

Interactive comment on “Relating historical vegetation cover to aridity index patterns in the greater desert region of northern China: Implications to planned and existing restoration projects” by Yanying Shao et al.

Anonymous Referee #2

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The desert ecosystems are vulnerable to climate change, particularly its effect on vegetation development. Previous study on climate change in desert regions of north China was mostly focused on large-scale modelling of arid climate features. This manuscript provides a local to regional-scale analysis of climate changes in the greater desert belt of north China, based on long-term meteorological records, aridity index (AI) and satellite-based NDVI calculation. The obtained results are quite interesting, particularly the change in precipitation which shows “dry areas becoming wetter and wet areas becoming drier” in the north China deserts, an opposite trend compared to global observations. The research plan in this manuscript is sound and overall presentation is

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well structured. However, some weaknesses may need to be clarified/ improved. 1. In general, the writing quality in the sections of “Introduction” and “Results” is obviously low, compared with Abstract and Discussion. It would be worth improving the writings accordingly. My specific suggestions are to:

1) Re-write the paragraph at Page 2 Line 13 – 20. Maybe start with a key sentence stating general research findings and pay an attention on linkage of context. 2) Revise the sentence at Page 6 Line 19 – 21, such as: “The increasing trend is statistically significant and strongest in the northern-half of the western desert region ($p < 0.05$). Comparably, a decreasing trend, though not statistically significant ($p > 0.05$), was observed in the eastern part of the study area, affecting about 30% of the greater desert region.” 3) Regulate the inconsistent order of references cited in the text (see Page 2 Line 2-5).

2. References of No. 3 and 5 (Page 11 Line 10 and Line 15) seem to be unpublished reports. Unsure whether or not it is necessary to list them in this paper. 3. Page 3 Line 15 “has resulted” should change to “have resulted”.

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