

SOIL Discuss., referee comment RC2
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Comment on soil-2021-16

Anonymous Referee #2

Referee comment on "Application of the governance disruptions framework to German agricultural soil policy" by Bartosz Bartkowski et al., SOIL Discuss., <https://doi.org/10.5194/soil-2021-16-RC2>, 2021

General comments

The article addresses a critical aspect of natural resource protection, the design and the implementation of public policies in the field of agricultural soil. Using the questions derived from the Governance Disruption Framework concept, the authors demonstrate the complexity of the interactions between different legislations and incentives/disincentives, and ultimately, the partial failure of soil protection instruments.

The article is based on very specific theoretical concepts (difficult to grasp for non-specialists) and a proper understanding of these concepts would require reading also the numerous publications cited (e.g. p. 111 so-called Tinbergen rule, p. 203-206 even if consulting the cited literature, it is not clear why organic fertilization may be detrimental to water quality). A more tangible approach, with examples, would increase the impact of the article.

From a pragmatic policy making point of view, the conclusions of the article (4. Lesson learned) do not sufficiently reflect the importance of the analysis performed and the recommendations lack relevance or are a little bit weak ("urgent need for more research").

A proposal would be to develop reflection/recommendations on how to include the following topics in policy frameworks, possibly with prioritization:

- **Monitoring.** The first question (target adequacy; specific environmental objectives, concrete indicators) clearly suggests the importance of setting targets and measuring

their achievement. Even if this point is obvious, it should be mentioned here.

- Behavioural changes. The original aspect of the GDF is to raise the importance of individual and societal behaviours for the implementation of conservation/protection measures of natural resources. This is now widely accepted in economics (behavioral economics), but has not been sufficiently taken into account in policy designing.
- Communication. The issue of (lack of) communication is well known, and also underlined by the authors (p. 387). The transfer of knowledge (i.e. of appropriate and comprehensible information between different levels and stakeholders) constitutes a major challenge and a critical phase in soil protection and policy design. It might be argued that this point is not sufficiently and explicitly addressed in the GDF.

Finally, an adaptation (and simplification) of the GDF to the field of soil legislation would be a valuable tool in the policymaking.

Specific comments

p. 192-193 SDG indicators: 15.3.1 Proportion of land that is degraded over total land area includes explicitly the soil organic carbon stock.

table 3 Possibly revise the table: cover crops (may) have an effect on CS, herbicides on BD

p. 359-361 As the § addresses the behavioural adequacy, "other motivational factors" should be more detailed.