

Innovative Technologies and Collaborations Abound at Coastal Training Program Workshop

Balloon aerial photography, sea turtle nest sensors, and apps to crowdsource data collection were only a few of the technologies on display at the Coastal Training Program event on October 15 in Wilmington. The workshop attracted resource management and environmental education professionals from across North Carolina to learn about using technology in the field for education and natural resource protection.

One especially intriguing project on display was Turtle Sense, a partnership between the National Park Service, Hatteras Island Ocean Center, and volunteer engineers. Turtle Sense has developed motion sensors that can be placed inside sea turtle nests to better predict when hatchlings are about to emerge. The sensors transmit data so that it can be viewed remotely. Although the program is still in the pilot stage, data from the sensors has helped Cape Hatteras National Seashore deploy scarce resources more efficiently and could be potentially expanded to other sites.



Reserve staff learn about wildlife cameras at the technologies workshop

Many of the workshop's technologies showcased ways to inexpensively collect data for projects that would otherwise be unfeasible. Citizen science projects, such as the Terrapin Tally program at Masonboro Island Reserve, use volunteers to perform scientific surveys that provide valuable information on a scale that would be impossible without their help. The Terrapin Tally provided N.C. Coastal Reserve staff with data about the health of diamondback terrapin populations in the Reserve. Another project, eMammal, trains citizen scientist volunteers to use motion-activated "camera traps" to photograph and document mammal distribution and abundance around Raleigh.

Another major trend at the workshop was the incorporation of smartphones and tablets into resource management. Resource managers increasingly use "apps" to collect data. These range in complexity from citizen-science apps to more complex programs that connect with other software packages. The Marine Debris Tracker App allows users to record the location and description of litter they find and upload it onto a publicly available website. This technology can be used by casual beachgoers and organized cleanup crews alike. Collector for ArcGIS is a way for mobile technology users to upload data directly into ArcGIS mapping software.

Workshop attendees left with new ideas, resources, and contact information to implement some of these technologies at their own sites or incorporate them into educational programs. The [North Carolina Coastal Training Program](#) provides coastal decision-makers with science-based training to promote informed decisions regarding coastal resources. Workshops are held throughout the year at various locations along North Carolina's coast. For more information about the program, contact Whitney Jenkins at (252) 838-0882 or whitney.jenkin@ncdenr.gov.