

Review Form 3

Journal Name:	<u>Journal of Geography, Environment and Earth Science International</u>
Manuscript Number:	Ms_JGEESI_124194
Title of the Manuscript:	Determining Soil moisture Condition in Sokoto State using Climate-based water Index
Type of the Article	Original Research Article

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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>	<p>This manuscript is important for the scientific community as it provides valuable insights into soil moisture conditions in a semi-arid region using a climate-based water index. This research is particularly relevant given the global concerns about water scarcity, climate change, and agricultural sustainability in arid regions. By applying satellite data and potential evapotranspiration calculations, the study offers a robust methodology that can be adapted for other regions facing similar challenges. I appreciate the manuscript's use of advanced geospatial techniques and its potential to guide agricultural planning and water resource management in semi-arid environments.</p>	
<p>Is the title of the article suitable? (If not please suggest an alternative title)</p>	<p>The current title is clear and accurately reflects the regional focus and methodology used in the study. However, it could be further enhanced by explicitly mentioning the climatic conditions of the region, which would provide greater context for the study's scope. For example, a more informative title could be: "Determining Soil Moisture Condition in Semi-Arid Sokoto State using a Climate-Based Water Index." This revision highlights the semi-arid nature of the region, adding depth to the reader's understanding of the study's geographical context.</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 abstract provides a good summary of the study. No major deletions are necessary, but minor clarifications would enhance the readability and impact of the abstract. It would help if the abstract clearly stated the main objective of the research at the start. While the abstract mentions water surplus during certain months, it could briefly explain why this is important for agriculture or water management. Suggestions - <i>The study could help improve agricultural planning and suggest irrigation during dry periods. The findings offer useful insights for managing water resources and improving farming in dry areas.</i></p>	
<p>Are subsections and structure of the manuscript appropriate?</p>	<p>I found the subsections and structure of the manuscript to be generally appropriate. There are a few minor areas of improvement. The introduction section could benefit from a clearer structure, where the research gap, objectives, and significance are more explicitly outlined. The materials and methods section is well-organized, providing detailed information on the study area, data sources, and methodology. The results are presented in a logical flow, but key findings can be separated into distinct subsections with headings, such as "Rainfall Distribution," "Evapotranspiration," and "Water Surplus" to enhance clarity. Discussion could benefit from being more explicitly linked to the results, with clearer headings to separate different points (e.g., "Implications for Agriculture," "Water Resource Management," etc.). Conclusion section is concise and appropriate, but the recommendations could be more detailed and clearly distinguished from the conclusions.</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>	<p>The manuscript appears to be scientifically robust and technically sound due to its use of established methodologies for determining soil moisture, such as the Hargreaves equation for potential evapotranspiration and satellite-based rainfall data. The application of spatial analysis techniques to visualize and interpret the data adds depth and reliability to the findings. Additionally, the manuscript draws on reputable data sources like NASA and the USGS/FEWS, which ensures accuracy in the climate and temperature data used. The study's results are presented logically, and the conclusions align well with the data, demonstrating careful analysis and interpretation of the findings.</p>	
<p>Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form.</p>	<p>The references are sufficient and include both foundational and recent studies. While many are up-to-date, some key references are older. To improve, you could include more recent studies on climate change, soil moisture, and remote sensing in agriculture. This would ensure the</p>	

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=	manuscript reflects the latest developments in the field.	
Minor REVISION comments		
Is the language/English quality of the article suitable for scholarly communications?	The language is suitable for scholarly communication, and no major improvements are needed.	
Optional/General comments	indicating that it requires minor revisions before acceptance. The study is scientifically sound but could benefit from some improvements in language clarity and structure	

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>	

Reviewer Details:

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