

Where flood risk management should head for ?

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Abstract

Human beings have been suffering from many natural disasters, including earthquakes, landslides and flooding. The fighting against flood disasters can be traced back to at least 2000 years ago when the Dujiangyan Irrigation System was created for flood control, irrigation water supply, and river channel siltation prevention. Since ancient times, many methods and techniques have been developed for flood control, including the constructions of floodwater diversion channels, levees, dams, reservoirs, and retention ponds to hold extra water during floods. In addition to these structural measures, non-structural measures such as flood hazard mapping, early warning systems, and land use planning have been developed in recent decades. Despite various efforts and progress, we have witnessed the frequent recurrence of flood disasters worldwide. Therefore, the present study addressed the question "are we safer than before" via case studies. It was intended to provide a diagnosis of how flood impacts in targeted areas have evolved over time. Such a diagnosis offers new insights into our safety in relation to flooding.