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Open Access Earth System Science Data Discussions

Interactive comment on "Reassessing the lithosphere: SeisDARE, an open access seismic data repository" *by* Irene DeFelipe et al.

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The answers to the referee's comments are indicated after each question (in «»).

GENERAL COMMENTS I concur with the observations and support the comments made by Reviewer 1. This paper is a very good introduction of the SeisDARE repository, and the authors are to be congratulated for setting up the repository and introducing it to the community.

«We appreciate the interest shown by the reviewer in our manuscript and thank him for the suitable comments addressed. Therefore, we resubmit a new version of the manuscript taking into consideration his comments. »

While the paper includes quite a lot of information about the geological / tectonic set-

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Discussion paper

tings and some main results of the various experiments, it lacks (also noted by Reviewer 1) in my view some further technical description of the datasets and the criteria applied to the datasets for inclusion in the repository. Thus I support the idea of Reviewer 1 to include a section on technical details / data set descriptions, quality assessment etc. and perhaps also add this to the repository website.

«In agreement with the comments of Reviewer 1, we have included in the new version of the manuscript a section: “4 Technical aspects of the data”. Here, we briefly discuss the general acquisition parameters of the datasets and the formats of the different files included on the database. References for both SEG-Y and SU formats have been added as suggested. We also included the SEG-D format as part of the raw data in the ALCUDIA-NI dataset are in this format. Further information on the details of each dataset can be consulted in the “show full item record” link in the left bottom corner of each dataset and in the publications cited. In addition, part of the information included in section “2 Outline of SeisDARE” has been moved to the current section “4 Technical aspects of the data” for consistency.»

SPECIFIC COMMENTS The consistency between the article and the database is now given, the authors apparently removed the non-fitting datasets noted by Reviewer 1. The currently (Dec 2020) 21 datasets listed in https://digital.csic.es/handle/10261/101879 correspond to the paper, as two were added late 2020, after the submission date. If possible, these two datasets could still be added to the paper for the final version (together with any other that might be included by then).

«Indeed, during the discussion phase we enlarged the list of the datasets in the repository with the IBERSEIS-NI (processed files) and MARCONI-WA. We have consequently included these datasets into the manuscript.»

As noted above, and in line with the comments from Reviewer 1, an additional section that further describes the technical details of the data sets, any quality check criteria,

embargo policies, would be helpful.

«The new section “4 Technical aspects of the data” aims to provide technical information of the data. Regarding the data quality, unfortunately there are no completely objective and quantitative ways to assess this. Currently, EPOS is trying to address this issue aiming to define numerical indicators to estimate the quality of geophysical data collections, but this is not yet solved. In the meantime, we prefer to leave out any subjective/qualitative assessment of the data quality to avoid biasing the readers. In any case, each dataset contains a list of publications where the users can observe and estimate the quality of the datasets by themselves. The embargo comprises a reasonable time period for the use of the data (and potential publication of the main results) by the project members or private companies involved. This has been added to the manuscript for clarity.»

TECHNICAL CORRECTIONS In addition to what was noted by Reviewer 1, I just have one additional editorial remark: line 70/71 - the formulation ’The ESFRI in Earth Sciences is the European Plate Observation System...’ is a bit misleading, as ESFRI is the Forum under who’s guidance / governance ERICs are set up. It would be more correct to write that EPOS is the European Research Infrastructure Consortium for Earth Sciences established under ESFRI. Also note that EPOS now has a new URL https://epos-eu.org

«In the new version of the manuscript we have re-write that sentence and corrected the link to the EPOS website.»

COMMENTS TO THE REPOSITORY From some spot-checks on the repository I noted a couple of items that could be considered (also in addition to what is already noted by Rev 1): - I am not sure what the purpose of the excel file with the ’list of files’ is? These ’Description_ficheros_[experiment].xlsx’ files just contain the list of files that are part of the dataset (and the filenames don’t match the content of the excel file).

«The ’Description_ficheros_[experiment].xlsx’ files included are a requirement of the

repository's file architecture and unfortunately cannot be removed.»

- quite often the file 'Seismic_data_[experiment]_metadata.xlsx' is missing in the repositories (but is included in the Description_ficheros and Readme... files).

«Indeed, as the referee pointed out, there is an inconsistency and we are currently and progressively solving this issue in the repository by updating the 'Description_ficheros_[experiment].xlsx' and 'readme' files. We started creating the file 'Seismic_data_[experiment]_metadata.xlsx' to provide further information on the data and therefore, it was also included into the 'Description_ficheros_[experiment].xlsx'. Finally, as most of the data of the 'Seismic_data_[experiment]_metadata.xlsx' are included along the dataset itself (check also the "show full item record" link), we decided not to upload it. »

- in the file table ('Files in this item') the Description field is usually empty, and the 'Format' field refers to the 'internal' format of the archive (e.g. a .rar file with trace records has Format entry 'SEGY/su'). While the data file format is an important information, this use of the field is inconsistent and may be confusing (in particular thinking of automatic access & processing). Maybe the internal format could be listed in the description field, and the Format field could specify the actual format of the downloadable file?

«The description field in the file table of the repository is being completed with a short and descriptive sentence, and the format field includes the format(s) of the files included.»

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