

Dear Editorial Board,

Please find enclosed the revised version of our manuscript, "Is higher resolution always better? A comparison of open-access DEMs for optimized Slope Unit delineation and regional landslide prediction"

We sincerely appreciate the constructive feedback provided by the reviewers. We have carefully addressed all comments and incorporated the necessary revisions into the manuscript. We hope that any previously unclear points have now been clarified.

Below, we provide specific responses to the first and second reviewers, including detailed replies to each of their suggestions. If deemed relevant, we kindly ask you to forward these responses to them.

We are confident that these improvements have enhanced our work to meet the expected standards, and we sincerely hope it will now be favourably considered for publication.

Please do not hesitate to contact me for any further information or queries regarding the manuscript.

I look forward to hearing from you soon.

Sincerely,  
Giacomo Titti

## **Reviewer#2**

**I appreciated how Authors addressed all comments of reviewers. Basically, the manuscript was improved in terms of contents, figures and tables. Thus, I consider it as ready for a publication on Natural Hazards and Earth System Sciences. However, I just suggest: 1) to check for some typos and 2) to improve a bit more the contents and the setting of some figures. Specific comments and suggestions are detailed as follows, starting from those of the previous review's report:**

*Thank you for your comments and suggestions. We appreciate the time and changes you have advised for this manuscript. We have tried our best to integrate your comments. They are highlighted in blue in the manuscript. Furthermore, we have responded to specific comments below. Most of the changes related to the figures are not visible in the track changes, please consider that we updated, according to the reviewers comments, the figures: 1,8,9,10,11,13*

**Lines 100-110: Check and revise the sentences for clarity and possible typos;**

*We revised in the entire text the typos and clarified the sentences where required by the reviewer*

**Line 130: Consider to split the sentence by using a dot and not a colon;**

*We revised the sentence as suggested by the reviewer*

**Figure 1: this figure could be improved: 1) Consider to improve the symbology on the map. Actually, it is very difficult to analyse some information in the map as reported in the legend (e.g. tectonic features, rivers and so on...); 2) The text is unreadable. I suggest to increase and/or add more information which were reported in the section Study area; 3) Consider to revise the frame of AOIb indicated in the figure. Basically, the study area b is just where there is the hillshaded dem in background. Thus, Authors could consider only it in the frame without the surrounding areas; 4) Consider to set a bit of transparency to the polygons of the landslide inventory. This could help readers to merge information about morphological setting and slope instabilities;**

*We updated figure 1 with all the suggestions of the reviewer. We increased the text, updated the symbols, updated the zoom figure. The figure is now more clear.*

**Figure 8: I suggest to move the scale "on the sea", thus increasing a bit more the size of the text of the legend;**

*The scale has been moved to the sea*

**Figure 9: consider to remove the external boundary of frames;**

*Unfortunately we cannot remove the frame, otherwise the scale of the axis will be not visible anymore*

**Figures 10 and 13: Consider to increase a bit more the size of the text. I suggest to give a bit of transparency to the legend background, thus allowing the understanding of the information there;**

*We updated figure 10, 13 and in addition 11 according to the suggestion of the reviewer*