandenburg. This region is characterised by its circa 118,000 ha arable land and 9,600 ha

maize cultivation (8 % of arable land) (Statistische Ämter des Bundes und der Länder 2009). Märkisch-Oderland is the centre of Bt-maize cultivation MON810 in Germany, with 550 ha Bt-maize cultivation compared to about 2680 ha Bt-maize cultivation in Germany as a whole in 2007 (MLUV 2008; BVL 2010).

Development and implementation of a communication strategy in the model region

In 2009 and 2010 the authors designed and developed a cooperation and communication strategy for the situation in Märkisch Oderland (Figure 1). This is an ongoing process. Based on the analysis of concerned local stakeholder groups a first workshop was realized to analyse the range of attitudes towards GMO. Subsequent expert interviews allowed a more detailed insight into the stakeholders' viewpoints (categories) and their expectations of problem handling with GMO. One important interim result indicated that the communication strategy should be focused on the following two objectives:

- defining “rules of coexistence” for the region, and
- elaborating “requirements to government agency and policy makers” of the region.

In consequence a second workshop was realized to develop these aspects. The following actors are involved in the ongoing communication process:

- a. the head of the county administration,
- b. the local environmental agency,
- c. the local farming agency,
- d. representatives of the regional farmers associations.

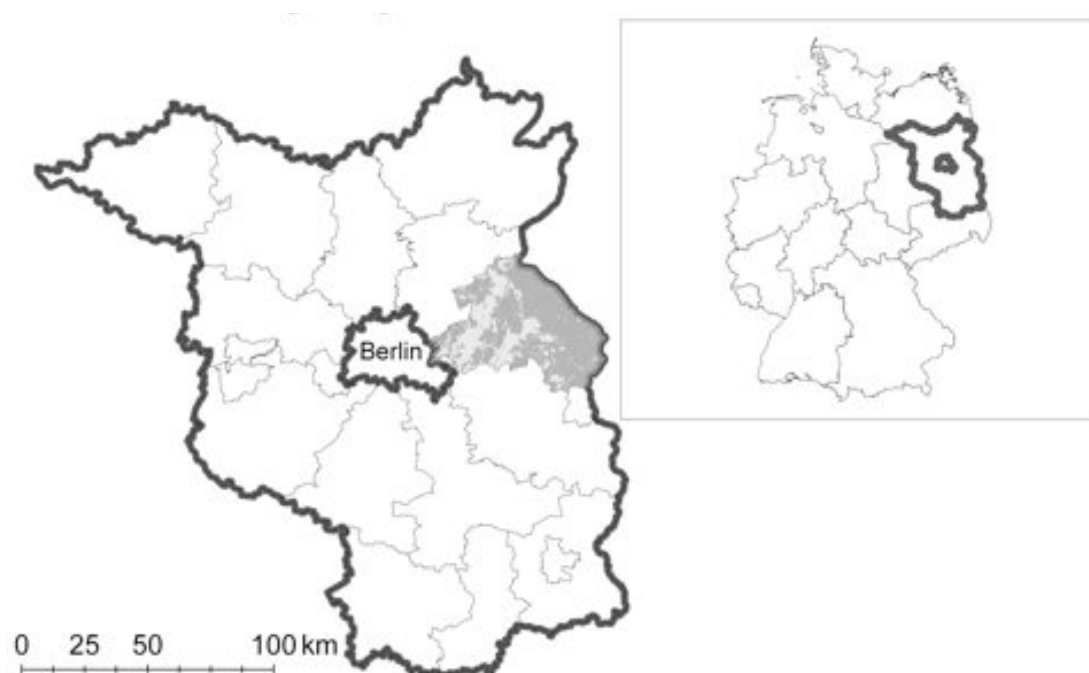


Fig. 1: Model region: The Brandenburg Region “Märkisch-Oderland”. Grey: Märkisch-Oderland; dark grey: arable land

Focus: selected results of the expert interviews

Expert interviews with non-GMO-farmers and stakeholders of the local administration were used to explore the general attitudes towards GMO, the problems and conflicts of dealing with GMO, their position to the communicative approach, their suggestions and ideas for handling GMO problems. The interviews were analysed according to the qualitative content analysis from Mayring (2008). This method guarantees the inter-subjective and transparent analysis of the attitudes.

As a result the attitudes towards GMO varied between ‘general refusal of GMO’ or ‘Bt-maize is not required in the region’ (non-GMO-farmers) and ‘responsible handling of GMO is needed’ (local administration). If stakeholders accept the requirement of coexistence according to the European Directive 2001/18/EC and ask for the responsible handling of GMO and for the minimizing of local and regional conflicts, the development of a cooperation and communication strategy will be supportive. According to the local actors’ opinion, the communication process should be focused on Bt-maize, because Bt maize is at present the only genetically modified plant that may be cultivated in the EU. In addition the capacity of every GMO is different and therefore the handling of every GMO (e.g. coexistence rules) should be specific.

The described examples of problems and conflicts in the region with regard to GMO-cultivation are the loss of confidence between GMO-farmers and non-GMO-farmers and limitation in help from neighbours up to legal disputes and political polarisations. The communicative approach is considered as a need for regional actors and a prerequisite for the coexistence between all forms of production. All experts announced: ‘we need a communication strategy for the moment of repealing the ban on MON810’.

In the interviews the experts also suggested some “rules of coexistence within the region”. This is what has been proposed: early communication with neighbours six months before sowing, enhanced distance between GMO and neighboured conventional-/eco-maize-fields, precautionary minimum distances on GMO farmland (also with support of a geographical information system), development of a best agricultural practice list dealing with GMO, exchange of arable land, preparation of a checklist for the GMO-farmers (e.g. to prove minimum distances; see above), improved farmers’ qualification for dealing with GMO and improved knowledge about pest control for European corn borer (*Ostrinia nubilalis*), and introduction of or support measures for minimizing the pollen drift of GMO-maize.

Examples of suggested “requirements to government agency and policy makers demanded by the region” concern the general decision for or against GMO-cultivation, the predictability of legal decisions, the clarification of liability for seed producers and the question of the necessity of insurance coverage for GMO-farmers.

Perspectives

Currently the communication process is in progress in the region. Local actors stressed the necessity of further scientific assistance. A supportive tool for this in the future could be “Risk mapping” (Kropp, Beck & Engel 2007), an instrument for the visualisation of any communication processes. The tool allows for an internet based visualisation of risk related controversies as argumentation maps. It will be helpful for structuring the attitudes of the panellists and for the visualisation of the different attitudes. This will support one main aspect of the governance approach: a broader involvement of various regional and local actor groups (Assmuth, Hilden & Benighaus 2010).

For developing a complete set of rules for coexistence other national regulations, for example the Danish coexistence regulation, must also be analysed to improve the local approach in the Brandenburg region Märkisch-Oderland and to further discourse towards complex risk governance (De Marchi 2003).

References

- Assmuth T., Hildén M., Benighaus C. (2010) Integrated risk assessment and risk governance as socio-political phenomena: A synthetic view of challenges. *Science of the Total Environment*, 408(18): 3943–3953.
- Benz A. (Ed.) (2004) Governance. Regieren in komplexen Regelsystemen. Wiesbaden.
- BVL (2010) Standortregister. http://apps2.bvl.bund.de/stareg_web/showflaechen.do.
- De Marchi B. (2003) Risk governance Public participation and risk governance. *Science and Public Policy* 30: 171–176.
- European Community (2001) Directive/2001/18/EC of the European Parliament and of the Council. Official J EU Commun 2001/18/EC: 1–64.
- Kropp C., Beck G., Engel A. (2007) Risikokonflikte visualisiert. Ökologisches Wirtschaften 3/2007. München, Ökom Verlag.
- Mayring (2008) Qualitative Inhaltsanalyse. Grundlagen und Techniken. Weinheim, Beltz.
- MLUV Brandenburg (2008) Gentechnik in Brandenburg, Bericht 2008. Potsdam, MLUV.
- OECD (2003) Emerging risks in the 21st century: An agenda for action (Final report to the OECD futures project). Paris. OECD.
- Renn O., Keil F. (2008) Systemische Risiken: Versuch einer Charakterisierung. *GAIA* 17(4): 349–354.
- RRAC (2009) A practical Guide to Public Risk Communication
<http://www.berr.gov.uk/files/file51458.pdf>.
- Statistische Ämter des Bundes und der Länder (2009) Statistik lokal. Daten für die Gemeinden, kreisfreien Städte und Kreise Deutschlands. Düsseldorf, IT.NRW.