Differentiated vulnerabilities and adaptive responses to climatic, economic and institutional stressors in Mexico’s Calakmul Biosphere Reserve

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Abstract

Rural vulnerability research has historically paid attention to the impacts of climate hazards, food insecurity, and poverty on people’s livelihoods. Such studies have been of critical importance to understand how socio-ecological systems are inter-connected, and they can be regarded as a pre-requisite to describe why and how components of social systems adjust to and shape the management of ecological systems. This article analyses rural households’ vulnerability and adaptive responses to climate variability, market-driven perturbations and conservation institutions, focusing on two rural communities located within Mexico’s Calakmul Biosphere Reserve. Drawing on household surveys, semi-structured interviews and focus groups, the article illuminates, first, the failure and success of some households to adjust to changing rainfall variability patterns; second, the role of cash cropping (i.e. jalapeño chili) in undermining and enabling household adaptations and; third, the tensions between “co-operative” conservation rules and the ability of some households to minimize their negative effects on the access to natural resources. The paper suggests that a given rural system’s resilience should be examined from a socio-political and institutional perspective, which allows unearthing trade-offs and synergies across and within its social and ecological components.

Keywords: Adaptive capacity, Adaptation to climate change, Capacities, Conservation, Ecosystem Services, Institution, Market, Political Ecology, Protected area, Trade offs

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