CSR presents results of sensor technology experiment at stakeholder meeting. CSR research PI’s, Hans Graber, CSTARS, University of Miami, Hugh Roarty, Rutgers University, Barry Bunin, Stevens Institute of Technology and Alex Pollara, DHS CDG Maritime Systems Fellow, presented the results of a multi-layer sensor experiment to detect vessels in the approaches to the New York Harbor. The experiment was conducted with the following objectives: To compare the detection capabilities of various technologies for common targets in the same venue, to explore application of the CSR layered approach for port protection from a systems perspective, to investigate synergies among three CSR technologies to enhance overall detection capabilities, and to identify technology gaps to be remedied. Meeting attendees included representatives from the USCG, CBP, DHS S&T, NOAA, NUSTL, PANYNJ and the Port of San Francisco.

The results of the CSR multi-sensor technology experiment demonstrated that when used in combination, satellite images, HF radar and passive acoustic systems are synergistic and can be used for vessel verification, including the separation of large boats from small, and for reliable and enhanced detection of vessel characteristic information.

Center for Island, Maritime and Extreme Environment Security (CIMES) conducting anti-piracy experiments on Somali pirate skiffs. CIMES researchers are working in collaboration EU NAVFOR (European Union Naval Force) and the Seychelles Coast Guard to conduct anti-piracy experiments in the Indian Ocean. CIMES acoustic researcher, Tom Fedenczuk, conducted a second round of anti-piracy experiments off the coast of Mahe Island, the largest island of the Seychelles archipelago. The Somali pirate skiff used in the experiment was captured by the Belgian Navy and loaned for CIMES research by the EU Marine Security Center, Horn of Africa.

The goal of the project is to develop an acoustic warning system for approaching pirate skiffs.

UPRM and CariCOOS host Coastal Ocean and Shelf Seas International Coordination Workshop. CSR’s Caribbean partners from the University of Puerto Rico- Mayaguez (UPRM) and the Caribbean Coastal Ocean Observation System (CariCOOS) recently hosted the Coastal Ocean and Shelf Seas Task Team (COSS-TT) 3rd international workshop. The workshop featured several talks by UPRM faculty and students, and a tour of CariCOOS headquarters and the Marine Sciences Institute. Dr. Julie Pullen, Director CSR, gave a presentation on CSR’s activities and a research talk on air-sea coupled modeling in island regions. Dr. Pullen was also elected to the task team leadership group, which is drawn from over a dozen countries.

UPRM will serve as the lead partner in the upcoming NOAA Coastal Ocean Modeling Testbed for Puerto Rico/U.S. Virgin Islands Surge and Wave Inundation Predictions.
CIMES engages stakeholders in a demonstration of the center's persistent surveillance technologies. On January 30th CIMES teamed with Liquid Robotics to host a demonstration of a combined wave glider and passive acoustic system for vessel detection. The half-day event included discussions of the technologies, demonstrations of the ability of two systems to monitor vessels in Kawaihae Harbor on the Big Island of Hawaii, and a short sea-going survey to locate a wave glider in the open ocean.

Distinguished guests included representatives from the U.S. Coast Guard, U.S. Senate, U.S. Navy, Royal Australia Navy, Hawaii Governor's Office, Sasakawa Peace Foundation, Schmidt Ocean Institute and the Marine Conservation Institute.

NCAR scientist discusses biosafety and biosecurity risk assessment in CSR hosted seminar. Dr. Paul Bieringer, a scientist with the National Center for Atmospheric Research (NCAR) discussed a site-specific risk assessment he participated in for the facility design and planning phase of the National Bio and Agro-Defense Facility, being built in Manhattan, Kansas. The risk assessment project included a highly integrated multi-disciplinary probabilistic risk assessment methodology involving facility engineering design evaluation, source term analysis, site specific climatology development and analysis, fate and transport modelling, epidemiological modelling, economic impact modelling, and quantitative risk analytics. Dr. Bieringer's talk focused on the complexity of the risk assessment and how atmospheric transport and dispersion served as key element of the analysis. Attendees included CSR researchers and members from the Stevens Institute of Technology community.

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MIREES is a National DHS Science and Technology Center of Excellence in Port and Marine Security.

The Center for Secure and Resilient Maritime Commerce (www.stevens.edu/CSR) is led by Stevens Institute of Technology and The Center for Island, Maritime and Extreme Environment Security (www.cimes.hawaii.edu) is led by the University of Hawaii.

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