

Geological disaster prevention and mitigation in the Ailao Mountain area

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Affected by the Ailao Mountain Fault and the Red River Fault, the Ailao Mountain area in Yunnan Province has a complex lithology, well-developed structural features and high weathering degree with broken rocks. It is a high-risk area of landslide disasters. Based on the investigation of geological hazards, it is concluded that the distribution of landslides is closely related to active faults, strata lithology and topographic gradients. The eastern foothills of the Ailao Mountains are a high incidence area of landslides, which is obviously affected by the Ailao Mountain Fault and the Red River Fault.

Taking Xinping County as a demonstration area, geological disaster prevention and mitigation work has been carried out. Through landslides monitoring, a large number of monitoring data have been obtained, and the mechanism of landslide disaster caused by regional rainfall has been studied. The risk assessment of landslide hazards has been carried out, and the cumulative rainfall and current rainfall are considered as critical rainfall. A geological disaster early warning analysis system has been developed to guide the geological hazard warning in Xinping County.