



SESYNC Feedbacks

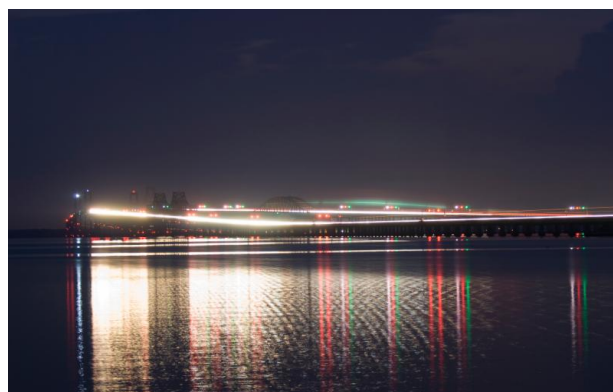
News from the National Socio-Environmental Synthesis Center

Save the Date: June 11-13, 2018

Boundary Spanning: Advances in Socio-Environmental Systems Research

An International Symposium

The National Socio-Environmental Synthesis Center (SESYNC) in partnership with Resources for the Future (RFF), the National Science Foundation (NSF), and the University of Maryland (UMD) is convening an international symposium devoted to exploring the current state of socio-environmental systems research, recent



advances, and the unique challenges and opportunities of this field to understand and provide solutions to increasingly complex issues.

To learn more and apply, please [visit our Symposium website](#).

January SESYNC Research

Curbing Climate Change: Study Finds Strong Rationale for the Human Factor



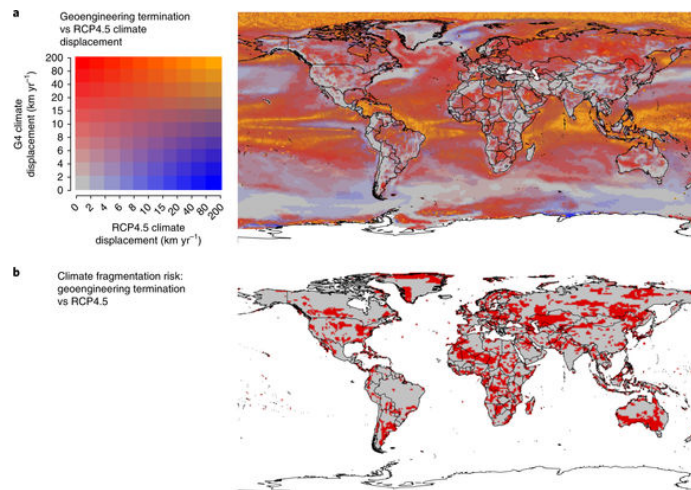
Dr. Brian Beckage explains how understanding the human perception of risk from climate change and the associated behavioral responses is key to curbing future climate change.

Humans may be the dominant cause of global temperature rise, but they may also be a crucial factor in helping to reduce it, according to a new study that for the first time builds a novel model to measure the effects of behavior on climate. Drawing from both social psychology and climate science, the new model investigates how human behavioral changes evolve in response to extreme climate events and affect global temperature change.

The model accounts for the dynamic feedbacks that occur naturally in the Earth's climate system-temperature projections determine the likelihood of extreme weather events, which in turn influence human behavior. Human behavioral changes, such as installing solar panels or investing in public transportation, alter greenhouse gas emissions, which change the global temperature and thus the frequency of extreme events, leading to new behaviors, and the cycle continues.

Read the full release on [our website](#) and the full article at [Nature Climate Change](#).

Geoengineering could have animals running for their lives



Climate displacement and fragmentation from sudden geengineering termination.

To avoid the worst impacts of climate change, scientists have started researching the potential costs and benefits of solar geoengineering - injecting aerosols into the atmosphere to reflect sunlight back to space - as a tool for artificially cooling the planet.

Although interest in solar geoengineering is growing, research has been lacking on how it would affect animals and ecosystems around the globe. Now, new research from the National Socio-Environmental Synthesis Center (SESYNC), Yale University, Stony Brook University, and Rutgers University shows that starting or stopping geoengineering too quickly could escalate the rate of climate change to unprecedented speeds, having catastrophic impacts on most groups of animals.

Read the full release on [our website](#) and the full article at [Nature Ecology and Evolution](#).

Bayesian Modeling for Socio-Environmental Data

Application Deadline: March 15, 2018

The National Socio-Environmental Synthesis Center (SESYNC) will host a nine-day short course **May 29 - June 8, 2018** covering basic principles of using Bayesian models to gain insight from data. The goals of the course are to:

1. Provide a principles-based understanding of Bayesian methods needed to train students, evaluate papers and proposals, and solve research problems.
2. Communicate the statistical concepts and vocabulary needed to foster collaboration between ecologists, social scientists, and statisticians.
3. Provide the conceptual foundations and quantitative confidence needed for self-teaching modern analytical methods.

There is no fee to attend, but participants are responsible for most of their own travel and accommodations.

To learn more and apply, please [visit our website](#).

Introduction to Spatial Agent-Based Modeling

Application Deadline: April 2, 2018

The National Socio-Environmental Synthesis Center invites applications for a 5-day short course, **June 11 - 15, 2018**, that will serve as an introduction to the theory and practice of spatially-explicit agent-based modeling (ABM).

This course will guide you through the basic phases of the ABM research process: formulating a research question, specifying a model, creating a simulation and interpreting the output. The course combines lectures with hands-on model-building sessions where you will build a model using NetLogo to acquire basic and intermediate programming skills. More advanced students are welcome to build a model in a programming language of their choice.

To learn more and apply, please [visit our website](#).

NSF SI2: GSI conceptualization survey

The National Science Foundation has recently funded a project to conceptualize a Geospatial Software Institute (GSI) as a long-term hub of excellence in software infrastructure that can serve diverse research and education communities. This survey aims to gain in-depth understanding of geospatial software challenges and opportunities with regard to requirements for the GSI by various science communities, and should take about 15 minutes. Your participation would be greatly appreciated.

Access the survey [here](#).

SESYNC Publications

Potentially dangerous consequences for biodiversity of solar geoengineering implementation and termination. Published in *Nature Ecology and Evolution* by SESYNC postdoc Chris Trisos and colleagues.

Urban agriculture growth in US cities. A feature piece in *Nature Sustainability* by SESYNC Senior Fellow Lisa Palmer.

Introduction to the Special Feature Practicing Panarchy: Assessing legal flexibility, ecological resilience, and adaptive governance in regional water systems experiencing rapid environmental change. Published in *Ecology and Society* by Barbara Cosens and colleagues as part of the Pursuit, *Social-ecological System Resilience, Climate Change, and Adaptive Water Governance*.

From salamanders to greenhouse gases: does upland management affect

wetland functions? By SESYNC postdoc Nate Jones and colleagues in *Frontiers in Ecology and Evolution*.

Is local biodiversity declining or not? A summary of the debate over analysis of species richness time trends. By Bradley Cardinale, former SESYNC postdoc Ginger Allington, and colleagues in *Biological Conservation*.

Social vulnerability projections improve sea-level rise risk assessments. Published in *Applied Geography* by SESYNC postdoc Dean Hardy and Matthew Hauer.

Linking models of human behaviour and climate alters projected climate change. Published in *Nature Climate Change* by Brian Beckage and colleagues as part of the Pursuit, *Integrating Human Risk Perception of Global Climate Change into Dynamic Earth System Models*.

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1 Park Place, Suite 300, Annapolis, MD 21401
410.919.4810