

Suessle et al., 2026 – ‘Ocean alkalinity enhancement reduces silica ballasting during export due to amplified dissolution’

This is my second review of this manuscript, and as previously concluded, this study presents a very timely and relevant aspect of OAE research. I appreciate the time and effort the authors have put into revising the manuscript thoroughly and am pleased with edits made. Particularly, I appreciate the tightening and cleaner presentation of the statistical analysis and results.

I believe that this manuscript warrants publication, however, I would suggest three minor points to consider:

- (1) Lines 95-98: Although this is true, it would be good if the authors could elaborate on this a little further to give a more complete picture. What does trigger precipitation, and how could that alter carbon export pathways? I am missing some mechanistic links here, which are especially relevant in coastal OAE applications, where naturally high fluctuations of carbonate parameters are occurring. Right now, this statement seems a bit out-of-place, but its significance gets lost a bit. This line of argumentation should then also be picked up again in the discussion. How are biotic (established in this study) vs abiotic (alkalinity loss due to precipitation) factors acting on export efficiency, and how are the results of this study are situated in this context?
- (2) Line 107: (BSi:POC) POC was not yet defined. I suggest to introduce it earlier in the introduction rather than here to maintain the current read flow. Lines 63-65 might be a good place for this.
- (3) How confident are the authors that the filling and four days confinement have not altered the baseline measurements and subsequently might potentially have impacted biology? This would be rather important to consider when comparing observed post-OAE patterns to pre-treatment conditions. Please elaborate on this here and also shortly in the discussion.