SERDP Ecosystem Management Program (SEMP)

Conservation
CS-1114

Background:

SEMP was initiated as a result of the 1997 SERDP Ecosystem Workshop. The Workshop identified some of the critical knowledge gaps in understanding ecosystem status, especially as they relate to military land management concerns. The primary themes that emerged from the Workshop included (1) Ecosystem Health or Change Indicators; (2) Thresholds of Disturbance; (3) Biogeochemical Cycles and Processes; and (4) Ecosystem Processes as they relate to multiple temporal and spatial scales.

Objective:

This project is designed to develop and demonstrate through 2010 a set of ecosystem management and monitoring tools and techniques that support sustained military training and testing at the installation and regional scales.

Summary of Process/Technology:

An ecosystem management project initiative will focus on ecosystem science relevant to Department of Defense (DoD) ecosystem management concerns. This includes (1) establishing and managing one (or more) long-term ecosystem monitoring sites on DoD facilities; (2) conducting multiple ecosystem research and monitoring efforts relevant to DoD requirements and opportunities; and (3) facilitating the integration of results and findings of research into DoD ecosystem management practices. The SEMP approach focuses on the characterization of the biotic and abiotic elements, processes, and properties of ecosystems by addressing both spatial and temporal variability of aquatic, riparian, and terrestrial settings.

Benefit:

Successful implementation of SEMP ensures maintenance and improvement of land sustainability and native biological diversity of terrestrial, freshwater, and marine ecosystems to support DoD military missions. Results from this project will provide a foundation for distinguishing negative impacts related to military training and testing activities from other sources of ecological variation and provide an improved knowledge base for evaluation of ecosystem health.

Accomplishments:

The Fort Benning Army installation in southwest Georgia, was selected as the initial SEMP host site. A draft monitoring plan has been developed and includes (1) documenting existing data; (2) designing and implementing a baseline monitoring program; (3) establishing and maintaining a data repository; and (4) adapting the monitoring program based on new research findings or installation requirements. Three research teams have been selected to support SEMP's FY 1999 research focus -- Identification of Indicators of Ecological Change. These research efforts involve defining ecological indicator guilds and ecosystem integrity and conducting a variety of comparison studies to identify indicators of ecological change.

Ecosystem Management Research is Being Used to Maintain Mission-Readiness While Protecting Endangered Species Such as the Red Cockaded Woodpecker

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Additional information on SEMP may be obtained at **www.cecer.army.mil/KD/SEMP**

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