Natural Hazards and Earth System Sciences

Open Access

Discussions

Interactive comment on "On the clustering of winter storm loss events over Germany" *by* M. K. Karremann et al.

R. Caballero (Referee)

rodrigo@misu.su.se

Received and published: 29 April 2014

This is a solid and useful study of serial clustering in loss potentials due to extreme windstorms. While the basic ideas and methods are mostly well know, the use of loss potentials in this context is new and the application to a large GCM dataset to obtain statistically stable results is interesting. The methods are correctly applied so far as I can understand, though their description is in part ambiguous and hard to follow. I think the manuscript can be published subject to some minor re-writing and clarification as specified below.

Specific comments:

1) p.1920: The description of the method beginning in line 5 is not very clear: for

instance, is the "gliding" window made up of consecutive disjoint 3-day segments, or do they overlap? (note also that the usual terminology is "sliding window"); what does it mean that the event is "aggregated to LI3D"? What do you mean with "if no clear maximum can be found"? I suggest a comprehensive re-write of this important section to make perfectly clear what it is that is being done.

2) Fig. 3: The text claims that the ERAI and NCEP results are very similar, but that is not really true – there are many winters in which the number of events is quite different in the two datasets. Yet the results derived from fitting a negative binomial (Table 2) do seem quite similar for the two reanalyses. Can you explain this apparent discrepancy?

3) Fig. 5: This figure is referred to in the text, but there is no comment at all about the results it reports. I suggest adding more discussion of this figure, or removing it altogether if it does not add useful information.

4) Suppl Table D: The detection of statistically significant overdispersion as quantified by Ψ seems like an important point in this paper, and I would suggest including this table in the main text. It would also be interesting to report the values of Ψ derived directly from the data (ie. by computing the sample variance and mean instead of using Eq. (9)).

Minor comments, typos:

1) p.1914 l.23: The correct citation is Hanley, J. and R. Caballero (2012): The role of large-scale atmospheric flow and Rossby wave breaking in the evolution of extreme windstorms over Europe. Geophys. Res. Lett., 39, L21708.

2) p.1921 l.19: The word "predictand" looks out of place here; λ is usually called the "rate parameter".

3) p. 1929 l.5: Analogue -> Analogously

4) p. 1929 l.20: depend only little *on* the length

Interactive comment on Nat. Hazards Earth Syst. Sci. Discuss., 2, 1913, 2014.

Interactive
Comment

Full Screen / Esc

Printer-friendly Version

Interactive Discussion

Discussion Paper