

## ***Interactive comment on “Statistical model for economic damage from pluvial flood in Japan using rainfall data and socio-economic parameters” by R. Bhattarai et al.***

**Anonymous Referee #1**

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Content:    The slope calculation are bases on a km<sup>2</sup> raster, small flow lines are not detectable at this resolution but are essential for the pluvial flooding process. BetterDTMs are available, why are they not being used?    The population is used for distribution of assets, but infrastructure and public buildings often effected a lot by pluvial flooding, also the economic sector. This approach does not really sufficiently describes the vulnerability.    The daily precipitation rate is used, pluvial floods often last only few minutes to hours. Are there no intensity data available? At least the problem should be better addressed.    Where do the population density classes come from? Are there better results reached by other classes?    What types of losses

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are used for the calculations? Is a net or gross concept used? What types of damages / losses are included in the statistical data used for this study?    Formula 5 and 6 need some more explanation, formula 5 also contains an error.

Formal:    Prices should always be in USD.    ff always different font    Should be grammar and spell checked.    The diagrams are sometimes hard to read: Units at Fig4a missing, quite small, especially the numbers.    Also the maps are not really readable.

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Interactive comment on Nat. Hazards Earth Syst. Sci. Discuss., 3, 6075, 2015.

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