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Interactive comment on "Socio-economic modifications of the Universal Soil Loss Equation" *by* A. Erol et al.

Anonymous Referee #3

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Manuscript title: Socio-economic modifications of the Universal Soil Loss Equation (Erol et al 2015)

1. I think the "Introduction" section is unnecessarily long and in my opinion, some paragraphs (e.g. from page 1734, line 3 up to page 1735, line 18) can be omitted as they are not closely related to the main objectives of the study. 2. Why you did not try to modify the RUSLE, instead of USLE, since it is a better and revised version of the USLE? You have also mentioned on page 1735 (line 28) that the USLE has limited applications. 3. Don't you think that some of the human interferences considered as social factors in this study are already included in the USLE? For example, when a dense forest changed into an open forest by illegal logging, which can be called a human impact, right! And I think this impact and/or factor is already represented

in C factor of the USLE. So, why try to find a separate coefficient to represent socio-economic factors for USLE? 4. Page 1733, Line 17: please add "for" before "agriculture and forest" in the sentence. 5. Page 1734, line 16: please add "that" before "the extent. . .." in the sentence. 6. Page 1734, line 19-22: please rewrite this sentence as it consists of unnecessary repetitions (e.g. biodiversity, energy, security). 7. Page 1735, line 11: please add "and" after " (Castro et al., 2001)" or rewrite this sentence because it is confusing. 8. Page 1735, line 18: please rewrite this sentence as it is not clear what it means. 9. In material and methods section, the 2nd paragraph is a little confusing. I think that if you just mention how much of the two watersheds are covered with vegetation would be enough to see the difference between them. 10. What do you mean with "All data for this study, such as topographic features, were obtained from GIS"? I think you need to specify what kind of GIS-based maps or layers (e.g. stand maps, DEM, etc.) you have used to gather data. 11. Page 1741, line 2: the unit for the total amount of erosion should be "414,803 t/yr" (not per ha) since it is for all 630.4 ha. 12. Even though the LS values between these two watersheds were very different, the average erosion amounts per ha for both watersheds were found to be similar. How do you explain this? 13. As mentioned in the Conclusion section, you might have chosen a watershed with higher percentage of settlement areas in order to see the possible effect of socio-economic factors more easily and clearly. Tables and Figures: Table 1. a. Is the elevation estimated as an average for each watershed? If yes, I would expect that such elevation difference may result in various precipitation amounts. Don't you think? b. I do not understand why you used "The total ratio of land use (%)" as a feature?

Interactive comment on Solid Earth Discuss., 7, 1731, 2015.