

Dear Prof. Schroter,

Thanks again for your response. You will find attached the responses. Regarding GitHub, we are starting to populate with code, but the input data is an issue because for the mine location, this came from a commercial dataset. The climate data is available for free and we will point to it instead of uploading all of it again since there is a limit in the number of files we can upload on GitHub. However, we will add a readme to our code to describe how it needs to be packaged to be a direct input to our code.

All the best,

Luc Bonnafous

p1 l16 and l22 do you mean spatial-temporal clustering of exposure or rather hazard?

We mean exposure to a given hazard. We account for hazard through the climate data and the exposure through a measure of production. However, we do not account for vulnerability. We only know /analyze the exposure metrics since we don't have information as to how these companies are managing the risks and hence we don't know their vulnerability.

p3 ll 8-15 This is a very long sentence and hard to understand. Please rephrase.

We have rewritten as several smaller sentences

Please include your argument provided in response to referee#2 comment 2 in your data and methods section. I think this is an interesting point to mention.

We have added a paragraph in the conclusion section to this effect (p.17 in the markup version), as it seemed to work better with the flow. Do let us know if you think we are wrong, and we will include it in the Data and Methods section.

In your response to referee#2 comment 4, you state "Perhaps the idea that we are looking globally and not regionally and temporal clustering is due to quasi-periodic climate phenomena is not well developed at this stage of the paper and we should make that clear." - It is not obvious where you have made this point clear in your revised manuscript.

This comment applied to the abstract. We have modified that sentence now to make it clearer (l.20).

p7 Table 1: please indicate an explanation of the symbols used in columns 3-5 to the table caption in a way that the reader is able to understand them without looking up in the text.

We have updated the table and the legend

p8 Fig 1: y-axis description still missing, Please check if the verbose titles to the different panels are needed or reduced to the commodities?

We have added the axis label.

p11 Fig 4: what do the black arrows indicate? what are the areas surrounded by a black line. Please

add this explanation to the caption of the Figure.

The explanation was added in the legend of Fig.4.

p12 Fig 5: please align legend title and figure caption. What does 'hits' represent?

We have removed the title since the legend is explanatory and added an explanation of what a 'hit' means.

p13 I23: regional spatial extent and timing of droughts or floods.

It is not clear if or how the comment from reviewer#2 'page 11, line 15: the jump in argumentation to parametric insurance is quite arbitrary.' has been addressed.

Indeed parametric insurance is only mentioned on p14, maybe it can be motivated already in the introduction?

Hmm. Since the paper does not really develop a parametric insurance strategy, we are more comfortable discussing this only in the final section as a way to address the exposure that emerges at the portfolio scale. Given the comment, we have added some language to explain why we discuss it in light of the key findings in the paper (p16 l.3-9).