GSO - A MAJOR PLAYER IN RI OFFSHORE RENEWABLE ENERGY

On July 24, 2008 the State of Rhode Island awarded URI $3.2 million for a 2-year study to coordinate and provide data for an Ocean Renewable Energy Special Area Management Plan (Ocean SAMP).

The Ocean SAMP will be used as a planning tool to determine where electricity-producing wind turbines and other ocean energy sources will be placed in Rhode Island coastal waters. These efforts position RI as the first State to zone its coastal area for various activities, including offshore renewable energy, while protecting marine habitats, fisheries, avian fly-ways, transportation, and other uses. Another primary objective will be to foster a well-informed and committed public constituency.

The study is funded from the Rhode Island Renewable Energy Fund. The research grant is administered under a memorandum of understanding among the RI Economic Development Corporation, the Coastal Resources Management Council, and URI. RI Governor Donald Carcieri is committed to generating 15% of RI's electricity from renewable energy by 2012, primarily from offshore wind energy. Seven companies submitted proposals to construct, operate, and finance such a facility. On September 25, a five-person selection committee led by Andrew Dzykewicz (Commissioner, RI Office of Energy Resources) selected the company Deepwater Wind (dwind.com).

GSO's contribution will be to provide accurate and current ocean-based data and technology specifications as a scientific basis on which SAMP policies will be decided. For more see: seagrant.gso.uri.edu/oceansamp and see the Peter Lord Providence Journal article here.
In the Press!

URI/GSO experts testify to the Senate Environmental Committee

Coastal ecosystems in Rhode Island and other states will be impacted by climate change over the next few decades. This warning came from testimony delivered at GSO to a special session of the US Senate Environment and Public Works Committee chaired by RI Senator Sheldon Whitehouse. According to GSO Associate Dean Kate Moran, Narragansett Bay is already seeing the effects of warming with a 2.5°F water temperature rise over the last 50 years. This is a direct result of increased greenhouse gases (e.g., CO₂) in the atmosphere. An estimate of a 3 to 5 foot sea level rise by the end of this century is possible as described by Grover Fugate, Executive Director of the RI Coastal Resource Management Council. URI geologist Jon Boothroyd stated that with sea level rise destruction by hurricanes landing in southern New England will be much greater than in the past. In summary, Senator Whitehouse said that although it will take a global effort to counter the warming effects, we also need to begin to take action here at home to preserve RI's coastal environment. Read more at the Providence Business News and the Woonsocket Call.

GSO Partnership with the Naval Academy Bears Fruit

Excerpted from URI press release by Todd McLeish: GSO Masters candidate Michelle Akleszczyk is the first commissioned naval officer to earn a degree at GSO. Associate Dean David Smith explains that “This partnership is a win-win situation for everyone involved. We can offer students specialty areas that aren’t available at other graduate schools and the students retain their commission in the Navy and draw their regular Navy salary. Our professors get top-quality, highly-motivated students, and the Navy gets officers with experience conducting research in a discipline that meets its needs in operational oceanography.” Michelle’s area of study was the dynamics of ocean circulation at the midshelf front off the coast of New Jersey. She worked with Marine Research scientist Dr. David Ullman. She will be based at Pearl Harbor aboard a destroyer for the next two years, and then hopes to join the Navy meteorology program at Stennis, Mississippi.

Metcalf Institute Awards Grantham Prize to the New York Times

A team of reporters from The New York Times received the $75,000 Grantham Prize for Excellence in Reporting on the Environment on September 8 in Washington D.C. The Grantham Prize jurors recognized their work - a 10-part series on the effect of China’s recent explosion of development on the environment. The series, called “Choking on Growth”, described how industrial growth in China is polluting its landscapes and waterways and is destroying habitats. This and other reporting by the foreign press seems to have spurred the Chinese government to look more seriously at environmental reforms and regulations. Three $5,000 awards of special merit were also given to: the National Public Radio series “Climate Connections”; Dinah Voyles Pulver of the Daytona Beach News-Journal for her series on development pressure in Florida; and to Ed Struzik for his series on the changing culture and wildlife in the Arctic, which ran in two Canadian newspapers, the Edmonton Journal and Toronto Star. The Grantham Prize is awarded every year and is funded by Jeremy and Hannelore Grantham through the Grantham Foundation for the Protection of the Environment. For more details see the Metcalf website.

GSO Student Wins Providence Marathon Run

Alyson Venti won the women’s title in the Cox Sports Marathon run in Providence in May. Her time was 3 hours, 1 minute and 2 seconds. She was one of 3,300 runners racing in the inaugural Cox Providence Rhode Races. Although this was Alyson’s first marathon in RI, she is not new to them. She participated in two Fiji Bula Marathons while she was a volunteer in the Peace Corps.
Recent & Upcoming Events

Honors Colloquium Focuses on Global Climate Change

Through a series of lectures and panel discussions, the 2008 URI Honors Colloquium addresses the consequences of human-induced climate change. Well-known authors, academics, and public leaders such as Elizabeth Kolbert, Michael Mann, Charles Mann, Robert Socolow, and Mary Nichols, among others will deliver lectures on how we have affected our own climate and on suggestions for mitigating the problems that face us. Panel discussions will be led by URI and GSO professors Rebecca Robinson, John Merrill, Arthur Spivack, Kate Moran, Jim Opaluch, and others to answer questions and discuss details about media depictions of our environmental crises. The Colloquium is free and open to the public and events are held every Tuesday throughout the Fall. For more information see uri.edu/hc/index.shtml.

Evening at the Dunes Club

On the evening of August 20, more than 150 guests assembled at the Dunes Club in Narragansett for a reception and talk by GSO Professor Robert Ballard. The event was hosted by Karen and John Warren who were assisted by a committee of friends. Dr. Ballard spoke about the new paradigm of undersea exploration whereby research and outreach can be conducted remotely through satellite communications. Ballard’s dream comes closer to reality with the completion of the Inner Space Center, a new facility at GSO that will provide high technology for connections among scientists, the classroom and research conducted in distant areas. The Inner Space Center will be housed in the new campus center building that will be completed this coming spring.

Marine Scientist to Give Plenary Talk at Ocean Optics Conference

Senior Research Scientist Percy Donaghay will deliver an invited talk to the 19th installment of the Ocean Optics Conference in Tuscany, Italy in early October. His speech is titled “Evolution of profiling systems for understanding the characteristics, distributions, dynamics, and impacts of thin plankton layers in stratified waters.” Percy’s research has been focused on understanding how expansive thin layers of ocean plankton are affected by physical oceanographic interactions and how optical and acoustic sensor data are impacted. In his talk, he will describe recent improvements in sensors and deployment modes that have dramatically increased the resolution of physical and biological structures in the coastal ocean. The new data challenge the general paradigm that mixing in the upper ocean is vigorous enough to dissipate any thin structures less than a few meters thick.

Graduate Student Adventures

Okay, everyone close your eyes and picture a New England salt marsh. Smell the salt air, the mud, feel the breeze on your face, hear the sea grasses waving in the breeze. Now, imagine this salt marsh is somewhere in the Caribbean, replace the grass with trees, make the breeze warm, keep the mud and salt smell, and imagine a tropical drink in your hand if you like. Congratulations! In your mind’s eye, you are in a mangrove forest that is uniquely adapted to coastal environments in the tropics and provide vital habitat for many organisms. Unfortunately, mangrove forests all over the world have been logged for coastal construction projects. Mangroves living in areas exposed to wave action are particularly vulnerable and are extremely difficult to replace by planting new trees. Their seedlings cannot be moved once they’ve been planted and seeds (or propagules) are easily washed away by waves and tides.

GSO graduate student Jason Krumholz teamed up with the Reef Ball Foundation on Grand Cayman Island to develop a technique for establishing new mangrove forests in high energy environments. Mangrove propagules were planted in biodegradable cement planters filled with soil and fitted with plaster bottoms (designed in concert with the Scotts Company) that release fertilizers over the span of a year and then break away, allowing the seedlings to take root in the underlying soil. The cement planters, too, will degrade over time, and, eventually, no signs of the restoration project will remain. At the last check, the seedlings were doing fine – but then Hurricane Gustav blew through the Caymans. Jason does not yet know if his project and the seedlings have survived. Stay tuned.
Noteworthy

Balloons Measure Ozone in the Atmosphere Over RI

Every month Professor John Merrill and his graduate students attach a box of instruments to a helium-inflated weather balloon and launch it from the Narragansett Bay Campus. On its way to 120,000 feet it measures the ozone concentration in the troposphere and stratosphere. The measurements are transmitted to the lab via a radiosonde, which provides a vertical profile of the ozone variation. The project represents a unique record of this important atmospheric gas over RI for the past 4 years. The ozone distribution is a basic observation for determining atmospheric circulation and provides a “ground-truth” for satellite observations. After reaching the pre-determined altitude, the balloon deflates and the instrument pack falls to earth. Dr. Merrill explains that most of the packages fall into the ocean. Many are washed up on shore where those who find them can return them by calling the phone number marked on the package. About 25 percent are returned and recycled. Dr. Merrill plans to continue these measurements so that a long-term understanding of changes in ozone can be captured.

Kuroshio Current Caught in Transition

The North Pacific climate is, in part, controlled by the transport and motion of the Kuroshio western boundary current jetting eastward from Japan. The system is known as the Kuroshio Extension. The current forms a meandering boundary between warm subtropical and the cold northern waters of the North Pacific. The cold, dry, air masses coming from the Asian continent interact with the warm current to produce intense air-sea heat exchange. Its strength and penetration help steer storm tracks across the Pacific and affect the weather in western North America.

The Kuroshio Extension System Study (KESS) combines oceanic measurements and modeling to better understand this meandering process. KESS is run by GSO scientists Randy Watts, Kathleen Donohue, Jae-Hun Park, Karen Tracey, Mark Wimbush, and Penelope Howe, along with several investigators at other marine institutions, including former GSO PhD student Meghan Cronin, now at the NOAA Marine Environmental Laboratory.

Kuroshio varies between weak and vigorous meandering over decadal time scales. The oceanographers were fortunate to have deployed their measuring devices in 2004 just prior to a transition, and were able to document the change-over to the present vigorously meandering mode. The forces that govern the interaction of the current with the recirculating gyre to the south are now the focus of their investigations. For a more detailed description of the project, see: www.uskess.org.

Pete August Honored

The director of the Coastal Institute at URI/GSO, Pete August, has been selected as the recipient of the L. Hawkes award for outstanding leadership and service in the preservation and enhancement of the Rhode Island environment. As Dean Farmer stated; “Pete’s receipt of this award affirms the importance of putting the University’s scholarship to work in the real world. It is also a great testament to the work of the Coastal Institute, which has flourished under his leadership.”

University of Michigan Recognizes Brian Heikes Accomplishments

This month Oceanography Professor Brian Heikes was awarded the University of Michigan Alumni Society Merit Award for Atmospheric, Oceanic and Space Sciences. Brian received his BS, MS, and PhD at the University of Michigan. The award was given in recognition of his significant research accomplishments in his professional life.