



SESYNC Feedbacks

News from the National Socio-Environmental Synthesis Center



TEAM SCIENCE RESOURCES | Tips for Collaborating

Resources Available on Team Science & Building an Interdisciplinary Team

Stuck on how to go about building a successful interdisciplinary team? Do you have questions like: "How big should my team be?" or "What do I look for when assembling members?" This SESYNC explainer provides some tips and recommended resources to help address those questions. Read the [Building an Interdisciplinary Team](#) explainer.

Interested in learning more about conducting interdisciplinary and transdisciplinary research? Curious about some of the literature on team science? Then check out [this list of resources](#) from SESYNC, including videos, publications, explainers, etc.

TUTORIAL AVAILABLE | Use of Systems Thinking Archetypes

Archetypes for Solving Socio-Environmental Problems



Fixes That Fail



Band-Aid Solutions

- To identify and frame problem
- To reveal components and relationships
- To build scenarios
- To build options



Tragedy of the Commons



Limits to Progress



Eroding Ambitions



Downplayed Problems



Escalating Tensions



Success to the Successful

Watch on YouTube

Missed Our Last Webinar? Watch Now the Tutorial on Archetypes Analysis in Socio-Environmental Modeling

Archetypes are typologies, groups, or categories that have similar characteristics and patterns. Archetype analysis, which involves looking for and understanding patterns in our data, is one method that can help researchers identify socio-environmental systems' dynamics and develop models. With its particular focus on using feedback loops as the leverage point for solving sustainability problems, the use of archetypes is growing in research and management.

This tutorial developed by Sondoss Elsayah and Margaret Palmer explains how archetypes can be a useful tool for illuminating the dynamics of socio-environmental systems (SES) and for developing formal SES models. Here, Elsayah introduces the concept of archetypes, discusses some of the most common archetypes including their application in research, and describes how the use of archetypes can facilitate the socio-environmental modeling process.

Watch now.

A list of publications referenced in this video is available [here](#).

Be sure to subscribe to [SESYNC's YouTube channel](#) to receive notifications whenever we add new videos!

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PAYNE FELLOWSHIP AWARDED | Meet the Awardee

SESYNC Announces the Recipient of the Dr. Richard Payne Graduate Fellowship, Kathrine Udell Lopez

The National Socio-Environmental Synthesis Center (SESYNC) is pleased to announce that University of Maryland (UMD) graduate student Kathrine Udell Lopez is this year's recipient of the Dr. Richard Payne Graduate Fellowship Award. This fellowship aims to recognize excellence in graduate students within UMD's College of Computer, Mathematical, and Natural Sciences by supporting innovative



and actionable research that directly links social and environmental sciences. The award honors Dr. Richard Payne, a UMD Professor of Biology, University Senator, and a dedicated instructor and mentor for students and postdoctoral fellows.

Kathrine is currently a second-year PhD student enrolled in the Department of Geology. She is studying the cryosphere, which is the frozen part of the Earth's surface, including glaciers; ice caps; sea, lake, and river ice; and ice sheets. Because the cryosphere plays an important role in regulating the climate and sea level, Kathrine explains that it is one of the regions that is most vulnerable to the effects of climate change—particularly in Antarctica. Thus, Kathrine's research focuses on trying to understand the drivers of ice loss occurring there, which could help inform future climate and global sea-level predictions. [Read more.](#)

CALL FOR PARTICIPANTS | Survey of Scientific Software Teams

Call for Participants: Survey of Scientific Software Teams

Researchers **invite contributors to collaborative scientific software development projects to participate in a short survey** about their experiences and perceptions. If you are not directly involved in such projects, feel free to share this survey to those you know who might be.

The goal of this study is to better understand the relationship between individual, team, and project characteristics in collaborative scientific software development. The survey is expected to take **approximately 5 minutes** to complete. We would be grateful if you considered filling out the survey. If you are interested in participating, please use the following link:

https://ucf.qualtrics.com/jfe/form/SV_8kTrmOtiRPctCwC

If you would like more information on this study, please contact the researchers Stephen M. Fiore (sfiore@ucf.edu) and/or Olivia B. Newton (olivia.newton@ucf.edu).

NEW PUBLICATIONS | SESYNC in the Journals

"Ecosystem-level effects of re-oligotrophication and N:P imbalances in rivers and estuaries on a global scale." Published in *Global Change Biology* by Carles Ibáñez, Nuno Caiola, José Barquín, Oscar Belmar, former SESYNC postdoc Xavier Benito-Granell, Frederic Casals, Siobhan Fennessy, Jocelyne Hughes, SESYNC Director Margaret A. Palmer, Josep Peñuelas, Estela Romero, Jordi Sardans, and Michael Williams. This paper resulted from the Pursuit, [A global analysis of oligotrophication trends in rivers and their ecological consequences.](#)

"Diffuse land control, shifting pastoralist institutions, and processes of accumulation in southern Kenya." Published in *Peasant Studies* by former SESYNC postdoc Ryan R. Unks and colleagues, Mara J. Goldman, François Mialhe, Yanni Gunnell, and Charlotte Hemingway.

"Risk from responses to a changing climate." Published in *Climate Risk Management* by Talbot M. Andrews, Nicholas P. Simpson, Katharine J. Mach, and former SESYNC postdoc Christopher H. Trisos. This paper resulted from the SESYNC Pursuit, [New Scenarios and Models for Climate Engineering.](#)

"Transnational agricultural land acquisitions threaten biodiversity in the Global South." Published in *Environmental Research Letters* by Kyle Frankel Davis, Marc F. Müller, Maria Cristina Rulli, Mokganedi Tatlhego, Saleem Ali, Jacopo A. Baggio, Jampel Dell'Angelo, Suhyun Jung, Laura Kehoe, Meredith T. Niles, and Sandra Eckert. This paper resulted from the SESYNC Pursuit, [Food-Energy-Water \(FEW\) Agrarian Transition.](#)

"Typologies of multiple vulnerabilities and climate gentrification across the East Coast of the United States." Published in *Urban Climate* by Kelsea B. Best, Zeynab Jouzi, Md Sariful Islam, Timothy Kirby, Rebecca Nixon, Azmal Hossan, and Richard A. Nyjawung. This paper resulted from the SESYNC Graduate Pursuit, [Climate Gentrification.](#)

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