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A Synthesis of Disaster Resilience Measurement Methods and Indices

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Abstract

Disaster resilience has become an important societal goal which captures the attention of academics and decision makers from various disciplines and sectors. Developing tools or metrics for measuring and monitoring progress of resilience is a critical component that requires extensive research to achieve better understanding. However, different fields have different emphases and the knowledge gained from the various studies are scattered and fragmented. To provide an integration of the literature and reflect on the current state of resilience measurement, we conducted a synthesis analysis through a systematic review of 174 scholarly articles on disaster resilience measurement from 2005 to 2017. Using a review table designed for this study and content analysis, we extracted key information from each article on resilience definition, type of measurement method, resilience indicators used, and proposed adaptation strategies. Results indicate that 39.7% of the articles used qualitative methods for resilience measurement and 39.1% of the articles used quantitative methods. However, only 10.3% of all the 174 articles

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