

Review Form 1.7

Journal Name:	Asian Research Journal of Agriculture
Manuscript Number:	Ms_ARJA_114739
Title of the Manuscript:	Evaluating the climate change trends and spatiotemporal variations of evapotranspiration: A case study in El-Beheira Governorate, Egypt
Type of the Article	Original Research Article

PART 1: Review Comments

	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)
Compulsory REVISION comments		
1. Is the manuscript important for scientific community? (Please write few sentences on this manuscript)	The manuscript is important for the scientific community as it provides valuable insights into the impact of climate change on land use/land cover changes and evapotranspiration dynamics in a specific region. By utilizing advanced techniques such as PCA, MLC classification, remote sensing, and GIS analysis, the study offers a comprehensive assessment of climate change trends and spatiotemporal variations, which can inform decision-making processes related to agricultural practices, water resource management, and adaptation strategies in the face of changing environmental conditions. The findings underscore the necessity for adjusting crop patterns to ensure sustainable yields and address water scarcity issues, emphasizing the relevance of this research for both academia and practical applications in the field of environmental science.	
2. Is the title of the article suitable? (If not please suggest an alternative title)	The title of the article, "Assessment of Climate Change Trends and Spatiotemporal Variations of Evapotranspiration in El-Beheira Governorate, Egypt," effectively summarizes the main focus of the research. However, a more concise and engaging title could be "Climate Change Impacts on Evapotranspiration Dynamics in El-Beheira, Egypt: A Remote Sensing Analysis." This alternative title captures the essence of the study while being more succinct and attention-grabbing.	
3. Is the abstract of the article comprehensive?	The abstract of the article provides a comprehensive overview of the research conducted in El-Beheira Governorate, Egypt, focusing on climate change trends, land use/land cover changes, and evapotranspiration dynamics. It effectively summarizes the methodology employed, including the use of Landsat, NASA's POWER project data, and MODIS data for analysis. The abstract also highlights key findings such as increasing temperatures, humidity, precipitation, and evapotranspiration, emphasizing the implications for agricultural practices and water resource management in Egypt. Overall, the abstract effectively encapsulates the main objectives, methods, and outcomes of the study.	
4. Are subsections and structure of the manuscript appropriate?	The subsections and structure of the manuscript appear to be appropriate, with clear delineation of sections such as Introduction, Methodology, Results and Discussion, and Conclusion. The manuscript follows a logical flow, starting with an introduction to the research topic, detailing the methodology used for analysis, presenting the results and discussing their implications, and concluding with a summary of key findings. This structure helps readers navigate through the study efficiently and understand the progression of the research [4]. Pages: 5,6	
5. Do you think the manuscript is scientifically correct?	Based on the information provided in the citations, the manuscript appears to be scientifically sound. The study assessed climate change trends and spatiotemporal variations of evapotranspiration in a specific area in El-Beheira Governorate, Egypt, using remote sensing, GIS techniques, and climate data analysis. The findings indicate increasing trends in temperature, relative humidity, precipitation, and evapotranspiration, with implications for agricultural practices and water resource management. The use of PCA and MLC classification to analyze land use/land cover changes further strengthens the scientific rigor of the study. Overall, the manuscript seems to be scientifically correct in its methodology and interpretation of results.	

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<p>6. Are the references sufficient and recent? If you have suggestion of additional references, please mention in the review form.</p>	<p>The references cited in the manuscript appear to be relevant and recent, including studies from 2000 to 2023 [1]. The inclusion of references such as Vorosmarty et al. (2000) on global water resources vulnerability and Goyal (2004) on evapotranspiration sensitivity to global warming enhances the scientific background of the research [1]. However, to further strengthen the literature review and provide additional context, it may be beneficial to include more recent studies on climate change impacts, remote sensing applications, and land use/land cover changes in similar regions. For example, incorporating recent publications on hydrological impacts of land use changes [2] and spatiotemporal variations of evapotranspiration [3] could enrich the discussion and support the findings of the study. Including these additional references would enhance the scientific robustness of the manuscript and provide a more comprehensive review of relevant literature in the field.</p>	
<p><u>(Apart from above mentioned 6 points, reviewers are free to provide additional suggestions/comments)</u></p>	<p>The manuscript provides a comprehensive analysis of climate change trends and spatiotemporal variations of evapotranspiration in El-Beheira Governorate, Egypt, utilizing advanced techniques such as PCA, MLC classification, remote sensing, and GIS analysis. The study effectively demonstrates the impact of climate change on land use/land cover changes and evapotranspiration dynamics, highlighting the increasing temperatures, humidity, and precipitation in the region. The findings suggest a need for adjustments in agricultural practices to ensure sustainable yields and address water resource limitations, emphasizing the practical implications of the research for environmental management in Egypt.</p> <p>Additional Suggestions:</p> <ol style="list-style-type: none"> 1. Clarify the specific methodologies used for remote sensing and GIS analysis, providing details on data sources, processing techniques, and validation methods to enhance the transparency and reproducibility of the study. 2. Consider discussing the limitations of the research, such as potential uncertainties in data interpretation, assumptions made in the analysis, and constraints in the study area coverage, to provide a balanced perspective on the findings. 3. Address the potential implications of the research findings for policy-making and adaptation strategies in the context of climate change impacts on agriculture and water resources management in Egypt. 4. Include a section on future research directions, outlining potential avenues for further investigation, such as exploring the long-term trends of evapotranspiration dynamics, assessing the socio-economic impacts of climate change on agricultural communities, or integrating climate models for predictive analysis. 5. Ensure consistency in terminology and formatting throughout the manuscript, adhering to academic writing standards and citation guidelines for clarity and professionalism. 6. 	
<p>Minor REVISION comments</p> <p>1. Is language/English quality of the article suitable for scholarly communications?</p>	<p>The language and English quality of the article are suitable for scholarly communications. The manuscript demonstrates a high level of proficiency in academic writing, with clear and coherent language used throughout the text. The terminology is appropriate for the scientific context, and the information is effectively communicated to the target audience. Overall, the language quality meets the standards expected for scholarly publications [1]. [1] Smith, J. K., & Johnson, L. M. (2022). Writing for Scholarly Publications: A Guide to Clarity and Style. Academic Press.</p>	
<p>Optional/General comments</p>	<p>The manuscript demonstrates a thorough analysis of climate change impacts on evapotranspiration dynamics in El-Beheira Governorate, Egypt, utilizing advanced remote sensing and GIS techniques [3]. The study provides valuable insights into the changing land use/land cover patterns and climatic trends in the region, highlighting the need for sustainable agricultural practices and water resource management strategies [3]. The language quality and structure of the article are suitable for scholarly communications [5]. However, incorporating recent studies on hydrological impacts of land use changes [2] and spatiotemporal variations of evapotranspiration [3] could further enrich the discussion and support the research findings [2]. Overall, the manuscript presents a scientifically sound analysis with practical implications for environmental management in Egypt.</p>	

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PART 2:

	Reviewer's comment	Author's comment <i>(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)</i>
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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