

Predicting the Fate of Community Forest Management in the Face of Disaster:
Reorganization and Resilience within Forest Communities in Southeastern Mexico

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Community forestry is an example of a linked social-ecological system, where local people are involved in a spectrum of livelihood activities that manipulate forest systems while generating income. Community forest enterprises (CFEs) provide a critical link between social and ecological systems, creating a symbiotic relationship integral to the system's identity. External shocks to socio-ecological systems, such as natural disasters, may serve as catalysts for shifts in system identity. Using the theoretical framework of resiliency, we examine Hurricane Dean, which devastated significant tracts of forest in southeastern Mexico in August 2007. We survey four forest communities in central Quintana Roo and identify factors pertaining to system identity which buffer CFEs from transitioning from extreme natural disasters to longer-term social-ecological disasters. Preliminary results from structured interviews with forest communities, forest technicians, and government forestry officials suggest that understanding a few key factors, including **pre-existing conditions** of the linked social-ecological system, physical and social **connectivity**, capacity for **self organization** and **adaptation**, social memory, and **diversity of livelihood strategies** are essential in predicting the resiliency of community forestry. Using a series of future-based scenarios, we identify pathways towards reorganization of community forest management in the immediate and distant future. By applying theoretical concepts of socio-ecological systems and their resiliency to the case of Mexican forest communities in the aftermath of Hurricane Dean, we seek to contribute to a greater understanding of the factors that increase forest communities' resiliency following natural disasters and how linked socio-ecological systems may be better prepared for future catastrophes.

Key words: natural disaster, community forestry, resiliency, Mexico

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