

## ***Interactive comment on “The challenge and future of rocky desertification control in Karst areas in Southwest China” by J. Y. Zhang et al.***

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First of all, we are very thankful for the time and work of the reviewer reviewing our manuscript. All of the reviewer's comments are important to improve the manuscript. The replies to the reviewer's comments are as follows: Comment1: Page 3, the authors said that the major distribution provinces of rocky desertification in China. It should be better to add a picture of distribution provinces in China in order to make the readers more intuitively understand it. Reply1: We are sorry for the neglect of the problem. The geographical location and distribution of the rocky desertification in China is more familiar to the Chinese readers or the readers who expert on rocky desertification problems, but it is not conducive to the general readers. We will provide a picture of the main provinces distributing the rocky desertification in China in the revised

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manuscript. Please see specific amendments in the revised manuscript. Comment2: Page 4, the authors mentioned the rocky desertification area decreased by 960,000 ha after the rocky desertification control, but "there is potential rocky desertification (PRD) area of  $1331.8 \times 104$  ha". Is the data after rocky desertification control? Please give instructions in the manuscript. Reply2: Yes. The "rocky desertification potential (PRD) area of  $1331.8 \times 104$  ha" is the monitoring area after the rocky desertification control project. Comment3: Page 4, the authors said that the southwest karst region "lies in a subtropical climate zone, it is warm and humid". But the authors did not give specific data, which may be difficult for readers to intuitively understand. The local precipitation and temperature data for many years can be added. Reply3: According to the reviewer's comment, we will provide the annual precipitation and temperature of the study area in the revised manuscript. Please see specific amendments in the revised manuscript. Comment4: Page 5, the authors mentioned some large-scale human activities, such as the "Great Leap Forward", the "Work for Food Program". I think the authors need to make the appropriate interpretation in order to help readers understand who are not familiar with the historical background of China. Reply4: The "Great Leap Forward" is a movement in China between 1958 and 1960 when people blindly pursued high economic development. Such as in agriculture, Chinese people pursued the increase of grain yield by 80% from 1957 to 1958, leading to large-scale deforestation and serious environmental degradation. The "Work for Food Program" is an agricultural production goal which was put forward and implemented around 1970 in China. Similarly, it aimed at increasing grain production, leading to the deforestation phenomenon and environmental degradation. We will add necessary information in the revised manuscript. Please see specific amendments in the revised manuscript. Comment5: Page 6, the author mentioned the role of company in the rocky desertification control. The work mechanism of company should be appropriately explained to help understand. Reply5: In rocky desertification control, the role of the company is mainly to make concrete rocky desertification control planning according to the government's target, and to take measures to manage rocky desertification

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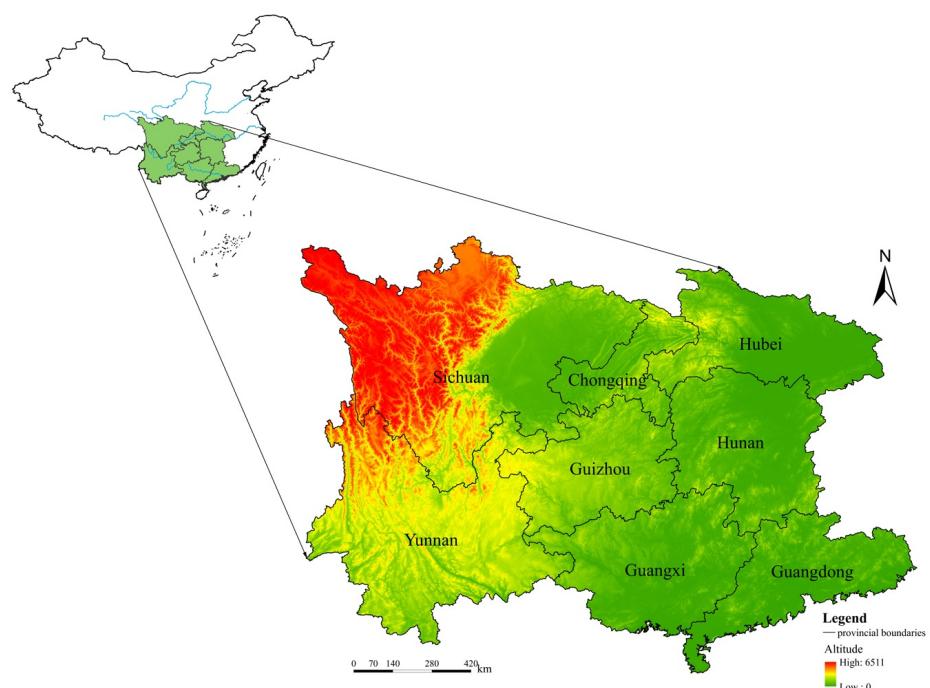
land. Please see specific amendments in the revised manuscript. Comment6: The last two lines in Page 11 and the first two lines in Page 12, the author mentioned the sensitive of karst ecosystem and the impacts of climate change on it. I think the authors want to express the necessity of technological research in context of climate change. However, it is more appropriate to put this part in the final conclusion. Reply6: According to the reviewer's comment, we will put this part in the final conclusion. we want to express the necessary of strengthening technology research in the context of climate change. We will make appropriate amendments to this issue according to the comment in the revised manuscript. Please see specific amendments in the revised manuscript.

Please also note the supplement to this comment:

<http://www.solid-earth-discuss.net/7/C1562/2015/sed-7-C1562-2015-supplement.pdf>

Interactive comment on Solid Earth Discuss., 7, 3271, 2015.

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**Fig. 1.**

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