Interactive comment on "Responses of aeolian desertification to a range of climate scenarios in China" *by* Xunming Wang et al.

Anonymous Referee #2

The work of Wang et al. (manuscript SE-2016-59) shows a large scale study about aeolian desertification throughout China and its degree of intensity (4 classes). Regarding to a scientific novelty point of view, this study may be very useful because it can provide relevant information to stakeholders about this important problem, particularly in the boundaries of Sandy and Gobi deserts. However, in my opinion, the authors should do still a great effort to improve the quality of the manuscript in order to be accepted for publication in Solid Earth journal. Therefore, I am going to suggest to the Editor a Major Revision. Please see below general and specific comments.

GENERAL COMMENTS

- Although English is not my mother tongue, I think that a linguistic review by a native speaker is still needed.

- Chapter 1 should be renamed to "Introduction" and not "Instruction".

- "Rainfall" and "speed" should be used instead of "precipitation" or "velocity" throughout the text.

- The main goal and research questions of the article are not mentioned in any part.

- The chapter of Materials and methods is very bad organized. I.e. there are too many subchapters and methods used in this research are not well explained.

- A subchapter of "Study area" is necessary.

- More references worldwide are needed in the Discussion section.

SPECIFIC COMMENTS

- Line 20: "arable land and grassland are degraded". Please use "land degradation due mainly to a decrease of vegetation cover.

- Line 23: "Over the past five decades". Please use "In the last 50 years". Please check it throughout the text.

- Line 30: "Sandy and Gobi deserts". Please use capital letters.

- Lines 37-42: This sentence is repetitive. Please delete it.

- Lines 46-49: Are you sure? If the predictions of global warming are good to avoid aeolian desertification why Chinese government has implemented numerous programs in the last decades. It does not make sense! Please give more details.

- Lines 56-57: I do not know exactly what is happening in China but it is a little strange that variations in the predominant climatic factors and their impact on desertification have not been studied. Please revise it.

- Line 78: "reported by Wang (2014)". Please check it.

- Line 85: "a spatial resolution of 1/12  x 1/12 ". Please check it throughout the

text.

- Line 105: This subchapter should be renamed "Statistical analysis". Furthermore, it should be much better explained.