Dear Dr. Zhang,

We have now addressed the remaining technical corrections and resubmitted the paper. Please find our responses to Referee #3's suggestions below.

We would like to thank you again for handling this submission.

Kind regards,

Bartholomé Duboc and co-authors

Response to Report #1 (Referee #3) – Technical corrections

We would like to thank Referee #3 for their exhaustive and helpful review. We have replicated the Reviewer's comments below in blue and italics. Our responses to each of the comments are in black.Thank you for your time and expertise!

Figure 1: „[…] we show therefore interpolations (long dashed lines) over this time span."
The caption has been corrected.

Figure 2: I note that abbreviations differ between plot labels and figure caption (ΔTair vs. SAT and ΔTsst vs. SST); I suggest to harmonize terminology.

Indeed, we have now harmonized the terminology by keeping SST and SAT in both labels and caption.

Figure 6: Please make sure that the text or the caption conveys the meaning / origin of white-colored areas, in particular for some coastal regions and gateways. I assume there is a lack of data due to ocean bathymetry being lower than 250 m (e.g. Bering Strait) or specific regions not being actively simulated in the model (e.g. Caspian Sea), am I right?

The Reviewer is correct and we have amended the figure caption accordingly.

Line 214: observe the dot that jumped to the next page

We are not sure what the Reviewer is referring to here. We have double checked the revised manuscript and have not seen any displaced dot.

Figure 10 d: Should the axis label read „net freshwater budget" instead of „net water budget"?

The axis label has been fixed.

Figure A7: Please provide a scale for the vectors.
The vector scale has been added in all the subplots. We have also reduced the size of the arrows in the last two plots to make them easier to read.

Figure A8: Should „Full fields" be replaced by „Absolute values"?

No, the Reviewer is mistaken here, it should be "full fields".