



## Hazard Reduction & Recovery Center

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### “Building Community Resiliency: Spatial Links Between Household & Business Post-disaster Return.”

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Rapidly urbanising areas along the world’s coasts are introducing more households to more frequent and extreme natural and man-made disasters. Instead of being an exception, disasters often heighten or accelerate pre-existing relationships between several factors acting within urban areas. The disaster research community has called for more systematic and quantitative approaches to modelling the impacts and recovery processes after a disaster to reduce them and increase our understanding of the mechanisms at work.

#### Findings

This article explores the way households and businesses rely on each other post-disaster following 2008’s Hurricane Ike in Galveston, Texas. Data from 980 households and 145 businesses that were collected in the months after the storm allow the spatial correlation of the household occupancy and business operation, controlling for damage. The researchers’ analysis has showed support for the hypothesis that the return of households and businesses after a disaster are mutually dependent across space. The study finds that the world is likely to see more frequent hot extremes, heavy precipitation and more severe tropical cyclones in the future as a result of climatic change. More people are living in at-risk areas, particularly along the world’s coasts, which puts more people at risk from natural disasters. It’s important to understand the different parts of post-disaster community recovery to inform policy-making for improving community resiliency.

#### Implications

The knowledge gained from disaster situations can provide understanding into larger urban forces and play a role in improving and recommending policies that help shape the creation of more resilient communities. The level of hazard mitigation and preparedness is generally very low among businesses. Sharing information about the successes of hazard mitigation to businesses may raise their awareness of pre-disaster risk reduction. The re-opening of businesses can influence households to return to their homes and become part of the market that businesses in turn need for a chance to return.