

Interactive comment on “Soil organic carbon along an altitudinal gradient in the Despeñaperros nature reserve, Southern Spain” by L. Parras-Alcántara

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This paper studies the distribution of soil organic C stock in soils following a toposequence. It is an interesting contribution with brings new quality data and some conclusions that are interesting for the scientific community. This is a relevant topic, and data allow extrapolation to other semiarid areas world wide. It falls within the scope of Solid Earth.

However, in my opinion, the text has some problems to be revised before it is ready for publication. I recommend publication after major revision.

Some ideas for revision are: -Results are discussed in the context of the study area,
C980

which is a system characterized by soil, land uses, vegetation and climate representative of wide other areas in the Mediterranean. But results look not so interesting if they are restricted to this area. So, authors must highlight the relevance of these data in a more global context. -I think some confusion exists among soil organic carbon, organic matter, organic carbon stocks and total organic carbon stocks. -Some errors exist in the interpretation of previously published papers. -A great part of results is devoted to description of taxonomic units. But all methods necessary for soil characterization and classification are not described. -Data from different topographic positions are compared and discussed, but it is not clear what are the causes of transitions. -A short text should be added outlining climate warming impacts.

I hope this will help authors to improve their manuscript.

I have also uploaded a separate file with a long series of detailed comments in the margin and suggested changes to the text (marked in yellow).

Please also note the supplement to this comment:

<http://www.solid-earth-discuss.net/6/C980/2014/sed-6-C980-2014-supplement.pdf>

Interactive comment on Solid Earth Discuss., 6, 2495, 2014.