

## ***Interactive comment on “New Global Characterization of Landslide Exposure” by Robert Emberson et al.***

### **Anonymous Referee #1**

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This is a really interesting paper, that I definitely think contributes something that doesn't currently exist: a homogeneous global measure of landslide exposure. The manuscript is well-written and there are not many problems with it that I can see. One general comment I would make is that the LHASA model is focused on modelling rapid landslides, and states that it may be less useful for estimating the occurrence of slow moving landslides. This is fine in terms of your estimation of population exposure, but you also consider damage to infrastructure which may be effected by slow-moving landslides and, so I think it should be stated somewhere that you are mostly considering rapid landslides to avoid confusion.

### **Specific comments**

Line 55: From the wording of this sentence, it is not entirely clear whether it is the

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output that is at 1 km resolution or the input data ( I assume it's both?)

Line 155: I agree - could this error be quantified better though, by comparing areas for which there is a relatively complete catalogue of landslides with the number of nowcasts received in that area?

Line 247 - which average? mean?

Figure 3 - Exactly what has been normalised by what is not really clear here e.g. in the text, it states that the population is normalised by country area but in the Figure it describes the Nowcasts as normalised but not the population

Line 283 - I agree that this would be a useful application of the study you have done here, but given the scatter in Figure 6, it seems that the uncertainty in y value for a given x must be very high.

Figures 7 & 8 - The conclusions you draw from Figure 7 could also be drawn from 8, so I am not convinced you need both

Line 344 - As the Petley dataset includes anthropogenic-induced landslides, could this account for some scatter in Figure 5?

Technical comments

Figure 1 & the top Figure in Figure 2 have very small numbers for the bin sizes that are quite hard to read

Line 158: estimate 'of' exposure, rather than 'for' exposure

Line 259 - Do you mean misrepresent instead of miss?

Line 281 'further highlights' not 'does further highlight'

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Interactive comment on Nat. Hazards Earth Syst. Sci. Discuss., <https://doi.org/10.5194/nhess-2019-434>, 2020.

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