



EGUsphere, referee comment RC1  
<https://doi.org/10.5194/egusphere-2022-498-RC1>, 2022  
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## **Comment on egusphere-2022-498**

Anonymous Referee #1

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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-RC1>, 2022

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### **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.

### **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.

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.

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.

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...)

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.

## **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.

## **Technical comments**

## **Abstract**

L1: what do you mean by 'preferred' systematic reviews? PRISMA is not implied here; thus, it sounds like an awkward adjective.

L5: please correct: to 'the' present

L10: This sentence needs grammar correction.

## **Introduction**

L18. References should be put in parenthesis

L27: please delete the second 'the'

L29: consider specifying that these are amounts for premiums per capita

L34: please rewrite the sentence as a verb seems missing

L58: please correct the reference presentation inside the sentence

## **Methodology**

L100. Please correct: 1192 studies were selected

Figure 2: (a) please include a legend for series

## **Results**

L161: Please consider rewriting the sentence to make sense

L163-165: these sentences have to be corrected for grammar and language. The parenthesis is awkward. Which study are the authors referring to??

L170: please delete 'and' before 'wind...'

Figure 3. Please use consistent fonts/colors...I don't understand the meaning of the box sizes and positions.

L198-199: please rewrite. The authors 'concluded' or just 'suggested'?

L201: please put space before the parenthesis

L218-219: please rewrite as the indices are not grammatically connected to the rest of the sentence.

L257: please consider rewriting; the sentence is not clear in what concerns the extreme of the distribution. May a verb be missing?

L260: A conjunction is missing (and or while...??)

L263: please correct: 'evaluated'

L264: please correct: 'by the increase in..'

L271: please rephrase. 'We observed an emerging topic affecting sustainability with a focus on sustainable energy generation' does not make sense.

L266-270: this has been already said in previous sections

L271-276: I don't understand the difference between this paragraph and the last one in 3.2.1.

L277-280: This paragraph is not well written. E.g., moral hazards cannot be neglected, but rather the opposite. They seem to be considered. Also, 'Basis risk, and it implies...' is grammatically incorrect and the sentence makes no sense.

L283-284: Another sentence that is grammatically incorrect...Please rephrase.

L293: what is meant by `..and its interaction'? interaction with what?

L299: I am not sure I understand well this sentence. What method/tool was used and how were the hazards included as independent?

L305-307: please clarify: `this variable should be considered to improve the model's ability...' Which variable? Why `should' it be considered'? based on which evidence?

L311: consider putting a comma before `giving'. Otherwise it does not make sense.

L320: streamflow `is' low

L321: which `extreme condition'?

L322: `sustainable insurance' sounds not appropriate. Do the authors mean `sustainable energy production'??

L341: what is meant by `full information'?

L342: please correct `They are calculated historical data...'

L341-345: this paragraph is confusing. Mixing non-index and index insurance as if this is the first time index insurance is mentioned, while this is the main subject of this review paper.

L347-348: grammatically incorrect sentence.

Fig4: please correct : (c) amount. Also correct the figure caption: `fnancial risk pricing (e)

and (e) and (f)'

L386: note that Table 2 should be in parenthesis, or included correctly in the sentence.

L398: WTP, what does it mean? Please clarify

Paragraph L397-409: the entire paragraph has grammar mistakes, verbs missing, language issues. It requires careful editing