

## Review of: "Gumbel's Extreme Value Distribution for Flood Frequency Analyses of Timis River"

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Potential competing interests: No potential competing interests to declare

The study specifically targets flood frequency analysis for the Timis River in Romania, providing valuable insights for this particular region. The analysis is based on a substantial dataset of 30 years, which enhances the reliability and robustness of the findings. However, the paper needs substantial revisions before final publication. My specific comments are:

**Abstract:** The abstract is poorly written. You should consider the following points:

- 1. The abstract could benefit from briefly mentioning the methodology used to conduct the flood frequency analysis, providing readers with an overview of the study approach.
- 2. While the abstract mentions the results, it could be enhanced by briefly discussing the significance of these findings for flood risk management or infrastructure planning.
- 3. It would be helpful to include a statement on the generalizability of the findings beyond the Timis River in Romania to provide context for readers from other regions.
- 4. A brief mention of potential implications or future research directions could make the abstract more engaging and informative.

Introduction: The introduction is also poorly written. The following points need to be considered.

- 1. An overview of the topic.
- 2. Prior research.
- 3. A rationale for your paper.
- 4. Describe the methodology you used, which could provide readers with a better understanding of the study approach.
- 5. A paper statements. It should be straightforward and clear. It could benefit from emphasizing the specific relevance of the study to the Timis River in Romania.

**Study Area:** The following points need to be considered.

- 1. While the study area description is informative, it could be enhanced by discussing how specific geographical features or climate patterns impact flood frequency analysis in the Timis River basin.
- 2. While Figure 1 provides a map of the study area, additional maps or visual aids could further enhance the reader's understanding of the geographical context.
- 3. The study area description could benefit from a brief mention of potential future research directions related to the



impact of climate change or land use on flood frequency in the region.

**Database and Methods:** Please mention the databases and their sources. While the method mentions the calculation of average values and standard deviations, providing more insight into the step-by-step process of applying Gumbel's distribution method could enhance the clarity of the analysis.

## **Discussion:**

- 1. The discussion could benefit from suggesting potential future research directions or areas where further investigation is needed to enhance the applicability of the study findings.
- 2. While the study provides valuable insights for the Timis River, a brief mention of the generalizability of the findings to other regions or the need for validation in different contexts could strengthen the conclusion.
- 3. The discussion could be enhanced by including a brief discussion on the uncertainties associated with the predictions and the limitations of the methodology used, providing a more comprehensive view of the study's implications.
- 4. Compare with the previous findings.
- 5. Add a separate section for the conclusion.