

Dear Dr. Jack Middelburg,

Thank you handling the edition of our manuscript to a success. We think that the manuscript has been greatly improved throughout the revision process. We also appreciate the considerable time you have taken to carefully read our manuscript. Thanks to that, we have corrected all the typos and references we previously missed. Below is a detailed description of the latest changes we implemented:

- P. 2, l. 16: correlation between heterotrophic bacterial productivity and N₂ fixation
Response: we implemented your suggestion and added the word “heterotrophic” to this line.

- P. 4, l. 10: NO₃ and PO₄ reach 2 and 0.1 microM, respectively.... (it appears that you have them swapped in the text when comparing with the figure, p. 5 information and my understanding of the system). Please check.
Response: thank you for noticing this typo, the values were swapped indeed. We corrected it.

- P.5 , l. 20, l. 23 and all through text: I propose to use the term non-N₂-fixing rather than non-fixing organisms/phytoplankton because phytoplankton fixes CO₂.
Response: we implemented this suggestion throughout the text and in the description of parameters in the tables.

- Check your reference list: e.g. Benavides et al. 2017 is not in it.
Response: thank you for pointing this out. We revised the reference list thoroughly for its completeness. References cited in the supplements are now also included in this list.

- P 10, l. 4 and all through: check the use of superscript/subscript with NO₃, PO₄
Response: Thank you for noticing this type. We checked the entire document and corrected it where necessary.

- P.16, l. 21: which are the typically available ones in ..
Response: the sentence was modified as suggested.

- P. 16, l. 22: try to avoid the word experimental testing in a modelling study. Why not use the word explorative or alike? Experimental testing should be reserved for real experiments not numerical experiments.
Response: We changed the word to “explorative” in this line and modified other similar instances throughout the text.

Best regards,

Angela Kuhn