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## ***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 #2**

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This paper aims to develop a simple but robust statistical model for pluvial flood damage assessment based on historical database in Japan. This paper tries to address an important problem: uncertainty of economic loss estimation due to natural disaster. However, it has serious drawbacks in the method and targeted area. Therefore, this paper is judged to be rejected in the NHESSD.

Frist, this paper misused or confused economic concepts due to lack of basic knowledge on micro and macro economics. For example, assets cannot be substituted by GDP because GDP is flow while asset is stock. Damage cost must depend on the amount of damaged asset. Eq. (10) is too rough to estimate damage cost.

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Second, the approach of this paper is much suitable to developing countries where the relevant data is not sufficient. In Japan, each river has sufficient information to estimate the flood risks including rainfall damage much more precisely and robustly than the approach of this paper have proposed. The Ministry of Land, Infrastructure, Transport and Tourism in Japan provide the manuals on estimation on flood or rainfall risks (in Japanese).

[http://www.mlit.go.jp/river/basic\\_info/seisaku\\_hyouka/gaiyou/hyouka/hyouka.html](http://www.mlit.go.jp/river/basic_info/seisaku_hyouka/gaiyou/hyouka/hyouka.html)

Therefore, the result in this paper does not have a sufficient contribution to the literature on natural hazards.

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