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Forestland change and soil erosion in karst watershed under the Grain to Green Project

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With the implementation of the Grain to Green Project, the vegetation growth in karst region in southwest China has increased. In order to explore whether the growth of trees can be sustained after artificial afforestation in karst area and the influence of the forestland change on soil erosion, the WaTEM/SEDEM model was used to simulate the 11 stages of annual soil erosion in the past 33 years in Chongan river drainage basin in Guizhou, and the dominant influencing factors of soil erosion change in the past 33 years were discussed based the pixel scale in this study. The results showed that the forestland increased in a fluctuating way after the conversion project, and the decrease of forestland was mainly caused by drought, especially in the area where the dolomites were distributed. Therefore, the change of forestland caused no significant improvement in soil erosion since the Grain to Green Project.