

Interactive comment on “Damages during February, 6–24 2017 Çanakkale earthquake swarm” by Ramazan Livaoglu et al.

S. Kundak (Referee)

kundak@itu.edu.tr

Received and published: 1 August 2017

The manuscript gives information on field survey aftermath EQ swarm, so that it can be evaluated as a preliminary report rather than a research article. I would have some suggestions to authors in developing their manuscript.

1. General composition: The given theoretical background is quite fragmented. An acknowledgement on EQ damage in traditional houses should be given referring past events in both national and international scene. In more detail, a general review of the seismicity of survey region (including consequences of past events) is expected to be given.
2. Presentation of survey area: In the text, authors mentioned about affected villages

C1

where I assume that the research has been conducted in. However, it is not clear how many villages have been studied, how many buildings are in those villages and what is the damage ratio in each. It would be better that the authors produce survey area map(s) indicating epicenter, location and damage ratio in those villages. Furthermore a schematic map might be produced to show PGA distribution. In the text, economic status of residents is mentioned as one of the root causes for damage level (page 7, line 16). If this is a relevant determinant, the authors should give a detailed information on socio-economic status of the survey area.

3. Details: The authors should keep in mind that this manuscript addresses to international readers who are not likely familiar with Turkish abbreviations. For instance: AFAD is given in international papers as DEMP (Disaster and Emergency Management Presidency); MTA is MRE (General Directorate of Mineral Research and Exploration). The authors mentioned Turkish Earthquake Code (TEC). The abbreviate name of this reference is Turkish Earthquake Resistant Code and full name is Specification for Building to be built in Seismic Zones (Not disaster zones. According to the Turkish Regulations, once a region is declared as "disaster zone" no building development is permitted, so that, logically, it is not possible to have a building codes for new development). In the page 5, line 6, it sounds that the survey area zonning is released in 2007's document. However, the Earthquake Zonning Map of Turkey was produced in 1996. In the page 7, line 23, the year of the reference is not given.

4. Conclusion & recommendation: It is very well known that old and low quality (both in material and engineering aspects) buildings are vulnerable to seismic tremors. The recommendations should be beyond re-phrasing "avoid those buildings". Most of the villages are dated back 1970s and before, it is not likely to evaluate them according to the newest building codes. Furthermore, there is always doubt how much they had fit to the old building codes. I suggest authors to focus how traditional rural domestic buildings would be retrofitted using local knowledge and local materials. This approach would give a valuable contribution to the research field.

C2

