

***Interactive comment on* “Brief communication: Post-event analysis of loss of life due to hurricane Harvey” by Sebastiaan N. Jonkman et al.**

I. Kelman (Referee)

ilan_kelman@hotmail.com

Received and published: 21 January 2018

This is an excellent Brief Communication, well-worthy of publication in NHESS given its topical importance, robust methodology, sound analysis, and helpful conclusions. The authors describe exactly what they did, why they did it, what they could not do, and relationship to other sources and analyses including logical, defensible explanations. I request only some minor clean-up points and clarifications prior to publication (and the paper requires a mild copy edit): 1. In the "other" category, Figure 1 seems to have one sample and Figure 3 seems to have two samples (3%). Surely the exact cause of death could be listed rather than "other"? 2. "the risks of evacuating millions of people were considered too high". By whom? There was an intense debate at the time regarding evacuation. Furthermore, many immigrants, legal or otherwise, indicated that they

[Printer-friendly version](#)

[Discussion paper](#)



would have considered evacuating, but they were scared by the lack of guarantee from the government that they would be permitted through checkpoints when evacuating. Please add one sentence here describing exactly who felt that evacuation risks were too high, indicating that some people wanted to evacuate but had reasons not to. 3. Rather than the word "victim", it would be better to repeat "fatality", "death", or similar. 4. The distinction between direct and indirect deaths is difficult to make. In this paper, I can see exactly why the terms "direct" and "directly" are used and I could understand if the authors might be reluctant to remove these terms. Instead, perhaps either use "immediate deaths" or else add one sentence clarifying what is meant by "direct" and "directly" while indicating the reticence of many disaster deaths researchers to distinguish between direct and indirect deaths. 5. "Approximately half of the casualties were located in Harris County". It is implied, but not stated explicitly, that the dominance of Harris County is due to better records. Please make a short, explicit statement. 6. Is there any material covering whether or not the boat fatalities were wearing PFDs (lifejackets)? Please note this information or just indicate that it is not known. 7. When return periods are given, please indicate the parameter being calculated (e.g. flood depth, volumetric flow rate, areal extent). 8. Delete "At the time it [Allison] was the costliest and deadliest urban flood in U.S. history." I think that Johnstown 1889 counts as an urban flood in U.S. history. Allison might not even count as the deadliest urban flood in Texan history depending on how "urban" is defined. 9. "people were warned for flooding beforehand". They were warned before Katrina also. Then, "during Harvey the great majority of fatalities occurred due to drowning, especially in and around vehicles": Could there have been any chance these fatalities occurred during evacuations, i.e. people trying to leave after receiving a warning? The point here is to be wary of assumptions that warnings inevitably reduce death toll, because the social process of warning systems is not straightforward. 10. For the title, perhaps simply "Loss of life from Hurricane Harvey". Finally, congratulations to the authors for not mentioning climate change, demonstrating how they understand the fundamentals of vulnerability to Hurricane Harvey. Please ensure that climate change remains absent from this paper,

[Printer-friendly version](#)

[Discussion paper](#)



because it was vulnerabilities which caused the deaths, not climate change. None of the above points detract from the relevance, originality, and worthwhileness of this article which I hope to see published soon. The authors have done a useful and needed analysis on an important case study, providing a solid baseline for further work.

Interactive comment on Nat. Hazards Earth Syst. Sci. Discuss., <https://doi.org/10.5194/nhess-2017-436>, 2018.

[Interactive
comment](#)

[Printer-friendly version](#)

[Discussion paper](#)

