

Nat. Hazards Earth Syst. Sci. Discuss., author comment AC1  
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## **Reply on RC1**

Mohamadreza Hosseini and Habib Rahimi

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Author comment on "Probabilistic fault displacement hazard analysis for the north Tabriz fault" by Mohamadreza Hosseini and Habib Rahimi, Nat. Hazards Earth Syst. Sci. Discuss., <https://doi.org/10.5194/nhess-2021-351-AC1>, 2022

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Thanks for taking the time to read the manuscript.

Regarding the quality of the figures as well as the writings inside them, these figures must be edited and the quality will be improved in the text of the revised version. Of course, due to the file being converted to PDF and uploaded to the site, the resolution of the figures has dropped a bit.

Regarding the return period, as you mentioned, there is no consensus in this regard in the different studies, and for this reason, we have considered various return periods for this purpose. In the Tabriz region, due to the existence of urban buildings in the study area, a return period of 475 years can be used. Also, for higher importance structures such as petrochemicals and refineries in the study area, higher returns periods can be considered.