

## ***Interactive comment on “The spatial dimension in the assessment of socio-economic vulnerability challenges for an application on an urban scale, a systematic review” by Diana Contreras and Alondra Chamorro***

**Anonymous Referee #2**

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Comments This is an important paper to reflect about the current stance of SV research as it is a rare systematic review covering a decade and the period of 2008-2018. The focus is on social and economic aspects of SV indices and their relation to spatial aspects, specifically.

The findings are based upon a systematic selection of studies, yet are also facing certain limitations, obviously, when describing numbers of findings according to countries or even continents, based on a total number of 21 papers only. Shortcomings and guidance for fellow researchers should be added such as the process of selec-

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tion these papers (why those keywords were selected and others deselected), certain countries and languages that might be overlooked, grey literature and their importance for SV publications such as global or country wise indicator sets, EU is just an example, where many more studies might be found than just within journal papers published on Clarivate Analytics. A discussion section describing those shortcomings would balance out the impression conveyed by this paper that the charts and tables represent world rankings.

Certain older literature might be interesting to add that were dealing with spatial aspects of indicators such as King 2001. The discussion of spatial aspects could also include literature on known effects of spatial indicators per se - for example, within the literature on social-ecological systems that is mostly absent in this selection, but that does deal with socio-economic components of vulnerability. Scale discussions, effects such as the Modifiable Area Unit Problem, ecological fallacy, could be mentioned - even their absence in the literature cited could be of interest. It could also be cautioned more explicitly that while many aspects such as Moran I tests are not mentioned within the journal papers selected does not mean they're not treated by their studies. Often, more technical analyses in GIS such spatial autocorrelation tests are subject to more technical chapters or even shifted into the appendices within project reports or PhD theses.

The authors might connect their review of studies related to the Hyogo Framework also with current strategies such as the Sendai Framework and their related data bases and indices; what aspects of the spatiality of SV are demanded for by those frameworks and which aspects are captured for instance by their indicators or certain other world risk indices? Maybe the findings of the paper could also be compared to findings of similar reviews in terms of predominance of certain factors of vulnerability, prevalence of countries or aspects of spatiality such as scale, unit effects (administrative versus grids, catchments etc), or, shortcomings (de Sherbinin, Fekete, Kuhlcke, Rufat, Tate, Terti are just examples - also look at recent articles). Climate change research

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has been excluded, but reasons for this not detailed; more review studies could be found here maybe useful for a discussion section, still such as Ford, Gallina, Preston. Embedding this review into a broader background would better help to clarify the contribution of this paper by covering the period from 2008-2018. The selected decade is fine, since it is recent which is important to add and compare it to previous studies - but this comparison is missing, still. However, these suggestions are optional and the paper does not need to be expanded much on this.

Some minor remarks: I suggest to merge short paragraphs

Section 1 maybe more dimensions of vulnerability should be named and argued, why they had been deselected such as ecological vuln, physical, institutional etc.

Section 2 methods is very short; maybe some more information could be provided such as why a decade has been selected (making it comparable with similar studies such as...?). Clarivate Analytics has been selected, because,....

Section 3: Make consistent use of "I" or "We" How did you define whether the articles were "highly relevant" or "medium"...?

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Interactive comment on Nat. Hazards Earth Syst. Sci. Discuss., <https://doi.org/10.5194/nhess-2019-147>, 2019.