

Review Form 3

Journal Name:	Asian Research Journal of Agriculture
Manuscript Number:	Ms_ARJA_124962
Title of the Manuscript:	Erodibility prioritization and mapping of a Mid Himalayan watershed using Technique of order preference by similarity to ideal solution (TOPSIS)
Type of the Article	Research paper

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PART 1: Review Comments

Compulsory REVISION comments	Reviewer's comment	Author's Feedback <i>(Please correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)</i>
<p>Please write a few sentences regarding the importance of this manuscript for the scientific community. Why do you like (or dislike) this manuscript? A minimum of 3-4 sentences may be required for this part.</p>	<ul style="list-style-type: none"> • Innovative Application of TOPSIS • Conservation and Soil Erosion Management • Data-Driven Decision Making • Global Relevance 	
<p>Is the title of the article suitable? (If not please suggest an alternative title)</p>	<p>Yes : Prioritizing Erodibility and Mapping Vulnerable Areas in a Mid Himalayan Watershed Using TOPSIS</p>	
<p>Is the abstract of the article comprehensive? Do you suggest the addition (or deletion) of some points in this section? Please write your suggestions here.</p>	<p>The results reveal significant spatial variability in erosion potential across the watershed, with certain areas showing a high risk of soil degradation due to a combination of steep slopes, sparse vegetation, and intense rainfall. These findings provide valuable insights for watershed managers and policymakers in devising targeted erosion control measures, such as afforestation, check dams, and land-use planning, to mitigate soil loss and ensure sustainable land management.</p>	
<p>Are subsections and structure of the manuscript appropriate?</p>	<p>1. Introduction</p> <ul style="list-style-type: none"> • Background and Rationale <ul style="list-style-type: none"> • Introduce the problem of soil erosion, especially in mountainous regions like the Mid Himalayas. • Explain the importance of prioritizing erodibility in watershed management. • Aim and Objectives <ul style="list-style-type: none"> • Clearly state the aim of the research (prioritizing and mapping erodibility). • Define the specific objectives of the study. • Study Area Overview <ul style="list-style-type: none"> • Provide a brief description of the Mid Himalayan watershed under study, including its geographic, climatic, and ecological features. • Literature Review (optional or part of the introduction) <ul style="list-style-type: none"> • Review relevant studies on soil erosion, watershed management, and the application of decision-making tools like TOPSIS. <p>2. Materials and Methods</p> <ul style="list-style-type: none"> • Data Collection <ul style="list-style-type: none"> • List the types of data collected (soil properties, land use, topography, rainfall, etc.). • Explain the data sources (satellite imagery, field surveys, etc.) and their relevance to the study. • Parameters Influencing Erodibility <ul style="list-style-type: none"> • Discuss the factors influencing soil erosion (e.g., slope, soil texture, vegetation cover, rainfall intensity). • TOPSIS Methodology <ul style="list-style-type: none"> • Provide an overview of the TOPSIS method. • Explain how TOPSIS was adapted for this specific application (how weights were assigned to the factors, how rankings were calculated, etc.). • Geospatial Analysis <ul style="list-style-type: none"> • Describe the use of Geographic Information Systems (GIS) for mapping and analyzing the spatial distribution of erosion risks. <p>3. Results</p>	

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	<ul style="list-style-type: none"> • Erodibility Ranking <ul style="list-style-type: none"> • Present the ranking of the sub-watersheds based on their susceptibility to erosion. • Spatial Distribution of Erosion Risk <ul style="list-style-type: none"> • Discuss the results of the spatial analysis and show maps of high, medium, and low-risk areas. • Validation of Results <ul style="list-style-type: none"> • If applicable, discuss how the results were validated (e.g., comparison with field data, erosion models, or existing studies). <p>4. Discussion</p> <ul style="list-style-type: none"> • Interpretation of Results <ul style="list-style-type: none"> • Discuss the significance of the findings. Why are certain areas more vulnerable than others? • How do the findings align with or differ from previous studies in the region? • Implications for Watershed Management <ul style="list-style-type: none"> • Discuss how the results can be applied to watershed management and soil conservation efforts. • Suggest specific measures (e.g., reforestation, check dams) for the high-risk areas. • Strengths and Limitations <ul style="list-style-type: none"> • Reflect on the strengths of using TOPSIS for this kind of analysis. • Mention any limitations in the data or methodology that could affect the results. <p>5. Conclusion</p> <ul style="list-style-type: none"> • Summary of Key Findings <ul style="list-style-type: none"> • Recap the most important results of the study (areas of high erosion risk, efficacy of the TOPSIS method). • Recommendations <ul style="list-style-type: none"> • Provide practical recommendations for policymakers, land-use planners, and environmental managers. • Future Research <ul style="list-style-type: none"> • Suggest areas for further research, such as applying the methodology to other regions or incorporating additional data (e.g., climate change scenarios). <p>6. References</p>	
<p>Please write a few sentences regarding the scientific correctness of this manuscript. Why do you think that this manuscript is scientifically robust and technically sound? A minimum of 3-4 sentences may be required for this part.</p>	<ol style="list-style-type: none"> 1. Scientific Rigor of Methodology 2. Geospatial Analysis and Data Sources 3. Erosion Modeling and Parameters 4. Validation of Results 5. Reproducibility and Transparency 6. Interpretation of Results 	
<p>Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form.</p>	<p>Include a more appropriate reference</p>	

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Minor REVISION comments Is the language/English quality of the article suitable for scholarly communications?	Yes	
Optional/General comments	-	

PART 2:

	Reviewer's comment	Author's comment (if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)
Are there ethical issues in this manuscript?	<i>(If yes, Kindly please write down the ethical issues here in details)</i>	

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