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Natural Hazards and Earth System Sciences
Discussions

Interactive comment on "Numerical Simulations of the 2004 Indian Ocean Tsunami Deposits Thicknesses and Emplacements" *by* Syamsidik et al.

Anonymous Referee #3

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The selected four areas in this study are not interfered by human, which is a reasonable criteria after more than a decade. However, the author mentioned that several prior studies have been conducted in the general study area. Apart from these four areas, is there any other conserved areas which can represent obvious coastal features, such as plain and ria? What did you find out during the area survey before the beginning of this study?

For numerical simulation, what if the author use only Delft3D for both hydrodynamic and morphodynamic models? I don't think that the multi-fault scenario is a reasonable reason. In addition, why don't the author perform COMCOT with NSWEs for layers 1

to 3? Please clarify more on this point. What is a novelty in this paper for numerical modeling?

The author verified tsunami inundation area from numerical simulations with satellite images. Please provide more explanation and clarification for the verification results.

Where is the location of boundary flow input in Figure 12?

I feel that the discussion part should be limitation of this study. Please clarify this.

In the conclusion part, the author mentioned that this coupling method of COMCOT and Delft3D provide a better understanding. How can the author conclude this? The method would be able to repeat sediment transport in these study areas. Lastly, what is the main benefit or contribution of this study?

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