

Ocean Sci. Discuss., author comment AC3
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Reply on RC1

Maike Iris Esther Scheffold and Inga Hense

Author comment on "There and back again, a journey of many pathways: conceptualising the marine organic carbon cycle" by Maike Iris Esther Scheffold and Inga Hense, Ocean Sci. Discuss., <https://doi.org/10.5194/os-2021-75-AC3>, 2021

We would like to thank referee 1 again for the constructive criticism. As some time has passed since our responses to referee 1, we would like to give a brief overview of the main changes we have made:

- We have added a new chain of reasoning to the introduction in order to improve the motivation of our research and the gap we are addressing. To this end, we have rewritten the entire introduction.
- In the main part - the results section - we improved the explanations based on the comments of referee 1 and 2 and increased consistency by, for example, adding an atmosphere space and using the same process terms in the text and the table.
- We put an application example at the centre of our discussion and translated a definition of the biological carbon pump into our concept so that readers can see what an application might look like. We rewrote the entire discussion and conclusion.