In Focus: CESUs

Cooperative Ecosystem Studies Units at 10 years

By Thomas E. Fish

THE COOPERATIVE ECOSYSTEM STUDIES Units (CESU) network is a nationwide consortium of federal agencies, universities, conservation organizations, and other partners working together to support agency missions and informed public trust resource stewardship. The CESU network was established pursuant to the National Parks Omnibus Management Act of 1998 (16 USC 5933). A memorandum of understanding was signed in 1999 by participating federal agency administrators, establishing the CESU Council as the governing body for the CESU network, and initiating the process to competitively establish a national network of CESUs. The first four pilot CESUs were established in 1999, comprising six federal agencies and more than two dozen academic and other nonfederal partners. Now in its 10th year, the CESU network includes more than 250 partners, including 13 federal agencies, in 17 CESUs representing biogeographic regions across all 50 states and U.S. territories (see map, opposite page).

CESUs bring together scientists, resource managers, and other conservation professionals from across the biological, physical, social, cultural, and engineering fields (from anthropology to zoology) to conduct coordinated, collaborative applied projects that address natural and cultural heritage resource issues at multiple scales and in an ecosystem context. Each CESU consists of a partnership between a host university; multiple federal agencies; numerous additional academic institutions; tribal, state, and local government agencies; and nongovernmental organizations. All projects are supported by federal financial assistance awards facilitated through master cooperative agreements at each CESU. NPS project development and coordination is assisted by duty-stationed NPS scientists (CESU research coordinators) at each CESU.

Current activities at the national level include looking back over the first 10 years and looking forward to the next. At the 10-year mark, the establishment of the national network of CESUs is complete, yet the organization is still young. A 10-year program evaluation is under way across the system, aimed at capturing vital statistics for the program (e.g., project typology, partner involvement, geographic locations, outputs, outcomes) and to better understand the successes, challenges, and lessons learned from the first 10 years. Preliminary data indicate that more than 5,500 projects have been administered through the program since 1999 at a cumulative value (across all CESUs and federal agencies) of more than $350 million. Recent CESU Council discussions have focused on the utility of these vital statistics for periodic reporting, performance measurement, transparency, program visibility, outreach, and recruitment of new partners. Additional initiatives supported at the national level include a comprehensive administrative history, information resource development, multiagency climate change workshops, establishment of a national office fellowship program, and enhancement of the CESU network Web site (www.cesu.org).

It is an important and exciting time for science in the federal government, with reinvigorated support for collaboration in science-based and outcome-oriented decision making coming from the highest levels. The CESU network is well positioned to serve as a platform for supporting research, technical assistance, and capacity building that is responsive to national, regional, and local needs. The strategic plan for the CESU network is currently being revised, employing an outcome-oriented logic model approach that aligns program inputs, activities, and outputs with strategic goals linked to agency missions and relevant policy and management directives. Much of the first 10 years of the program, including its strategic goals, focused on the development of the national network. Revising the plan affords reflection and reartticulation of the strategic goals in terms of contemporary science, management, and capacity building drivers and priorities, for example, climate change adaptation, sustainability science, renewable energy, cultural and historic resource preservation, ecological restoration, connecting people to nature, ocean stewardship, green design and engineering, biological invasions and disease, and training of the next generation of conservation professionals. Developing innovative approaches that transcend disciplinary and institutional boundaries will be critical to solving the complex problems facing the sustainability of our natural and cultural heritage. The CESU network can support efforts to address existing and emerging priorities, building new usable knowledge, and engaging partners from across the palette of expertise in the CESUs.

This section of Park Science highlights a selection of CESU projects from across the network. The first article discusses the investigation and restoration of ancient cultural landscape features in Effigy Mounds National Monument in Iowa. The second article summarizes research conducted in Utah's Zion National Park that describes the cumulative effects of predator loss on terrestrial, riparian, and aquatic ecosystems. Scientists and managers in the northeastern United States explore changes in marsh elevation in relation to

NPS/CESU PROGRAM

Cooperative Ecosystem Studies Units are structured as collaborations among federal and state agencies, universities, nongovernmental organizations, and other nonfederal partners. They play a broad role in providing the research, technical assistance, and educational services necessary for management of national parks and pertinent to the missions of many other agencies. Each unit is hosted by a university and is named for the biogeographic area of service.

sea-level rise in coastal barrier island salt marshes within Fire Island National Seashore in New York. As an example of the many archaeological field school programs supported through the CESU network, the following piece details how Hawaiian high school students work alongside NPS staff and university faculty to learn archaeological field techniques and collect baseline data for Hawaii Volcanoes National Park. Next is a presentation of recent findings from research and monitoring efforts at Everglades National Park to address the increasing population of Burmese pythons that has invaded the park and surrounding areas in southern Florida. The final article provides a brief overview of the Money Generation Model, a useful economic assessment tool developed for gauging the impacts of NPS visitor spending on local and regional economies.

The CESU network sustains strong partnerships for NPS science, stewardship, and capacity building. The examples presented in this issue are intended to highlight some of the good work that NPS staff and collaborators are engaged in, yet provide just a snapshot into the true breadth and depth of efforts and outcomes supported across this unique program. The next 10 years will bring new opportunities, new partners, new challenges, and new successes as the CESU network continues to evolve.

About the author

Thomas E. Fish *is national coordinator, Cooperative Ecosystem Studies Units Network, 1849 C Street NW, Room 2723, Washington DC 20240. He can be reached at 202-208-5972 and tom_fish@nps.gov.*