

Interactive comment on “Hazard impact on settlements: the role of urban and structural morphology” by M. Bostenaru Dan and I. Armas

Anonymous Referee #2

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The authors develop a multi-criteria decision system to assess the benefits and costs of earthquake resistant retrofitting for architectural-heritage-buildings. Starting from a conceptual framework, a methodology is proposed based on the comparison of the seismic retrofitting costs with the rebuilding costs of the buildings. The objective is the reduction of the seismic vulnerability of the urban area. References are made to relevant works in the field of risk reduction like the EC projects RISK-UE and DESURBS and to other important works in this field. The methodology is applied to the evaluation of interwar buildings of Bucharest, Romania, a city with usable examples of seismic damage of buildings. This is a relevant topic for seismic disaster risk reduction. The article is oriented towards seismic disaster risk reduction, even if the introduction and the conceptual framework keep their validity for other hazards.

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The case study is based on a high number of well-studied and documented interwar buildings belonging to the historic center of Bucharest. In their discussion of the results, the authors aim at improving the quality of life of citizens by showing how to anticipate crisis situations, by reducing seismic vulnerability of buildings as well as the urban vulnerability, considering urban interdependencies and prioritizing investment in retrofitting. I believe that the results of this article are valuable and useful for scientists and decision makers. I agree with the improvements already made by the authors to the manuscript, including the review of English. Some other suggestions would be:

- Insist on the objective of the seismic disaster risk reduction in the Abstract, in the Introduction and, if possible, in the Title of the article.
- I believe that “hazard impact” is similar to “expected loss” or “expected risk”, concepts which can be used alternatively if desired.

Please also note the supplement to this comment:

<http://www.nat-hazards-earth-syst-sci-discuss.net/3/C1060/2015/nhessd-3-C1060-2015-supplement.pdf>

Interactive comment on Nat. Hazards Earth Syst. Sci. Discuss., 3, 3287, 2015.

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