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“Resilience of agricultural systems against crises”

Constructing Resilient Livelihoods in Burkina Faso: Finding the Right Balance between Persistence and Adaptation

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Abstract

Research on resilience in farming systems often focuses on encouraging diversification, so that risks are spread across a wider portfolio of activities. However, the financial literature has long warned that diversification is only beneficial if activities within the portfolio are not interdependent (low covariance), otherwise – akin to a row of dominos spaced too closely together – shocks affecting one component can quickly reverberate through the whole system. The long-term study of ecosystems has similarly documented the detrimental effect of high interdependence on the capacity of ecosystems to recover after hurricanes and other natural disasters.

This Ph.D. research applied these principles to livelihood systems in the arid Sahel, examining the processes fostering resilience and allowing households to ensure their food security year-round. With over 2.5 billion people living in drylands worldwide, it is important to understand how sustainable livelihoods are constructed and maintained in such a risk-prone environment. To model the adaptive trajectory of livelihoods, resilience was observed at the relational scale of the household over a whole agricultural cycle, from harvest to harvest (2009–2010). Results revealed that risk-taking behaviour of interviewees varied over the cycle, alternating between periods of persistence (continuing the same livelihood activities) and adaptation (pursuing new livelihood activities), refuting the commonly-held notion of ‘linear’ adaptation.

Three indicators of resilience were computed, capturing strategies which were diverse but exhibited low interdependence and could easily be adapted by intensifying current activities or accessing new ones. This study shows how resilience theory applied to livelihoods may provide a more holistic approach to ensuring food provision in risk-prone environments. The identified indicators can be used as a diagnostic tool, quantifying current level of resilience and guiding policy interventions to foster resilience.

Keywords: Adaptation, diversification, food, resilience, Sahel, risk aversion