

Dear Editor,

We would like to thank you for your work during the whole process of reviewing our article. We have performed all the recommendations you indicated in your response.

Thanks

David et al.

After receiving two largely positive reviews, the authors addressed the reviewers' concerns and suggestions in a comprehensive way. The paper now appears ready to move into a final editing stage to respond to the editor's remaining suggestions.

I have only one major suggestion, which is to bring the title more in line with the analysis. Something along the lines of

"Ocean alkalinity enhancement using sodium carbonate salts does not lead to measurable changes in Fe dynamics in a mesocosm experiment,"

We have changed the title to the recommended one.

Because the system has so much variability, and the possibility of contamination from various sources, I think the narrower title is more in line with the results and conclusions from the work.

And I make the following minor suggestions. Several of these are stylistic and aim to help improve the readability for greatest impact:

1) I am confused by this statement (Line 40), as the increase in pH is erased by the CDR, which is the ultimate goal of an OAE intervention. So I don't think successful CDR can be said to reverse ocean acidification.

> Moreover, the increased pH and carbonate ion concentration reverses ocean acidification due to the uptake of anthropogenic CO₂ from the atmosphere (Lenton et al., 2018).

You could simply eliminate the sentence, as it's not central to the paper, or better explain.

Done

Line 33 - eliminate the clause "is a negative emission technology (NET) that," as you only use the acronym NET once more in the paper (line 49, where it could easily be replaced with mCDR): Artificial Ocean Alkalinity Enhancement (OAE) can lead to the atmospheric carbon dioxide removal (CDR) by increasing the ocean carbon uptake and reversing ocean acidification (OA), favoring a higher ocean pH buffering capacity (Khesghi, 1995; Renforth and Henderson, 2017; Lenton et al., 2018).

Done

Line 89 - OAE is misspelled AOE. Also replace the comma with the word "or" here: Mg₂SiO₄, CaO

Done. We rechecked the whole document and found out one more misspelled OAE.

Line 259 = add clean to “trace metal clean”

Done