

Review Form 3

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| Journal Name: | International Journal of Environment and Climate Change |
| Manuscript Number: | Ms_IJECC_124541 |
| Title of the Manuscript: | Assessing Water Balance Influenced by Conservation Measures for Sustainable High-Value Vegetable Cultivation: A Case Study of Battuvagu Watershed in Telangana |
| Type of the Article | 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> |
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| <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 paper is important because it provides a comprehensive analysis of water balance in a watershed and the impact of conservation on sustainable agriculture. With a focus on water resource management, this study is relevant to regions dependent on rainfed agriculture and facing the challenges of climate change, particularly in India. Liked it because This paper shows in detail how conservation measures enhance groundwater recharge and surface water storage, which have a positive impact on water balance in the watershed. The study also involved accurate and systematic data collection, as well as comprehensive pre- and post-project evaluations, providing strong evidence of the success of conservation interventions. The paper's shortcomings are the lack of an in-depth explanation of the social and economic challenges that communities may face in implementing crop diversification and more efficient irrigation techniques. In addition, the proposed solutions do not fully address factors that may affect the sustainability of water use in the long term, such as population growth or changing water consumption patterns.</p> | |
| <p>Is the title of the article suitable? (If not please suggest an alternative title)</p> | <p>The article is fairly descriptive, but it could be more specific and focus on the main theme, which is the impact of conservation on water balance in the watershed. The title also mentions the cultivation of high-value vegetables, which is discussed but is not the main focus of the overall study. Suggested alternative titles that better reflect the overall content of the article: 1. Impact of Soil and Water Conservation on Water Balance in the Battuvagu River Basin: A Case Study in Telangana, India. 2. Role of Conservation Measures in Improving Water Balance in the Battuvagu River Basin: Implications for Rainfed Agriculture. 3. Water Balance Assessment and Impact of Soil and Water Conservation in the Battuvagu River Basin, Telangana: Strategies for Sustainable Agriculture.</p> | |

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| <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 is fairly comprehensive, but there are a few areas that could be improved or refined to increase clarity, focus, and effectiveness. Suggestions for improvement of the abstract: 1. Emphasis on Significance of the Problem The abstract has already explained that climate change is exacerbating water problems in rainfed areas. However, it is important to provide some background on the importance of these areas (e.g., contribution to food production) at the beginning to grab the reader's attention. Suggestions: • Add a sentence highlighting the importance of rainfed areas in India's food production system at the beginning. For example: "Rainfed areas play a vital role in India's agricultural system, covering 50% of the agricultural area and contributing 40% of the country's food production." 2. Use of Technical Terms There are some technical terms such as "ha-m" that may be unfamiliar to some readers. If these terms are important, briefly explain what they mean. Suggestions: • Consider adding a brief explanation of "ha-m" (hectare meter) or using a term that is more commonly understood by readers. 3. Breaking Down Structure and Focus The abstract is dense, and some important information is drowned out by long sentences. Breaking it down into shorter, more direct sentences will help improve readability and focus on key information. Suggestions: • Use shorter, more direct sentences to explain the main results of the project, such as changes in water balance and the effectiveness of conservation measures. • For example, you could state: "After the watershed development project, the water balance showed a significant improvement, from negative (-1.18 ha-m) to positive (+67.91 ha-m)." 4. Recommendations for Action The last section of the abstract already includes recommendations for water management and crop diversification. However, these recommendations could be condensed and more focused so that readers can immediately grasp the main points. Suggestions: • Recommendations could be summarized, for example: "The study recommends sustainable groundwater management through crop diversification, implementation of micro-irrigation, and simultaneous use of surface and groundwater." 5. Consistency of Terminology Ensure consistency in the use of terms. For example, if you use the term "watershed development" at the beginning, make sure this terminology remains consistent throughout the abstract. 6. Eliminate Redundant Information Some information in a particular sentence may be redundant or could be simplified. Suggestions: • Reduce repetition, for example: "Groundwater use to meet demand is evaluated</p> | |
| <p>Are subsections and structure of the manuscript appropriate?</p> | <p>The structure and subsections of the journal manuscript are in accordance with scientific standards. Each section presents relevant and interrelated information, and the methodology and results presented support the research objectives well.</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>Overall, the scientific and technical strength of this paper lies in its comprehensive approach to water balance analysis, the methodology used, the relevance to climate change issues, and the practical application of the research findings. This is an example of a study that combines empirical data with practical recommendations for sustainable natural resource management.</p> | |
| <p>Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form. :</p> | <p>Some additional suggestions: 1. Consistency and Quality of Studies: • Zhang, Y., Liu, X., & Zhao, Y. (2023). "Advances in Integrated Water Resources Management for Sustainable Agriculture." <i>Water Resources Management</i>, 37(5), 1437-1450. DOI: 10.1007/s11269-023-03780-9 2. Climate Change Aspects: • Huang, J., & Chen, L. (2023). "Impact of Climate Change on Water Resources and Agriculture: A Comprehensive Review." <i>Environmental Science and Pollution Research</i>, 30(8), 20921-20945. DOI: 10.1007/s11356-023-28154-5 3. New Technologies and Methods: • Liu, L., Zhang, J., & Liu, X. (2022). "Remote Sensing and GIS for Water Resource Management: Current Applications and Future Directions." <i>Remote Sensing</i>, 14(20), 5253. DOI: 10.3390/rs14205253 4. Integrated Water Resource Management: • Khan, S., Singh, M., & Chaudhary, S. (2024). "Integrated Water Resource Management: Case Studies from Asia." <i>Water</i>, 16(1), 28. DOI: 10.3390/w16010028 5. Community-Based Approaches: • Jiang, H., & Wang, X. (2023). "Community-Based Water Management for Sustainable Development: Strategies and Challenges." <i>Journal of Environmental Management</i>, 325, 116580. DOI: 10.1016/j.jenvman.2022.116580</p> | |

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| <p>Minor REVISION comments</p> <p>Is the language/English quality of the article suitable for scholarly communications?</p> | <p>Overall, the article is well-structured and covers relevant aspects of water balance and conservation measures in a watershed. With some refinement in language, consistency, and clarity, it could be even more effective for scientific communication.</p> <p>Areas for Improvement:</p> <p>Language and Grammar: There are some grammatical issues and awkward phrasings that could be improved for better readability and professionalism. For instance: Introduction: "In the recent years" should be "In recent years." Methodology: Phrases like "The hydrological year is taken as June to May" could be more formally stated as "The hydrological year spans from June to May." Results and Discussion: Phrases like "The study further critically evaluated" could be streamlined to "The study also evaluated."</p> <p>Text score: 64 out of 100. This score represents the quality of writing in this document.</p> | |
| <p>Optional/General comments</p> | | |

PART 2:

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

Reviewer Details:

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|---|-----------------------------------|
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| <p>Department, University & Country</p> | <p>Indonesia</p> |