

Response to Anonymous Referee #1

General comments

The subject of the article 'Review article: Design and Evaluation of Weather Index Insurance for Multi-Hazard Resilience and Food Insecurity' is interesting. The review methodology is generally transparent. However, many issues need to be addressed. The overall presentation of results, discussion, and conclusions are very rough and often confusing. English is poor, with many grammatical and conceptual errors. The article requires professional editing to improve both language and readability. A major revision is needed before it can be accepted for publication in this Journal.

Response: We thank the Anonymous Referee #1 for his/her comments on our manuscript. We will address each of the suggestions in order to improve it, so it can be accepted for publication.

Specific comments

Terminology is an issue. E.g. 'sustainable insurance' is used all over the article and implies insurance for sustainable energy production. However, the expression is not correct, as it actually means insurance that is sustainable. Or, the abstract's phrase 'preferred systematic reviews' probably refers to a specific review method (I assume PRISMA), but it is not evident at all the way it is used, i.e., as a common adjective.

Response: We agree with the reviewer. The terminology "sustainable insurance" will be changed to "sustainable energy production insurance". The second suggestion will be clarified in the abstract and the text.

The title promises a 'Design and Evaluation of Weather Index Insurance for Multi-Hazard Resilience and Food Insecurity'. However, we learn that the studied papers lack a multi-hazard approach, while the authors only refer to some examples that need to be studied. They do not propose any specific method to address this issue.

Response: In fact our first idea was to use the conceptual framework presented in Figure 4 to address this issue, however, we believe that, based on the review, we need to create a sub-section to better discuss the conceptual framework.

As in the title, the abstract also states that 'This paper aims to provide a state-of-art weather index insurance design.' This sounds quite promising. However, there is only 1 line dedicated to the design of Weather Index Insurance, in 3.2.3, L383-384: 'Finally, we present a conceptual framework derived from the literature review representing the weather index insurance design process (Figure 4).' Are this figure and the enclosed proposed design/process given as a result of the most used methods within the reviewed literature? Is this proposed design a synthesis that presents something new? How is multi-hazard resilience addressed in particular through this design? Finally, I would suggest a separate sub-section to present and discuss the proposed design, to support its effectiveness based on a case study, to highlight its effectiveness on multi-hazard index insurance, and, further, on resilience and food insecurity. Otherwise, the title and the abstract are not well connected to the results.

Response: As we stated in the previous response, we appreciate the suggestion of creating a new sub-section to describe the conceptual framework in more detail. We are preparing a case study to illustrate our concept and show how to address the questions raised by the reviewers mathematically.

3.2.2: the entire section requires thorough English editing and better development. It seems very draft, full of sentences without verbs, confusing the reader. Also, the sub-sections 3.2.1-3.2.2 include some same comments and results. Several consecutive paragraphs should be merged as they deal with the same subject (see for example, L346-356, and many others...)

Response: We will address the language and editing problem as suggested.

L313: Table S3 presents loss models. Vulnerability as a title is not mentioned. Either it is a misconception, or it needs clarification. Actually, the models are called vulnerability models; however, their objective seems to be to estimate the loss and not the vulnerability.

Response: We thank the reviewer for this comment, we believe that we need to reflect the table mentioned in the supplementary material and make the proper clarification, so the difference between loss models and vulnerability models is fully explained.

Conclusions

The conclusions summarize the results but are written in a very rough form. L420: which gaps were observed? This should be highlighted in conclusions and complemented by suggestions.

Response: We thank the reviewer for this comment, we will revise the text and make sure the conclusions are better rendered and the gaps better explained.

Technical comments

Response: We will revise all the technical comments made by the reviewer. We thank you for the thorough revision and attention to details. We believe that this will make our manuscript stronger and in shape for publication.