

Interactive comment on “Ideas and perspectives: Synergies from co-deployment of negative emission technologies” by Thorben Amann and Jens Hartmann

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Dear reviewer, Thank you for a constructive and thoughtful review. We acknowledge your concerns and will incorporate all suggestions in the revision. We like to specifically address a few issues raised.

Reviewers comment

Our reply

C1

However, the manuscript is largely qualitative rather than quantitative, and seems to focus on soil and EW, whereas the title, and partially the abstract, implied a much broader review.

This point is well taken. The synergies mainly apply to soil-based NETs, maybe we can reflect this in the title. However, “soil-based NET” is not a term established as such in the community. About the qualitiveness: This is a good point. There is some data out there on the processes mentioned, however the framework of research is very often so far off the focus of our manuscript, that it would introduce a level of detail that is misleading for the purpose of this manuscript. We explicitly chose the format of a “perspectives piece” to identify the main important processes that need to be considered in future research on NETs and their combined effects. This should provide a guideline for projects to come. Yet, we try to be at least a little more specific in the discussion of the processes.

- P.3, line 26 mention for the first time dunite and basalt. Can the author specify why they choose these specific examples? References are reported but the reader is left wondering what’s special about these rocks;

We extended the text to explain the background and we will add some broader categories of rock geochemistry (see comment below) to be more general in our arguments.

- Figures 2-3 are interesting, but I am wondering about the overall availability of these resources. As an example, I am not sure about the relevance of komatiite. I understand this is an explicative diagram, but the context here is that of global-deployable technologies. I feel the text should explain better the

C2

abundance and distribution of some key resources, or at least provide relevant references/tabula data;

We will remove the very specific selection of rocks, which was chosen as available in the database. We generalized the data now, by distinguishing classes via SiO₂ content of volcanic and plutonic ultrabasic/basic/intermediate/acid rocks. This classification enables us to give a broader and more general overview of what to look for in a rock. Additionally, we add the rock types dunite and basalt as commonly discussed types for reference. A map with the global distribution of the distinguished classes will be provided in the supplement. As an example, basic volcanic rocks (this class contains basaltic rocks) covers about 3.5

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