Dear Editor,

thank you for allowing our manuscript to progress in the evaluation process by recommending minor revisions. I am sorry if I gave the impression that I experienced any discomfort in addressing the requested changes. Probably, this stems from the fact that I had originally conceived the manuscript in a slightly different way, but it is certainly more compelling after your suggestions. Furthermore, this task is an integral part of our work, and I consider it a privilege to benefit from a thorough peer-review process. On the contrary, I am grateful for your many precise suggestions and for the time you have dedicated to our manuscript.

Below is a detailed tracking of the modifications:

- We modified the bibliography as requested and we added a couple of citations.
- We removed or merged several figures, mainly those not directly functional to the objectives of the paper, significantly reducing the overall length of the manuscript.
- As suggested, we thoroughly restructured Case Studies by removing geological details from their descriptions, leaving only a brief description of the geomorphological context and of the hydrographic network (in the Materials & Methods section) and a description of the effects, criticalities and suggested interventions (in the Results section). In a couple of cases, we chose to retain a 1:25,000-scale image (essential for understanding the peculiar geomorphological configuration of the area) or the overlay of the natural and human-modified hydrographic networks (with historical images), as these elements were considered highly functional to our work and to the arguments we developed. We merged some picture and we left 3 pictures for each case study. We hope that now, the paper will be more clear, readable and concise.
- We deleted the toponyms not important and we added the main cited toponyms in the main figures.
- We deleted all the abbreviations of the provinces.
- Including a map with the locations of the rain gauge stations would not be entirely appropriate, since the maps of the Marche region do not report their positions accurately. This practice was adopted to prevent vandalism against the instruments. However, for each rain gauge we have provided bibliographic or online references so that interested readers can reconstruct its location (even though, as mentioned, it may not be fully reliable).
- Ex line 180-185: modified a requested.
- Figure 6: We consider the image appropriate because it conveys the mountainous setting in which the event occurred and highlights the concave morphology that channelled the flows during the flood. The geomorphological analysis proved to be an invaluable tool for this work.
- Ex line 260-264 and fig. 7: We consider the contribution derived from the spatiotemporal comparison between historical maps and the recent situation to be essential for the present work. We regard it as an integral part of the article and fully consistent with its aims.

- Ex fig. 8: deleted as requested.
- Ex fig. 11: This figure is very important because it shows the entire hydrographic basin affected by the event and it gives an idea of the area involved. The blurring has been resolved.
- The description of the values recorded by the rain gauges is crucial to show that intense rainfall occurred only in the mountainous area. In the coastal zone—where almost all the fatalities took place—there was virtually no rainfall. The flood wave developed in the upland sector and propagated downslope toward the coast, catching the victims by surprise, as the very limited rainfall near the shoreline gave no indication of the incoming hazard. This is considered by the authors to be a key point of the work, and we would like to retain it.
- Discussion and conclusions: following the recommendation, we have substantially revised it by separating into two distinct sections. The new structure provides a clearer hierarchy, avoids mixing methodological details with interpretative content, and enhances the overall readability. The Conclusions section now explicitly highlights the key take-home messages, as suggested. We believe that these changes significantly improve the clarity, synthesis, and scientific impact of the manuscript.
- As requested, we deleted the sentence “Thanks to hydrological- hydraulic modelling…”.
- Ex fig. 17: deleted as requested.
- Ex fig. 16: modified as requested.
- Ex fig. 27 and 29: we consider these images essential for the manuscript. Ex figure 27 shows an 1800s map onto which we have superimposed the current hydrographic network. The anthropogenic modifications to the watercourse are clearly evident. The former Figure 29 showed the hydraulic cross-section of an affected watercourse, derived from the DTM acquired with the lidar system mounted on our drone. The section displayed asymmetric levees, differing in both height and thickness, as well as a portion of the channel obstructed by river point bars. All these critical elements underpin the considerations discussed in this work.
- Ex lines 771-786: deleted as requested.
- Fig. 32 and 33: merged as requested.
- Discussion: limited as requested.
- Conclusions: modified as requested.
- Home messages introduced.
- Ex fig. 5: deleted.