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Synthesis

An Indicator Framework for Assessing Agroecosystem Resilience

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ABSTRACT. Taking departure in the theory of resilience in social-ecological systems, we present an analysis and discussion of how resilience theory can be applied to agroecosystems. Building on the premise that agroecosystems are too complex for resilience to be measured in any precise manner, we delineate behavior-based indicators of resilience within agroecosystems. Based on a review of relevant literature, we present and discuss an index of 13 such indicators, which, when identified in an agroecosystem, suggest that it is resilient and endowed with the capacity for adaptation and transformation. Absence of these indicators identifies points of intervention for managers and stakeholders to build resilience where there is vulnerability. The indicators encompass various phases in the adaptive cycle and seek to link core aspects of social-ecological systems. We stress the strong societal need for building resilience in agroecosystems and advocate for a broader way of evaluating resilience in agroecosystems.

Key Words: *adaptive cycle; agroecosystems; behavior-based indicators; resilience; social-ecological systems*
