

Interactive comment on “Assessing residential buildings value in Spain for risk analyses. Application to the landslide hazard in the Autonomous Community of Valencia” by I. Cantarino et al.

Anonymous Referee #3

Received and published: 31 August 2014

1. Does the paper address relevant scientific and/or technical questions within the scope of NHESS?

The (economic) assessment of natural hazards on the built environment is definitely an important topic for (natural) risk management. This question is not limited to landslide and potentially concerns any hazardous situation.

2. Does the paper present new data and/or novel concepts, ideas, tools, methods or results?

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The paper is based on widely disseminated concepts, methods and tools. Several European FP7 research projects and PhD works deal with similar objectives.

3. Are these up to international standards?

Some of these works provide results that are more pertinent than the results presented in this paper. A more thorough literature review would improve the paper.

4. Are the scientific methods and assumptions valid and outlined clearly?

As with other similar works, “official public sources” (page 3637) (demographic, land use, ...) are cross-analysed. Strong limitations (that are common in academic works in this field) are mentioned in the paper: exclusion of non-residential building stock, restriction to building damages, exclusion of other direct damages, exclusion of intangible damages, reluctance to value human losses.

5. Are the results sufficient to support the interpretations and the conclusions?

Consequences of these limitations are unfortunately not discussed in chapter 5 (discussion). This would represent an added value of the paper.

6. Does the author reach substantial conclusions?

Discussion on the above mentioned limitations would have probably influenced the conclusions. The reader of the paper would for instance be interested in knowing what the authors precisely know about the “land use, hazard and property market” in the Valencia area. This would help to better appreciate the declared pertinence of presented results.

7. Is the description of the data used, the methods used, the experiments and calculations made, and the results obtained sufficiently complete and accurate to allow their reproduction by fellow scientists (traceability of results)?

The core of the paper is the description of a method to evaluate and map floor surfaces of the main categories of residential buildings. This method is not original as such and

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can be reproduced as soon as statistical data are available.

8. Does the title clearly and unambiguously reflect the contents of the paper?

The title of the paper partly reflects the core of the paper. Floor surfaces are adequately calculated but the (economic) value assessment is not clear in its purpose and method. Clarification would be needed concerning terminology: "value of residential buildings", "reconstruction cost value", "selling prices", "financial value", "market value", "economic value".

9. Does the abstract provide a concise, complete and unambiguous summary of the work done and the results obtained?

The abstract reflects the structure of the paper and also reveals one of its strong weaknesses: "if hazard maps and risk assessment methods are available". In the absence of valid risk assessment methods, results lose their interest.

10. Are the title and the abstract pertinent, and easy to understand to a wide and diversified audience?

See above

11. Are mathematical formulae, symbols, abbreviations and units correctly defined and used? If the formulae, symbols or abbreviations are numerous, are there tables or appendixes listing them?

Page 3620: Equation (1) is missing in the manuscript.(must be a misprint) Page 3626: NPj in Eq (2) is not defined

12. Is the size, quality and readability of each figure adequate to the type and quantity of data presented?

Fonts of legends of figure 1 could be bigger.

13. Does the author give proper credit to previous and/or related work, and does he/she

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indicate clearly his/her own contribution?

The floor surface assessment is not original as such. The "value" assessment needs to be further clarified (for instance by a review of similar studies) The "hazard" (p. 3632) and "vulnerability" (p. 3633) sections cannot be accepted as such. Further considerations on vulnerability factors, damage mechanisms in the chosen landslide situation should for instance be proposed.

14. Are the number and quality of the references appropriate?

Further considerations will allow quoting more references.

15. Are the references accessible by fellow scientists?

Some old references but most are accessible (or can be identified) through internet

16. Is the overall presentation well structured, clear and easy to understand by a wide and general audience?

See above comments.

17. Is the length of the paper adequate, too long or too short?

18. Is there any part of the paper (title, abstract, main text, formulae, symbols, figures and their captions, tables, list of references, appendixes) that needs to be clarified, reduced, added, combined, or eliminated?

See above and below comments.

19. Is the technical language precise and understandable by fellow scientists?

The "hazard" (p. 3632) and "vulnerability" (p. 3633) sections need strong revision.

20. Is the English language of good quality, fluent, simple and easy to read and understand by a wide and diversified audience?

A final revision by a native English speaker would improve paper but it is not its main

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weakness.

21. Is the amount and quality of supplementary material (if any) appropriate?

Not relevant

Interactive comment on *Nat. Hazards Earth Syst. Sci. Discuss.*, 2, 3615, 2014.

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