

## RESPONSE TO REVIEWERS COMMENTS ON THE MANUSCRIPT egusphere-2023-1003

**Title:** Using integrated hydrological-hydraulic modelling and global data sources to analyse the February 2023 floods in the Umbeluzi catchment (Mozambique)

**Authors:** Luis Cea, Manuel Álvarez and Jerónimo Puertas

### GENERAL COMMENTS

The authors would like to thank the editor and reviewers for their positive final assessment of our work. We have incorporated in the new version the few minor comments mentioned by Reviewer #1.

#### Answers to the comments of Reviewer #1

The manuscript contains some amendments compared to the previous version. The content is easily understandable and the writing is very good, so the material is straightforward reading. I am still not convinced of the usefulness of the two counterfactual scenarios; however, I am not raising the issue again and have just few remarks, most of which are minor stuff.

404: the third explanation given does not sound very convincing. Furthermore, the use of "slightly" does not seem very appropriate for the deviations seen in the plot.

We agree that the third explanation alone would not explain the differences between the observed and modelled water depths. It is probably the combination of the three factors that might explain those differences.

Following the reviewer's suggestion, we have removed the word "slightly", and we have added the following sentence: *"These three factors might have contributed, to different degrees, to the deviations shown in Figure 11, the first two being probably the most relevant".*

492: the tone of this statement (using "not so accurately") sounds quite different from that used at line 408, where the model accuracy was declared as satisfactory in spite of the uncertainties involved. It is just an impression, but some more coherent writing could be used in the two places.

We appreciate the reviewer's impression, so we have modified, in line 404, the statement *"are satisfactory" by "follow the same trend as the observations"*.

91: I would invert: "The PL mountain range is located in the ...".

This sentence was actually removed from the manuscript, since it was redundant. The location of the PL mountain range is already mentioned in the previous sentence, and also shown in Figure 1.

158-159: it is probably better to use "on" for days.

Modified.

337: is not

Modified.

#### Answers to the comments of Reviewer #2

After this round of revisions, I found a nicely improved paper. All remarks I raised, as a reviewer, were satisfactorily accomplished and\or replied.

We thank the reviewer for his positive assessment of the effort done in the revision of the manuscript.