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Automatic mapping of a reservoir flood risk map using GIS technology

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Abstract A flood risk map is an important non-engineering measure for flood control and management. To draw a flood risk map and design a page layout format for it automatically, a two-dimensional hydraulic model was used to analyse the flood risk of a reservoir when a dam-break is encountered. An automatic method to draw a flood risk map based on GIS technology was used. Meanwhile, taking Shilianghe Reservoir in Jiangsu Province, China, as an example, its flood risk maps were mapped. The results obtained could be used as technical support for flood prevention schemes and organizing the local population to escape from flood disaster.

Key words flood risk map; reservoir; GIS; dam-break flood