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Solid Earth
Discussions

Interactive comment on "Vegetation greenness response to water availability in northern China from 1982 to 2006" *by* Zhang Fengtai and An Youzhi

Anonymous Referee #2

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I thank to SE Editorial Board for the request to review the manuscript "Vegetation greenness response to water availability in northern China from 1982 to 2006" by Zhang and An (see below my review report).

The paper presents a spatial and temporal analysis from 1982 to 2006 of the trend variation of NDVI as a proxy of greenness from remote sensors to gain understand how vegetation greenness responds to water availability (soil moisture) with no significant changes on rainfall during the study period. A consistent work was done using different methodological approaches and sources of data. The paper is well written and structured. The objectives are clear and the results are well interpreted. However, some questions are needed to improve the manuscript. Please find below the review

comments:

Lines 54 and 58 please include some references related to "previous studies" and "few studies"

Line 83 I recommend to include the spatial resolution of the AVHRR is 1.1 km (when the satellite is directly overhead).

Line 87 "by a maximum value composite approach" I suggest including "increasing the quality of NDVI images by selecting the best observations for each pixel although the temporal resolution decreases"

Lines 130 – 131 could be placed in Materials and methods (line 115)

Line 122 2.6 Methods for correlation analysis

Lines 158 – 160 Description of methodology should be included in line 122 Methods for correlation analysis

3.1 I suggest discussing in depth the positive trend of greenness

Line 187 Revise grammar "Plants are important in Earth system" or "The importance of plants in Earth system"

Technical corrections

Lines 26 – 27 space after comma

Line 132 Figs.

Line 104 2.4 in bold

Line 167 Figs.

Lines 168 – 186 and 207 – 212 justify the text

Lines 182 and 230, 260, 305 Revise typography