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Comment

***Interactive comment on “A contribution to the selection of tsunami human vulnerability indicators: conclusions from tsunami impacts in Sri Lanka and Thailand (2004), Samoa (2009), Chile (2010) and Japan (2011)” by P. González-Riancho et al.***

**Anonymous Referee #1**

Received and published: 4 February 2015

Comment on MS\_nhessd-2-7679-2014 Anonymous Reviewer The paper makes a comprehensive analysis of the immediate post event situations for the most important tsunami events (that happened until now) in the 21st Century. The material published and the analysis made are quite valuable for the tsunami scientific community and I recommend it for publication in NHESS, with minor revisions. Below some points that need clarification: 1. The 2011 Tohoku earthquake happened at 14:46 JST (LT). The

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Earthquake EWS sent out warnings 1 min before the earthquake was felt in Tokyo, reaching the general public about 31 s after the earthquake occurred. This sentence is misleading you mention the warning was issued 1 min before the earthquake was felt in Tokyo – this means that the warning was before the shock but in the same sentence you say reaching general public 31s after the occurrence of the earthquake – apparently the warning was too late. Please clarify.

2. Section 3.2 line 17 What is meant by 15 min and 40 min of warning? The time left for evacuation? Not clear from the text.

3. Section 3.2 line 19-20 The authors state: “Just over an hour after the earthquake at 15:55 JST, a tsunami was observed flooding Sendai Airport”. What can we conclude about the effectiveness of the warning to Sendai?

4. Section 3.3.1 The authors mention children as a sensitive group. What is the age considered for children 9 years old as mentioned in line 3 page 12? Or other?

5. On line 19 the authors state: Only Japan, where the tsunami travelled up to 10 km inland in some areas, shows some correlation between these variables, being negative or very low for the other events. The correlation between the two variables is valid only for distances over 10km? Is there a minimum value of the tsunami inland distance for this correlation to be observed?

6. On page 9 line 1: The authors should specify what type/types of modeling they believe are good to the identification of human exposure.

7. Subtitle 3.6 is not necessary.

In footers of pages 6 and 15 the authors should indicate the date they assessed the different websites-

8. Paragraph 4. Conclusions is too lengthy if it relates to conclusions only and does not clearly state what are the human vulnerability indicators the authors recommend. May be the authors should renamed to Discussion and Conclusions. This paragraph

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(in my opinion) needs to be re-worked according to the title of the paper.

9. Figure 5a Please explain or correct the dates of the events, these do not coincide with figure 5b. What tsunami events were analyzed to produce this figure? This not well explained in the text.

10. Page 17. The sentence “These results are summarized in Fig. 7 which presents population rates and tsunami mortality rates by type of population pyramid.” should be moved to the end of the section

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Interactive comment on Nat. Hazards Earth Syst. Sci. Discuss., 2, 7679, 2014.

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