

UC SANTA BARBARA

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## **NATIONAL ECOLOGY CENTER RECEIVES TWO MAJOR GRANTS**

Nearly \$4 million in grants has been received by the National Center for Environmental Analysis and Synthesis (NCEAS) -- the unique national think tank for ecologists, based at the University of California, Santa Barbara.

The new funds will allow the Center to contribute to generic information management solutions that will advance the entire field of ecology. Additionally, critical information about the environment will be made accessible to resource managers and policy makers. The research will be conducted with participants from the University of New Mexico and the San Diego Supercomputing Center.

Given the rapid change in natural systems, wise stewardship based on all available knowledge concerning these natural systems is essential, according to Jim Reichman, director of the Center. He noted that the information management approaches to be addressed in these new awards will also make efficient use of existing data.

The larger of the two grants, awarded by the National Science Foundation in the area of Knowledge and Distributed Intelligence, is for \$2.9 million over three years. The grant will allow for the development of a new computerized knowledge network with advanced tools for exploring complex data sets.

"The network will broaden our understanding of biocomplexity and ecological systems, which can be applied to understanding societal issues," said Reichman. "And, in developing this network, we will create a new community of environmental scientists who will be able to focus on complex, multi-scale problems that, to date, have proven to be intractable."

"Information on biocomplexity is voluminous and complex," said Reichman, "but currently is scattered in many places and formats. The research advances in information science that we propose will provide an accessible infrastructure for identifying, integrating, managing, and ultimately synthesizing the nation's existing ecological and biodiversity information resources."

The second grant, also from the National Science Foundation, is for \$889,000 and contributes to database activities at the Center. The Center will use the funds to develop a prototype community database repository which will accommodate a variety of marine ecological data sets. The repository will be valuable in the research of long-term and large-scale ecological processes in the marine environment.

The data will come from marine ecologists, analysts, and data managers -- in academia, government, foundations, and the private sector -- who want to make their data readily available in a common framework which is accessible via the internet. The information deals with the rocky intertidal zone at 61 sites throughout Central and Southern California.

According to Reichman, these data sets are critical in tracking changes in biological communities. They are also valuable for guiding and informing the management of California's nearshore environment.

"We envision the database repository as the basis for a growing resource that will be essential for coastal researchers and policy makers," said Reichman. "Furthermore, the insights gained from this information resource will have general application to other coastal locations and to broader ecological concepts."

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of faculty, students, and staff is characterized by a culture of interdisciplinary collaboration that is responsive to the needs of our multicultural and global society. All of this takes place within a living and learning environment like no other, as we draw inspiration from the beauty and resources of our extraordinary location at the edge of the Pacific Ocean.