

***Interactive comment on* “Tsunami damage to ports: Cataloguing damage to create fragility functions from the 2011 Tohoku event” by Constance Ting Chua et al.**

Anonymous Referee #1

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The work extended the MLIT database to include more than 5000 port structures pertaining to eight industries. The tsunami damage fragility functions for structures in each industry were obtained with reasonable accuracy. The manuscript is well written and is a valuable contribution to the field of tsunami damage to port structures. The reviewer has minor comments, which the authors may find helpful.

L167: Although the structures are categorised based on industries, it is relevant to mention the structure/building characteristics (steel, concrete, reinforced, components, heights, shapes, etc) specific to each industry in this study. The reviewer feels that the structure/building type in each industry is not clearly described, especially the structural

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components and physical features that help to sustain the tsunami impact. The common structural/physical features of structures in a specific industry should be assessed as in lines 374-387.

L175: Since this study uses the maximum inundation depth as the intensity measure, is there any evidence in the literature showing the link between damage to structures and the maximum inundation depth?

L279: The distribution skewed towards the left or right?

L286: Possible reasons for the outliers?

Interactive comment on Nat. Hazards Earth Syst. Sci. Discuss., <https://doi.org/10.5194/nhess-2020-355>, 2020.

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