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Comment on nhess-2021-354

Anonymous Referee #1

Referee comment on "Integrated seismic risk assessment in Nepal" by Sanish Bhochhibhoya and Roisha Maharjan, Nat. Hazards Earth Syst. Sci. Discuss., https://doi.org/10.5194/nhess-2021-354-RC1, 2022

The deveopment of a Social Vulnerability Index is a worthwhile advance in Nepal seismic risk assessment. While this is welcome, a serious omission in this paper is the absence of a detailed casualty analysis. In the conclusions, it is stated that, 'The authors are aware to the fact that numerous estimations such as casualties, non-structural damage, business-interruption loss and loss to critical infrastructure may improve the indicator of physical risk'.

The only information on deaths is in Table 1, which gives a poor indication on fatality risk. For example, had the Gorkha earthquake not occurred on a Saturday, there would have been a tragic loss of life in Nepalese schools, where many thousand classrooms were wrecked. All tabulations of death statistics need to be subject to counterfactual risk analysis (see www.llloyds.com).

At the very least, there should be a section of the paper addressing casualty risk. The authors note that the most recent Nepal census was in 2021. Ideally, this paper should be withheld for a number of months until it can incorporate this latest important demographic data.