

# ***Interactive comment on “Impacts of anthropogenic inputs on the hypoxia and oxygen dynamics in the Pearl River Estuary” by Bin Wang et al.***

## **Anonymous Referee #1**

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### **General Comments**

Congratulations for the research work, there is a large amount of work summarised in a clear and well structured document.

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### **Specific Comments**

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1. Page 4, Line 23: The description of the 1-D model does not refer to any other study, Does this mean that the model was developed for this research? Is there any reference for validating this 1-D model?
2. The configuration description of the 1-D model is quite small in contrast with the ones for the 3-D model and the water quality model.
3. Page 7, Lines 13 and 14: mention any quantitative description for the temperature and salinity validation as it is done for the tide.
4. Model Validation section: No validation mentioned of the 1-D model
5. Section 2.2: Are there any other hypoxia events reproduced by the model throughout the period Nov. 2005 to Dec. 2006, apart of the summer 2006? Are these events observed or not observed? Is the hypoxia event of summer 2006 the only event simulated by the model?
6. A map showing the location of the study area in a global context will be a great help for the reader which is not familiar with the study area.

## Technical Corrections

- Page 2, Line 17: Why the reference is made on Italic font (Diaz and Rosenberg)
- Not sure which the format for the references within brackets:  
Page 2 Lines 19 and 20  
Page 5 Line 19  
Page 6 Line 8
- Page 10, Line 8: where is the definition for **Cont**?  
I see there are the names for each simulations. Could be possible to mention this

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before start describing each of them? (The 7 simulations are named as ..... and summarized in table 1)

- Figure 1a [page 24]: It could be just the pdf copy, but the y-axis (latitude) top and bottom labels are missing a 2 (23.5 and 21.5)

## Suggestions

- Page 2, Line 13: Enhance instead of exaggerate
- Page 5, Line 8: There is a reference for the Mellor-Yamada model but not for the Smagorinsky-type formula. It should be a reference for each of them as they are in the same sentence (line).
- Page 7 Line 7: Could be possible to specify if the summer is on the north or south hemisphere? It is in the north hemisphere but the suggestion points to be specific as the moths to consider are not the same ones.
- Page 18, Line 4: anthropogenic perturbations instead of just perturbations

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Interactive comment on Biogeosciences Discuss., <https://doi.org/10.5194/bg-2018-134>, 2018.

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