For research article

Response to Reviewer 1 Comments

1. Summary

Thanks for your constructive advice. Please find the detailed responses below and the corresponding revisions/corrections in track changes in the re-submitted files.

2. Questions for General Evaluation	**Reviewer's Evaluation**	**Response and Revisions**
Does the introduction provide sufficient background and include all relevant references?	Yes	
Are all the cited references relevant to the research?	Yes	
Is the research design appropriate?	Yes	
Are the methods adequately described?	Can be improved	
Are the results clearly presented?	Can be improved	
Are the conclusions supported by the results?	Yes	

3. Point-by-point response to Comments and Suggestions for Authors

Comments 1: *First, in the abstract it was reported that modelling was performed under various scenarios. Maybe it is better to define briefly in the abstract what are these scenarios and then you can explain better in material and methods.*

Response 1: Thank you for pointing this out. We agree with this comment. In the latest version of our manuscript, we added expression to briefly define these scenarios in the abstract, please see L16-19:
"This study developed a 3D wave-current-sediment numerical model for JC based on the Finite Volume Coastal Ocean Model (FVCOM) to investigate the sediment dynamic response to TCs under various scenarios, such as different tracks and intensities of TCs, and tidal conditions."

Comments 2: *Second, you must define the tidal conditions existing in your study areas (like macrotidal, semidiurnal, amplitude, etc.). This is important to discuss the increase of water level due to the occurrence of typhoons during spring tides.*

Response 2: Agree. We have inserted the tidal conditions of the study area in chapter 2 to emphasize this point, please see L104-105: "The hydrodynamics in this region is primarily

governed by semidiurnal tides, with large tidal range which can reach up to 7m."

4. Response to Comments on the Quality of English Language
None.

5. Additional clarifications
Additionally, we have accepted the majority of your comments and revisions in the manuscript and we hope the revised version can meet your approval.