

Dear Lennart:

Thank you for submitting this nice paper to Biogeosciences. I have read your revised version and I am happy to inform you that your paper is now accepted for publication in Biogeosciences.

While reading, I identified a few technical corrections, please implement these (if you agree) when uploading the final version.

- 1) Line 63: calcium and inorganic carbon
- 2) Line 191-199: please try to integrate these two paragraph. Sensitivities and ratios are calculated for the same conditions.
- 3) Line 206: Water-column carbonate chemistry..
- 4) Line 456: smaller than 20 nm

With best regards,

Jack Middelburg, Associate Editor Biogeosciences

RESPONSE to Jack's comments

Dear Jack,

thank you very much for editing this manuscript! I adopted all your suggestions except for point three. I cannot integrate these two sections because the conditions were not exactly the same. While $p\text{CO}_2$ increased for the ratio calculation, it was fixed to 400 μatm in the sensitivity analysis.

With best regards,
Lennart