

Dear Editor and reviewer,

thank you for the helpful and constructive comments. Below we respond to each comment while referring to the revised manuscript:

Comment	Response
it is not completely clear how they are combined (technically) [line 55]	Thank you for pointing this out! The combination is rather context-specific and qualitative; we've added a short explanation, so that the sentence now reads "Therefore, the benefit is in looking at all four of them together and exploring interlinkages (e.g. disruptions in one dimension that affect another dimension; or related disruptions across dimensions)." (lines 55–6 in the track-change document)
This also manifests itself in footnote 1 (p. 4): The footnote seems to be quite difficult to understand, if the potential reader is not so deep into the topic (relation between GDF and DPSIR model).	We have removed the reference to DPSIR in the footnote in order to avoid confusion.
The withdrawal of the Soil Framework Directive happened to be in May 2014, not in 2006 [line 25]. The reason for withdrawal (GER): claimed to be too expensive (but also: difficult situation in discussions on policy level/ with stakeholder groups (farmers` association)) [line 25f.].	Thank you! We've corrected the withdrawal year.
For considered soil functions (based on Techen and Helming 2017), maybe you could hint on the EU H2020 project Land Management Assessment Research Knowledge base (LANDMARK). LANDMARK's classification is quite similar (http://www.soilnavigator.eu/).	Thank you for this suggestion; we now refer to the LANDMARK approach in line 181, in the context of soil functions as defined in the BBodSchG.
Maybe, you could include further BONARES's outcomes when mentioning surveys on stakeholders' opinions and literature research on governance styles, i.e. Ledermüller/ Fick/ Jacobs 2021 and Marx/ Jacobs 2020	We added a reference to Marx & Jacobs in lines 186–7 as another example of target inadequacy.
The critique on the concept of 'Good agricultural practice' being imprecise, is certainly justified [line 60]. Maybe, you could also point out that result-based approaches do fit better to the EGD targets (and its sub-strategies) [line 63f.].	We added a reference to the EGD's call (formulated e.g. in the F2F strategy) for a more result-based approach in lines 64–5.
Similarly revealing is the classification of 'soft', informal instruments into the context of policy instruments and stakeholders' response [line 108/ 135]. What is missed	We added a brief reference to social influences in line 136.

though is that other motivational factors (e.g. comparison with the neighbour farmer) also play a role [line 360].	
Maybe, an outlook on reaching EGD/ EU FTF targets would be nice, i.e. If a better governance level would be reached (by the GDF tool), the results/ site-specific efforts of each farmer could be (more easily) assessed and CAP payments may be combined with these efforts for sustainable soil management on plot level in the nearer future.	Thank you for the suggestion; as we consider our analysis rather exploratory, we would prefer to not draw too strong policy-relevant conclusions, especially given that the EGD hasn't been the main focus on the analysis.
line 110: Delete the word 'which' and insert the word 'that'.	Done.
line 112: Delete the word 'that'.	Done.
line 176/ 187/ 300: Check punctuation in connection with footnotes.	Checked, it's all according to English punctuation norms (footnote after punctuation).
line 313/ Table 3: the values (x), x, ?, - and 0 seem to be difficult to reckon visually. If you choose '-' for a negative effect, a positive effect should be marked by '+' (and not by x). In Figure 1, colours are used, so I suggest using colours here as well to support your assessment.	Thank you for this suggestion! We changed "x" to "+" and added some minimal colour coding (green for +, light green for (+), orange for -); however, we are not sure whether this is in line with the journal graphical standards.
line 357/ 358: Which soil types do you mean? Soil types characterized by a high percentage of clay/ clayey soils? Which crops do you mean? Maize, winter wheat? (a short example each might be helpful)	We are not aware of any systematic investigations into this; our formulation is based on anecdotal evidence and reports from farmers. We therefore rephrased and now say "in many contexts", rather than "for many soil types and crops". Furthermore, we added a reference on the adoption of no-till practices in organic agriculture in Germany.
line 358: The expression 'not feasible' might be too strong. There are efforts on how to farm no-till without herbicide application, but farmers must be well educated/ have excellent knowledge to do this.	We rephrased as "currently not feasible".