# 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.

The authors aimed to evaluate the spatial interpolation methods by comparing TRMM and ground precipitation data in Xinjiang between 1998 and 2019. They examined the precipitation patterns both spatially and temporally.

The authors have collected and analysed a pervasive material body over 20 years. The methods used by the authors are reasonable, up-to-date, and fully justified in terms of their aims and objectives. The authors have set specific aims and objectives. The paper investigates the effectiveness of four spatial interpolation methods - inverse distance weighted, kriging, radial basis function, and thin plate spline. The aim is to evaluate their accuracy in mapping the annual rainfall distribution of Xinjiang.

The authors have come up with interesting and important results throughout the research process. Combined with the TRMM data, the inverse distance weighting method showed the highest interpolation accuracy, making it suitable for analysing Xinjiang's rainfall distribution. This provides a practical methodological reference for future studies.

In the Methodology section, please specify the method for preprocessing the data.

Please briefly explain why the authors chose the period from 1998 to 2019!

For example, in Figure 4, what do the colours indicate (blue, red, and yellow)? It was stated that the precipitation increased in the regions of Aksu, Kashgar, Hotan, and Aral, but are those locations indicated in Figure 4? But I can also say it in Figures 5 and 6.

In general, the amount of scientific data processed, research work, accuracy, and methodology were of a high scientific standard. The results' reliability is beyond doubt and is of significant theoretical and practical relevance. Therefore, it is impossible not to agree with the authors on the following conclusions.

In summary, this study sheds light on the trends and regional characteristics of precipitation in Xinjiang and compares the effectiveness of different interpolation methods. These results have practical significance and theoretical value for the region's water resource management, agricultural development, and climate change research.

The figures have some Chinese words. Please write them in English.

In summary, this manuscript is acceptable. It can be accepted after some minor revisions.