

Nat. Hazards Earth Syst. Sci. Discuss., referee comment RC1
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Comment on nhess-2021-291

Anonymous Referee #1

Referee comment on "A global open-source database of flood-protection levees on river deltas (openDELvE)" by Jaap H. Nienhuis et al., Nat. Hazards Earth Syst. Sci. Discuss., <https://doi.org/10.5194/nhess-2021-291-RC1>, 2021

The authors present an important and useful database of flood protection structures in levees globally. An assimilation of such data is crucial for improved understanding of global flood risk, yet is one of the few topics in our field which has not undergone meaningful recent advances in its characterisation (at least, in an efficient or somewhat automated way). While not wanting to understate the importance of the task the authors have completed, the presented science available to review is extremely minimal. It is paradoxical that the authors' work is more meaningful and important than much of the marginal advances typically presented in the modern deluge of academic papers, but the paper in its present form does not appear to be publishable in this kind of journal.

The decision is really, then, an editorial one. As a reviewer, I can not see why this wasn't simply submitted to a dedicated journal that fields papers describing datasets. If the authors want to publish in a traditional journal, they need to actually apply the data they have collected to answer a research question. One idea would be to look at recent European or global flood modelling studies by the JRC and examine how their risk estimations change when considering the information in this database.

I would also like to see the delineation of a "leveed area" unpacked further. How is this defined? If we know the location of levees, it is not straightforward to understand who they actually protect (presumably some kind of "undefended" model would be needed). If conclusions are to be drawn based upon these areas, the authors should provide more detail on how they are computed.