

Interactive comment on “Brief communication “The magnitude 7.2 Bohol earthquake, Philippines”” by A. M. F. Lagmay and R. Eco

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I have found very interesting and relevance the Brief communication entitled “The Magnitude 7.2 Bohol Earthquake, Philippines” and I suggest its publication after improvements of few points and a general revision to fix small inaccuracies into the text.

reply: Thank you very much for the favourable review.

Comments:

1) The organization of the paper appears unusual, first the data (seismological and field data), then the previous earthquakes and, last, the geodynamic setting. Is it possible to change and to anticipate geodynamic setting and past earthquakes? For me it is

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more logical.

reply: We will fix this accordingly. We agree with this observation.

2) Introduction: the authors are using only the USGS data for magnitude and location (page 2104, lines 15-20), but there are also local data, from the Philippine Institute of Volcanology and Seismology, data cited later in the text. Why do not you add also those data here?

reply: The plot of earthquake epicentres are actually from Phivolcs. What we forgot to include was the magnitude and location provided by Phivolcs for the main shock. This should have been side by side with the USGS record. We will fix this accordingly. Thank you.

3) Tectonic framework of the Philippines: interesting paragraph, but without any relation with the described earthquake; please, add some sentences to explain how the studied earthquake is set in the geodynamic framework

reply: This is a good point. We will maintain the current discussion on Philippine tectonics and then focus on the Bohol region. We will then add an explanation on how the studied earthquake is set in the geodynamic framework.

4) Conclusion: I suggest to strength it, avoiding the atomic bombs, and suggesting a mapping project of capable faults and a study of the recurrence time related to the strongest earthquakes. Some sentences are useless, as lines 1-3 (page 2109) and lines 4-8.

reply: We will improve the conclusions by describing the current mapping projects on the fault that generated the earthquake. There are several including trenching and radar and lidar remote sensing studies. We will drop the atomic bomb and scrap the useless sentences, as suggested.

5) Figure 1: not so clear, most elements described in the caption are not visible, as the largest circle of M 7.2, and the lineaments. In addition, please, locate fig. 1a in the 1b.

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Finally, 1b should be located in fig. 5

reply: Revisions will be made as suggested. Thank you.

6) Figure 5: please improve the readability of this figure. Too many information and letters

reply: We will improve readability of the figure.

Answers to Specific comments:

1) page 2104, line 2: 12 km reply: Will change

2) line 6: US\$ 52.06 reply:ok will add the dollar sign

3) line 21: PEIS, please, add a reference reply: We will add the reference for PEIS

4) page 2105, line 7, please use a rough estimation, as 2.257 million Philippines Pesos
reply: Will change to 2.257 million Philippine Pesos instead of 2,257,337.182

5) line 17: can you add also any field data to support the fault kinematics reply: We can add data for this to support fault kinematics.

6) lines 18-21: repeated, please rephrase reply: We will rephrase

7) line 25: earthquake, . . . reply: We will add the comma . 8) page 2106, lines 4-5: . . . there were recorded several aftershocks reply: edited to "there were recorded several aftershocks". Thank you.

9) line 6 and following: please, change "wall" with "scarp" (also in the caption of fig. 4, p. 2114) reply: Will change wall to scarp

10) lines 3-9: there are no witnesses or observers that can describe when the scarp has been formed? reply: Yes, there was a witness who described how it was formed. She was crying when she narrated the story. According to the witness, the scarp formed right in front of her and happened only in a few minutes.

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11) Lines 13-14. This sentence is a repetition of lines 10-11 of page 2105, but with different data and numbers. Please, uniform and avoid the repetition reply: Yes, this was also mentioned by another reviewer. The discrepancy is due to an update after the set of 3 reviews before publication in NHESSD. The latter is the updated version.

12) Lines 19-20, lineaments found reply: The word "structure" will be dropped

13) Lines 23-24: matter is normally . . . reply: We will change to "matter is normally ..."

14) Line 25: ... is located where ... reply: We will change accordingly. Thank you.

15) Line 26: the fault, as the Inabanga Fault reply: Will add the word "as"

16) Lines 27-29: can you add the geographic coordinate of the archetypal fault location? reply: Yes, we will add the coordinates of the Inabanga Fault. It is now a tourist destination.

17) Page 2107, line 1: M 6.8 reply: We will add a space before 6.8

18) Lines 1-2: please locate them in fig. 1 reply: Yes, we will locate it in fig. 1

19) Page 2108, line 18: mapped or unmapped? reply: mapped. We can mention though that the fault responsible for the 2013 Bohol earthquake was unmapped to make it clear.

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