

[1]吴吉东,李宁,周扬,等.灾害恢复度量框架——Katrina飓风灾后恢复应用案例[J].自然灾害学报,2013,04:58-64.

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灾害恢复度量框架——Katrina飓风灾后恢复

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Title: Disaster recovery measurement framework: an application case of disaster recovery after hurricane Katrina

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关键词: 自然灾害; 灾害恢复; 度量框架; Katrina飓风; 灾害管理

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摘要: 灾害恢复的量化判别对于灾害管理者掌握灾害恢复进程及合理优化灾后恢复重建策略至关重要。为了弥补灾害恢复概念不统一、量化判定方法和案例研究不足的问题,首先基于复杂巨系统理论,在灾害恢复理论层面,从“均衡”角度定义了灾害恢复的概念;其次,利用文献归纳法,从灾害影响的基础设施、经济、社会和自然环境四个维度提出了度量灾害恢复的指标体系;进而基于灾害恢复概念,提出了利用灾害恢复指标进行量化判定的模型,系统地构建了灾害恢复的度量框架;最后,以2005年美国Katrina飓风后路易斯安那州的灾后恢复为例,判定灾区恢复进程。结果显示,经过6年多的恢复重建,灾区仍未完全恢复。灾害恢复的定量化研究可以为

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灾害经济影响评估模型的构建及模型参数的验证提供重要的理论依据, 灾害恢复度量框架的有效性尚需要更多的案例对比分析及验证。

Abstract: Disaster recovery process research is essential for decision-makers in post-disaster recovery and reconstruction strategy optimization. But there is not a uniform disaster recovery measurement framework, including the disaster recovery concept and identification method of disaster recovery process. Also, disaster recovery case studies are lacking. In view of these problems, this paper first improves the understanding of disaster recovery concept through the equilibrium theory of complex system, and then proposes a disaster recovery measurement metrics from four disaster impact dimensions, i.e., social, economic, infrastructure and physical environment, as well as provides a disaster recovery process identification model. This paper improves the disaster recovery theory and measurement framework. Meanwhile, the disaster recovery case study of 2005 hurricane Katrina in Louisiana was analyzed. Results indicate that after more than six year' s recovery, Louisiana still has not fully recovered according to the recovery measurement of Gross Domestic Product and population. Disaster recovery quantitative study is critical for the construction of disaster economic impact assessment model and the model parameters' validation, and is also beneficial to the disaster risk management. Further case studies are needed to further explore the disaster recovery mechanism.

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