

Review of: "Drought Risk in the Mahanadi River Basin: A Multidimensional Approach for Integrated Urban-Rural Drought Management Strategies"

Ramgopal Sahu¹

¹ Sandip Foundation

Potential competing interests: No potential competing interests to declare.

I have reviewed the manuscript titled **'Drought Risk in the Mahanadi River Basin: A Multidimensional Approach for Integrated Urban-Rural Drought Management Strategies'** that has been submitted for possible publication in the Qeios Journal. The topic of the article and the objective selected for the study are interesting and up to the mark. The figures and tables are well prepared. Overall, the article has a well-formed structure. Apart from that, I acknowledge the authors for the great effort and time spent during the research and in preparing the manuscript.

Following are some points that I observed, which can be incorporated to improve the quality of the manuscript.

Major Comments:

1. The abstract is very discursive; be concise while preparing the summary. The content "To mitigate management studies" can be either removed or summarized to one sentence.
2. The findings presented here must be presented using some probabilistic approach. "According tomodel output".
3. Highlight points are not justifying the work: Remove the 1st and 2nd points, the 3rd point is indirect, replace the 4th point with the actual gap, and the 5th point is confusing. While presenting highlights, be specific, either with findings or methods.
4. Objectives 2nd and 3rd are undefined parts of your study; you can't define them as any form of objective. When you are working on any model, performance evaluation is an integral part of your modelling.
5. Section 3.2: This part of the manuscript has paid unnecessary attention to describing the conceptual references. I recommend ignoring the content if the same can be presented in a Table, Graph, or Figures. It is unworthy of increasing the length of the manuscript.
6. Section 3.4: If the concept has not been in regular use, describe its mathematical base; that may ease the reader's understanding of the fundamental. Here, you would have paid little attention to elaborating on the criteria of ROC and AUC.
7. In the conclusion: rewrite the 1st sentence by replacing the term "Knowledge gap." This is taking the sense of understanding in a different way. You should simply write it as the literature gap that you have gone through or that is under your reach.

8. The conclusion part is poorly written; it needs to be rewritten. Authors are advised to conclude the work or present your recommendations. On the basis of AHP modelling output, how are you going to present the Mahanadi drought characteristics? How do the different regions of the Mahanadi basin behave with respect to different categories of drought type?
9. Overall, the manuscript needs thorough revision before any form of publication,

*****All the best*****