

Interactive comment on “Analysis of land cover change and its driving forces in a desert oasis landscape of southern Xinjiang, China” by T. Amuti and G. Luo

Anonymous Referee #2

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The authors propose an original approach to characterize, quantify and understand the land cover change. The study is interesting, the authors have gathered a nice set of data, manuscript is well written, but unfortunately several considerations should be taken. My recommendation is that the authors improve the manuscript and submit it again with the changed suggested. I would suggest to improve the presentation and order of the data, provide a more concise description of their results, specially about the second objective of this paper (drive forces). Sustain the general discussion and conclusions with their own results, explaining better the relationship between the main two objectives of this research. I think that a new structure of your manuscript will be very useful to understand the paper. I highly recommend reconsider the different sec-

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tions of your manuscript. As a suggestion, see below (end of the review) an example that maybe will be useful. This is only an example, but please, note that:

- Current section 5, "Driving forces: implications for arid oasis landscape planning and management", should be part of the results, as a objective of this research. It should be included in result - Current Section 4. Discussion can't appear before "driving forces" section - Discussion section need to be improved and should be include discussion and data about driving forces, making an effort to integrate the two objectives of this paper

The following are some specific comments: - Would be very useful for readers include in introduction more information related with ecotone (a brief definition of) and more details about driving forces. As well as more information about GIS overlay operation. - The size of the catchment (ha) has to be included in the manuscript, not only at the footnotes of table 2. - I try to figure it out the spatial resolution of the three images. 1990 with 28.5m*28.5m, 2008 with 30m*30m, but I am not sure about imagine acquired on 2000. How to deal with different resolutions? - More information about how and why the control points were selected - Thresholds between different categories in Oasis land cover need to be better explained (table 1) - Table 5 can't be referred before Table 3 and 4, please re-organize, or cite table 5 after table 3 and 4 in the manuscript. I hope all these comments are useful for the authors. I encourage them to address the points listed above to correct their manuscript, which could be an important contribution to understand I) the trending of desert in the extremely arid desert oases of Southern Xinjiang, Northwest China, and II) the potential risks to the eco-environment of the Hotan oasis over the next decades.

EXAMPLE

1 Introduction 2 Study Area 3 Materials and Methods 3.1 Dataset 3.2 Data pre-processing 3.3 Vegetation and soil indexes 3.4 Land cover classification 3.5 Accuracy assessment 3.6 Detection of land cover change 4 Results 4.1 Land cover changes:

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integrated methodology between remote sensing with a geographic information system 4.1.1 Land cover classification 4.1.2 Land cover change 4.1.3 Land cover change patterns 4.2 Driving forces: implications for arid oasis landscape planning and management 4.2.1 Natural forces 4.2.2 Human forces - Population growth - Economic policy - Unsustainable land use - Socio-cultural factors 5 Discussion 6 Conclusions

Interactive comment on Solid Earth Discuss., 6, 1907, 2014.

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