Interactive comment on "Assessment of the 1783 Scilla landslide-tsunami effects on Calabria and Sicily coasts through numerical modeling" *by* Filippo Zaniboni et al.

Anonymous Referee #3

Received and published: 3 June 2019

This manuscript describes new analysis of previous studied 1783 Scilla landslide. The analysis in this paper is focused on the inundation of the generated tsunami in the areas close to the landslide. It also includes a reconstruction of the topography to fulfil the historical observations.

The paper is very interesting, and I liked the open and transparent way the results are presented. Good and clear figures. I have suggested minor revision with some suggestions to improvements below.

Main comments:

1) Discussion of results of simulations on Grid2. Line 16++ on page10: Looking at the

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Discussion paper

maximum surface elevations of Fig. 5, the main argument for not achieving observed runup at location 5 and 8 is the resolution of the grid. Why not perform grid refinement tests? I guess that the resolution is high enough for propagation in the deepest part of the strait. 0.3 m before runup cannot give 2 and 3.2 m runup.

2) What is the original resolution of the data SRTM and GEBCO used in this paper

3) Grid refinement tests – should be shown or at least referred to for all grids (not only the 50 m grid, but in sea and on land for 10 m grid)

Minor comments

1) Table 1 – must have a ref. to Fig 2

2) Line 1 page 7: what is "cellular automata"

3) L5 p7: check super scripts: m3->mˆ3, m2->mˆ2 etc. Check entire paper

4) L8 p7 vs L18 p7. Inconsistent use of "million" and "M". Check entire paper

5) Fig 3: a vertical line at shoreline will help reading the figure. Include also the location of "blocky deposit", not only simulated deposits

6) Fig 3: Use of only end-paranteses for dividing the text for different panels. I think it is better to use colon (Check rest of paper)

7) L8 p8: Higher grid resolution give more accurate results must be more discussed. Resolution of grids and data, stability etc.

8) L14 p9: the sentence starting with "The picture of . . ." must be revised – I could not understand what was meant here

9) Chap 5.1 – I think some mariograms for 3-4 locations also could be fine for better understand the wave pattern

10) Fig 6: include also depth toward location 5 and 8.

11) L19 p 11: what is meant by "this zone"?

12) L21 p11. Revise sentence "If in Calabria. . .". Show the lowland of Capo Peloro in a map?

13) L18 p13: What is meant by (#1), similar L32 p18 (#2). Is it "Grid 2"?

14) Fig. 11 upper panel. For better comparison to Fig 8, use same scales!

15) L12-14 p18: Check sentence

16) L30 p18: "inundation does not fit observations"??? See L12 p18 and bulletpoint at L28 p19 and elsewhere where you have concluded that the simulations is a good reconstructions.

17) L6 p19: "basing" use based instead?

18) L12 p19. What is meant by "better resolution" – finer grid or higher resolution of the data

Interactive comment on Nat. Hazards Earth Syst. Sci. Discuss., https://doi.org/10.5194/nhess-2019-94, 2019.