

Dear Dr. Yool,

Thank you for your comments and we are glad that our contribution is being considered for publication in *Geoscientific Model Development*. Below we explain how we have addressed your points (quoted in italics).

*Line 115: "versions" should be "version"*

Done.

*Line 204: correct to "... from adjacent areas are characterised ..."*

Done.

*Line 369-370: amend to "A trait-based description of zooplankton can help in reducing model complexity ..."*

Done.

*Line 447: "my" should be "by"*

Done.

*Figure 1: I believe einsteins are abbreviated as "E" not "Ein"; also, mol photons are often preferred to einsteins*

We have now adopted "mol photons" throughout the manuscript.

*Figure 1: both leftmost panels are rather murky (e.g. coastlines are far less distinct than in the rightmost panels) – has something gone wrong?*

Thank you for pointing this out. We have revised the figure using a lighter color for land mass, which produces a clear coastline in all panels.

*Also, in the new text around trait-based zooplankton mentioned above (lines 369-376), there could be a little more clarity around why the trait-based approach "reduces complexity". Perhaps a bracketed remark along the lines of "(i.e. adds size-related functionality without the need for discretely parameterised zooplankton classes)" could be added to the end of the sentence on line 376. Might that help?*

Yes, indeed the suggested parenthetical sentence improves the clarity of our original statement. Thanks for your suggestion! We have added it to the latest version of the manuscript.