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

Ramgopal Sahu[1]

1 Sandip Foundation

Potential competing interests: No potential competing interests to declare.

The article titled "Spatio-Temporal Analysis of Precipitation Patterns in Xinjiang Using TRMM Data and Spatial Interpolation Method: A Comparative Study" has been submitted for possible publication in the Qeios Journal. The topic of the article is interesting and innovative. The objectives selected for the study are good enough. The figures and tables are prepared nicely. Overall, the article is written well, covering almost all the components. Apart from that, I am acknowledging the author for accomplishing the previous comments, and I am satisfied with the accomplishment.

Some of the comments that can be incorporated in the article for improvement in the quality of the article:

1. Add a discussion section; this will validate your results based on structural methodology in regional as well as global study. (I find it missing in the study)
2. The literature review is quite exhaustive, but had the review been in some chronological order, reading and appreciating the literature would have been much better. The background study of spatio-temporal analysis in regional as well as the global scale is missing and requires more recent literature work. Kindly go through the following articles that may better be included in the article for an improved introduction background.
    a. Impact of long-distance interaction indicator (monsoon indices) on spatio-temporal variability of precipitation over the Mahanadi River basin. ***Water Resources Research***, https://doi.org/10.1029/2022WR033805
    b. Analysis of Rainfall Trend in India over the last 117 years, Incorporating Non-Parametric Tests and Wavelet Synopses. ***Journal of Environmental Informatics Letters***. http://dx.doi.org/10.3808/jeil.202300117
    c. Some non-uniformity patterns spread over the lower Mahanadi River basin, India.***Geocarto International***, https://doi.org/10.1080/10106049.2021.2005699
    d. https://doi.org/10.1080/10106049.2022.2091163
    e. http://dx.doi.org/10.1504/IJHST.2022.10048476
    f. http://dx.doi.org/10.1007/s11600-023-01085-6
    g. http://dx.doi.org/10.1007/978-981-19-5077-3_3
    h. Satellite Video Remote Sensing for Flood Model Validation. ***Water Resources Research***, http://dx.doi.org/10.1029/2023WR034545
3. Conclusion is an important chapter where more care should be taken; the language should be in the 3rd person

singular.

4. In a previous comment, I asked you the criteria for selecting the best interpolation method for assessing the performance of climate data (TRMM). “I mean to say that based on your performance coefficients, the interpolation technique must have been given some score or a rank, and on the basis of that ranking, you must decide which of the interpolation methods is best for that particular climate data.” Or else, go for any one of the evaluation techniques (R^2, RMSE, MBE, and BIAS)."