

1. General comments

The authors have made a substantial effort to address the reviewer's comments, and the manuscript has clearly improved in several aspects. Key improvements include the reformulation of the DSHA methodology, the implementation of a weighted logic tree, an improved discussion of uncertainties, and the public availability of the DSHA code.

I have only a few remaining comments that I encourage the authors to address before publication.

- The justification for using GMPEs developed for the Japan Trench has been improved. Nevertheless, the authors should acknowledge more explicitly that the tectonic analogy remains imperfect, as the IMR is a complex plate-boundary region with diffuse deformation and is not directly comparable to the well-defined subduction setting of Japan. This remains one of the main sources of uncertainty in the study. A short statement highlighting this limitation in the conclusions would be sufficient.
- The discussion of the highest PGA values and the influence of HZ23 is appreciated. However, I recommend adding one or two sentences explicitly stating that the highest values obtained for the longest return periods should be interpreted with caution because they are partly controlled by extrapolation beyond the calibration range of the GMPEs. Extremely high values may reflect methodological artefacts rather than physically meaningful hazard levels.
- Although the authors have substantially improved the discussion of the study limitations, some methodological constraints remain, particularly regarding the interpretation of offshore ground motion, the reliance on PGA-only hazard representation, and the limited validation of the selected offshore GMPEs under IMR conditions. These limitations should be acknowledged more clearly when discussing the potential engineering applications of the results. I recommend moderating the conclusions and avoiding strong statements regarding the direct implications of the findings for the seismic design of subsea structures (eg. "The findings have significant implications for the seismic design and risk management of subsea structures").

2. Recommendation

The manuscript has substantially improved and most of the major issues raised during the previous review have been satisfactorily addressed. I recommend publication after revision of the minor points listed above.