

Nat. Hazards Earth Syst. Sci. Discuss., referee comment RC1
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Comment on nhess-2021-334

Anonymous Referee #1

Referee comment on "Terrain visibility impact on the preparation of landslide inventories: a practical example in Darjeeling district (India)" by Txomin Bornaetxea et al., Nat. Hazards Earth Syst. Sci. Discuss., <https://doi.org/10.5194/nhess-2021-334-RC1>, 2021

COMMENTS TO THE AUTHORS

Title: Terrain visibility impact on the preparation of landslide inventories:
some practical cases

General comments:

This manuscript analysis effects of a visibility of the territory on the quality of landslide inventories. The topic is within the scope of the journal NHESS, important and of scientific interest. The authors provide a review of the literature, including a large number of references. The purpose of the paper is to compare four landslide inventories prepared using different approaches in two study areas of Spain and India. My comment: maybe it would be more correct to compare different methods of landslide inventory for the same area. In other words, you probably need the same number and types of inventories for each of the study regions to compare. My specific comments to the authors are shown below.

Specific comments:

1) The structure of the manuscript is complicated; separate sections contain repeating information. I recommend reorganizing the manuscript as follows: Introduction; Study area; Materials and Methods; Results; Discussion; Conclusion.

2) Sec. 2 Rationale is a part of the literature review and should be combined with the Introduction; repeated sentences in both sections such as, for example, lines 28-30 and 54-57, lines 25 and 64-65, lines 37-38 and 112-114 should be merged / removed.

3) Sec. 3, 5 and 6 should be combined in one Section Materials and Methods (you can divide it into subsections if necessary) and reduced by removing repeated phrases. All the results obtained in the study should be collected in the Results Section and discussed in the Discussion. You can also combine Results with Discussion.

4) Line 123 – Please decipher the abbreviation DTM at the first mention.

5) Line 170 – Figure 2: In the Figure caption, please start with the description of Fig. 2a, and then of 2b (and not vice versa).

6) Fig.2a - On the map, the roads are shown in black, while in the legend they are shown in gray. Please make these designations the same color.

7) Figure 9 is unclear and needs explanations. What is “the landslide size central value”? What is “the median value”? Are these the same terms? What do the dotted lines and horizontal bars mean in the Figure?

8) Line 292 – “Landslides in class 1 are significantly smaller than those included in the other classes” – Why? How can you explain this findings?

9) Lines 293-294 – “Furthermore, the landslide size central value in these two inventories tends to increase with the decrease of the visibility class, while the maximum variation of the median is 188% and 2000% respectively.” I cannot understand this sentence. Please rephrase. Percentage is a fraction of 100. As far as I understand, it cannot be 188 and 2000.

10) Figure 10 – The caption does not match the picture. “The values above each column signify the absolute number of landslides in each visibility class.” - There are no columns in the Figure, no numbers above them.

11) Lines 334-338 - This is a fairly obvious conclusion, understandable initially and without the use of complex mathematical methods.

I believe that the main conclusion from this study may be that the compilation of a landslide inventory requires a combination of both types of methods: remote sensing and field surveys.

