

Interactive comment on “Field-based landslide susceptibility assessment in a data-scarce environment: the populated areas of the Rwenzori Mountains” by Liesbet Jacobs et al.

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General comments: Paper summarized objectives, methodology and results are already well commented by the first reviewer, therefore I will skip this part in my comments. Likewise, the manuscript is well structured and written, and figures and tables are quite illustrative. The manuscript is considered valuable for publication with minor revision.

Specific comments: Most positive comments and suggestions by the first reviewer are also subscribed here. Additional comments follow. 1. In the paper title, the term “Field-based...” does not appear to properly reflect the contents of the paper. In addition,

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field investigations are mainly dealt with in previous work by the main author. Therefore I suggest to change this somehow misleading title. 2. Page 2, lines 12-13: Do you mean reliable landslide susceptibility “models” or rather “data” or “assessments”? 3. Page 5, line 10: A reference should be provided for TanDEM-X DEM as done for the other DEMs. 4. Page 5, lines 6-18: Although four DEM resolutions are said to be used, the last sentence appears to indicate six resolutions. Please clarify. Also, adding a table would improve the readability of this part. 5. Page 9, lines 20-21: Even though the focus of this part is placed on risk hotspots not on risk assessment, the census data used (from 2002) appears quite outdated considering that a more recent census of 2014 provisionally reports an outstanding 43% increase of total population in the country in that period. 6. Page 12, line 27 – Page. 13, line 2: Can the findings from DEMs quality comparison be extrapolated to non-tropical regions, i.e. to areas where more cloud-free ASTER imagery can be acquired and thus better ASTER-based DEM model can be constructed (e.g. to Europe)? Please explain. 7. Page 15, line 24 (and page 9, line 23): Within-parish distribution of population densities could be somehow determined through mapping built-up areas using optical satellite imagery, thus providing a better identification of landslide risk hotspots when combined with landslide susceptibility levels. Please consider this in the revision. 8. Page 18, lines 8-9: It would be helpful to explain possible DEM mosaicking-derived issues (e.g. boundary effects) and the solutions implemented if any. 9. Page 26: In Figure 3 caption it would be helpful to refer to table 2. 10. Page 30: Table 3: Please clarify why there is no lithological variable called gneiss, despite it is reported in the text to be the reference lithology in the region. Additionally, do you mean by “quarts” “quartzites”? Please clarify or correct. 11. Page 31: Table 4: Same as previous comment.

Technical corrections: Page 1, line 19: I suggest to remove comma. Page 1, line 20: “the” must be removed. Page 1, line 24: Space is needed between 10 and m for consistency throughout the manuscript. Page 3 Line 28: I suggest to remove “depth”. Page 4, line 16: Add comma after “al.” Page 5, line 21: Add “s” to resolution. Page 7, line 1: The citation “Yilmaz et al., 2010” should be “Yilmaz, 2010”. Page 7, line

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19: The citation “Dai et al., 2003” should be “Dai and Lee, 2003”. Page 7, line 26: Please insert “of” between “use” and “elevation”. Page 8, line 2: I suggest to delete this sentence, as it is already more appropriately included two sentences afterwards. Page 8, line 26: The initial letter of tanDEM-X should be capitalized. Page 10, line 14: TanDEMx20 should be all capitalized according to the notation previously established by the authors. Page 10, line 19: Please pluralize “variant”. Page 11, line 4: Please replace “this” with “these”. Page 12, lines 21-25: Please insert some comma in this very long sentence. Page 16, line 22: Change Massonet to Massonnet. Also change “&” to “and”. In addition, the citation “Hannsen et al., 2001” does not exist in references, Please correct spelling or references. Page 17, lines 7-8: Please use same symbols noting phase as before. Should they mean something else please explain them Page 17, line 12: Change Massonet to Massonnet. Page 17, lines 12-13: Please explain also the θ meaning. Page 17, line 26: Add a space before “values”. Page 18, line 6: Change “this” to “these”. Page 19, lines 8-9: Please provide EGU abstract number. Page 21, line 5: Change Switzerland to Switzerland. Page 21, lines 19-21: Please complete reference. Page 22, lines 20-21: Please complete reference. Page 23, line 3: Please correct authors style.

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