

Response to Reviewer 1

You need to highlight in your introduction the human health problem
see here

Brevik, E. C. and Sauer, T. J. 2015. The past, present, and future of soils and human health studies, *SOIL*, 1, 35-46, doi:10.5194/soil-1-35-2015.

but also the Earth health problems in semiarid land
See here

Bai, X.-Y., Wang, S. -J., Xiong, K. -N. 2013. Assessing spatial-temporal evolution processes of karst rocky desertification land: indications for restoration strategies. *Land Degradation & Development*, 24: 47- 56. DOI 10.1002/ldr.1102

Izzo, M., Araujo, N., Aucelli, P. P. C., Maratea, A., and Sánchez, A. 2013. Land sensitivity to Desertification in the Dominican Republic: an adaptation of the ESA methodology. *Land Degradation & Development*, 24: 486- 498. DOI 10.1002/ldr.2241

Jafari, R., & Bakhshandehmehr, L. (2015). Quantitative mapping and assessment of environmentally sensitive areas to desertification in central Iran. *Land Degradation & Development*. DOI: 10.1002/ldr.2227

We thank the reviewer for these suggestions. We have made effort to incorporate some of these references but none met our needs. We think the human health problem is highlighted by the WHO 2000 reference and the earth problem is inherent in the paper.

for the copper discussion

Fernández-Calviño, D., Garrido-Rodríguez, B., López-Periago, J. E., Paradelo, M., and Arias-Estévez, M.: Spatial distribution of copper fractions in a vineyard soil. *Land Degradation & Development*, 24: 556- 563, 2013

Mahmoud, E., Abd El-Kader, N. 2014. Heavy metal immobilization in contaminated soils using phosphogypsum and rice straw compost. *Land Degradation & Development*.| DOI: 10.1002/ldr.2288.

We appreciate the reviewer's suggestion. One of the suggested references, Fernández-Calviño et al, 2015, has been added to strengthen the introduction (line 54, 378-380)

Reduce the size of the font of the text inside the box of the graphs
They should be all inside the box of the graph

We appreciate this recommendation. However, we do not see what is wrong with the figures. I think the MS word version submitted meet the specification recommended by the reviewer. So please we would implore to retain the figures as they are.