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| Book Name: | [**Engineering Research: Perspectives on Recent Advances**](https://www.bookpi.org/bookstore/product/engineering-research-perspectives-on-recent-advances-vol-1/) |
| Manuscript Number: | **Ms\_BPR\_4303** |
| Title of the Manuscript:  | **SPATIAL AND TEMPORAL VARIATION OF ETO FOR EGYPT USING REMOTE SENSING** |
| Type of the Article | **Book Chapter** |

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| PART 1: Comments |
|  | Reviewer’s comment | Author’s Feedback *(Please correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)* |
| **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.** | This manuscript is important to the scientific community as it provides a comprehensive spatial and temporal analysis of reference evapotranspiration (ETo) across Egypt using advanced GIS techniques and the FAO Penman-Monteith equation. By integrating high-resolution climate and terrain data, the study offers a robust methodology for accurately estimating water requirements, which is crucial for sustainable agricultural development in water-scarce regions. The detailed ETo maps serve as valuable tools for policymakers and researchers to optimize irrigation planning, conserve water resources, and identify suitable areas for agricultural expansion. Additionally, the study highlights the potential for adapting this methodology to other regions, making it a scalable solution for global water management challenges. |  |
| **Is the title of the article suitable?****(If not please suggest an alternative title)** | Mapping Reference Evapotranspiration in Egypt Using GIS and Remote Sensing: A Tool for Sustainable Agricultural Planning |  |
| 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. | 1. Rephrase "give an insinuation about the suitable areas" to "provide insights into suitable areas.
2. Highlight the unique contribution of the study more explicitly. For example, mention how the GIS-based approach enhances the accuracy compared to prior studies.
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| **Is the manuscript scientifically, correct? Please write here.**  | **Introduction**1. Expand the research gap. While you mention that most studies represent Egypt with limited points, explicitly state how your approach overcomes these limitations.
2. Define the practical implications of your results regarding policy or agricultural planning.

**Materials and Methods**1. Clarify the rationale for using WorldClim Version 2 data (lines 105–106). Why was this dataset chosen over other potential sources?
2. Provide more details about the Natural Neighbor method. Why was this interpolation method preferred?
3. Discuss any assumptions or limitations associated with the methodology.

**Results and Discussion**1. Figures 2-4: Ensure the maps are clearly labeled with legends and scales for better interpretability. Include a brief description of the color codes used in the figures.
2. Compare your findings with previous studies to contextualize your results.
3. In the statistical discussion (lines 109–110), explain why certain months exhibit higher variability or skewness.
4. Add a subsection to discuss the potential impact of climate change on ETo values, referencing more recent datasets or trends if possible.

**Conclusion**1. Reinforce the study's contribution by stating how it advances existing methodologies or provides actionable insights for agricultural planning.
2. Expand the recommendation section to include specific applications for policymakers or researchers, such as developing irrigation schedules or selecting crops based on ETo maps.
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| **Are the references sufficient and recent? If you have suggestions for additional references, please mention them in the review form.****-** | * Verify consistency in reference formatting (e.g., placement of periods and commas, use of italics for journal titles).
* Ensure all citations in the manuscript are included in the reference list and vice versa.
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| Is the language/English quality of the article suitable for scholarly communications? | The article's language is adequate for scholarly communication but requires refinement. Some sentences are overly complex, and minor grammatical errors affect clarity. Simplifying sentence structures, ensuring consistent terminology, and improving transitions between ideas will enhance readability and professionalism, aligning the manuscript with high academic standards. |  |
| Optional/General comments | 1. Ensure that all figures and tables are appropriately referenced within the text.
2. Conduct a thorough grammar and syntax check. For instance, phrases like "constancy of water resources with increasing demands" can be revised for clarity.
3. Simplify complex sentences to improve readability for a wider audience.

By addressing these suggestions, the manuscript will achieve higher clarity, coherence, and impact. |  |

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| **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?**  | *(If yes, Kindly please write down the ethical issues here in details)* |  |

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| **Reviewer Details:** |
| Name: | **Muhammad Ramdhan Olii** |
| Department, University & Country | **Universitas Gorontalo, Indonesia** |