

***Interactive comment on* “Evaluation of global seismicity along Northern and Southern hemispheres” by Olaide Sakiru Hammed et al.**

Anonymous Referee #2

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General comment: In the manuscript entitled “Evaluation of global seismicity along Northern and Southern hemispheres” by Olaide Sakiru Hammed et al. an attempt is made for the study of the global seismicity by using the earthquake catalog of the Advanced National Seismic System during the period 1963 - 2018. The authors evaluate the Gutenberg Richter b-value parameter and focal depth distribution of earthquake parameters to identify the prominent earthquake-prone zones in the Northern and Southern hemispheres. Although the topic is interesting it is also broad (a comparative study of results additionally obtained from the Centennial earthquake catalog and the GCMT earthquake catalog would make the study more complete). The presentation of the methods is not up to date (see, e.g., Nava, F.A., Márquez-Ramírez, V.H., Zúñiga, F.R. et al. Gutenberg-Richter b-value maximum likelihood estimation and sam-

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ple size. *J Seismol* 21, 127–135 (2017). <https://doi.org/10.1007/s10950-016-9589-1> and references therein) while the presentation of the results is poor: For example, the type of the bar chart in Fig.10 is uncommon, what is the definition of the Weighted sum of Earthquake Energy in Figs. 12, 14? What is the meaning of frequency in Fig.11? There are also letters missing in Fig.15 while in Fig.16 I think Frequency is Annual Frequency or Number of earthquakes. Finally, a map of the earthquake epicenters would be much more important for the paper (and would facilitate the relative discussion) than the political map shown in Fig.1. The authors should also check whether they refer to erg or J energy units in various points in their manuscript.

In view of the above, I cannot recommend publication of the present manuscript.

Specific comments: The points raised in my general comments above also include specific points that the authors should consider.

Interactive comment on *Nat. Hazards Earth Syst. Sci. Discuss.*, <https://doi.org/10.5194/nhess-2020-128>, 2020.

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