

## Bringing New Ph.D.s Together for Interdisciplinary Climate Change Research

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PAGE 57

Climate change is complex and thus requires interdisciplinary research, and new scholars are rising to that challenge. The Dissertations Initiative for the Advancement of Climate Change Research (DISCCRS (pronounced “discourse”); see <http://www.disccrs.org>) brings together select groups of recent PhD graduates to encourage interdisciplinary work on climate change. The DISCCRS Symposium VII held just outside of Colorado Springs, Colo., brought together 33 graduates from fields as diverse as climatology, ecology, anthropology, and political science for an intensive week of cross-disciplinary engagement in activities like facilitation and leadership training, collaborative research development, peer networking, communication training, and analysis of working group processes.

Interdisciplinary research requires scientists to develop shared languages in order to “translate” their expertise, approaches, and methodologies across disciplinary boundaries. From discussions at the symposium, three key themes emerged from scholars as essential for working across disciplines effectively:

1. Interdisciplinary climate change work requires integrating a multidisciplinary team from the start, at the moment of framing research questions. Working together from the very beginning of the creative process allows scientists to ask new and important research questions that extend beyond disciplinary boundaries. Jointly developing research objectives also encourages colleagues to establish shared stakes in the project’s success. Yet current institutional structures and reward systems are still designed to support disciplinary scientists. Approaches that may improve interdisciplinary research outcomes, such as forming teams early in the research process, finding venues and time for extended brainstorming, and resisting the impulse and pressure to quickly narrow the team’s research questions to disciplinary foci, warrant more attention and consideration.

2. Communication remains a significant but surmountable barrier. Scholars will always encounter communication challenges when embarking on interdisciplinary research, but these barriers can be anticipated and graduate programs could be better designed to train graduates in overcoming them. Further, what counts as evidence or a robust methodology in one discipline may be

viewed quite differently in another; disciplines have their own cultures, their own assumptions, and their own understandings. Such diversity extends to disciplinary cultural norms as well—the natural and social sciences have different norms with respect to things as basic as the rules and value of coauthorship and whether article reviews are single or double blind.

3. Successful interdisciplinary research requires an openness to working in a way that transcends disciplinary boundaries—that is an attitude. It also calls for researchers to nurture trusting relationships across disciplines—that is a behavior, and one that takes time to develop.

Despite continued hurdles, interdisciplinary training is growing, as apparent in this most recent symposium—scholars increasingly come from interdisciplinary programs, and many have specific training and experience in how to work in interdisciplinary research settings. As an organizer noted, “this year’s group was already so interdisciplinary that the final exercise was considered more exciting and productive than frustrating or challenging—that’s very different from what we’ve seen previously.”

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