

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

G. Luo (Referee)

luoguangjie@gznc.edu.cn

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Rocky desertification is the major environmental degradation problem in karst areas in Southwest China. The control and improvement of Rocky desertification are of importance for regional development. From the perspectives of "the economic interests - production practices", the manuscript aimed at China's internal conditions, and analyzed the reasons and the driving mechanism of rocky desertification at "region" level and "farmer" level. It has practical and theoretical significance. But there are some little deficiency. As follows: (1) 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. (2) Page 4, the authors mentioned the rocky desertification area decreased by 960,000 ha

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after the rocky desertification control, but "there is potential rocky desertification (PRD) area of 1331.8×10^4 ha". Is the data after rocky desertification control? Please give instructions in the manuscript. (3) 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. (4) 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. (5) Page 6, the author mentioned the role of company in the rocky desertification control. The work mechanism of company should be appropriate explained to help understand. (6) 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. In short, the manuscript analyzed the driving social economic factors behind rocky desertification; summarize the scientific research on rocky desertification in the southwest karst in China. The paper is valuable. I agree to publish it after completion of the above modification.

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