SESYNC Feedbacks
News from the National Socio-Environmental Synthesis Center

Highlights

New Study: Ecosystem Disturbance and the Recovery Debt

Ecological restoration is seen as a key tool for building back biodiversity and resilience in ecosystems that have been disturbed. But new research found that even in cases where ecosystems fully recover, the disturbance of ecosystems typically incurs decades of lost biodiversity and ecosystem function such as carbon and nitrogen cycling.

A multi-disciplinary **team of researchers**, brought together by SESYNC, analyzed data from 3,035 sampling plots worldwide to quantify the interim reduction of biodiversity and functions occurring during the recovery process. They found that recovering ecosystems had, on average, half the amount of plants and animals, were one third less diverse, and had 40 percent lower cycling of carbon and nitrogen than undisturbed ecosystems.

The study appeared on January 20th in the journal *Nature Communications*.

Read SESYNC's Press Release on the website .

Academics race to save rare colonial documents in Cuba

Locked inside the archives of Catholic Churches in Cuba are tomes of information that shed light on mid-16th century life on the island, as well as critical information on the slave trade.

Former SESYNC postdoctoral fellow **Matthew LaFevor**, a human-environment geographer who is now a Professor at University of Alabama, has worked since 2005 trying to save and digitize these records, before they are lost to the elements and the degradation of time.

Matthew and his brother David, a professor at the University of Arlington, were recently interviewed by the Associated Press for their efforts. The interview was cross-posted on the New York Times, Washington Post, among others.

Read the **AP story here**, and **SESYNC's coverage on our blog** .

SESYNC Approves Five New Pursuits

SESYNC recently approved support for five new Pursuits that aim to tackle a wide range of socio-environmental topics, including:

Pursuits:

Socio-Spatial Ecology of the Bed Bug and its Control

PIs: Daniel Schneider, University of Illinois, Urbana-Champaign
Michael Levy, University of Pennsylvania

Food & Landscape Diversity

PIs: Sarah E. Gergel, University of British Columbia
Terry C.H. Sunderland, Center for International Forestry Research

Graduate Student Pursuits:

Urban Gardens and Ecological Wealth

PIs: Elsa C. Anderson, University of Illinois at Chicago
Monika Egerer, University of California, Santa Cruz

Feasibility of Dynamic Agricultural Conservation to Improve Migratory Bird Habitat in the U.S.

PIs: Alexander Killion, Boise State University
Jessica Gilbert, Texas A&M University

A Socio-Environmental Framework for Assessing Stormwater Infrastructure Equity

PIs: Julia A. Domenech-Eckberg, Mississippi State University
Paris Edwards, University of Idaho

Apply Now: Short Course in Spatial Agent-Based Modeling

This 5-day short course will serve as an introduction to the theory and practice of spatially-explicit agent-based modeling (ABM). You will learn the essential theoretical background and technical expertise needed to conceptualize, build, and analyze your first ABM. The short course will take place at SESYNC from June 5 through June 9.

Find out more on **our website**. **Applications** due by March 24.

New Publications

The progress of interdisciplinarity in invasion science - Published in *Ambio* by Ana S. Vaz, Christoph Kueffer, and colleagues as part of the **Socioecology of Acacia** SESYNC synthesis team.

A global review of past land use, climate, and active vs. passive restoration effects on forest recovery - Published by Paula Meli and colleagues in *PLoS ONE*, as part of the **Restoration Synthesis** team.

Protected Area Designation, Natural Amenities, and Rural Development of Forested Counties in the Continental United States - Led by Kent Kovacs as part of the SESYNC team: **Rural Forest Communities at a Tipping Point?**

Invasion speeds in microbial systems with toxin production and quorum sensing - Published by SESYNC postdoctoral research fellow **Phillip P.A. Staniczenko** in the *Journal of Theoretical Biology.*

Why wood density varies across communities - Published by SESYNC postdoctoral research fellow **Jenny Zambrano** in the *Journal of Vegetation Science.*

A special section on Fisheries Learning Exchanges was published in *Marine Policy*'s **March 2017 issue**. Articles from the SESYNC team **Learning Exchange Conservation** were published in the section.

SESYNC Welcomes Ken Conca

Dr. Ken Conca recently joined the SESYNC team as a fellow on sabbatical from his home institution, American University's School of International Service, where he is a professor of International Relations. He will spend much of his time on an independent sabbatical project that investigates climate change, water, and the social construction of risk.

Ken has written extensively on topics related to environment, peace, security, conflict and global governance. He is a member of the United Nations Environment Programme's Expert Advisory Group on Conflict and Peacebuilding.

His SESYNC project examines how international water management experts incorporate climate risks into their decision-making. He is particularly interested in professional networks working on 'climate-resilient' infrastructure, specifically: large dam project planning/financing; urban water management; and rural water aid programs in developing countries.

On March 14th, Ken will be giving a seminar at SESYNC titled, " **Climate change, water, and the social construction of risk**."

Join Our Team!

SESYNC is currently accepting applications for two Associate Director positions:

The Associate Director for Actionable Science will provide support for interdisciplinary synthesis research teams with emphasis on the identification of potential decision contexts for the socio-environmental problems being addressed.

The Associate Director for Research will provide scientific support to interdisciplinary synthesis research teams during the development and implementation of SESYNC projects. The incumbent will learn about the scientific basis of projects with an emphasis on helping teams with the integration of natural, social, and computational science.

For more information, read the full job descriptions on **SESYNC's website**. Please share with potentially-interested colleagues. Applications due **March 30, 2017**.

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