

Interactive comment on “Active fault databases: building a bridge between earthquake geologists and seismic hazard practitioners, the case of the QAFI v.3 database” by Julián García-Mayordomo et al.

N. Litchfield (Referee)

N.Litchfield@gns.cri.nz

Received and published: 16 May 2017

This paper provides a nice summary of an updated version (3) of an Active Fault Database of Iberia including addition of seismic hazard parameters (M and RI) and assessment of the quality and reliability. The paper will be useful for the special issue and will be of international interest. The paper is well written, well structured, and provides a thorough and thoughtful description of the key updates and new parameters in the database, without getting too buried in detail. The figures and tables are useful and clear, with the possible exception of a map as noted below.

C1

Specific comments

The one thing I think is missing from the paper is a map of Iberia showing the active faults in the database. It would be useful to denote the new ones added as well as the sense of movement, which is currently not noted anywhere. This would be particularly useful for international readers.

I am also unclear if this is a live database that is being constantly updated, or if there will be no more updates until v4 is released? I suggest a sentence is added clarifying that to the paper.

One thing that is not really mentioned at all is if any of the faults are divided into segments? Because magnitude is calculated for each fault it implies that they are considered to be an individual seismic sources, but if some faults are divided into segments then it would be useful to at least note somewhere in the text that some segments may rupture together. In fact the 2016 Kaikoura Earthquake in New Zealand has clearly shown us that faults may rupture together, regardless of whether they are divided into segments or not. I know that analysis of segment options is part of seismic hazard analysis rather than an active fault database, but I'm slightly concerned that by supplying magnitudes for each fault readers may assume that they can only rupture on their own.

The paper notes that the 42 faults in Portuguese territory have not been assessed for some of the parameters. This should be stated early on, with the reasons why.

The discussion is really a summary and discussion, so I suggest changing the heading to this.

The histogram figures need labels on the y-axis. Presumably this is number of faults?

Technical corrections are noted as comments on the pdf supplement, and most are minor English corrections.

C2

Please also note the supplement to this comment:
<http://www.nat-hazards-earth-syst-sci-discuss.net/nhess-2017-128/nhess-2017-128-RC2-supplement.pdf>

Interactive comment on Nat. Hazards Earth Syst. Sci. Discuss., doi:10.5194/nhess-2017-128, 2017.