

Dear Editor,

first of all, we would like to thank you for reviewing our manuscript and for offering us the opportunity to publish in your prestigious journal. We truly value this work and, therefore, we have done our utmost to accommodate the appropriate requests made by both reviewers and the editor.

Regarding the length of the manuscript, we would like to note that, last August, following careful discussion, the editorial support team granted us an exemption (as permitted by the journal), recognising the merit of our article. We can provide the email correspondence, if required. In any case, this article was conceived as a comprehensive overview, from multiple perspectives, of the 2022 flood in the Marche region. We thought that this could be the main merit of the work.

We have tried to reduce our work as much as possible by cutting text and many images. However, we chose to keep the images we considered most representative for the article. We would also like to point out that the overall length of the article has changed only slightly, since much was removed, but many additions had to be included, as requested. We hope this is acceptable to you and will not pose any issue for publication.

As recommended, we produced the required flow chart of the methodology and attached it in the article.

- For tab. 1, the abbreviations shown in the table next to the name of the municipality do not refer to vehicle number plates but to the commonly used system for provinces, which is considered useful for identifying locations more accurately from a geographical point of view, given that the article is intended for an international audience. However, we have removed these abbreviations as requested and inserted the measure unit (mm) only at the top of the column. The meaning of the acronym SIRMIP was specified the first time it was mentioned, in the section “Hydrological analysis of the event”, a couple of lines above the table in question.
- As required, fig. 6 has been redrawn to improve its clarity and communicative effectiveness.
- In tab. 2, as required, the unit of measurement has been added and the term 'Rain gauge station' has been uniformly applied in the various tables. We have reduced the length of the caption.
- As you requested, we have changed the entire document, replacing “return period” instead of “return time”.
- We removed Table 3, as rightly requested by Reviewer 2 and you.

Concerning Reviewer 2's comments:

- We re-structured the manuscript

- We change “hazard” instead of “risk” in the title.
- We delete tab. 3 and a lot of other considered negligible figures.
- For fig. 12, we substituted the English language for the layers in QGIS and we integrated the caption.
- For lines 690 – 695: we have implemented describing the image in the caption. Furthermore, we inserted a detailed description and a picture of the lidar image from which we have calculated the single volume of each river point bar to be dredged to widen the river section. We tried to perform a lidar analysis pre- and post-event, but the pre-event image was acquired by the Marche region with a definition of 1 meter, while our lidar acquisition through drone has a definition of 0.3 meters. Therefore, unfortunately, due to this difference, GIS software can’t perform the analysis for the sediment transport budget.
- We specify how we used lidar images.
- We added the details of hydrological modelling.
- We improve the description of hydraulic modelling conducted with HEC-RAS software, adding images.
- Line 755: we changed the wrong title.

Concerning Reviewer 1's comments: we would like to point out that we have included his appropriate observations on the Flood Adaptation Hierarchy (FAH) in the “Discussion and Conclusions” section. Furthermore, we cited the suggested authors.