

## A Restoration Synthesis

**Award Year:**

2014

**Principal Investigator:**

David Moreno-Mateos, Basque Center for Climate Change  
Holly Keltner, Northern Illinois University

**Associated Program:**

[Call for Research Proposals: Biodiversity & Ecosystem Services](#) [1]

**Collaborative Site:**

[Group Collaboration](#) [2]

**Email List:**

[restorationsynthesis@lists.sesync.org](mailto:restorationsynthesis@lists.sesync.org) [3]

As human extraction of resources grows and land uses change, ecosystem restoration is becoming a critical tool to both stem biodiversity loss and ensure flows of key ecosystem services into the future. However, the science of ecological restoration is relatively young. It has yet to fully take advantage of the potential for cross-scale studies of restoration efforts to inform our understanding of ecosystem recovery, resilience, and functioning and to hone restoration decisions. Rigorous tests of restoration trajectories of biodiversity and ecosystem functioning, and cross-scale investigations of strategies to maximize restoration outcomes, remain scarce.

This research will investigate the pattern and timing of recovery of both biodiversity and ecosystem functions and services in ecosystems following large-scale disturbances (agriculture, damming, eutrophication, hurricane/cyclones, invasive species, logging, oil spills, and overfishing). Expected outcomes of this project are:

- empirically-derived guidance for restoration and conservation regarding the performance of various metrics of ecosystem recovery;
- a searchable online repository of the empirical studies that document ecosystem recovery; and
- a series of approximately three peer-reviewed journal manuscripts reporting findings about the relationships among biodiversity, ecosystem functioning, and ecosystem services in recovering ecosystems.

A significant portion of this project will be devoted to training graduate students and public outreach. We will use social media, blogs, and news articles to communicate our findings with the public using an existing platform dedicated to promote the implementation and improve accessibility of the science and practice of ecosystem restoration.

**Participants:**

Edward Barbier, University of Wyoming  
Karen Holl, University of California Santa Cruz  
Peter Jones, Northern Illinois University  
Michelle McCrackin, Stockholm University  
Paula Meli, Natura y Ecosistemas Mexicanos A.C.

Daniel Montoya, University of Bristol  
José María Rey Benayas, University of Alcalá  
Bronwen Stanford, University of California Santa Cruz

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**Source URL:** <https://www.sesync.org/project/restoration-synthesis>

**Links**

[1] <https://www.sesync.org/bio-ess>

[2] <http://sesync.us/rs>

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