

Interactive comment on “A multi-hazard risk prioritization framework for cultural heritage assets” by Giacomo Sevieri et al.

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The manuscript presents a very interesting multi-level procedure to prioritise disaster risk reduction measures for cultural heritage assets, considering multiple hazards. The manuscript is well organised and written, allowing a good understanding of the proposed framework. Just some typos can be detected in some instances, which can be easily removed. The methodology presented in this paper has different potentialities; for instance, the quantitative consideration of possible construction deficiencies at multiple scales is strongly appreciated because it may have a significant impact on relative risk estimates used in the prioritization scheme. Therefore, this reviewer recommends a minor revision of the manuscript according to the comments provided below.

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1) The CHeRiSH RVS form illustrated in Fig. 2 includes the possible description of the “Opening Layout” (“Building Information” module), which may play a key role in the in-plane response of load-bearing URM walls to horizontal seismic actions. It seems that horizontal misalignment of openings at given storeys is not taken into account. Please comment on this and eventually include this feature in the form.

2) What is the meaning of “Frame masonry” and “Reinforced” in the section “Type of Lateral Load Resisting System” of the “Structural Information” module? Please make a double check of the taxonomy reported therein; it seems that the “Moment Resisting Frame System” type is not mentioned.

3) Did the authors evaluate the possibility of including adobe masonry in the section “Masonry Type” of the “Masonry” module? Regardless of the actual use of adobe masonry in the Philippines, the RVS form could include it to allow the implementation of CHeRiSH procedure in other countries.

4) Line 384: I suggest replacing “Wall-to-Diaphragm connection” by “Floor-to-Wall connection” because existing floors, particularly in old masonry buildings, do not necessarily develop a diaphragmatic action in the global seismic response. This also applies, for instance, in Fig. 4.

5) Table 3: It appears that the façade regularity depends on the opening layout, but they are separately scored. Is there any overlapping between scores? Please comment in the text.

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