



EGUsphere, referee comment RC2
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Comment on egusphere-2022-498

Anonymous Referee #2

Referee comment on "Review article: Design and Evaluation of Weather Index Insurance for Multi-Hazard Resilience and Food Insecurity" by Marcos Roberto Benso et al., EGU Sphere, <https://doi.org/10.5194/egusphere-2022-498-RC2>, 2022

With the recent emergence of index insurance papers and the myriad approaches and hazards available, a review paper is warranted. The title indicates a focus on multi-hazards and food insecurity, however the manuscript moves far beyond these topics. Significant amounts of information spanning hazard type, variables, approaches, etc., are presented, which turns out to be overwhelming instead of comprehensive. Arguably the manuscript would benefit from a greater focus; presently it has too much breadth and lacks depth. In its current form, it is unclear how readers can benefit from this contribution. A reformatting of the presentation with a clearer emphasis and concrete take-aways could lead to a valuable contribution. Additional suggestions are presented below:

Questions at the end of the Introduction section are very relevant, but also very broad. Perhaps focusing specifically on multi-hazards and food insecurity can help to focus the questions further (and presumably the manuscript as a whole.) Related, it's not well motivated why other sectors (e.g. energy) are included here. Unless they specifically relate to energy used in food production? Or tradeoffs between hydropower and allocations to agriculture? More specificity is strongly suggested to tighten the analysis and findings.

Table 1: Are these Themes developed by authors or follow a commonly accepted methodology? More description is required on what centrality and density really mean and how best to be interpreted. Also, what is the reference for the numerical scale? 0-10? Finally, some clusters are described in numerous Themes. For example, Basic includes four clusters in the text, but only two in the figure.

The Hazard Identification section feels like a really long list, and it's unclear what the goal is in this section. Is it to essentially list the papers that go with each hazard? That could be doable in a large Table (perhaps appendix.) The descriptions of the hazards are basic enough that most readers should be familiar (and arguably aren't learning new information), perhaps with the exception of SPI or similar, but even then, most are likely

to already know. It's of course necessary to identify the top hazards (e.g. Fig 3), but the text in its current form does not add much. The authors are encouraged to consider either simplifying (e.g. a Table as suggested) or taking a deeper dive into the details of hazard aspects identified and targeted in each paper.

The Vulnerability Analysis section appears to be a mix of discussing assets, variables, and modeling approaches. Perhaps the authors could consider an alternative presentation approach such as combining parts with the Hazard Identification section (e.g. have subheadings by hazard type that also includes assets at risk and relevant variables.) This could partially address the comment above. The description of modeling approaches does not appear to fit in this section, and is probably a stand-alone section.

While the Financial Methods section relays the large number of design approaches, target outcomes, etc. It is unclear what the reader is supposed to take away from this section. Simply that there are many types? Or if a particular type sounds most appealing or relevant to their needs, then they can refer to the papers cited? Certainly some aspects are appealing, such as those that describe the pros and cons of a particular approach. The authors are encouraged to include more pros and cons to give the reader a more firm understanding and perhaps guidance for their own work.

For the Conclusions, it may be a stretch to claim that a large number of papers (ag and crop insurance) leads to a 'high impact on index insurance'. It does mean the topic is perhaps more well studied than others, but I believe the impact is still very small. Also, I'm not sure this manuscript really points to the 'gaps in the field', and if it does, then this needs to come across much more strongly. Conclusions that point directly to multi-hazard and food insecurity should be front and center in this section. I suggest expanding this section.

The Reviewer acknowledges that review papers are challenging to write. The authors are encouraged to highlight their motivation for assembling the manuscript, more clearly focus the topics, and articulate precisely what they want readers to glean from this contribution.