



Seagrass Ecosystems At "Global Crisis," Says UNH Professor

Article in "Bioscience" Calls for Global Conservation Effort to Protect Coastal Habitat

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DURHAM, N.H. -- A University of New Hampshire faculty member is part of an international team of scientists calling for a targeted global conservation effort to preserve seagrasses and their ecological services for the world's coastal ecosystems, according to an article published in the December issue of *Bioscience*, the journal of the American Institute of Biological Sciences (AIBS).

Frederick Short, research professor of natural resources and marine science at UNH, co-authored the article, "A Global Crisis for Seagrass Ecosystems." It cites the critical role seagrasses play in coastal systems and how coastal development, population growth and the resulting increase of nutrient and sediment pollution have contributed to large-scale losses worldwide.

"Seagrasses in New England are declining in most areas due to human impacts, from eutrophication and upland development, mainly" said Short. "North of Cape Cod, we estimate we've lost 20% of seagrass from historical distribution levels; south of Cape Cod, where the shoreline is more developed, we've lost 65%."

"Seagrasses are the coal mine canaries of coastal ecosystems," said co-author Dr. William Dennison of the University of Maryland Center for Environmental Science. "The fate of seagrasses can provide resource managers advance signs of deteriorating ecological conditions caused by poor water quality and pollution."

Among its findings, the study analyzed an apparent disconnect between the scientific community's concerns over seagrass habitat and its coverage in the popular media. While recent studies rank seagrass as one of the most valuable habitat in coastal systems, media coverage of other habitats – including salt marshes, mangroves and coral reefs – receive 3 to 100-fold more media attention than seagrass systems.

"Translating scientific understanding of the value of seagrass ecosystems into public awareness, and thus effective seagrass management and restoration, has not been as effective as for other coastal ecosystems, such as salt marshes, mangroves, or coral reefs," said co-author Dr. Robert Orth of the Virginia Institute of Marine Science. "Elevating public awareness about this impending crisis is critical to averting it."

"This report is a call to the world's coastal managers that we need to do more to protect seagrass habitat," said co-author Dr. Tim Carruthers of the University of Maryland Center for Environmental Science. "Seagrasses are just one of the many keys to maintaining healthy coastal ecosystems and their biodiversity."

Seagrasses – a unique group of flowering plants that have adapted to exist fully submersed in the sea – profoundly influence the physical, chemical and biological environments of coastal waters. They provide critical habitat for aquatic life, alter water flow and can help mitigate the impact of nutrient and sediment pollution.

The study was funded by the National Center for Ecological Analysis and Synthesis (NCEAS) through the National Science Foundation.

The article, "A Global Crisis for Seagrass Ecosystems," is available at <http://www.eurekalert.com>.

An earlier story on Frederick Short's seagrass research, with links to photographs, is available here:

http://www.unh.edu/news/news_releases/2006/march/bp_060327seagrass.html.