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## ODU Researchers Will Put Buoys in The Mediterranean Sea to Help Schools Teach Climate Change

April 21, 2022

### By Mindy Ayala-Diaz

The Odyssey Exploration: Extreme Education research initiative is headed to Cyprus to deploy research buoys to help scientists understand climate change and sea level rise.

The initiative is a continued partnership between Old Dominion University, East Carolina University, the University of Cyprus Oceanography Center and the Cyprus Department of Fisheries and Marine Research (DFMR). Petros Katsioloudis, interim associate dean in the Darden College of Education and Professional Studies, will travel to Cyprus in late April to deploy research drifter buoys in the Mediterranean. The work is a continuation of previous research meant to provide a unique educational experience for K-16 students.

These 3-D printed buoys, designed by Katsioloudis and the research team, are programmed to map sea currents and measure water temperature and barometric pressure. The battery-powered buoys will be deployed between April 26-29 and will collect data for the next eight months. The university partners worked with the Cyprus DFMR to identify data they need to collect and where the buoys should be deployed in the Mediterranean. The buoys will gather information that could help combat possible pollution.

The information collected from the drifter buoys is being integrated into the educational curriculum developed by the team and provides an innovative and interactive educational experience related to climate change and sea level rise for K-16 students, as part of the Odyssey Exploration: Extreme Education Project.

"We have created an educational version of drifter buoys that collects similar data to the commercial buoys, but in a smaller scale that is appropriate for K-16 students to understand and manipulate for educational purposes," Katsioloudis said. "We are also creating visuals that are more appropriate to young-student settings. Hopefully, this information can inspire future climate scientists."

Eastern Virginia has experienced about 15 inches of sea level rise over the past 80 years, in part due to warming water temperatures and melting glaciers. The Virginia Institute of Marine Science predicts Hampton Roads could see at least 1.5 feet more of higher water levels by 2050.



Since 2017, researchers annually traveled to Alaska to test and release specially programmed drifter buoys at a National Oceanic and Atmospheric Administration (NOAA) research testing center.

Climate change can be difficult to teach, and scientific data can be confusing, especially for children, Katsioloudis said. His curriculum involves visuals that will be easy for most students to understand.

"So now instead of looking at a number, you're looking at different types of scientific visualizations more appropriate for young ages," he said. "It creates informed environmental citizens for the future."

Since 2017, researchers annually traveled to Alaska to test and release specially programmed drifter buoys at a National Oceanic and Atmospheric Administration (NOAA) research testing center. An exhibit documenting their research and findings in the arctic can be found at the Slover Library in Norfolk until May 2022.

Interim Dean Tammi Dice commended the ongoing initiative, saying, "The research being conducted by Dr. Katsioloudis, first in Alaska and now in the Mediterranean, is impactful, both for land preservation and for inspiring school-aged children to become knowledgeable about sea-level rise and motivated to contribute to change efforts needed through entry into STEM related professional paths."

Other partners involved in this project include the Cyprus Department of Meteorology, Cyprus Marine and Maritime Institute and the Cyprus University of Technology.

For more information on the Odyssey Exploration: Extreme Education project, please contact Petros Katsioloudis at [pkatsiol@odu.edu](mailto:pkatsiol@odu.edu).