Dear Prof. Dr. Mario Hoppema,

Please find the corrected MS of our study "Planktonic cnidarian responses to contrasting thermohaline and circulation seasonal scenarios in a tropical western boundary current system".

We sincerely appreciate the useful insights provided by you and Dr. Martin Vodopivec to improve our study. As detailed in the rebuttal letter below (responses in bold) we took into account all corrections and suggestions to prepare the revised version of our MS.

We hope that you will find that the revised manuscript adequately addressed all comments and that it now is suitable for publication in Ocean Science.

We thank you very much, in advance, for the attention you will grant to our re-submission.

Editor coments:

L54-55 „ However, the effects of the variability in western boundary currents intensity, intrusions of tropical water and river runoff over the continental shelf in zooplankton distribution and abundance are to be tested." Do you mean: "However, if the effects …"

R. No, we mean the effects are "still" to be tested. We corrected it.

L56 … westward flowing, central South Equatorial Current … (delete: of the)

R. We corrected it.

L58 … shallower mixed-layer leads to an increase of the nutrient input …

R. We corrected it.

L60 delete: relatively

R. We deleted it.

L60-61 I do not understand the second part of this sentence ("and it was for 60 instance related with increased production of zooplankton"), and how it relates to the first part. Please clarify.

R. We changed to "and it was also related with increased production of zooplankton, though bottom-up control effect".

Section 2.1 Please specify the salinity values you use in the paper: practical salinity or absolute salinity?

R. We specified it was practical salinity.

L89 for temperature use: 0.001 °C instead of 10-3

R. We corrected it.

L116 through instead of though

R. We corrected it.

L156 data during (typo)

R. We corrected it.

L319 "The oceanward flow free up space for the spread of coastal waters over the continental shelf …" It is not quite clear what is meant here. Please rephrase.

R. We changed to "The oceanward flow opens space over the continental shelf for the spread of coastal water, which also favors the uplift of deeper water masses".

L338 "the cline between …" What do you mean with cline? Nutricline, thermocline? Please modify.

R. We changed to "thermocline".

L344-345 “Anywise, the increase in primary production due changes in mixed layer generally reflects in coupled increase in secondary production of zooplankton” This sentence is not clear. Please rephrase.

R. We changed to “Anywise, the increase in primary production related to changes in mixed-layer depth typically reflects in increased production in the upper trophic chain in zooplankton, reflecting a bottom-up control”.

L361 delete: In conclusion,

R. We deleted it.

5. Conclusions: I would expect some word on the differences between spring and autumn.

R. We more specifically refer to spring and autumn differences.

Figure 1: Add a) and b) to the figure panels. Also: Please add all geographic names used in the text to the figure, for example, Pernambuco Plateau.

R. We included it.

Figure 2: Please explain what the dashed lines mean. Also: the current vectors are relatively small and it is hard to discern them. Would it be possible to make them clearer?

R. We explained the dashed lines are the boundaries between WBCS, transition zone and SECS. We reduced the number of arrows and made them thicker.

Figure 4: Please mention what the star in the different panels indicates

R. We included it in the caption.

Figure 5: Please mention what the star in the different panels indicates. Also, give the unit on the y-axis.

R. We included both in the caption.

Caption Figure 6: … of the water column in … (add: column)

R. We included it.

References

L406-409 What kind of publication is this? Report? Any more info on it?

R. It is a software manual (reference for the analysis).

L414 Clarke, K. R. and Gorley, R. N.: PRIMER 6 + PERMANOVA, 2006 What kind of publication is this? Any more info on it?

R. It is a software. We did not find how to cite it in the guidelines.

L423-424 Volume and pages should be: Arch. Fish. Mar. Res. 47(2/3), 1999, 5–24

R. We corrected it.

L484 Pages?

R. We included it.

L495 QGIS Development Team: QGIS Geographic Information System, 2022. What kind of publication is this? Any more info on it? Link? Access date?

R. It is a software. We did not find how to cite it in the guidelines.

L504 Volume and pages?

R. We included it.

Supplementary material: Please take all figures and tables together in one file and describe (give them captions) and explain. Please see the author instructions for Supplementary Material.

R. We did it except for Supplementary table A2, which is a large spreadsheet for data sharing.

Reviewer comments:

The authors have mostly modified the paper according to the comments and in my opinion it is now markedly easier to follow their reasoning.

R. Thanks.

I would also suggest moving the Figure S1 into the main body of the paper. I find it very informative.

R. We believe the manuscript is already quite long and including Fig. S1 in the main text would make it even longer. However, if mandatory, we may include it for the final version.

However, some things should still be corrected:

Abstract: The results of the study are valid for the western boundary system of tropical South Atlantic and not necessarily for all WBCS. This is nicely stated in the Conclusions section, but should be corrected in the abstract as well.

R. We changed it.

Figure 2: Adding the current speed to the plots has significantly improved their clarity, but the vectors are still to small to be visible. Especially on prints. I suggest reducing the number of arrows and increasing their thickness.

R. Thanks for the suggestion. We did it.

The number of digits/figures in presented values is still too large and makes a false impression of accuracy. Here is a short document about precision and suitable number of figures:

https://www2.chem21labs.com/labfiles/jhu_significant_figures.pdf – see point no. 9!

Also: https://faraday.physics.utoronto.ca/PVB/Harrison/ErrorAnalysis/SignificantFigures.html

This is one of the most basic principles in statistics! There are several instances throughout the manuscript and especially in the section 3.3 (but also e.g. Table S1 etc.) where the number of digits is much larger than the accuracy of the result would permit.

R. Along the whole manuscript (including section 3.3 we used 1 decimal digit for means and SD. In table S1 values were indeed with two decimal digits, we changed it in this new version.