Natural Hazards
and Earth System
Sciences

Discussions

Interactive comment on "Spatial indicators for desertification in south-east Vietnam" by Le Thi Thu Hien et al.

Le Thi Thu Hien et al.

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Reply to Reviewer #2

We thank reviewer 2 for the positive general comments.

A few minor revisions to be considered: 1. An explanation and clarification is necessary for ESAI and ESA: are the same? Also are the same with RI? If not, then specify the differences. This reflects Figures 2 and 4. The confusion has been removed from the manuscript. We have opted for the known terminology ESAI (Environmentally Sensitive Area Indicator), and have adapted the text and figures accordingly.

2. An explanation is necessary for muli-criteria analysis and how it is connected with the whole methodology. We have used a factorial approach and gave each factor

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equal weight in the Quality Indicators (QI), and in turn in the Environmentally Sensitive Area Indicator (ESAI). We did not use multi-criteria analysis in this research, but the suggestion is very valid and we have added the idea to the discussion section.

3. There is a need to clarify the scoring system of individual indicators. Is it objective or subjective? The scoring of the quality indicators was based on a multi-factorial approach combining the multi-component GIS framework for desertification risk assessment by Santini et al. (2010) and the Environmentally Sensitive Areas (ESA) approach by Kosmas et al. (2006) and Basso et al. (2000). The scoring system as presented here, and adopted by a lot of studies is subjective and could benefit further from data mining techniques.

4. It would be useful if the authors could add any limitations and uncertainties of the methodology. We have incorporated a section on the limitations of the methodology in the discussion section.

Please also note the supplement to this comment:
https://www.nat-hazards-earth-syst-sci-discuss.net/nhess-2019-146/nhess-2019-146-AC3-supplement.pdf