

NOAA
FISHERIES
SEFSC

Coordination efforts to address cross-jurisdictional fisheries management issues

Kevin Craig and Todd Kellison
NOAA Southeast Fisheries Science Center

SAFMC Meeting Dec 2023

NMFS Atlantic Coast Science Coordination Workshop

- August 2021
- Rationale: changing climate, ocean ecosystems, and species distributions
- Objectives:
 - Assess the degree of coordination of NMFS science activities along the Atlantic Coast
 - Identify opportunities to strengthen coordination and related support for fisheries and protected species management
- Participants (> 80)
 - NMFS (SEFSC and NEFSC)
 - NEFMC, MAFMC, SAFMC and ASMFC
 - State agency staff representing key data collection efforts
 - Academia & industry
- First formal cross-regional coordination effort

NMFS Atlantic Coast Science Coordination Workshop

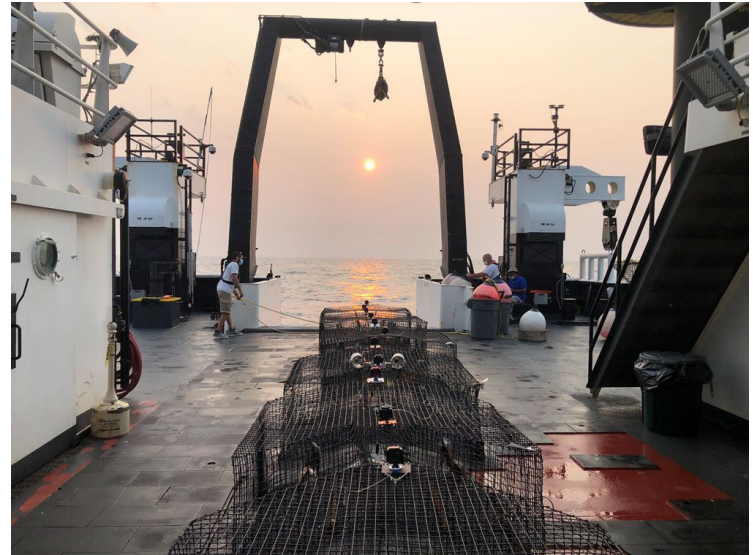
- Areas of focus
 - Fishery-independent surveys
 - Fishery-dependent surveys
 - Coastal shark surveys and science
 - Protected species - marine mammals and sea turtles
 - Social sciences and human dimensions
 - Stock assessments
 - Fishery management perspectives
 - State of the Ecosystem (SOE) and Ecosystem Status Reports (ESR)

NMFS Atlantic Coast Science Coordination Workshop

- Workshop summary and recommendations described in a NOAA Technical Memo
 - Saba V. and Kellison T. 2023. Summary Report NMFS Atlantic Coast Science Coordination Workshop August 17-19, 2021 US Dept Commer Northeast Fish Sci Cent Tech Memo 306. 44 p.
- Cross-regional coordination occurring across all workshop areas of focus, with considerable scope for strengthening coordination
- Coordination challenges, opportunities, priorities, key needs
 - Fishery-independent surveys
 - Fishery-dependent surveys
 - Coastal shark surveys and science
 - Protected species - marine mammals and sea turtles
 - Social sciences and human dimensions
 - Stock assessments
 - State of the Ecosystem (SOE) and Ecosystem Status Reports (ESR)
 - Fishery management perspectives

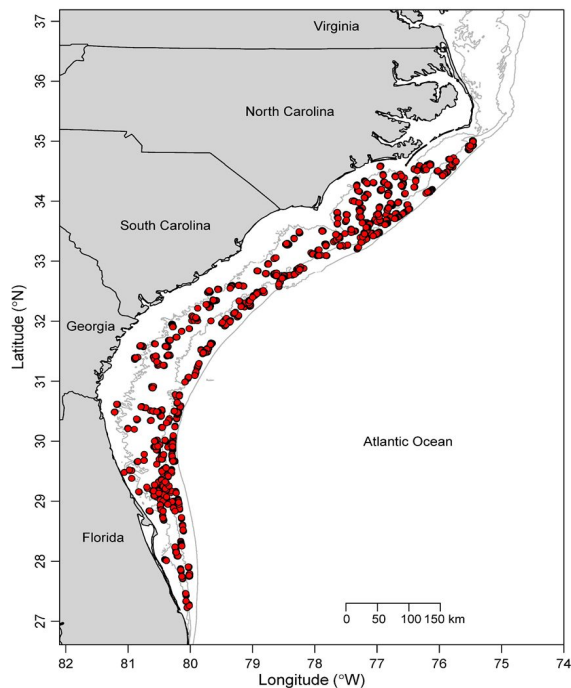
Habitat Mapping to Support Survey Expansion

- SERFS fishery independent trap-video survey
- Samples reef fish on hard bottom habitat on the continental shelf and shelf break
- Spatial extent: Cape Hatteras to St. Lucie Inlet, FL)
- SAFMC jurisdiction from NC-VA border to FL Keys
- Supports multiple stock assessments in the region

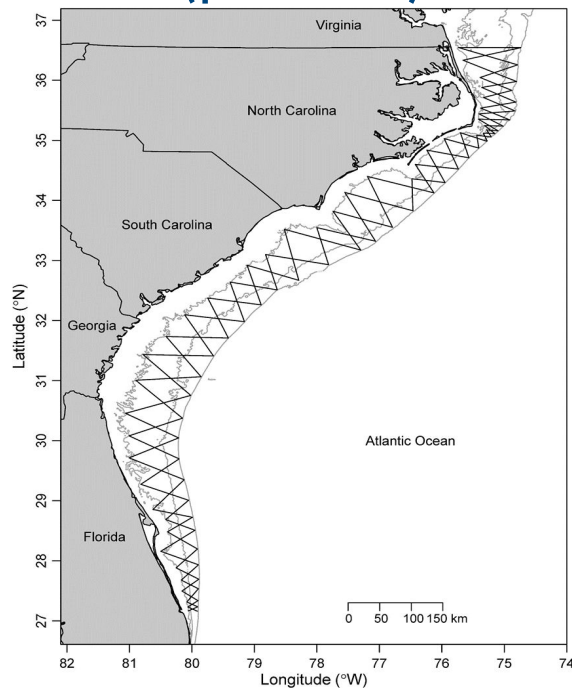


Habitat Mapping to Support Survey Expansion

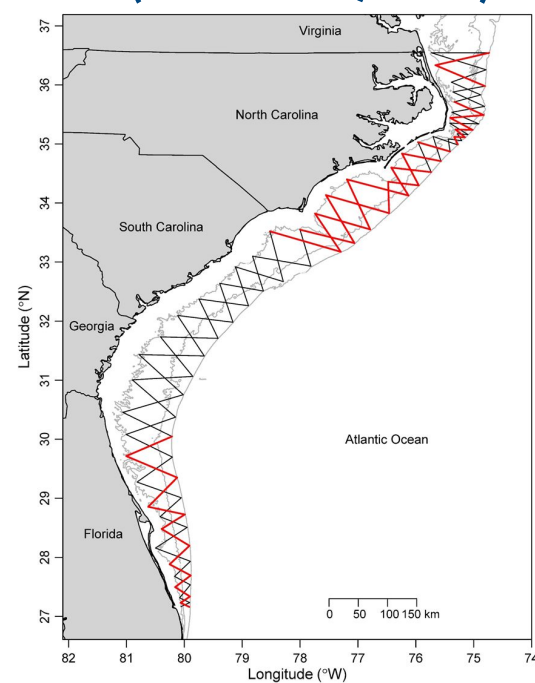
Current SERFS footprint



2023 mapping
(planned)



2023 mapping
(realized, red)



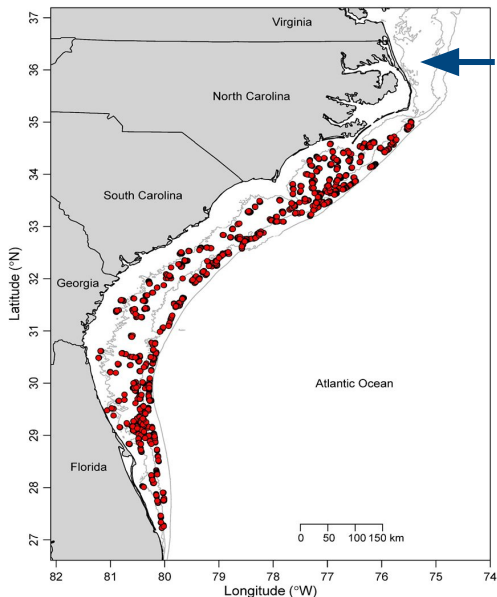
Additional SERFS spatial expansion?

Southward

- Logistics and cost planning
- Challenges - coral habitat; currents
- Requires additional funding or reallocation of resources

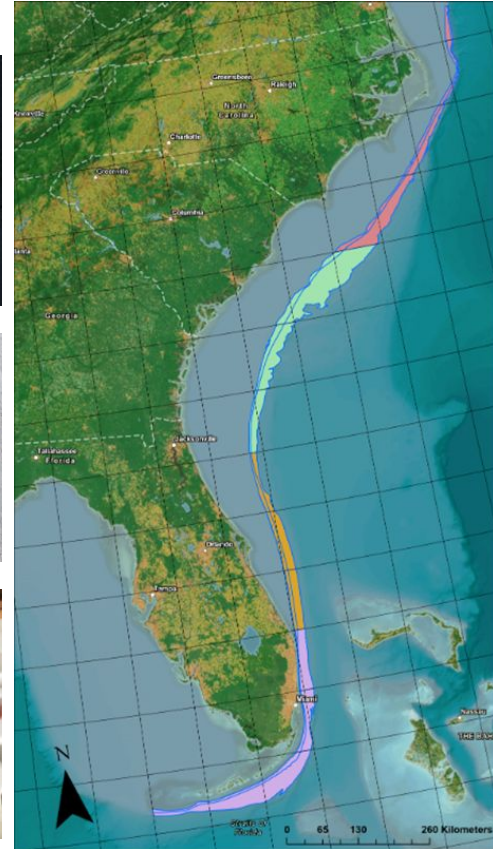
Northward

- Active, ongoing discussions with NEFSC
- Spurred by wind energy development; interest in implementing trap-video survey in Mid-Atlantic and New England waters to enable sampling within versus outside of wind energy development areas
- Challenges - habitat, visibility
- Requires additional funding or reallocation of resources



South Atlantic Deepwater Longline (SADL) Survey

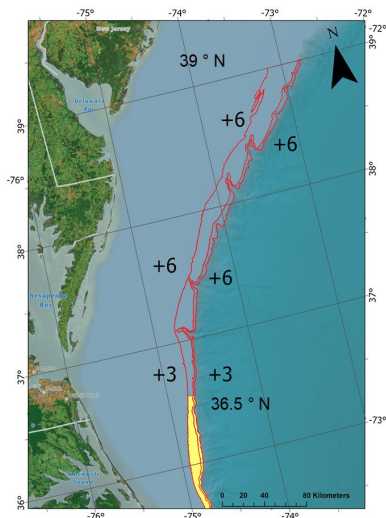
- Cooperative survey with industry
- Initiated in 2020
- Multi-species with focus on blueline tilefish, golden tilefish, and snowy grouper
- 75-366 m depth
- 4 zones (NC/VA border to Tortugas)
- SSC review in Oct 2023



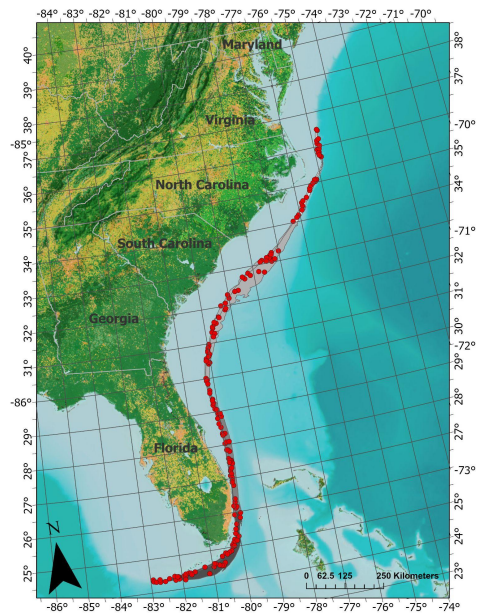
SADL Expansion

2023: Expanded into Mid-Atlantic waters

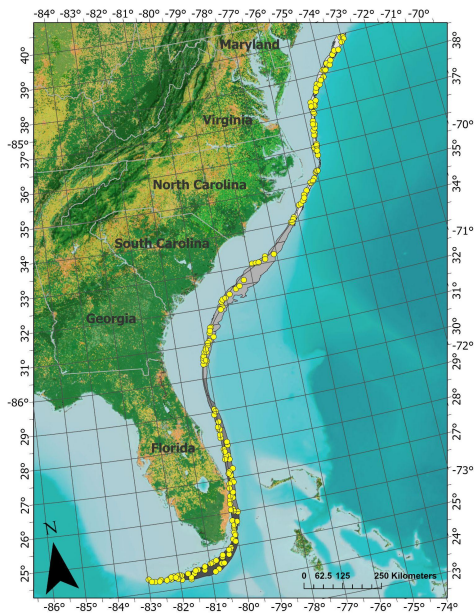
- Enhance data for assessments
- Inform allocation (e.g., blueline)
- Adjoins southern limit of Mid-Atlantic golden tilefish survey
- Address potential shifting distributions



2022 Survey footprint

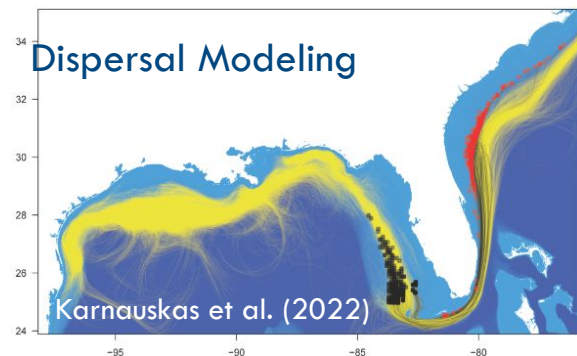


2023 Survey footprint

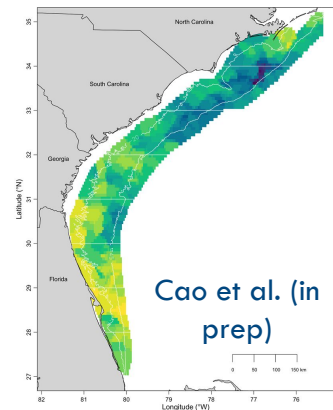


Other Cross Jurisdictional Activities

- Vessel and dealer data collections coordinated between HMS, GARFO, and the SEFSC
- Participatory workshops with fishermen (e.g., Mahi-mahi)
- Species distribution modeling (e.g., snapper-grouper, dolphinfish)
- Exploratory analyses of NEFSC trawl data and coastwide MRIP data
- Connectivity between Gulf and South Atlantic (e.g., dispersal modeling of red snapper and scamp)

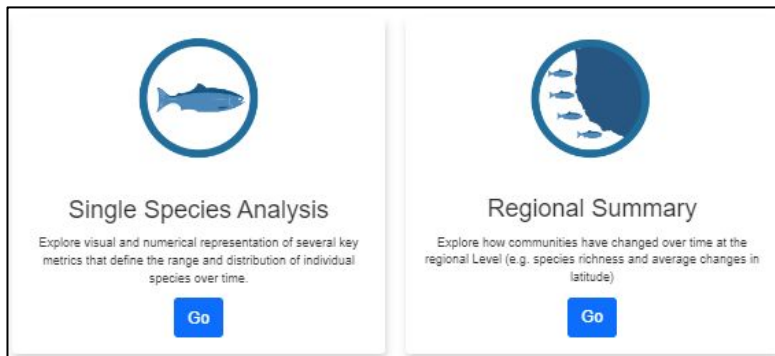


Multispecies
distribution
modeling



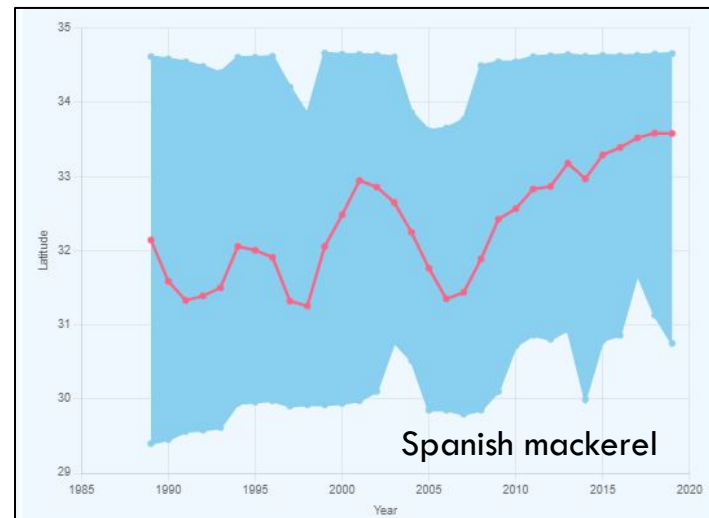
The NMFS Distribution Mapping and Analysis Portal (DisMAP)

DisMAP is: A national online portal that provides easy access to information to track and understand distributions of marine species in the U.S. Marine Ecosystems.



South Atlantic:

- Data currently limited to SEAMAP Coastal Trawl Survey
- Planned: addition of SERFS (trap-video) data



<https://apps-st.fisheries.noaa.gov/dismap/>

Climate, Ecosystems, and Fisheries Initiative (CEFI)

- Cross-NOAA effort to build a nationwide, operational ocean modeling and decision support system to reduce impacts, increase resilience, and help adapt to changing ocean conditions
- Provide decision-makers with information needed to prepare for and respond to changing climate and ocean conditions
- New capacity within SEFSC:
 - Social sciences modeler
 - Regional ocean modeler
 - Climate-enhanced stock assessment and management strategy coordinator
 - Species distribution spatial modeler
- Coordination with NMFS HQ and across NMFS Science Centers to maximize effectiveness



South Atlantic Climate Vulnerability Assessment



NOAA Technical Memorandum NMFS-SEFSC-768

doi: 10.25923/90b-1z90

A CLIMATE VULNERABILITY ASSESSMENT FOR FISH AND INVERTEBRATES IN THE UNITED STATES SOUTH ATLANTIC LARGE MARINE ECOSYSTEM

Michael L. Burton¹, Roldan C. Muñoz², John A. Quinlan³, Mark W. Nelson⁴, Nathan M. Bachelez², Brendan J. Runede⁵, Samantha M. Binion-Rock⁶, G. Todd Kellison⁷, Joseph W. Smith⁸, R. Wilson Laney⁹, George R. Sedberry¹⁰, James W. Morley¹¹, Steve Poland¹², Russel Brodie¹³, Lauren Gentry¹⁴, Karla Gore¹⁵, Jason E. Rock¹⁶, Matthew Johnson¹⁷, Marcel Reichert¹⁸, Jared Flowers¹⁹, Chap Collier²⁰

¹NOAA Fisheries, Southeast Fisheries Science Center, Beaufort Laboratory, Beaufort, NC, USA-retired.

²NOAA Fisheries, Southeast Fisheries Science Center, Beaufort Laboratory, Beaufort, NC, USA.

³NOAA Fisheries, Southeast Fisheries Science Center, Miami Laboratory, Miami, FL, USA.

⁴ECS Federal, LLC, Fairfax, VA, USA, in support of NOAA-Fisheries, Office of Science and Technology, Silver Spring, MD, USA.

⁵North Carolina State University, Morehead City, NC, USA.

⁶Department of Applied Ecology, North Carolina State University, Raleigh, NC, USA (and U. S. Fish and Wildlife Service, U. S. Dept. of the Interior, Raleigh, NC, USA, retired).

⁷NOAA Office of National Marine Sanctuaries, Gray's Reef National Marine Sanctuary, Savannah, GA, USA, retired.

⁸Coastal Studies Institute, East Carolina University, Wanchese, NC, USA.

⁹North Carolina Division of Marine Fisheries, Morehead City, NC, USA.

¹⁰Florida Fish and Wildlife Conservation Commission, Jacksonville, FL, USA.

¹¹Florida Fish and Wildlife Conservation Commission, St. Petersburg, FL, USA.

¹²NOAA Fisheries, Southeast Regional Office, St. Petersburg, FL, USA.

¹³NOAA Fisheries, Southeast Fisheries Science Center, Galveston Laboratory, Galveston, TX, USA.

¹⁴South Carolina Dept. Natural Resources, Charleston, SC, USA, retired.

¹⁵Georgia Dept. Natural Resources, Coastal Resources Division, Brunswick, GA, USA.

¹⁶South Atlantic Fishery Management Council, Charleston SC, USA.

¹⁷Present affiliation: Rosenstiel School of Marine and Atmospheric Science, University of Miami, Miami FL, USA.

¹⁸Present affiliation: The Nature Conservancy, Charlottesville, VA, USA.

U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Marine Fisheries Service
Southeast Fisheries Science Center
Miami, Florida

August 2023

Potential for distribution change

Blue Crab
Warsaw Grouper
Nassau Grouper
Redband Parrotfish
Gag
Slippery Dick
Emerald Parrotfish
Spotted Seatrout
Red Grouper
Sheepshead
Goliath Grouper
Cubbyu
Scamp Grouper
Hogfish
Golden Tilefish
Speckled Hind
Blueback Herring
Pink Shrimp
Brown Shrimp
Snowy Grouper
Yellowtail Snapper
Blueline Tilefish
Belted Sandfish

Low

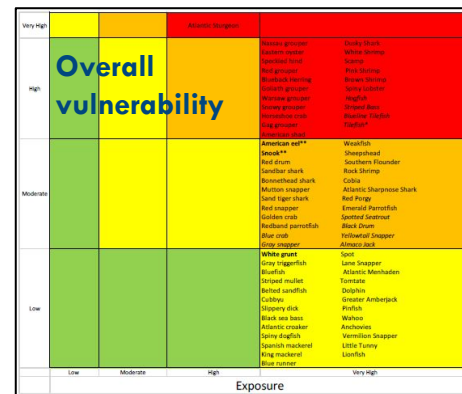
Moderate

High

Very High

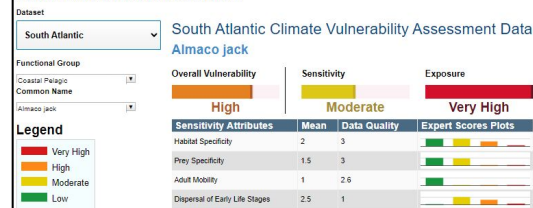
Gray Triggerfish
White Grouper
Red Drum
Black Drum
Cobia
Weakfish
Pinfish
Atlantic Croaker
Anchovies
White Shrimp
Tomtate
Southern Flounder
Spot
Red Snapper
Sand Tiger Shark
Lionfish
Vermilion Snapper
Red Porgy
Bonnethead Shark
Bluefish
Greater Amberjack
Striped Mullet
Spotted Bass
American Eel
King Mackerel
Almaco Jack
Lane Snapper
Dusky Shark
Blue Runner
Spanish Mackerel
Gray Snapper
Little Tunny
Mutton Snapper
Black Sea Bass
Sandbar Shark
Spiny Dogfish
Atlantic Menhaden

Dolphin



Climate Vulnerability Assessment Tool

This tool displays measurements for how vulnerable different species are to the effects of a changing climate. Scores are derived by experts to determine how much a particular species is exposed to a changing environment, and how sensitive it is to these changes. This can help broaden our understanding, which can be helpful in making decisions about how to protect them.




<https://www.fisheries.noaa.gov/resource/document/climate-vulnerability-assessment-fish-and-invertebrates-united-states-south>

<https://www.fisheries.noaa.gov/data-tools/climate-vulnerability-assessment-tool>



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Thank you!
Questions?