

We are very grateful for the extensive review of our paper including comments and suggestions. A revision of the paper has been carried out to take account of all the comments.

### **Reply to Referee:**

1. Seismic hazard, exposure, and physical risk:

The seismic risk assessment of the study is indeed based on the works by Chaulagain et al (2015) to some extent. We adopted the source zone (Chaulagain et al (2015) also adopted the source zones from the study by Thapa and Guoxin (2013)) and fragility models from their study. However, there are two major changes in our research. The building distribution (exposure model) of our works is at VDC/Municipality level in comparison to the district level study in Chaulagain et al. (2015). Also, we calculated per-capita economic loss for each VDC/Municipality as our result, while Chaulagain et al (2015) computed the total economic loss for each district in their study.

Understanding the ethical values of the research, we, the authors, have acknowledged other researchers' work wherever necessary, and had no intention to mention others' work as ours. After the second revision, we have increased the number of mentions of Chaulagain et al works in the reviewed manuscript to make sure the input models, adopted from their study, are not misinterpreted as our idea. The list of the acknowledges of Chaulagain's works are as follows:

- Line 69-70: "In this study, the country-level earthquake risk estimates from the Global Earthquake Model OpenQuake (Pagani et al., 2014) were analysed by using the input models (seismic hazard sources, fragility functions, and consequence model) given by Chaulagain et al. (2015)."
- Line 399-400: "On the other hand, the seismic source model, fragility curves, and consequence model used in the study by Chaulagain et al. (2015) were used to evaluate the physical risk in OpenQuake. Similar to the study by Burton and Silva (2016), the integrated risk was evaluated using integrated risk modelling toolkit."
- Line 265-266: "We assumed the tectonic region as a shallow crust and subduction interface like that in Chaulagain et al (2016)."
- Line 255-256: "In this study, the twenty-three source zones similar to that of Thapa and Guoxin (2013) were considered for probabilistic seismic hazard analysis."
- Line 284-285: "In this study, the fragility model developed by Chaulagain et al. (2015) was adopted for different building types."

2. Discussion remains not well organized.

We had completely added this section after the first major revision, and have revised and structured this section, as per the suggestion by reviewer. The major changes are:

➔ We have subdivided the discussion into three sections:

1. Discussion on social vulnerability assessment
2. Discussion on physical risk assessment
3. Discussion on integrated risk assessment

3. Reply to the Reviewer 2 on first major revision comments

The authors are grateful for the extensive review. We had addressed all the points with our best effort, and are described in detail in our first reply (Section A, B, C: Reply to the general, specific, and technical comments).