

Earth Syst. Sci. Data Discuss., referee comment RC2
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Comment on essd-2022-378

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Referee comment on "The Weisweiler passive seismological network: optimised for state-of-the-art location and imaging methods" by Claudia Finger et al., Earth Syst. Sci. Data Discuss., <https://doi.org/10.5194/essd-2022-378-RC2>, 2022

General comment

The paper presents a description of a local seismological network. The location, design, characteristics, and performance of the network during its operation time are accurately detailed. A DOI is assigned to the network and its metadata are complete and thoroughly compiled. The network metadata are easily accessible, although a few stations are embargoed, and they are encoded in the fdsn-station standardized format. The dataset is associated to a Creative Commons 4.0 licence.

However, the object of the paper is not a proper dataset because no original research data to be reused in further scientific research are presented, and the manuscript resembles a technical report probably not suitable for publication in ESSD.

The paper is not well written and a revision of the language and terminology is necessary (some examples are indicated as "Technical corrections" below).

Specific comments

The use of the term "passive seismic dataset" (lines 1, 11, 217) is very misleading, because a reader expects to find the description of a seismic (better, seismological) dataset, i.e. a compilation of waveforms/locations or other data produced by a network upon which further research can be based. Since only the data regarding the network are

presented, the dataset should be referred to as a “seismic network” instead of “seismic dataset”. This ambiguity is present throughout the manuscript (e.g. at lines 27-29, and especially in Section 6 – Data Availability).

To stimulate the readers’ interest in the paper, which is now limited and local, additional details on the recorded data and their availability and accessibility should be provided. For example, it seems that recorded waveforms are available through the GEOFON website and services, although this is not reported in the manuscript.

The landing page of the DOI is hosted by the GEOFON website, which shows the presented network metadata in a clearly readable way. This is not mentioned in the manuscript but must be added and described in the “Data Availability” section.

Technical corrections

- According to ESSD’s guidelines (<https://www.earth-system-science-data.net/submission.html#manuscriptcomposition>) the section dedicated to “Data availability” should precede the Conclusions
- Line 55: there are several regional European and national catalogues and papers providing more accurate magnitude estimates for the 1992 Roermond earthquake than the USGS catalogue
- The maps in Figure 1 are too small, in particular the lettering.
- The acronyms RWE (line112), and GIPP (line 119) are not explained.

Here are just a few examples of errors and misuses of English grammar, syntax, and terminology but many more can be found in the text (numbers indicate the lines in the manuscript file)

1 and 11: a “dataset” cannot be defined as a “technology” (see also the Specific Comments)

17: “Economic”: do you mean “Cheap”?

18: Pre-existing is repeated

20 "Novel" or "innovative"?

48: "Perpendicularly" instead of "perpendicular"

50: "Normal" is referred to a fault's type/mechanism, not a fault's strike

51: "Among" instead of "between"

53: Connect the two sentences and rephrase as "... the shallow part (above 12 km) has/shows a normal faulting regime and the deep part a strike-slip one."

58: What does "Based on the maximum fault rupture plane" means?

59: "Rupture" instead of "failure"

70: "Mining" instead of "mines"

71: "Aim at" not "aim for"

71: "Seismic network" instead of "seismic station network"

75: "an earthquake hazard region": do you mean "a high earthquake hazard region"?

79 "Extent" instead of "extend"

90: "population and industries" instead of "citizen and companies"

97: "is described" instead of "can be seen"

142 "Provide" instead of "comprise"?

143-144: "were still recording" instead of "still continue recording"

149: "following" instead of "next"

158: remove "frequency"

191: "exclude" instead of "negate"

198: "identified" instead of "recovered"? "Shallowest" instead of "shallower"