



#### **CENTER** for MARINE SCIENCE

#### "The Coastal University"



## **Center for Marine Science**

- 50 years
- Myrtle Grove, shellfish and finfish hatcheries

## Ensuring safe and healthy coasts



**CENTER** for MARINE SCIENCE

• Affiliated with 108 UNCW faculty & 15 academic programs & MarineQuest

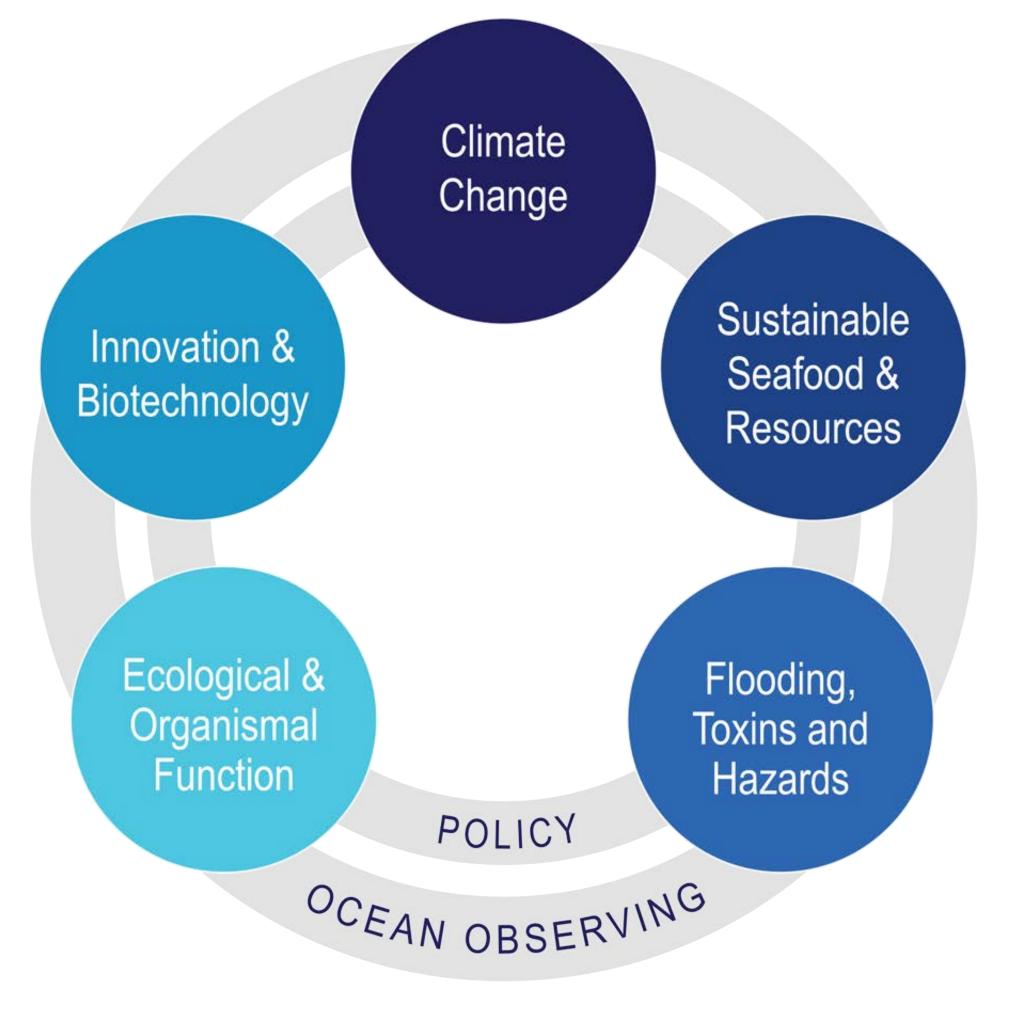








## Center for Marine Science



Ensuring safe and healthy coasts



## **Flooding and Inundation**

#### Complex flooding

# Need to be able to model and predict

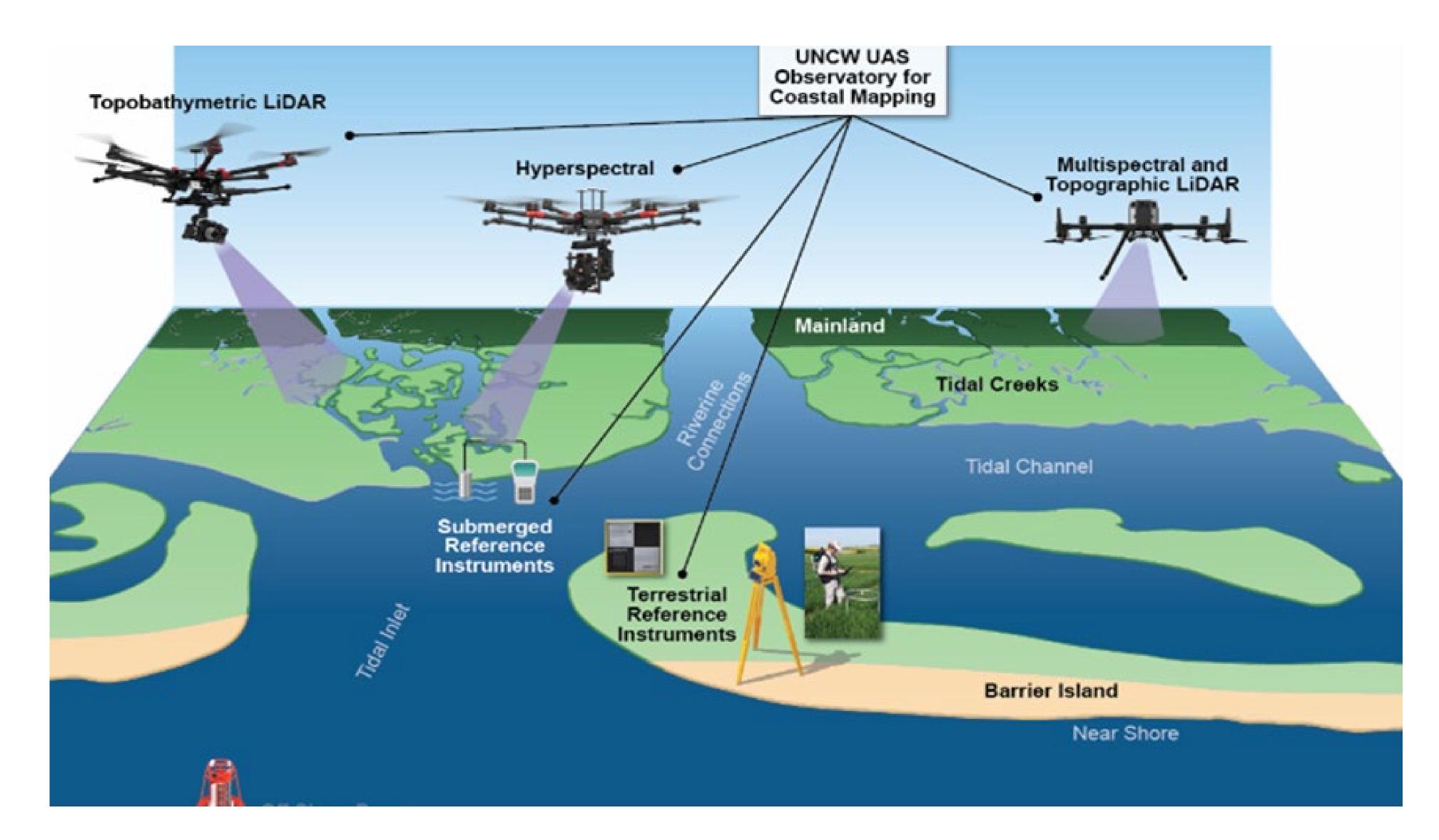
#### Hazard Nexus





#### STAR NEWS – CAROLINA BEACH

## **UNCW Coastal UAS Observatory**



#### Marine Al





## **Oceanographic Instrumentation**

The new buoys CHR60 and CHR60WAVE are already providing valuable weather and sea state data for ships transiting into and out of Charleston Harbor. This is important meteorological and oceanographic information to help aid in safe and efficient marine transportation.

#### TOM BOYLE

Director, Vessel Operations, South Carolina Ports Authority



- Operates and maintains a suite of specialized field instrumentation
  - Provides technical and electronics support
  - Capabilities include:
  - physical, biological and chemical in situ measurements
    - seafloor mapping
  - uncrewed shallow water and aerial surveys
- Support for "hands-on" learning in marine science laboratory courses.









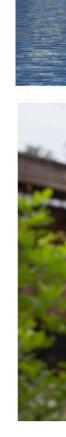




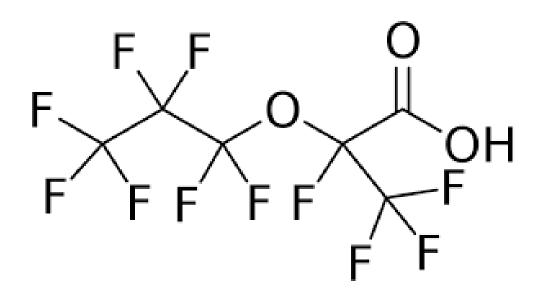
### **Toxicants & Hazards**

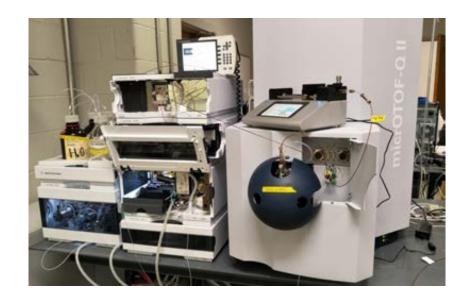
### Harmful Algal Blooms





#### **PFAS** detection











The beauty of North Carolina's lakes and rivers is being threatened by a group of human-made chemicals, known as PFAS, including GenX.



To understand the extent of PFAS contamination across the state, the North Carolina General Assembly funded a statewide research study.

This study is a collaboration among universities to document the presence of PFAS and understand its impacts on the environment and our health.

Learn about the study

#### What are PFAS?



## **UNCW Research Shellfish Hatchery**







• Includes a 2.75-acre aquaculture demonstration site adjacent to the CMS pier on the intracoastal waterway

- Strategies for increasing productivity:
  - Selective breeding of oysters
  - Crop diversification
    - Polyploidy
  - Growout challenges (including pathogens, parasites

















## **Finfish Hatchery**







#### • Established in 1997

- Facility on Harbor Island at Wrightsville Beach consists of:
  - broodstock holding systems
    - larviculture lab
      - nutrition lab
  - experimental hatchery
  - feeds preparation lab
  - recirculating growout systems
  - access to high-quality seawater from Banks Channel
  - Serving 5 restaurants









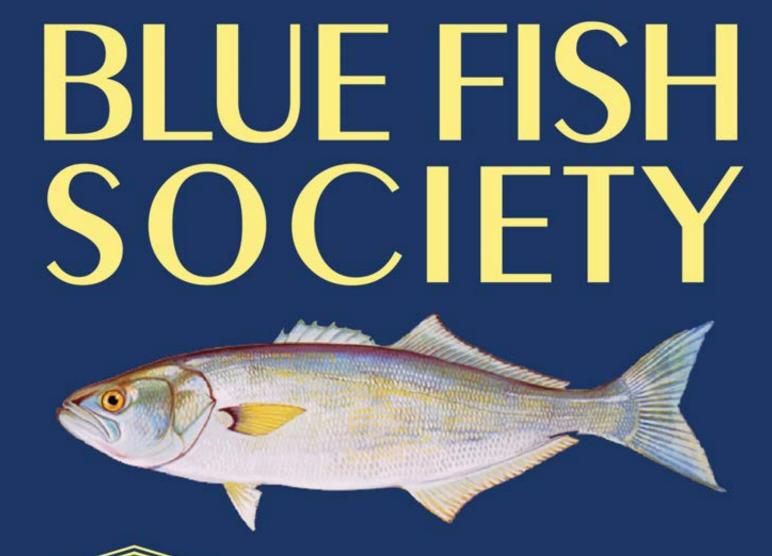












# **UNCW** CENTER FOR MARINE SCIENCE



## Questions?

the second second and the second



