

Ocean researchers: More funds needed for storm planning

Experts gather at Monmouth U.

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WEST LONG BRANCH — When the remains of tropical storm Ernesto made an unexpectedly strong showing on the coast of New Jersey, scientists were in the right place at the right time, sending emergency planners warnings about wave heights and storm tides.

But they would not have been there, except for an infusion of money from the Navy, which paid for this past summer's oceanography experiments off the New Jersey beaches. So an array of 58 moored instruments and robotic submarines were in place to help scientists anatomize the storm as it moved up the East Coast, said Frederick Grassle, director of the Institute of Marine and Coastal Sciences at Rutgers University.

Despite a decade of building their technological prowess, New Jersey ocean researchers are still supported largely by federal funding that occasionally pays for big projects but not the kind of ongoing ocean monitoring that would serve the Mid-Atlantic region's public and private interests, Grassle and a panel of other ocean experts said at the annual Monmouth University Urban Coast Institute ocean symposium Thursday.

"What ocean researchers want to do, and what society needs them to do today, are converging in a neat way," said keynote speaker Robert B. Gagosian, president and director emeritus of the Woods Hole Oceanographic Institution, the prestigious Massachusetts center for ocean science.

New technologies "open up whole new suites of opportunity," said Gagosian, who before this new age of robots had been to the sea floor himself in a submersible craft. "You could be sitting there with a joystick and determine how data is collected three or four miles below the surface, in any part of the world."

In the 21st century, it's time to move beyond exploration of the sea "and launch major advancements in (understanding) what is going on out there — and what is going on out there all the time," Gagosian told an audience that included Monmouth University professors, business people, and surfing and fishing advocates.

Understanding how ocean systems work is the next big shift in oceanography, a science rooted in the naval struggles of World War II and the Cold War nuclear submarine threat, Gagosian recalled. Today, he said, economic and environmental imperatives should take the place of nuclear security as clear motivations to fund ocean science.

Foremost is global climate change and the trend of rising sea levels, Gagosian said: "Ninety-nine percent of the heat in the ocean-atmospheric system resides in the upper 30 feet of the ocean."

Still, "only 3 percent of the federal research portfolio" is government support for ocean science, observed Tony MacDonald, director of the Urban Coast Institute.

At the moment, that leaves coastal states to pick up the challenge, and California, Oregon and Washington are doing just that with a joint West Coast science initiative, Gagosian said.

"Several other consortia are being formed around the country," he added.

"We haven't had the political strength in New Jersey that they've had in other parts of the country to get support for an actual observing system," Grassle said.

"Because of our modest knowledge . . . we are at a tremendous disadvantage in trying to manage our coastal zones," said Carolyn Thoroughgood, vice provost for research at the University of Delaware and the longtime dean of marine studies there.