

## ***Interactive comment on “Physical, chemical and mineralogical attributes of a representative group of soils from the Eastern Amazon, Brazil” by Edna Santos de Souza et al.***

**Edna Santos de Souza et al.**

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Dear Anonymous Referee #2

Thank you for reviewing our manuscript so thoroughly and taking the time to write helpful and detailed comments to improve our paper. We are very grateful for this. Please find our answers to the comments below:

This paper presents data on the chemical composition, texture, and other properties of soils sampled from 88 locations in eastern Amazon, Brazil. The authors present the results of many hundreds of laboratory analyses. In their Introduction, the authors

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present a good and reasoned case for the collection of soil data, in support of informed land and environmental management. This established the context for the work being reported. I think that the paper needs a more comprehensive description of the geological parent materials, since these materials underpin many of the soil properties that the authors report from their lab analyses. The Results and Discussion section is quite long, and presents a summary of the key data and their possible interpretation. I think that it might be preferable for the authors to omit the Discussion or possible interpretations and explanations from this combined section, and to have a new section where all of the ideas on soil formation are gathered together. This might be entitled “factors affecting the development and properties of the studied soils”, or something of that kind.

Answer: done.

In the context of informed land and soil management, which the authors rely on as a context or rationale for their paper, I wonder if they could say something about other aspects of the soils. For instance, are soil nutrient problems more widespread or more challenging for management than, for instance, erodibility or infiltration capacity and other physical aspects of soils? Some brief comments on this would be a useful addition to the paper.

Answer: The most challenging problems are the low contents of soil nutrients and organic matter, erosion and nutrient leaching. All these aspects were taken into account in the conclusions and will be incorporated in the introduction of the manuscript.

I think that there is a need for some minor tidying of the presentation. The authors refer to ‘pluvial precipitation’ (e.g. page 7, line 17, and page 8 line 27). I was not sure what was intended by this expression, but I think that simply referring to ‘precipitation’ is sufficient and preferable.

Answer: Done

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'Aluminium' is repeatedly written 'aluminum' (there are about seven instances of this in the manuscript). This should be corrected. Answer: Done

The sentence on page 7 line 6 should be re-written in English (not Portugese). Answer: Done

Overall this is a useful paper, that contains a wealth of soil data. However, I think that it would benefit from a re-write in order to make the results section distinct from a new section which would bring together all of the ideas that the authors have about what influences soil properties and soil development in their study region. Answer: Done

Please find our answers in the supplement AC3.

Thanks for the comments and suggestions that contribute significantly to improve the quality of the manuscript. Kind regards, Authors

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