



National Center for Ecological Analysis and Synthesis

University of California, Santa Barbara

<http://www.nceas.ucsb.edu>

The National Center for Ecological Analysis and Synthesis (NCEAS), a research center of the University of California, Santa Barbara, supports crossdisciplinary research that addresses major fundamental and applied problems in ecology and allied fields through the use of existing data. NCEAS is a unique institution with an explicit mission to foster synthesis and analysis, turn information into knowledge, and alter how we do science through effective collaboration. The Mission of NCEAS is to:

- *Advance the state of ecological knowledge through the search for general patterns and principles in existing data*
- *Organize and synthesize ecological information in a manner useful to researchers, resource managers, and policy makers addressing important environmental issues*
- *Influence the way ecological research is conducted and promote a culture of synthesis, collaboration, and data sharing.*

Research and Education Activities:

Ecological Research & Training: The Center hosts hundreds of visiting scientists each year. A primary mode of research at NCEAS is the Working Group, in which approximately a dozen scientists convene to concentrate on specific issues that require in-depth analysis of data and synthesis of ideas. An outgrowth of the Working Group concept is the Distributed Graduate Seminar, in which students and faculty from institutions around the world collaborate remotely on the same research topic using local data. Subsequently, representatives from each of the regional seminars meet at NCEAS to conduct a final synthesis of the knowledge developed by each group.

The Center also hosts up to 25 resident scientists, including approximately 6 sabbatical visitors (Center Fellows) and 18 Postdoctoral Associates. In the past 11 years, NCEAS has hosted 3,500 individuals (from 50 countries), 60-75% of whom are first time participants. The topics addressed by research projects at the Center range across the core areas of ecology and into many adjacent disciplines in the environmental and social sciences. Thus far NCEAS has supported 400 projects yielding more than 1,200 scientific articles and 28 books. Many of these articles are in top scientific journals, leading NCEAS into the upper 1% of 38,000 institutions ranked for scientific impact in ecological and environmental research. Approximately 30% of the research projects at NCEAS focus explicitly on solutions to pressing environmental issues; therefore the Center has initiated a new branch specifically dedicated to serving the needs of conservation and resource management entities such as foundations and non-governmental organizations.

Ecoinformatics Research & Support: NCEAS is actively involved in developing tools for access to ecological data, which are highly dispersed and heterogeneous. The research and implementation involves developing a desktop data management system for individual researchers and research groups. Embedded in the system are capabilities for developing metadata (data about data) and making both the metadata and raw data available to a broad community of users (www.ecoinformatics.org).

Outreach: The Center and its scientists are involved in the broader community, including outreach to 5th grade students through its Kids Do Ecology classroom program and instructional bilingual website.

