

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.

Methodological Rigor: The methodology employed for data analysis and spatial interpolation is comprehensive. However, the selection criteria for the four interpolation methods (inverse distance-weighted, kriging, radial basis function, and thin-plate spline) could be more explicitly justified. A deeper explanation of why these specific methods were chosen over others would strengthen the paper's methodological foundation.

Data Sources and Integration: The integration of TRMM 3B43 V7 satellite precipitation data with ground-based observations is a robust approach. However, the paper could benefit from a more detailed discussion on the potential limitations and biases introduced by this integration, especially considering the spatial resolution limitations of TRMM data.

Statistical Analysis and Interpretation: The statistical tools used (Theil-Sen Median slope estimation and Mann-Kendall trend analysis) are appropriate for the analysis. Nonetheless, a more in-depth exploration of the statistical significance of the results, including a discussion on the potential impact of outliers and the robustness of the trend analysis, would add depth to the findings.

Regional Implications and Broader Context The paper effectively highlights the increase in precipitation in Xinjiang, which is valuable for understanding regional climate change impacts. However, it could further elaborate on how these findings relate to broader climatic trends observed globally or in similar arid regions. This would contextualize the study within a larger environmental and climatic framework.

Figures and Tables: Significant changes are needed on figures and tables. Figures are not clearly readable and needs to change it to standard English language.