

Author Responses to Editor Comments

1) Manuscript:

- Data basis / General comment:

o The basis for an ESSD paper is a published dataset on a trusted repository with a fixed DOI. You cannot refer to a dataset that is still going on in the paper, as you also cannot describe the features/uncertainties of this dataset appropriately if it has not been collected yet. If your data collection is still going on, the best option is to refer to a fixed dataset in the past for the paper, but already mention in the paper that data collection is continuing and that you will update the dataset on the repository regularly, leading to new versions with extended time series. The paper will, however, always refer to a fixed dataset version with a fixed DOI.

□ Please make your time period/fixed dataset which you are referring to with the paper clear in the manuscript and mention the possible extensions that will happen on the repository, if you plan to do so.

This has been updated throughout the paper and is clearly referring to the fixed dataset, with one or two references to updates in the future so the reader knows that future data will be added to a repository related to the one published here.

- Rating curves:

o Thank you for the extension of the discussion on the uncertainties of the discharge measurements. This is already very helpful. However, it would still be good to include the rating curves (and their support/uncertainties) which you finally used as a basis for the stage-discharge relationship of the data in the paper with its fixed DOI. Of course this may change once you continue measurements, but as a snapshot and a basis for assessing which ranges of the data are more trustworthy than others the curves are very valuable, especially if it is not completely clear at which values the “low flows” or “high flows” with their considerably different error range can be expected. Updated rating curves could then still be provided on request, but for the published dataset the rating curve should be definite (and included in an appendix for example), not fluid.

Rating curves have been added as an appendix.

2) Supplement

- Displaying the times when sensors are working and when they are not in a figure is a good way. However, the presentation of it is possibly not the most intuitive/easiest to grasp. Some suggestions:

o Please refer to the dataset that is actually in the paper, with its fixed DOI.

This has now been listed in the captions.

o yearly resolution seems a bit coarse, maybe provide further ticks or lines to make comparisons of the durations a bit easier, possibly on a monthly basis?

o The rows are very wide with no apparent reason for it. If you made them narrower, you could possibly group more corresponding together, for example the weather station and discharge data from the same catchment. A raster with small monthly blocks that are black and white or something might also work for a compressed display.

Monthly was attempted but is very cramped and unreadable in the format described here. New plots were created, and space was given in between variables to make them more legible. The style is adapted from previous ESSD data papers (Strasser et al., 2018; <https://doi.org/10.5194/essd-10-151-2018>) which have been successful in displaying missing data.

- The information of availability for the LASCAR data is missing. Please also add it.

Lascar loggers are not missing data, which is why they are not included. Please look at the data. A sentence has been added to the manuscript to convey this.

- Please be consistent in the use of abbreviations for the station names. For example, in the map Fig. 1 and Table 3 you write the discharge stations as CuchQ, CDAQ, PumQ etc. whereas in the supplement they are called cuchilla, cda, puma etc. It just makes it easier for the reader to know that the same thing is meant.

All abbreviations have been updated in these figures.

- Please add this information as an appendix rather than a supplement (or if the compressed graph is compact enough, it could even be a figure), it is an important overview of the data, especially in a data-sparse region such as Peru, so it would be good to have it attached directly to the paper.

All of the above mentioned figures, along with the rating curves have been added to an appendix, and the supplement has now been removed entirely because of this shift.

3) Readme file:

- File format:

- o .xlsx is a proprietary format. Please put it in as a PDF so that everybody can read it

- o A form of text file (instead of this table format) is easier to read, insert the tables and maps into a text file rather than having text blocks in a table.

This has been updated.

- Tables: In the form it is now, last column doesn't match first ones as the lines of the last column don't correspond to the lines in the other columns. Please put this information separately.

This has been edited appropriately.

- Last header doesn't really talk about the sensors, the sampling and the data, rather about the cooperation which is more like an acknowledgement bit than needed to work with the data. More helpful would be to actually name the sensors that are measuring (or put them into the tables), the accuracy and also the overview of the time series when everything was measuring (like in the supplement/appendix).

The last header has been removed and the entire readme file has been revamped to include all information addressed here.

- You don't need to duplicate the abstract which is on the repository once more in the readme. However, providing information on sampling/sensors, and data processing for the individual variables is relevant and necessary to be able to use the data.

Abstract is removed from the readme file.

- Maybe some pointers about the documentation alongside the data (as in the readme) can be found here (under "Documentation and metadata"). Not everything may apply, but it provides a good list of what should be found on the repository, either on the landing page (eg. authors etc. are already there) or in the readme.

Bullet points for each form of data and sensor has been added at the beginning of the readme file. Tables and figures have been included and are numbered for ease of corresponding to the written portion of the readme file.