

ESSAY

THE NEXT WAVE: MARINE TECHNOLOGY

BY THOMAS O'NEILL III

Marine technology makes up just 10 percent of the state's marine economy, despite the fact that Massachusetts' expertise in this area leads the world. Given the seasonal nature of both the commercial fishing and tourism industries, the Cape would be wise to leverage a more lucrative opportunity in its midst.

Daniel Georgianna, chancellor professor of economics at the University of Massachusetts-Dartmouth, stresses the growth potential of marine technology in his 2000 report "The Massachusetts Marine Economy." As he defines it, the marine technology industry includes:

- Marine research and education, like that provided by the Woods Hole Oceanographic Institution and UMass-Dartmouth's School for Marine Science and Technology;
- Marine instrumentation, which includes the development and manufacturing of high-tech devices to measure, monitor and map the ocean; and
- Environmental services, such as pollution abatement and resource management.

Georgianna estimated that in 1997, Massachusetts' marine technology sector provided 10,000 jobs and \$500 million in income. As the only sector of the marine economy to offer salaries above the state average, marine technology has the potential to greatly enhance the Cape's economy.

The federal government has demonstrated great interest in the potential of security-related, biotechnological and environmental applications of marine technology. In September 2004, the U.S. Commission on Ocean Policy called for doubling the national budget for ocean

research to \$1.3 billion annually over a five-year period.

Additionally, the Department of Homeland Security, with support from the U.S. Coast Guard and U.S. Navy, is increasing its funding research and development of technologies for port security and coastal defense, and additional opportunities are on the way from agencies such as the National Science Foundation and the National Institute of Health.

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As Sen. Edward M. Kennedy told "Mass High Tech," in October, "Massachusetts has always been in the forefront of marine and oceanographic science because our leaders in the field recognize that understanding the sea contributes greatly to our quality of life and economy."

A recent study by Mass Insight Corporation, titled "Choosing to Lead: The Race for National R&D Leadership and New Economy Jobs," identified ocean exploration and management research as one of the top technology areas in which Massachusetts is both a leader and poised for growth.

The Cape's strength in this area is illustrated by the contracts that area firms are attracting.

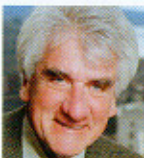
In recent months, Benthos of North Falmouth won an \$892,456 contract from the U.S. Navy's Office of Naval Research for smart marker and antiterrorism research and development.

AGM Marine Contractors of Mashpee won a \$684,000 contract from the U.S. Navy for Pier 3 bulkhead repair in Boston.

The Pocasset-based Hydroid Inc., which manufactures the REMUS autonomous underwater vehicle originally developed by the Woods Hole Oceanographic Institution, continually wins contracts with the U.S. Department of the Navy and recently sold vehicles to the University of Hawaii, the Singapore Navy and the Royal Netherlands Navy.

Cape Cod is not the only region in the country gaining steam in this field, however. The Raleigh, N.C., "News & Observer" reported in March that "marine science is starting to shine as an economic engine" along that state's central coast for the same reasons it is emerging here – the seasonal nature of commercial fishing and tourism employment.

If Cape Cod is to remain competitive in this new frontier, we will have to work together across disciplines and with other regions of the commonwealth to harness our talents and resources for the benefit of the entire state. Local, state and federal elected officials need to speak with a single voice. Together, we can maximize the opportunity of this new wave in economic growth ■



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