

Review Form 3

Journal Name:	International Journal of Plant & Soil Science
Manuscript Number:	Ms_IJPSS_126629
Title of the Manuscript:	ASSESSMENT OF TELUGU GANGA PROJECT IN NELLORE DISTRICT OF ANDHRA PRADESH, INDIA BASED ON IRRIGATION PERFORMANCE INDICATORS
Type of the Article	

General guidelines for the Peer Review process:

This journal's peer review policy states that **NO** manuscript should be rejected only on the basis of '**lack of Novelty**', provided the manuscript is scientifically robust and technically sound. To know the complete guidelines for the Peer Review process, reviewers are requested to visit this link:

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PART 1: Review Comments

Compulsory REVISION 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. Why do you like (or dislike) this manuscript? A minimum of 3-4 sentences may be required for this part.	This manuscript holds significant importance for the scientific community, particularly in the fields of agricultural sustainability and water resource management. By analyzing the impact of canal water and rainfall on crop yield in a drought-prone region, it provides valuable insights that could inform water management practices and optimize crop selection in similar contexts. I appreciate the manuscript's focus on practical indicators, such as irrigation efficiency and yield adequacy, which make the findings highly applicable for policymakers and farmers alike. Additionally, the longitudinal scope (covering over 20 years) adds depth to the analysis, enabling a clear understanding of how climate and resource management practices influence long-term agricultural productivity. This makes the study a valuable contribution to ongoing efforts in sustainable agriculture and resource conservation.	
Is the title of the article suitable? (If not please suggest an alternative title)	Alternative title suggestions: 1. "Evaluation of Irrigation Performance and Crop Yield in the Telugu Ganga Project, Nellore District, Andhra Pradesh, India" 2. "Impact of Telugu Ganga Project on Irrigation Efficiency and Crop Yield in Nellore District, Andhra Pradesh, India"	
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.	The article's abstract is informative but somewhat dense, with an extensive focus on specific data points that may overwhelm the reader. While it comprehensively outlines the study's objectives, methodology, and results, it could benefit from a clearer, more concise structure emphasizing the main findings and their practical implications.	
Are subsections and structure of the manuscript appropriate?	Introduction: 1. While related studies on irrigation and remote sensing are mentioned, it's unclear what gap this study aims to fill. Explicitly identifying the research gap and the need for performance indicators specific to TGP or drought-prone areas could strengthen the justification for the study. 2. Although the introduction reviews relevant literature, it lacks a clear statement of the study's main objective and its novel contributions. Summarizing the study's unique approach (such as using specific indicators in the TGP context) at the end of the introduction would clarify its value. 3. The literature review does not clearly connect to the methodology used in this study. For instance, studies using remote sensing (e.g., Bastiaanssen and Bos, 1999) are mentioned without explaining how these methods will be applied here. Briefly describing how this study builds on those methods could strengthen the introduction. 4. The section's flow is very poor. It could have discussed the introduction first, the importance of water	

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	<p>management for drought-prone agriculture, previous literature, the research gap, significance, and objectives of the study, all of which should be before the study area.</p> <ol style="list-style-type: none"> 5. Although the introduction mentions water delivery performance, it does not elaborate on the study's practical applications for regional agriculture. Adding a brief statement about the study's potential contributions to sustainable agriculture in the Rayalaseema region could give readers a sense of its broader impact. 6. Linkage with the relevant Sustainable development Goal could enhance the study's significance. <p>Material and methods:</p> <ol style="list-style-type: none"> 7. It would be better to add a flowchart explaining the important steps taken to complete the research in the section. 8. Some subsections are densely packed with information. Breaking down longer paragraphs (especially those explaining technical indices) could improve readability. 9. Although NDVI is commonly used, briefly explaining why it's suitable for this study—such as its ability to track vegetation health and water stress in crops—would strengthen the methodology's rationale. 10. The description of CROPWAT's usage should briefly explain how specific input variables (e.g., rainfall, crop type) influence the model's results. Clarifying that the Penman-Monteith method is used for calculating evapotranspiration is helpful, but adding a sentence on why it was chosen (e.g., accuracy in different climates) would be valuable. 11. Ensure all units and abbreviations are defined upon first use (e.g., m³ for cubic meters). Some terms, such as "PAR" and "ETp", appear without initial definitions, which may confuse readers unfamiliar with these terms. 12. Since the Water Table Fluctuation (WTF) method requires accurate values for specific yield (Sy), it would be valuable to mention if any assumptions or adjustments were made due to challenges in obtaining precise Sy values, as these can affect recharge calculations. <p>Results:</p> <ol style="list-style-type: none"> 13. The presentation of the results, i.e., graphs, could be better. 14. The discussion for the results needs refinement. 15. There must be a separate section named "Discussion" at the end of the results section and before the conclusions to summarize the overall discussion of the manuscript and also to compare your findings with relevant previous literature. <p>Conclusions:</p> <ol style="list-style-type: none"> 16. Instead of reiterating all the metrics, focus on concisely summarizing the most significant findings. For instance, prioritize mentioning key metrics that had a substantial impact on yield (like paddy yield correlation with canal water) and avoid repeating secondary details. 17. Where possible, use comparative statements to highlight changes or trends. 18. Much of the data presented here (like NDVI values for multiple years and variations in canal water released) is already in the Results section. Instead, focus on the overall insights from these values to emphasize the broader trends. 19. Mentioning the limitations of the study and future work would be great for manuscript quality. 	
<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>This manuscript demonstrates scientific robustness and technical soundness through its comprehensive assessment of the Telugu Ganga Project's (TGP) impact on crop yield using a wide range of performance indicators, such as NDVI, irrigation intensity, and yield efficiency. The study spans over two decades (1997-2018), providing a thorough longitudinal view that captures changes in rainfall and canal water distribution and their effects on crop performance. The methodology includes widely accepted tools and indices, like CROPWAT for water requirement estimation and the NDVI for vegetation monitoring, which are standard in agricultural and environmental research. Furthermore, the use of statistical analysis, including correlation and regression models, lends additional rigor, allowing for a nuanced interpretation of the relationship between water variables and crop yield, making the study's findings both reliable and replicable.</p>	
<p>Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form.</p>	<p>No The literature review in the introduction section needs serious improvements while citing latest relevant previous research.</p>	

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Minor REVISION comments Is the language/English quality of the article suitable for scholarly communications?	Needs minor grammar improvements.	
Optional/General comments	<ol style="list-style-type: none">1. The section's flow is very poor. It could have discussed the introduction first, the importance of water management for drought-prone agriculture, previous literature, the research gap, significance, and objectives of the study, all of which should be before the study area.2. The literature review in the introduction section needs serious improvements while citing latest relevant previous research.3. Mentioning the limitations of the study and future work would be great for manuscript quality.4. There must be a separate section named "Discussion" at the end of the results section and before the conclusions to summarize the overall discussion of the manuscript and also to compare your findings with relevant previous literature.5. Line number must be added before submitting any manuscript.	

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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