

Review of: "Spatio-Temporal Analysis of Precipitation Patterns in Xinjiang Using TRMM Data and Spatial Interpolation Methods: A Comparative Study"

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Potential competing interests: No potential competing interests to declare.

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Paper title: Spatio-Temporal Analysis of Precipitation Patterns in Xinjiang Using TRMM Data and Spatial Interpolation Methods: A Comparative Study

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The study, which investigates the effectiveness of four precipitation spatial interpolation methods is interesting and relevant to the scope. Though the results are noteworthy, some issues do exist and there is an opportunity to improve further which needs to be addressed to improve the scientific quality of the paper:

- 1) The abstract should briefly mention the objectives, along with a summary of methods of analysis followed by a summary of findings.
- 2) The abstract should be kept brief; around 200 words.
- 3) The introduction needs to be improved to increase clarity. Additionally, the introduction in its current form does not properly refer to previously published studies.
- 4) The introduction should take into account all aspects of the problem, including assumptions, limitations and constraints, advantages and disadvantages, and relative merits compared with other available studies and proposals. The new knowledge contributed in this article should be presented in this part.
- 6) A more suitable map should be presented for the study area instead of figure 1. It is recommended to show the general location and then, with 2 or 3 more figures, show the exact location (e.g. the country, then the city, and so on).
- 7) In order to make it easier to read and interpret the maps and figures, the comments on all figures should be in English.
- 9) A flowchart should be added to the article to show the research methodology and to present the sequence of steps.
- 10) The literature review is not enough; it is important to add some recent work (2021-2023) referring to the focus of the study.

- 11) It is suggested to compare the results of the present study with those of previous studies, analyzing their results completely and discussing this with clarity to draw conclusions.
- 12) Strong explanations and interpretations must be added for the result and supported with reasoning.
- 13) The length of the time series is only 20 years. However, the temporal pattern may not be captured well with such a short time series. As such, it is suggested to use the data covering the period up to 2022.
- 14) It is suggested to improve the organization of the conclusion section. This section should be presented with clear messages and recommendations.