

## ***Interactive comment on “Seismic vulnerability assessment of school buildings in Tehran city based on AHP and GIS” by M. Panahi et al.***

### **Anonymous Referee #1**

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In this paper the authors describe the results of a vulnerability assessment for school buildings in the city of Tehran, carried out by taking into account both the geotechnical and the buildings structural vulnerability. The paper is interesting and well organized, and it needs some minor changes:

- Some sentences are not clear and the grammar is not very good. So I advise the author to have the paper corrected and improved by a mother tongue. - As the studied area includes also a few foothills, the authors may carry out an analysis of the susceptibility to seismic-induced landslides for the hilly zones in the studied area. The method presented by Rapolla et al. (2010, 2012), Paoletti (2012) and Paoletti et al. (2013), for both regional and medium scale studies, is quick and easy to apply and I see that the authors have already all the information that is needed to make such a susceptibility

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assessment. Thus, I would encourage the authors to include such analysis in their paper, or to report about it in a separate, more specific, paper. Anyway I suggest to briefly discuss the problem of earthquake-induced landslides in the Introduction, making reference to the cited papers and to other relevant literature. - The words "Year of Construction" in Section 4.2.2 and in Figure 4(b) should be replaced by "Age of Construction".

- Fig. 7: Change the color of dots. They can't be seen when overlapped to red areas.

- Fig. 9: Please explain what the 77% in the cake diagram represents.

### References:

Paoletti V., 2012: Remarks on Factors influencing Shear Wave Velocities and their role in evaluating Susceptibilities to Earthquake-triggered Slope Instability: case study for the Campania area (Italy). *Natural Hazards and Earth System Sciences*, 12, 2147–2158. doi:10.5194/nhess-12-2147-2012. Paoletti V., Tarallo D., Matano F., Rapolla A., 2013: Level-2 Susceptibility Zonation of Seismo-induced landslides: an application to the Sannio-Irpinia area, Southern Italy. *Physics and Chemistry of the Earth*, 63, 147–159, DOI 10.1016/j.pce.2013.02.002 Rapolla A., Di Nocera S., Matano F., Paoletti V., Tarallo D., 2012: Regional zonation on seismic-induced landslide susceptibility: application of a new procedure to Campania, Southern Italy, *Natural Hazards*, 61, 115–126. DOI: 10.1007/s11069-011-9790-z. Rapolla A., Paoletti V., Secomandi M., 2010: Seismically-induced landslide susceptibility evaluation: application of a new procedure to the island of Ischia, Campania Region, Southern Italy, *Engineering Geology*, 114, 10–25.

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