

Interactive comment on “King Tide floods in Tuvalu” by C.-C. Lin et al.

Anonymous Referee #1

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Review of the article by C.-C. Lin, C.-R. Ho, and Y.-H. Cheng "King Tide floods in Tuvalu" "

The authors describe strong and dangerous tides in Tuvalu, an island country in the Pacific.

(1) Does the manuscript represent a substantial contribution to the understanding of natural hazards and their consequences (new concepts, ideas, methods, or data)

The authors present interesting data and describe an interesting phenomenon that deserves publication in NHESS

(2) Are the scientific and/or technical approaches and the applied methods valid? Are the results discussed in an appropriate and balanced way (clarity of concepts and discussion, consideration of related work, including appropriate references)

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The presentation requires improvement

(3) Are the scientific data, results and conclusions presented in a clear, concise, and well-structured way (number and quality of figures/tables, appropriate use of technical and English language, simplicity of the language)

Editing of the language is required.

I think the paper deserves publication after improvement. Now it resembles more a newspaper article that put forward serious problems of the Tuvalu country. The maximum elevation of the land on the islands is 5 m whereas the tide can be as high as 3.5 m.

The authors possess a large amount of data, but it is poorly presented. Scientific analysis of the data presented in Fig. 4 is required. The figure is very large but the discussion is very short.

I would like to see a graph of the inundation, for example for the period of two or three King tides (three months in 2011) that demonstrate the usual situation and dangerous tide. It could be a terrain profile of the island with the elevations of the usual tide, spring tide etc. that shows how far from the sea the water can reach.

I would also like to see a graph of tidal elevations combining the usual period and unusual king tides.

I recommend changing the title to exclude the King Tide from the title because this is a local term. The title could be for example “Strong and dangerous floods in Tuvalu due to tides”.

Some minor remarks: Please write Earth, Moon, Sun with a capital letter.

Page 1947 line 17 Owing not Owning

Please exclude abbreviations that are not widely used such as HAT, MLLW, SSHA.

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