

### Review Form 3

Journal Name:	<a href="#">Journal of Engineering Research and Reports</a>
Manuscript Number:	Ms_JERR_129203
Title of the Manuscript:	GIS-BASED ANALYSIS OF CROP YIELD TRENDS IN RESPONSE TO CLIMATE CHANGE USING DATA-DRIVEN ANALYSIS SYSTEMS (DDAS) TECHNIQUES
Type of the Article	Original Research Article

#### **PART 1: 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>
Please write a few sentences regarding the importance of this manuscript for the scientific community. A minimum of 3-4 sentences may be required for this part.		
Is the title of the article suitable? (If not please suggest an alternative title)		
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.		
Is the manuscript scientifically, correct? Please write here.		
Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form.		

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<p><b>Is the language/English quality of the article suitable for scholarly communications?</b></p>		
<p><b>Optional/General</b> comments</p>	<p><b>1. Abstract:</b></p> <ol style="list-style-type: none"> <li>1. Removed redundancies to make the abstract more concise.</li> <li>2. Emphasized the study's contribution to adaptive strategies and food security.</li> </ol> <p><b>2. Introduction:</b></p> <ol style="list-style-type: none"> <li>1. The gap in existing research is mentioned but can be emphasized more explicitly to strengthen the need for your study.</li> <li>2. Avoid reiterating points such as the importance of GIS and DDAS; instead, integrate them with the research gap to build a cohesive argument.</li> <li>3. Organized content into a more structured narrative that moves from global to regional context, introducing tools (GIS and DDAS) after the problem is established.</li> <li>4. Clearly articulated the study's purpose and significance to ensure the introduction aligns with your research goals.</li> </ol> <p><b>3. Objective of the Study</b></p> <ol style="list-style-type: none"> <li>1. The potential of GIS and DDAS, the specific methodologies for integrating these tools could be outlined in more detail to clarify how they will be applied.</li> <li>2. Comparisons with similar studies in other regions of Sub-Saharan Africa could add depth and show how the findings might generalize or contrast with other contexts.</li> <li>3. Although qualitative summaries are robust, including specific data points or trends from cited studies (e.g., percentage yield reduction due to climate change) could strengthen the argument.</li> <li>4. Highlight specific numerical findings from cited studies (e.g., percentage changes in yield, temperature variations) to provide a stronger empirical basis.</li> <li>5. Expand the discussion on yams and cereals by including any recent regional reports or case studies that address these crops' responses to climate stress.</li> <li>6. The research can be further enriched to provide a more comprehensive and impactful analysis.</li> </ol> <p><b>4. Methodology:</b></p> <ol style="list-style-type: none"> <li>1. The description of the study area provides sufficient background on its agricultural significance and the relevance of studying climate variability.</li> <li>2. The use of diverse data sources, including meteorological data, crop yield statistics, and satellite imagery, is robust and allows for a holistic analysis.</li> <li>3. Leveraging GIS for spatial analysis and DDAS for pattern recognition ensures that the methodology is modern and data-driven.</li> <li>4. Provide more details on how missing values and outliers were handled (e.g., interpolation, deletion, or substitution techniques). Mention specific criteria or thresholds</li> </ol>	

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	<p>used for validation.</p> <p>5. Elaborate on specific GIS techniques or software tools used (e.g., ArcGIS, QGIS). Include methods for spatial interpolation (e.g., Kriging or Inverse Distance Weighting) or multi-layer analysis.</p> <p>6. Discuss whether adaptation strategies or predictive models (e.g., crop simulation models like DSSAT) were considered in the context of your findings.</p> <p>7. Include qualitative data from farmers in the region about observed climate impacts. This could add a human dimension to your findings.</p> <p>8. Discuss how uncertainty in climate projections and yield estimates was managed, such as using confidence intervals or sensitivity analysis.</p>	
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**PART 2:**

	<b>Reviewer's comment</b>	<b>Author's comment</b> (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)
<b>Are there ethical issues in this manuscript?</b>	<i>(If yes, Kindly please write down the ethical issues here in details)</i>	

**Reviewer Details:**

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