



## **Development and Cause of Aeolian Desertification in Alpine Region-In Case of Maqu County in the Source of Yellow River**

Junfeng Lu, Quangqiang Qian, Wanyin Luo, and Zhibao Dong

Key Laboratory of Desert and Desertification, Cold and Arid Regions Environmental and Engineering Research Institute, Chinese Academy of Sciences, Lanzhou, China (lujunfeng2004@aliyun.com)

Maqu county locates in the northeast of Qinghai-Tibetan Plateau, which main native vegetation is alpine meadow. It was suffered severe desertification in recent years. In this study, we used Landsat images to investigate development of desertification. The result showed that the area of desertification land increased significantly, patch numbers and patch area of desertified land also increased from 1975-1990, the increased desertified land mainly converted from grassland. The degree of desertification also increased from 1990-2000, mainly because fixed sandy land converted to mobile sandy land and semi-fixed sandy land. The area of desertification land decreased from 2000-2010, the desertification land mainly converted to low coverage grassland. The reason responsible for desertification development including natural factors, such as temperature increased, the Yellow River runoff decreased, rodents and pests damage, and unreasonable management measures, such as long-time overgrazing, digging turf for building fence and herbs. In the beginning of this century, the implementation of ecological restoration project was main reason responsible for desertification reversion.