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Interactive comment on "Impacts of land use and topography on soil organic carbon in a Mediterranean landscape (north-western Tunisia)" *by* Donia Jendoubi et al.

Anonymous Referee #1

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GENERAL COMMENTS The article discusses a very important topic and is based on extensive dataset. However, because of poor English and lack of logic in presentation of research, the reading is quite difficult. Moreover, there is a lack of adequate explanation of the research context (state-of-the-art revision and indication of the scientific gap to be approached and methodology. We would recommend the author to look at the recent review of the topic by Thangavel Ramesh et al. (Advances in Agronomy, 2019). What is the new knowledge this work contributes to that already published? The article considers "land forms" as synonym to slope and aspect, which is not true. There is no clear explanation of methodology; confusion in Results and Discussion sections, and, as a consequence, Conclusions are not supported by Results and Discussion. Incor-

rect citing format through the article (you cannot begin the sentence with parenthesis). Example: Line 210: "(Kravchenko et al., 2002 and Jiang and Thelen, 2004) found . . ." Line 212: "(Herrick and Wander, 1997) showed . . ."

Specific comments: English style is very poor. The article is full of English mistakes of all types. Some examples: Abstract (lines 13-14): "For permanent crops, which was interplanted . . .." – the verb was is incorrect because crops is a plural noun Line 35: ". . . soil quality was seen in relation to soil conservation in agricultural systems, which aims at sustaining the productive capacity of soils, . . ." – impossible Line 167: "The performance evaluation of the prediction model was created on the following statistical criteria: . . ." - impossible Line 211: "slope plays a great role on crop yield" – mistake in the use of preposition Line 217: "Forests showed significantly the highest SOC" – the weird word order

Methodology: No table with descriptive statistics of data. No details on data preprocessing, spectral measurements instrumentation and protocol. No explanation of classification procedure used for land use detection from Landsat images. The method applied for assessment of slope and aspect impact is not explained. It seems that only one-way ANOVA was used to assess the impact of slope and aspect on SOC. Application of multivariate statistical modeling would be more appropriate. One of the key experts in VIS-NIR spectroscopy is incorrectly cited two times (different errors): Line 171: "Vicsarra et al., 2006" Line 188: "Rossel et al. 2006)"

Figures:

Figure 1, the map should be improved, the gray backgound (topographic sheet) should be removed. Figure 5 and 6 contain redundant information.

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