

Review of: "Assessment of soil erosion in the Cesar watershed, an initial step toward the restoration of the Cesar River"

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Potential competing interests: No potential competing interests to declare.

The manuscript titled "Assessment of Soil Erosion in the Cesar Watershed, an Initial Step Toward the Restoration of the Cesar River" by Stefany P. Vega et al. addresses an important environmental issue, and the study contributes to our understanding of soil erosion in the Cesar watershed. While the manuscript has several strengths, there are also significant concerns and suggestions that need to be addressed before publication.

Title and Abstract:

- The title is clear and informative, but it could be more concise. Consider shortening it for readability.
- The abstract is well-structured and provides a good overview of the study. However, it lacks specific findings or conclusions. The abstract should briefly highlight the key results to give readers a better sense of the study's significance.

Introduction:

- The introduction sets the context effectively by highlighting the importance of the Cesar River and its contribution to the Magdalena River. However, it could benefit from a more comprehensive literature review to provide readers with the current state of knowledge regarding soil erosion in the region.

Methodology:

- The manuscript mentions using the RUSLE-GGS model but does not provide sufficient details about the methodology. Explain the components of the model and the data sources used in the analysis.
- The temporal and spatial resolution of the analysis (1991-2020 and 2.5 km) should be justified. Why was this specific time frame chosen, and how does it impact the results?

Results:

- The results section is brief and lacks details on specific findings. It should present the estimated soil erosion rates, trends over time, and any variations observed within the watershed.
- Include visual aids such as tables, figures, or maps to illustrate the results and make the data more accessible to readers.

Discussion:

- The discussion should focus on interpreting the results and comparing them to existing literature. Discuss the implications of the findings for the Cesar River and the Magdalena River basin.
- Address any limitations of the study, such as data uncertainties or assumptions made during the analysis.

Conclusion:

- The conclusion is currently missing. Summarize the main findings and their implications for the restoration of the Cesar River.

Hotspots Analysis:

- The manuscript mentions using the Getis-Ord statistical analysis to identify hotspots, but this analysis should be explained in more detail. Describe how these hotspots were identified and their significance for soil erosion management.

Language and Clarity:

- The manuscript requires language and clarity improvements. Some sentences are complex and may benefit from simplification. Ensure that the text is concise and straightforward.

References:

- Review and update the references to include recent and relevant studies related to soil erosion and river restoration in the region.

Author Contributions:

- Include a section outlining the contributions of each author to the study.

In summary, the manuscript has the potential to make a valuable contribution to the field of environmental science, particularly regarding soil erosion in the Cesar watershed. However, it needs substantial revisions to provide more detailed methodology, results, and discussion. Addressing these issues will significantly enhance the quality and impact of the paper.