

Interactive comment on “Vulnerability, resilience and adaptation of societies during major extreme storms during the Little Ice Age” by Emmanuelle Athimon and Mohamed Maanan

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Dear Referee El M'rini A.,

First of all, thank you for your review on our paper "Vulnerability, resilience and adaptation of societies during major extreme storms during the Little Ice Age".

You are absolutely right about the term "climate hazard", better use "meteorological hazard". We will change all occurrences of the term.

We will also develop the conclusion and add the main finding of the paper.

Considering the question of current societies and whether the collective memory is

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currently active or not, this part of the research is still ongoing. Some colleagues do their PhD on such a subject and we started a few months ago to study it too. However, our results are not as relevant as those of the past period yet, so a pertinent comparison will be part of a futur paper. Perhaps we should expose it more as a near prospect or as operational information for territorial and political leaders.

Finally, with regard to the formation of storms in Europe, it is not likely proved that global warming will increase the frequency of storms. According to IPCC reports (2014), global warming is likely to increase the frequency of droughts, heavy rains and floods. However, an increase in the frequency of storms is still under discussion. If the IPCC considers this could probably be the case for tropical cyclones (hurricanes, cyclones, typhoons), which appear mainly in summer, "feed" and find their energy in the warm waters of the oceans. The IPCC also argues there is no certainty about storms in extra-tropical latitude. In addition, in the North Atlantic Ocean, tropical and extra-tropical cyclones seem to increase more in intensity than frequency (IPCC, 2014), mostly due to internal climate variability such as NAO than global warming. This internal climate variability could result in a greater variety of intensity and trajectories of North Atlantic storms rather than increase in frequency.

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