



## **Regional differentiation regular and comprehensive partition of soil erosion in the lower Jinsha River**

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Based on erosion force, the soil erosion types in the lower reaches of the Jinsha river were divided into water erosion, water erosion-gravity erosion, water-karst erosion, freeze-thaw erosion. The scope of different erosion type was determined by means of remote sensing interpretation and field investigation. Based on the universal soil loss equation, the single factor sensitivity such as rainfall, terrain, soil erodibility, vegetation coverage was analyzed. Then comprehensive assessment model of the water erosion is built. We selected six factors such as slope, relative height difference, lithology, distance to fault, average rainfall, ground motion peak acceleration and assessed susceptibility of landslide and debris flow. The karst severity was analyzed based on rocky desertification distribution. We analyzed the characteristics of the different regional differentiation. In the end, the comprehensive regionalization map of soil erosion was drawn, which comprised 5 region and 12 sub-regions. the result will provide the important basis of the partition management of ecology environment, the reasonable use of land resources, effective control of soil in the lower reaches of the Jinsha River.