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.

QEIOS ARTICLE REVIEW BY TÁCIO M.P. DE CAMPOS

(by invitation of Qeios)

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

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General Recommendations

1. Please, review all references. A number has not been included in the Reference topic. Others have been included with letters such as (a), (b), etc, not identified in the text.
2. Please, clarify if results from instrumented erosion parcels installed in the investigated area were used to calibrate numbers, in principle, valid for US (see, for instances, reference 25). Also, satellite data such as those provided by using the InSAR technique have been considered? Could it be recommended to use such a type of data on developing further, may be more precise, data on the development of erosion processes in the area?

Specific Recommendations

Location	Observation
Fig. 1 - p. 4/15	Figure needs improvement: Scale of Fig. 1a is not the same of Fig. 1b and 1c. Elevation varying from 3 to 5.339 m related to Fig. 1b is inadequate and colour scale becomes useless. Fig. 1c shows colours related to 4 biomes while the legend shows 5 biomes. Colours of the legend should be easier to differentiate and better related to Fig. 1c.
Table 1 – p. 5/15	How was it possible to get a spatial resolution of 2.5 km from maps in scales of 1:100.000? Justify!
p. 6/15	Equations related to ER, K and IMF are not numbered (should be numbered 1, 2 and 5 respectively). The symbol h is confusing. It appears to refer to hectare, but is confused with hour! Suggestion: use ha. OM is organic matter, not matter organic. Second terms of Equations 2, 4 and 5 should be better aligned with the terms K, OM and IMF for pdf presentation. Check the way references are cited in the definition of factors LS and R (they should be numbered as others in the article).
p. 7/15	Please, review the title of Table II Equation related to $G_t^*(d)$ is not numbered. Should be 9. Also, the second term of this equation must be better aligned.
p. 8/15	What do samples 135-SDO4, 103-SDR4, 63-SDR2 and 96-SDR1 mean? Why where they chose among 144 samples to define things? Are these numerical or experimental samples? What the mentioned Stations have in order to be specifically cited? Do they have instrumented erosion parcels? Are there other Stations at the studied site?
p. 9/15	Stating that only 8% of the total watershed area shows low rate of erosion may be confusing for the reader when referring to Fig. 2. It is suggested to also indicate the percentage of the total watershed area showing natural and light erosion rates. Would the light erosion areas also be related to anthropogenic effects? What characterises the natural area? Both light and natural areas are in an elevation near that of sea level (refer to Fig.1). Are they not partially urbanised or used in agricultural activities?
p. 10/15	It is suggested to plot (and show) the vertical axis of Figure 3 in a log scale.