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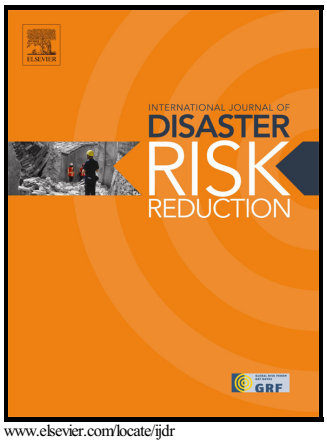
# An augmented approach for measurement of disaster resilience using connective factor analysis and analytic network process (F'ANP) model

Asad Asadzadeh, Theo Kötter, Esfandyar Zebardastb

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# An augmented approach for measurement of disaster resilience using connective factor analysis and analytic network process (F'ANP) model.

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**Abstract:**

The ability to measure risks and disasters induced by natural hazards is increasingly considered as one of the fundamental objectives to promote disaster resilience in hazard prone areas. Although constructing composite indicators has been mentioned as a key step for measuring disaster resilience, there is no agreed upon a standard procedures in the literature for measuring the concept. With these backgrounds, in this study we present a connective F'ANP model not only to construct a new set of disaster resilience indicators in the context of earthquake hazard but also to propose a new network process to calculate the weights of disaster resilience indicators. The proposed framework will then be validated through an empirical application in the Metropolitan Area of Tehran, Iran.

**Key words:** Disaster resilience, seismic resilience, composite indicators, factor analysis, analytic network process, Tehran

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