MEETING

Catalyzing Interdisciplinary Research on Climate Change

DISCCRS: Dissertations Initiative for the Advancement of Climate Change Research; Mesa, Arizona, 13–20 March 2010

Each year, the Dissertations Initiative for the Advancement of Climate Change Research (DISCCRS; http://disccrs.org) brings together a select group of 34 recent Ph.D. graduates to facilitate peer networking and professional development and to encourage interdisciplinary research related to climate change. This year, the invited scholars included physical, biological, and social scientists specializing in fields ranging from atmospheric science to environmental governance. The meeting focused on the challenges and benefits of collaborative interdisciplinary research and the imperative to achieve climate change solutions. Professional development activities provided participants with new tools for scientific communication, leadership, and facilitation of collaboration. The symposium demonstrated the value of interacting in an intensive, structured setting with a highly diverse group around a shared scientific interest.

The risks of interdisciplinary research are varied and occur at multiple stages in a scholar's career, ranging from pursuing nontraditional dissertation topics to publishing outside one's primary field. Many institutional challenges require creative problem-solving approaches and a high tolerance for uncertainty and ambiguity. The participants' high level of engagement reflected their strong motivation to conduct interdisciplinary research despite these obstacles. Multidisciplinary teams at the symposium developed projects on (1) visualizing the effects of climate change on the energy sector; (2) evaluating the impacts of glaciers on human-ecological systems; (3) assessing food production in the 21st century; (4) improving interdisciplinary training; and (5) analyzing carbon monitoring impacts on global political and economic systems. Some of these projects will become proposals and publications.

The symposium reinforced the need to redefine approaches to climate change research. Participants recognized that solutions developed outside academia often lack sufficient attention to peer-reviewed scientific findings. Likewise, solutions developed by academics are often naive about societal processes and constraints and can lack integration. To remedy this, scholars must learn to reach out to business leaders, policy makers, journalists, and the public, all of whom are crucial to delivering innovative, efficient, and sustainable solutions. Truly addressing climate change requires redefining the role of universities in society and removing barriers to interdisciplinarity, for example, by training academics to become better knowledge translators and by developing incentive structures encouraging outreach activities. Initiatives like DISCCRS help ensure that new Ph.D.s have individual and community-wide resources to draw on in these efforts. The challenge remains in scaling such efforts to the size of the need.

The authors thank Ronald B. Mitchell and C. Susan Weiler for organizing DISCCRS and reviewing this report. DISCCRS is supported by U.S. National Science Foundation grants SES-0931402 to the University of Oregon and SES-0932916 to Whitman College. Support from NASA is pending.

—JENNIFER R. MARLON, Department of Geography, University of Oregon, Eugene; E-mail: jmarlon@uoregon.edu; GENEVIEVE PATENAUDE, School of Geosciences, University of Edinburgh, Edinburgh, UK; and REBECCA T. BARNES, Department of Geological Sciences, University of Colorado, Boulder