

## Rocky Desertification Landscape Pattern on Spatio-temporal Evolution of Land Use the Response

WANG Yuanyuan<sup>1 2</sup> ZHOU Zhongfa<sup>1 2</sup> ,WEI Xiaodao<sup>1 2</sup>

(1. Institute of South China Karst, Guizhou Normal University, Guiyang 550001, China)

(2. The State Key Laboratory Incubation Base for Karst Mountain Ecology Environment of Guizhou Province, China)

**Abstract:** Land use is the most direct manifestation of human activities. There is a close relationship between the karst rocky desertification evolution and land use change. The control of rocky desertification is in human intervention accelerate recovery of vulnerable Karst ecosystem. The research was studied by 3S technology and spatial pattern analysis technology means combining, on the comprehensive control of rocky desertification in Ziyun County Shuitang small watershed land use and karst rocky desertification landscape pattern evolution was discussed. The results show that: (1) During the period of 2004—2010 Shuitang small watershed land use types to forest and grassland change more, the other kind of fewer changes, the forest land area increased by 10%, grassland area increased by 5%; (2) During the period of 2004—2010 Shuitang small watershed in rocky desertification, the main types of moderate rocky desertification to mild Rocky Desertification Area 5%, slight rocky desertification to potential rocky desertification area 10%; (3) During the period of 2004—2010 reservoir watershed land use and landscape pattern of rocky desertification. Diversity index all raised by 0.3 and 0.12, fragmentation index all decreased by 0.138 and 0.16, the dominance index all decreased by 0.181 and 0.126 respectively, evenness index all raised by 0.092 and 0.209, fractal dimension index all raised by 0.02 and 0.18 respectively. Research shows that use such land use and rocky desertification transfer matrix with landscape pattern analysis of a combination of methods, for the evaluation the control of rocky desertification effectiveness to provide reference significance.

**Key words:** land-use; karst rocky desertification; landscape pattern; 3S technique

## 中科院成都山地所“4·20”芦山强烈地震科研应急简讯

2013年4月20日,四川省雅安市芦山县发生7.0级地震。中科院成都山地所迅速启动科技救灾应急预案,成立了“4·20”芦山地震抗震救灾领导小组和科技救灾专家组,分四路赶赴地震灾区开展山地次生地质灾害隐患排查与评价、无人机航拍监测等工作。

截至5月10日,专家组分别对芦山县、宝兴县和邛崃市等地的250余个次生山地灾害点进行了调查,查明了芦山地震次生地质灾害的主要类型和特征。并对乐山峨眉山市地质灾害隐患点及灾害治理工程进行了全面排查和安全复核,针对各类地质灾害类型、规模、危险性,以及灾害对抗震救灾及灾后恢复重建的影响等进行了评估。同时利用高分辨率航拍数据对地震受灾严重的芦山、宝兴、天全、太平镇、宝盛乡、龙门乡等乡镇的受灾情况进行解译分析,编制灾区遥感地形地势图和地震灾区房屋受损及次生地质灾害分布图。获取了超过30G的无人遥测基础数据。

所长邓伟应省政府邀请,出席了芦山地震第八次新闻发布会,回应震后安置点及灾后重建等社会关注问题,落实了四川省“芦山地震灾区资源环境承载力评价”等后续科研任务。

(信息来源:中科院成都山地所综合办公室)