

Author's Response

Dear Dr. Gazeau and the *Biogeosciences* Editorial Team,

Thank you very much for accepting our revised manuscript for publication. We have carefully implemented all requested technical corrections and addressed your comments. In addition, we revised the figure and table captions to ensure that they are fully understandable without consulting the main text, including short explanations for all acronyms (e.g., DIC, TA, AOU).

We also updated the *Financial support* section to acknowledge additional funding from the Helmholtz Association EU Partnering project “*SEA-ReCap – Research capacity building for healthy, productive and resilient seas*” and the Helmholtz-Zentrum Hereon, alongside the CARBOSTORE project (BMBF, Grant Number 03F0875A). This ensures that all relevant funding sources are properly recognized.

We greatly appreciate your guidance and support during the review and revision process.

Kind regards,

Julia Meyer