

# Drones in the Coastal Zone

A workshop to advance unoccupied aircraft systems in coastal ecosystem and fisheries management in the US Southeast and Caribbean



## Drones in the Coastal Zone Meeting

February 6 - 8, 2024

Beaufort Hotel & Duke University Marine Lab  
Beaufort, North Carolina

### Meeting Objectives - Participants will:

- Network with colleagues in the U.S. Southeast and Caribbean with common interests in using unoccupied aircraft systems (UAS), or drones, for coastal and ocean research and management;
- Learn about the use of drones in the Beaufort area;
- Discuss and troubleshoot the use of drones;
- Interact with drone technology through equipment tables and an airshow; and
- Discuss the future of the Drones in the Coastal Zone Community of Practice.

## AGENDA

### Tuesday, February 6, 2024

| Time   | Activity  |
|--------|---|
| 1:00pm | <b>Meeting check-in begins at Beaufort Hotel</b><br>Network with Sponsors<br>Sign-up for Wednesday Carpools to Pivers Island  |
| 1:30pm | <b>Welcome &amp; Vision for Drones in the Coastal Zone (DITCZ)</b> <ul style="list-style-type: none"><li>● Dave Johnston, Duke University's Marine Robotics and Remote Sensing Lab (MaRRS)</li><li>● Chris Taylor, NOAA Beaufort Lab</li></ul> <b>Meeting Objectives &amp; Agenda Review</b> - Whitney Jenkins, N.C. Coastal Reserve<br><b>Plenary: Using Drones to Manage the Rachel Carson Reserve</b> <ul style="list-style-type: none"><li>● Paula Gillikin &amp; Justin Ridge, N.C. Coastal Reserve</li><li>● Dan Bowling, North Carolina State University</li></ul> <b>Icebreaker</b> |
| 2:45pm | <b>Networking Break with Sponsors</b>   |

|                                    |   |
|------------------------------------|---|
| 3:15pm                             | <b>Brainstorming Gallery Walk &amp; Discussion Groups</b><br>Participants will brainstorm and prioritize topics for facilitated small group discussions   |
| 5:00pm                             | <b>Adjourn for day</b>  |
| 5:30pm                             | <b>Evening Reception with Sponsors</b>  |
| 7:30pm                             | <b>Dinner on own</b>  |
| <b>Wednesday, February 7, 2024</b> |   |
| <b>Time</b>                        | <b>Activity</b>   |
| 8:00am                             | <b>Breakfast at Beaufort Hotel</b>  |
| 8:30am                             | <b>Carpool to Pivers Island – <a href="#">101 Pivers Island Rd, Beaufort NC 28516</a></b>   |
| 9:00am                             | <b>Tour of NOAA Beaufort Lab &amp; Duke University Marine Lab - Learn about technologies used by various lab groups for coastal and ocean management</b> <ul style="list-style-type: none"> <li>● 9:20am – Groups <b>Red</b> &amp; <b>Blue</b> tour NOAA Beaufort Lab &amp; Groups <b>Yellow</b> &amp; <b>Green</b> tour Duke University Marine Lab</li> <li>● 10:30am - Groups <b>Red</b> &amp; <b>Blue</b> tours Duke University Marine Lab &amp; Groups <b>Yellow</b> &amp; <b>Green</b> tour NOAA Beaufort Lab</li> </ul> |
| 11:30am                            | <b>15-Minute Break</b>  |
| 11:45pm                            | <b>Lunch at Duke Marine Lab Dining Hall</b>   |
| 12:30pm                            | <b>Equipment Showcase - Duke University Marine Lab Auditorium</b>   |
| 1:15pm                             | <b>Safety &amp; Logistics Briefing for Airshow</b>  |
| 1:25pm                             | <b>20-Minute Break &amp; Get Ready for Airshow</b>  |
| 1:45pm                             | <b>Airshow - Duke University Marine Lab</b>   |
| 3:30pm                             | <b>Travel Back to Beaufort Hotel</b>  |
| 4:00pm                             | <b>What do we want the Drones in the Coastal Zone Community of Practice to be? How do we move forward?</b> <ul style="list-style-type: none"> <li>● Dave Johnston, Duke University's Marine Robotics and Remote Sensing Lab (MaRRS)</li> <li>● Gary Sundin, S.C. Department of Natural Resources &amp; S.C. Interagency Drone Users Consortium (SCiDUC)</li> </ul>  |
| 4:50pm                             | <b>Action Items, Next Steps &amp; Closing Remarks</b>   |
| 5:00pm                             | <b>Adjourn</b>  |

**Thursday, February 8, 2024**

| Time   | Activity   |
|--|--|
| <p>9:00am - 12:00pm</p> <p>Registration required</p> | <p><b>Optional, space-limited trainings at Duke University Marine Lab</b></p> <ul style="list-style-type: none"> <li>• <b>Photogrammetry Activity, <u>meet at Duke’s Bookhout Building</u>:</b><br/>Participate in the whole workflow for focused photogrammetry of target organisms. From the field to the screen, this activity will include hands-on experience conducting mission preparation, data collection, and image analysis. Participants will learn about camera setting considerations, practice collecting imagery over targets, and use freely available software tools to make measurements.</li> <li>• <b>Mapping Activity, <u>meet at Duke’s South Point</u>:</b> The exercise will have participants engage in the various parts of conducting a UAS mapping survey. We will cover the distribution and surveying of ground control, mission planning, data collection, processing the imagery, and analysis of the products. During the exercise, participants will experience some of the different tools that can be used during the UAS mapping workflow.</li> <li>• <b>National Institute of Standards and Technology (NIST) Certification Training, <u>meet at Duke’s South Point</u></b></li> </ul> <p><b>Boxed lunch for training participants, pick up at Duke University Marine Lab Dining Hall</b></p> |

