Nat. Hazards Earth Syst. Sci. Discuss.,
https://doi.org/10.5194/nhess-2017-143-RC1, 2017

Natural Hazards and Earth System Sciences
Discussions

Interactive comment on "Role of NAO and ENSO in the anomalous precipitation in the southern part of China – study on the two contrary high impact weather and climate cases" *by* Qiuxia Wu

Anonymous Referee #1

Received and published: 15 November 2017

Review of the research article (nhess-2017-143): "Role of NAO and ENSO in the anomalous precipitation in the southern part of China – study on the two contrary high impact weather and climate cases" by Qiuxia Wu.

This study highlights the socio-economic importance of anomalous dry and wet episodes concurrent with El Nino-Southern Oscillation (ENSO) and North Atlantic Oscillation (NAO) signatures in the background. The authors have presented the case with two significant episodes occurred during 1982/1983 (coincident with canonical ENSO and positive phase of NAO) and 2009/2010 (coincident with El Nino-Modoki and negative phase of NAO), and demonstrated how specific phase of NAO works with

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ENSO pattern to produce anomalous dry and wet conditions over the study region. I must admit that this is a commendable effort and the results emerge from this study are interesting and very useful for improving prediction skill as well as for the long-term climate analysis. I certainly would recommend this article for publication subjected to a few minor concerns:

(1) The events considered in this study are hand-picked ones, how robust the conclusions would fit for similar case situations as addressed in this study. Are there any other years or events with combination of ENSO/NAO situations occurred over China before such as the ones used in this study. I don't see any mention about this in the text. How can we generalize the outcomes of this study? I understand it is going to be a big task, although a few sentences are mentioned (Lines 430-435), this rationale needs to be further be highlighted for the readers about the above.

(2) Given the gravity of this study and results, the dynamical scenario associated with the two events keeps repeating in many places, it needs to be made concise and precise. The authors need to work on reducing the redundancy. The text content is amply long and this primarily needs to be looked at, the manuscript needs substantial editing of texts and shortening of text so that the essence of the results is more visible to the readers.

(3) The contents of the figures (e.g., Figure 3; Lines 83-100) are generally not very clear (means to all figures), and I was not able to assess the contents in tune with the text. Labelling (a,b,c,d) for the sub-figures will be easier and the corresponding can be referred in the text to ease the reading. Also the figure captions are too long.

(4) Although overall grammar is good, the narration appears more of conversing nature at certain places, though it is a minor concern which can be revised easily. The author is seriously advised to sit with experts for grammar (right from beginning to the end of the manuscript for the flow to be in one tense) – I see that it keeps changing a lot. Some minor things I quote below, although the entire text needs a thorough check.

a. Line 79: “Thus, we hypothesize that the NAO works together. . ...” b. Line 83: should it be “in accordance with. . .” c. Line 91: “However, a thorough investigation has not been carried out on how the two factors worked out to set up the relevant large-scale atmospheric circulation anomaly which is the focal point of this study” d. Line 135: “. . .calculated following Takaya et al.(2001) as follows: ” (no need to mention C5 here). e. Line 140: “represents” in place of represented. f. Line 167: “influencing” in place of “affected” g. Line 246: Remove “to” h. In most places, the word “tended” can be “tend” or “tends” (e.g., Line 290) i. Concerning the lines referring the subtropical jet, you refer this as “entrance region of the Asian subtropical jet” . . . not as “entrance of the subtropical jet” appears to be vague. j. Line 425: “. . .an educated guess”

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