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Natural Hazards and Earth System Sciences
Discussions

Interactive comment on "Network-risk: an open GIS toolbox for estimating the implications of transportation network damage due to natural hazards, tested for Bucharest, Romania" *by* Dragos Toma-Danila et al.

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1. General comments: the authors are presenting an approach which might have a consistent application (not only for Romania, but worldwide) in terms of exposure/vulnerability/risk analysis. Moreover, there are numerous stakeholders which may show practical interest in this application, both coming from the prevention/preparedness or response/recovery parts of the risk management spectrum. The manuscript follows a rather clear and logic structure. There are consistent chapters devoted to methodology, results but not so much discussions, overall witnessing a good

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Discussion paper

knowledge of the authors in both theoretical and applied issues. The manuscript is written in good English (sometimes with long sentences) and the graphic part is (mostly) clear and strongly backs-up the written text. 2. Specific comments: to our opinion, the structure of the manuscript could be improved by rearranging the text according to the chapters. Consistent paragraphs in the Results chapter (e.g. those following line 250) are more fit to the Methodology chapter; meanwhile, at Results there are considerations which we find more suitable for the description of the study area (see Fig.6). There are some references which deserves an update (some 10-15 years old; see lines 26, 58, 82, 152), since in the recent years, similar applications have been developed (see rupok.cz). In our opinion, a consistent part of the discussions should be devoted to the following issue: how useful is such an application and which is its effectiveness? As mentioned by the authors, it is important not for the scientists, but a more consistent part should be devoted to: which is the main outcome - improved exposure analysis or improved vulnerability assessment; how it might improve the cost-benefit analysis if it addresses risk evaluation (as written in the abstract); which is its main applicability - prevention or response (since based on this, different stakeholders should be interested); was any feed-back requested in this respect? In the mean time, the authors are mentioning numerous uncertainties behind such an approach, which brought in the same context with its high applicability, deserve a larger explanation which could rank its effectiveness. 3. Technical corrections: - the graphic part may be improved by replacing some of the written names: Fig.6 - better if the names are in the legend, since on the map they look rather general. - lines 110-111: difficult to understand, is there something missing? "... to be considered" maybe? - line 177: already mentioned; - line 223: an explanation of the statement "very well updated and representative" is needed; - there are names which sometimes are in English, sometimes in Romanian (e.g. Piata Universitatii vs. University Square); they should all follow the same writing.

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