

Interactive comment on “Assessment of potential seismic hazard for sensitive facilities by applying seismo-tectonic criteria: an example from the Levant region” by Matty Sharon et al.

Anonymous Referee #3

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The present review contains observations and comments on "assessment of Potential seismic hazard for sensitive facilities by applying seismo-tectonic criteria: an example from the Levant region". The paper used the seismic characteristics as well as the geology and slip rates of the faults in the Levant area in order to help assessing seismic hazard. Although the paper adopts a terrific state-of-the-practice, many points have to be addressed to get an acceptable outcomes as the paper in its current state is open to criticism. 1- The title is irrelevant as I could not see a comprehensive seismic hazard analysis, unless the author consider defining the active and capable faults (seismic source model) is a complete hazard assessment process. It is very important component in any seismic hazard study, but it is not the entire process. 2- Regarding

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the exclusion of a very important event Md 5.8 1993 due to unreliable location, please show how much the location is uncertain. Compare this with the clear uncertainty in location around the Gulf of Aqaba. 3- Please show how many circles are included in your calculations and the weight of each circle and why did you select (calculate) such weight. 4- It seems that the catalogue contains the aftershocks of large earthquakes, please show the role of these aftershocks as they are not due to primary tectonic movements. What is the situation if these aftershocks are removed from the calculations of earthquake kernel density distribution? 5- For many faults the slip rate is provided based upon geologic or GPS surveys. Such slip may contain a creep component in addition to the seismic one. The role of creep should be addressed for all active faults as it could be a source of large uncertainty. 5- With the large periods of quiescence observed frequently along many parts of DST, 35 years of instrumentally recorded seismicity are very short to reflect the active tectonics accurately. This period should be extended using robust historical records. 6- Although the seismicity and earthquake kernel density distribution show high seismicity to the east of the Gulf of Aqaba, neither active nor capable faults are inferred at this area. 7- Abbreviations should be explained at their first appearance in the text (e.g. LRB). Some abbreviations has no explanation (QFMI). 8- Minor comments a) Line 54 contains two fullstops, please remove one of them. b) Arrange references in line 116 in a chronological order. c) Sentence in lines 147 and 148 needs reference. d) Change figure 4 into Fig. 4 in line 258. e) Change demonstrates into demonstrate in line 282. F) Change is represents in line 366 into represents. g) Rewrite lines 408 to 411 as it is really so difficult to be followed. h) Remove many in line 454. i) Sea of Galilee should be shown on a map. j) ARF is repeated in Fig. 7. k) All the maps lack to the North Direction Indicator.

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