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Interactive comment on "Tsunami evacuation modelling as a tool for risk management: application to the coastal area of El Salvador" *by* P. González-Riancho et al.

Anonymous Referee #1

Received and published: 24 July 2013

Comment on paper nhess-2013-163 (Submitted on 22 Apr 2013) Tsunami evacuation modeling as a tool for risk management: application to the coastal area of El Salvador By: P. González-Riancho, I. Aguirre-Ayerbe, I. Aniel-Quiroga, S. Abad, M. González, J. Larreynaga, F. Gavidia, O.Q. Gutiérrez, J.A. Álvarez-Gómez, and R. Medina I. The paper presents a complete methodology for tsunami evacuation plans based upon tsunami inundation modeling, vulnerability assessment and evacuation modeling. The paper is clearly written (minor corrections are needed) and the structure is well organized. The abstract clearly summarizes the paper. The length of the paper is adequate. The subject of the paper is adequate to NHESS. Before final

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publication I would recommend that the authors should clarify the following points: 1. An explanation on how the 23 tsunami scenarios were obtained is needed or a reference to a previous publication (if exists) is needed. 2. The authors do not explain how they obtain the aggregated scenario. Is it done using SCHEMA project methodology? 3. In figure 4 a map showing flow velocity is needed in order to better understand the drag map. How 4. To compute the drag map what velocity is used? Maximum velocity? Please explain. 5. Figure 6: Please explain the meaning of the black rectangles. The caption shows the road network but it explains nothing about the evacuation routes. Evacuation routes are shown only in figure 7. 6. Line 267: Natural Breaks method please insert reference 7. Line 264 – 265 Where it reads: "The indicators for the assessment of safe areas also provides" should be corrected to: "The indicators for the assessment of safe areas also provide" 8. Line 307 the sentence reads better if the words elapsed and instant are included: Population Reaction Time: time elapsed from the instant that population receives the alert until 307 they start to evacuate. 9. Line 340: Evacuation distances: the aim is to obtain the minimum length (L) from each evacuation point of origin to the destination point. What is meant by minimum length? The minimum distance a person has to walk? The authors should clarify. 10. Definition of slope: Slope = $(Z_a-Z_o)/L$; being Z_a the highest point and Z_o the lowest point. The authors should clarify which points they are referring to by highest and lowest points. Are these points on the evacuation route? 11. Line 404 where it reads: "The Analysis" should read "The analysis" 12. Figure 2: The caption should be changed to: Tsunami evacuation time lines. The caption is incomplete. Authors should explain the difference between top and bottom draw. 13. Line 321: a reference to figure 2 should be inserted after: "situation happens (see figure 2)" The following references need corrected: 1)Clerveaux, V., & Katada, T. (2008). Tsunami scenario simulator: a tool for ensuring effective disaster management and coastal evacuation in a multilanguage society. Science of Tsunami Hazards, 27(3), 48–71. This reference is not quoted in the text and should be deleted from the references list: 2) Line 60 (Jonkman et al., 2008) refers to (2008a) or (2008b)?

Please also note the supplement to this comment:
http://www.nat-hazards-earth-syst-sci-discuss.net/1/C597/2013/nhessd-1-C597-2013-supplement.pdf

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Interactive comment on Nat. Hazards Earth Syst. Sci. Discuss., 1, 2163, 2013.