

Interactive comment on “Spatial Seismic Hazard Variation and Adaptive Sampling of Portfolio Location Uncertainty in Probabilistic Seismic Risk Analysis” by Christoph Scheingraber and Martin Käser

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Thank you for your helpful review. Please find our answers to each of your comments below:

» “This is a quite interesting paper dealing with the Spatial Seismic Hazard Variation and Adaptive Sampling of Portfolio Location Uncertainty in Probabilistic Seismic Risk Analysis. The paper is original, well-written and organized.”

Thank you.

C1

» “p. 6 Hazard Model There is need to provide more details on the seismogenic sources introduced in the model.”

We understand that the description of the hazard model was too brief, even though it is not the main topic of our manuscript. In the now updated manuscript, we have therefore improved and extended the corresponding Section 3.1 (“Hazard Model”). We have provided information on the results of the original USGS hazard model, and have described the differences to the original USGS model in more detail. For instance, we have added paragraphs on the modeling of the subduction zone geometry and events on the subduction zone as well as on the ground motion model logic tree. Furthermore, we now show and discuss a hazard map produced using our model.

» “p. 6 Write “United States Geological Survey” instead of “United States Geological Service”.”

We corrected the text to “United States Geological Survey”.

» “p. 6. “Site conditions are based on topographic slope (Wald and Allen, 2007)”. But site conditions are also dependent on soil conditions. How do you consider this?”

We acknowledge that the initial description of our site conditions (or soil classes) was too brief. While they are based on the approach proposed by Wald and Allen (2007), they have also been refined locally to consider areas of soft soil such as river beds. In the updated manuscript, we now describe this.

» “p. 6. “The CV is the lowest in Kalimantan (< 0.1) due to the absence of any known or modeled crustal faults”. It is hard to follow this statement. Therefore, once more there is need to provide more details on the seismogenic sources introduced in the model.”

We see that it was hard to follow the statement about Kalimantan and have therefore – in addition to elaborating more on the hazard model – extended the corresponding paragraph in Section 3.1. We now explain that only homogenous gridded seismicity is used in this area, and also explain why this is the case.

C2

