

Interactive comment on “Identifying areas susceptible to desertification in the Brazilian Northeast” by R. M. da Silva Pinto Vieira et al.

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Dear Prof A. Jordán,

We are pleased to submit the revised version of our manuscript: Identifying areas susceptible to desertification in the Brazilian Northeast. Thank you for reading our manuscript and review it. We hope that the revisions and our accompanying responses will be sufficient to make our manuscript suitable for publication in Solid Earth.

Responses to the comments of Reviewer #2:

Reviewer #2: Section 2.3.1 (Quality index) needs at least one introductory paragraph of text or delete the title and leave as part of 2.3.

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Response: The section was deleted, as suggested.

Reviewer #2: The Environmental Quality index is not specified in 2.3. Do these indices are proposed or are from literature?

Response: To identify areas susceptible to desertification, we evaluated eleven indicators of susceptibility to desertification (Table 1), based on previous studies of the area [Vasconcelos Sobrinho, 1978; Ferreira et al., 1994; Matallo Júnior, 2001; Lemos, 2001, (page 6, lines 163-166)]. The Environmental Quality index was renamed to Physical Land Quality index refers the slope data, geology, geomorphology and pedology maps. The Figure 2 shows how different those indicators were combined to calculate quality index (Page 31).

Reviewer #2: Regarding the classification as "low, moderate and high" of each index, how was established? What from previous classifications or exclusively from the range of values obtained? It is not clear.

Response: Each class receives a weight factor, related to the potential influence on desertification process that ranges between 1 (low susceptibility) and 2 (high susceptibility), producing 11 susceptibility maps (SM). The weight factors were assigned based on previous analyses of the literature, as reported in Page 6, lines 166-171.

Please also note the supplement to this comment:

<http://www.solid-earth-discuss.net/6/C1586/2015/sed-6-C1586-2015-supplement.pdf>

Interactive comment on Solid Earth Discuss., 6, 3227, 2014.

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