UH SOEST scientist investigates Everglades ecosystem and effects of water management and climate change

Honolulu, HI – The National Science Foundation (NSF) awarded a total of $5 million to David Ho, Oceanography Professor in the School of Ocean and Earth Science and Technology at the University of Hawaii - Manoa, and his collaborators as a part of NSF’s Water, Sustainability and Climate Program. The 5-year project will explore the hydrologic, ecologic and economic impacts of management strategies designed to increase the resilience of the Florida Everglades ecosystem to climate variability, climate change and sea level rise.

“My role in this project is to study the effect of changing freshwater supply, due to management decisions and climate change, on carbon cycling in the mangrove ecosystem of the Everglades,” stated Ho.

“With this project, I also aim to determine how ecosystem services provided by the mangroves might change with water management practices and climate change,” Ho explained.

The carbon cycle is inextricably linked to climate change. By providing a better understanding of factors controlling carbon cycling in the largest mangrove ecosystem in North America, Ho hopes to contribute to determining the role of mangroves in the global carbon cycle.

“This research will help south Florida to understand the economic and ecological values of its water
resources, and use this information to shed light on the trade-offs that decision makers will be faced with in the next century,” said project leader Mike Sukop, Associate Professor in the Department of Earth and Environment in FIU’s College of Arts & Sciences. “It’s important that we begin this work now because sea level rise may start to have dramatic effects on South Florida in the coming decades, and water managers are likely to be challenged both by flooding and water supply problems.”

Ho will collaborate on this project with scholars and scientists from Florida International University, the lead institution; University of Miami; University of South Florida; University of Florida; Florida State University; University of Central Florida; Michigan Technological University; Pennsylvania State University; University of Pennsylvania; and Geodesign Technologies.

The School of Ocean and Earth Science and Technology at the University of Hawaii at Manoa was established by the Board of Regents of the University of Hawai‘i in 1988 in recognition of the need to realign and further strengthen the excellent education and research resources available within the University. SOEST brings together four academic departments, three research institutes, several federal cooperative programs, and support facilities of the highest quality in the nation to meet challenges in the ocean, earth and planetary sciences and technologies.

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