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.

Congratulations on the paper. I have attached a commented version of the article in the supplementary data. I hope you find my contributions pertinent. Overall, it is a relevant paper and a breakthrough in your study area.

Concerning the English level, some paragraphs have wordy or complex sentences with punctuation problems and a few passive voice misuses. But, in general, good job! The reading is easy and captivating, although there is space to improve some intricate paragraphs.

I would like to have more authors in the discussion and introduction sections. Even in different areas, where are the results of other researchers who have used the same model or tools as you? In the Introduction regarding the models used, the authors presented examples of ways to couple the models with other functions. I wanted to know parameters like grain size or river flow that are part of the equation, focusing on the parameter difference between the two models. The examples are also pertinent, but I was just expecting something else. Also, adding the parameter difference in the two models would enrich your paper. As well as cite other successful papers with that methodology.

In the paragraph in the introduction, when you presented the Magdalena River, I missed the study area description. Later in my reading, I understood that there is a section with a study area map. But I didn't understand why this section is not integrated with the Introduction. Or, maybe change this paragraph to the Study Area so it makes more sense to me. Also, regarding the maps, I've missed the location of the stations in Figure 1. The difference between the stations wasn't clear, starting from the location. Please show me this information on a map or add the area of influence of each station.

The methodology and results sections are well written and have few inconsistencies. I would like to know how the raw data were post-processed. Why lower the resolution of your data? Some of the source information has a 1km resolution. How do you transform your data into a 2.5km resolution? I assume you lose the resolution just to fit the model? I suppose it was an important decision, so maybe it is worth describing more of these processes. Also, I would like to see a graph with the gaps in your time series. So I can understand what level of gaps we are talking about. I don't know the percentage of the time series that has observed data. Why didn't you apply a linear regression or other interpolation method to fill the gaps in the raw data?

In general, your work presented low erosion rates focused on natural processes. I didn't understand the first paragraph of the subsection Towards Cesar River Restoration. Gutierrez et al. exhibit a rate of 81.9% soil degradation due to erosion.

Even with different methodologies, it seems like a point to expand the discussion. Put things in perspective. Of all soil degradation in the Cesar watershed, 81.9% is due to erosion. Of all the territories mapped in this paper, only the hotspots marked in Fig. 3 are the regions that need attention and restoration actions. Am I correct? If so, highlight the importance of your work in this paragraph. It would enrich the discussion if you critically analyzed the details of their methodology and how they reached this rate concerning your work. Which areas did they focus on? Since your work covers the entire watershed, it could be interesting to have this area comparison. It brightens the relevance of your rates, giving straightforward indications of which areas the authorities should pay more attention to. What do you think of this reflection?

Also, in the Conclusion section, add the possibility of the uncertainty of the anthropogenic activities, highlight and account for how these rates could be higher. I also think this section should mention the resolution of the work as a point of consideration.

I hope you find these comments relevant. I really enjoy reading your paper.