

Interactive comment on “Development of a composite soil degradation assessment index for cocoa agroforests under tropical conditions of southwest Nigeria” by Sunday Adenrele Adeniyi et al.

Anonymous Referee #1

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This paper showed great efforts by the authors to assess soil properties and degradation applying soil analysis, PCA on cocoa plantations. Results show alternatives to detect soil indicators and promote strategies during soil sampling and land planning/restorations. In this paper a relevant topic of soil science community is worked in a non-current study area in Nigeria. The methods present clear concepts and tools about soil properties in this potential land degraded area. I find the applied methods are correct and the obtained results are useful to use by the farmers and the soil science community. The results are sufficient to support the interpretation and conclusions, but the authors should work something more in some details. Some descriptions of the soil

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collected samples (please remark in the figure 1), soil analysis and descriptions (table 1) are not clear for me. Firstly, I suggest general comments, and finally, attached, authors can observe some appreciations.

1) Title: I find the title no clear and no precise. Maybe, if authors considerer it, they would change it as I suggested. 2) Key words: good. Only little changes are suggested. 3) Abstract: good. 4) Introduction: The best part of the text, congratulations. I suggest a couple of references and that the authors put one decimal into the percentages (in all the text, all the figures and tables). 5) Methods: I find really interesting that the authors add pictures about the soil profiles or the plantations with different ages. 6) Discussion: Only, I suggest that add information about the last point of the conclusions. It is really important to discuss this point. Ok, we have an index, maybe the solution are fertilizers: which types? Are expensive? What use other researchers over the world? Only expensive fertilizers? 7) References: actual, complete and international reference list. 8) Figures and Tables: the worst part of the paper. The last three tables are really long and heavy. Please, add them as supplementary materials. Figure 1 would better with photos and the points with the soil samples. Take care with Excel and their graphics. Solid Earth is a high impact factor journal and requires professional graphics (any colours, any lines inside, the same scale...).

Right now, for me the paper is accepted but with major revisions. I encourage the author to improve all the figures, tables and this point of the discussion (mandatory... it is the key of your paper!). Good luck and congratulations for this hard work!

Please also note the supplement to this comment:

<http://www.solid-earth-discuss.net/se-2016-175/se-2016-175-RC1-supplement.pdf>

Interactive comment on Solid Earth Discuss., doi:10.5194/se-2016-175, 2017.

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