Monitoring for Resilient Ecosystems: Developing Indicators and Metrics

A framework for monitoring ecosystem resiliency: Insights from national forest planning and implementation of the 2014 Farm Bill.

The restoration and enhancement of ecosystem resilience is a management priority on U.S. public lands. Adaptive management and ecological monitoring have been identified as fundamental mechanisms to evaluate the impacts and effectiveness of management approaches, test assumptions, and reduce uncertainty in the face of rapid environmental change. Yet operationalizing the emerging idea of resiliency for management and monitoring presents a challenge. The concept of ecological integrity, which has been adopted as an ecosystem management objective in the U.S. Forest Service land management planning rule and the 2014 Farm Bill’s insect and disease area designation program, provides a framework for establishing indicators/metrics for the assessment, management and monitoring of ecosystem resilience. Using examples from national forest planning and implementation of the Farm Bill, the presentation will present a framework and discuss approaches (and challenges) for selecting and monitoring resiliency indicators/metrics within collaborative planning environments.

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