



Land use classification and vulnerability analysis on elements at risk in terms of landslides in the watershed of Xiangxi River

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The construction of the Three Gorges Dam on the Yangtze River in China has an extensive impact on the ecosystems and local population. For evaluating its impact, the Xiangxi River's watershed is taken as an example. The inflow of the Xiangxi River, a northern tributary of the Yangtze River, is located about 40 km upstream of the Three Gorges Dam. In order to develop and establish sustainable land use strategies, a vulnerability analysis will be conducted to examine the risks and impacts of landslides on the local population as well as on material assets. Analysing land use based on remote sensing techniques, is one objective of the project. During a field survey carried out in September 2008, land use types as well as cropping cycles in the project area were evaluated. Training areas were mapped for supervised classification, using Landsat-5 imagery. The result of the classification is a land use map of Xiangxi watershed.

After interpreting remote sensing data from 1987 and examining land use maps from 1992, depicting the pre-Three Gorges Project phase, the results will be compared with current land use to document any change.

Knowledge of current land use and change analysis will be utilized as a basis for vulnerability analysis to identify elements at risk and to determine the damage potential. The elements at risk will be mapped, labelled and then processed in conjunction with possible damage intensities in a GIS.

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