

Interactive comment on “La Palma landslide tsunami: computation of the tsunami source with a calibrated multi-fluid Navier–Stokes model and wave impact assessment with propagation models of different types” by Stéphane Abadie et al.

Anonymous Referee #2

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Overall Assessment: The study is an important contribution to assessing the tsunami hazard to the coasts of countries exposed to the potential tsunami from the collapse of the Cumbre Vieja volcano at La Palma island. The study is not just useful for the scientific community but also to disaster managers of those countries so as to better prepare for any eventuality. I would like to recommend this manuscript provided the author addresses the following comments.

Comments: Pages 1-3: Section 1 on introduction should also mention modelling studies related to the Storegga slide event and anak Krakatau December 2018 event. More-

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over, an index map should also be provided showing the location of Cumbre Vieja volcano with reference to the potential areas that may be exposed to the ensuing tsunami in case of collapse. The index map should also show zoom in regions that are being analysed in the paper.

Page 5: What are the reasons for using THETIS over other available models in Section 2.2?

Pages 3-9: All the models discussed share the same basic equations, differences between those models must be presented in one single section. These differences may be with respect to assumptions, limitations or the numerical methods used. No need to show the equations.

Pages 3-9: Following section 2.3 on models used for long distance propagation, a separate section on the DEM should be provided. Also, figure showing elevations of the computational region must be provided. A sub-section on the grids utilised in each of the models can then be covered in this section.

Page 15 line 27: Limitation and assumptions of the current study should be discussed in this study.

Page 16: Conclusion should discuss steps that can be considered for improvement in better understanding the tsunami hazard.

Figures 8 and 9 are hard to follow especially in terms of location and orientation of slide.

Figure 18 and 19: fonts are not clear.

Interactive comment on Nat. Hazards Earth Syst. Sci. Discuss., <https://doi.org/10.5194/nhess-2019-225>, 2019.

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