

# Tech tips

## Tips for Using Zoom

- ✓ **If you don't have optimal internet connection, join the meeting via computer for video & opt to dial in via phone for audio.**
  - When you are dialing in, please be sure to enter your participant ID.
- ✓ **Mute when not speaking.**
- ✓ **Rename yourself** in the Participants tab with First & Last Name, Your Affiliation.
  - In front of your name:
    - Team members: put \* // Alternates: put \*ALT
- ✓ **Bring a tech-adaptive mindset** as we work to maximize engagement in this online setting!

...We'll formally begin the meeting at 1:30 PM



**NOAA**  
**FISHERIES**

# *Updates: Bottlenose Dolphin Take Reduction Team & Plan*

Webinar  
July 11, 2023

# Objectives for Webinar

- Create opportunity for the Team to reconnect
- Provide a status update on the Team's 2017 recommended Take Reduction Plan amendments
- Ensure the Team is up-to-date on Bottlenose Dolphin TRP-related activities and information
- Share planning and considerations for future direction

# Agenda

- Changes & Updates since 2017 Meeting
- Status of Recommendations
  - Analysis of regulatory recommendations
  - Update on non-regulatory recommendations
- Bottlenose Dolphin Status Updates
  - Science updates
  - Bycatch estimates
  - Bottlenose dolphin strandings
- Public Comment
- What's Next



Photo: Dolphin Ecology Project

# Ground Rules for Team Members

## Discussion protocols:

- Contribute – need to build shared understanding
- Make room for others – need to hear from all
- Ask questions – others may be wondering the same thing
- Make good faith effort to collaborate – patience, open ears and minds

## To contribute to the discussion:

- Primary members
  - **Encouraged** to keep your cameras on and stay on mute unless speaking
  - Raise a virtual “hand” (remember to put it down after)
  - Chat to host only with issues (emoji reactions available)
- Alternates
  - In plenary, engage as public unless sitting in for primary
  - In cross-caucus breakouts, alternate generally in same room as primary (not relevant today)

# Changes & Updates - Staffing and Restructuring

- SERO
  - Small Cetacean Conservation Coordinator - Jessica Powell
    - BDTRT Coordinator
  - Southeast Large Whale Recovery Program Coordinator - Clay George
  - Southeast Right Whale Coordinator - Kara Shervanick
  - Marine Mammal Fisheries Biologist - Abigail Machernis
- SEFSC
  - Marine Mammal Branch Chief - Jenny Litz
  - Research Biologist - Matthew Bowers

# Changes & Updates

## Team Composition

43 Team Seats; 8 vacancies

- Recruiting for:
  - GA blue crab & shrimp
  - SAFMC
  - NC gillnet
- Processing appointments for:
  - NC DMF
  - Scientist
  - NC gillnet
  - Conservationist
  - MMC



# Changes & Updates

- COVID challenges
  - Delays in field work, observer coverage, meeting planning
- ALWTRP Mid-Atlantic rulemaking underway
  - Monitoring gillnet portion for potential conservation implications for bottlenose dolphins



# STATUS OF REGULATORY RECOMMENDATIONS



# Review of Regulatory Recommendations

## North Carolina coastal state waters (Coastwide)

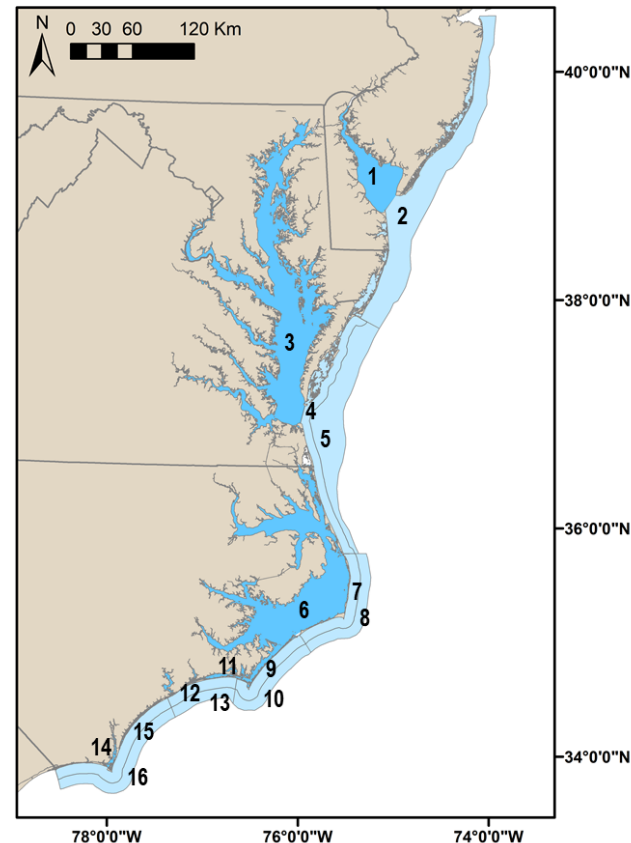
- All small, medium, large mesh subject to 100-yard fishing setback year-round
  - Exempt strike nets, runaround gear, or drop nets that are used to surround fish and immediately retrieved
- Extend existing BDTRP gillnet gear length requirement ( $\leq 1,000$  feet) to coastwide, year-round, and for all small, medium and large mesh gillnets

## Stratum 7 Only

- Cap on total gillnet gear (small, medium, large mesh) fished at any one time of 1,600 yards between 100 yards of beach extending to 1.5 nautical miles offshore
  - Location: NC/VA border to Cape Lookout

## Stratum 15 Only

- Cap on total gillnet gear (small, medium, large mesh) fished at any one time of 1,200 yards between 100 yards of beach extending to 1.5 nautical miles offshore
  - Location: New River to South Carolina State line



# Summary: Analysis of Recommendations

**GOAL:** Reduce NNCES morality & serious injury by 70% from 26.4 → 7.8 animals

- Calculable bycatch reductions across all recommendations summed to 20%
- Recommendations did not achieve necessary bycatch reduction

# Analysis of Regulatory Recommendations

## North Carolina coastal state waters (Coastwide)

- All small, medium, large mesh subject to 100-yard fishing setback year-round
  - Exempt strike nets, runaround gear, or drop nets that are used to surround fish and immediately retrieved

**GOAL:** Reduce NNCES mortality & serious injury by 70% from 26.4 → 7.8 animals

- **Implemented:** Yes. 100-yard setback, coast-wide and year-round by NCDMF - Proclamation (M-8-2019; April 12, 2019)
- **Result:** Unknown associated bycatch reduction
- **Why:** Unable to quantify

# Analysis of Regulatory Recommendations

## North Carolina coastal state waters (Coastwide)

- Extend existing BDTRP gillnet gear length requirement ( $\leq 1,000$  feet) to coastwide, year-round, and for all small, medium and large mesh gillnets

**GOAL:** Reduce NNCES mortality & serious injury by 70% from 26.4  $\rightarrow$  7.8 animals

- **Implemented:** No
- **Result:** Recommendation anticipated to provide 20% bycatch reduction for NNCES
  - Anticipated reduction from 26.4  $\rightarrow$  21.1 animals
- **Why:** 73% of observed hauls were already fishing gear  $\leq 1,000$  ft reducing conservation value

# Analysis of Regulatory Recommendations

## Stratum 7 Only

- Cap on total gillnet gear fished (small, medium, large mesh) at any one time of 1,600 yards between 100 yards of beach extending to 1.5 nautical miles offshore
  - Location: NC/VA border to Cape Lookout

**GOAL:** Reduce NNCES mortality & serious injury by 70% from 26.4 → 7.8 animals

- **Implemented:** No
- **Result:** Recommendation anticipated to provide 0% bycatch reduction
- **Why:** Needed greater reduction in net length to gain conservation value
  - The majority of gear fished is between 300-600 yards in N. NC

# Analysis of Regulatory Recommendations

## Stratum 15 Only

- Cap on total gillnet gear (small, medium, large mesh) fished at any one time of 1,200 yards between 100 yards of beach extending to 1.5 nautical miles offshore
  - Location: New River to South Carolina State line

**GOAL:** Reduce NNCES mortality & serious injury by 70% from 26.4 → 7.8 animals

- **Implemented:** No
- **Result:** Not available
- **Why:** Lack of observer data prevented analysis in this area
  - Anticipated bycatch reductions to SNCEs could not be analyzed
  - Alternative analysis for all waters south of Cape Lookout:
    - 6% anticipated bycatch reduction for NNCES

# Summary & Questions

- Analysis suggested measures would fall far short of bringing bycatch reductions below PBR
- Given the package did not achieve the required level of bycatch reduction, we did not move forward with a proposed rule until the Team could be reconvened



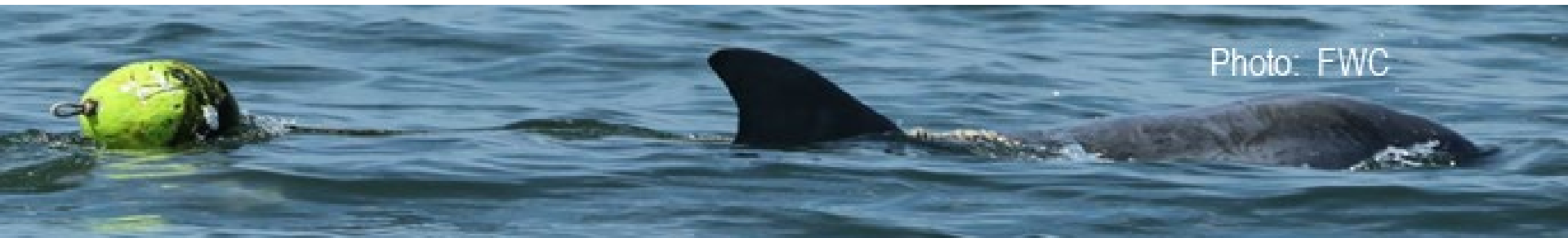


# UPDATES ON NON-REGULATORY RECOMMENDATIONS



# Focus of Non-regulatory Recommendations

- Outreach Efforts
- Observer Coverage
- Enforcement
- NC Internal Waters Bycatch Estimate



# Outreach Summary

## North Carolina: 2019-Present

- Monthly dock-side visits:
  - 222 in Northern NC
  - 180 in Southern NC
- NCFA's *Tradewinds* magazine:
  - BDTRP regulatory requirements:
    - Nov/Dec 2021
    - April/May 2022
  - MMAP reporting requirements:
    - Jan/Feb 2022
- Connected with fishermen groups on potential trainings in Northern and Southern NC
- Assistance to Northeast At-Sea Observer Program
  - Challenges scheduling observer trips in NC and suggestions to improve observer outreach

## Virginia: 2021-Present

- 25 dock-side visits to VA Beach and Eastern

# Observer Coverage Update

## Bottlenose Bycatch in Gillnet Gear

2019 - 1 NM mortality on a trip landing in VA

2018 - 1 NM mortality on a trip landing in NC

2018 - 1 NNCES animal released alive (SI undetermined) on trip landing in NC

## Challenges

- All vessels required to have a USCG Commercial Fishing Safety Examination and Decal to take an observer
- Days tasked in NC highly specific to county, mesh size, distance from shore, and month - difficult to meet all criteria
- Weather - small vessels cannot fish in 20 kts+
- No pre-trip notification requirement - difficult to contact individual vessel operators to set up trips
- Tracking compliance - dealer reports do not always provide information to determine the owner of the vessel, location fished,

or mesh size

*Note: table represents federal waters only*

SBRM Year	Area	Percent of Vessel Trip Report trips Covered
2018	VA	19.40%
	NC	35.40%
	<b>Total</b>	<b>54.80%</b>
2019	VA	11.70%
	NC	33.50%
	<b>Total</b>	<b>45.20%</b>
2020	VA	2.70%
	NC	3.10%
	<b>Total</b>	<b>5.80%</b>
2021	VA	5.20%
	NC	4.70%
	<b>Total</b>	<b>9.90%</b>
2022	VA	4.80%
	NC	5.70%
	<b>Total</b>	<b>10.50%</b>

# Enforcement updates

Year	Type	Result
2018	Gear Inspection	Compliance assistance to new fisherman
2018	Gear Inspection	Compliance assistance for non-compliant net
2018	Patrol	10 pound nets inspected in Chesapeake Bay; 3 minor gear violations; educated JEA partners
2019	Patrol	Unattended pound net observed, not actively fishing

# ***Bottlenose Dolphin Bycatch Estimate NC Estuarine Gillnet Fishery 2015-2019***

## **NC Division of Marine Fisheries Observer Program**

- **Program covers estuarine anchored (e.g., set/stationary) gillnets**
- **Statewide coverage since Fall 2013: spring, summer, fall seasons only**
  - **Coverage of winter season added Dec. 2014**
- **Observer coverage goals:**
  - **7-10% of large-mesh gillnets**
  - **1-2% of small-mesh gillnets**
- **Occasional coverage of drift/runaround gillnets**
- **One observed bottlenose dolphin interaction (mortality):**
  - **8 November 2017**
  - **Core Sound**
  - **Set net, 3.15 inches stretched mesh, 20-hour soak**
  - **Animal assigned to NNCES stock**



# ***Bottlenose Dolphin Bycatch Estimate NC Estuarine Gillnet Fishery 2015-2019***

- Bycatch estimate calculated in consultation with NMFS SERO
- Methods followed Lyssikatos & Garrison 2018
- Annual observer coverage across state ranged 5.3-6.8%
- Estimates calculated for two datasets:
  - Dataset 1: anchored + drift gillnets
  - Dataset 2: anchored gillnets only
  - Both methods produced same annual mean
- No observed interactions since 2017
  - Updated bycatch estimate not calculated

	Dataset 1: Anchored & Drift Gillnets	Dataset 2: Anchored Gillnets
Weighted Mean Annual Mortality Estimate	3.1 CV=0.31 95% CI=1.2-5.0	3.1 CV=0.30 95% CI=1.3-4.9
Percent of PBR	40% PBR (PBR=7.8)	40% PBR (PBR=7.8)



# Questions?



Photo: NMFS



# Tursiops Researcher Workshop - October 2021

## Purpose

Improve information exchange and data sharing between NMFS and the broader academic and research community to improve management of coastal migratory and estuarine bottlenose dolphins along the U.S. Atlantic coast.

## Research Recommendations

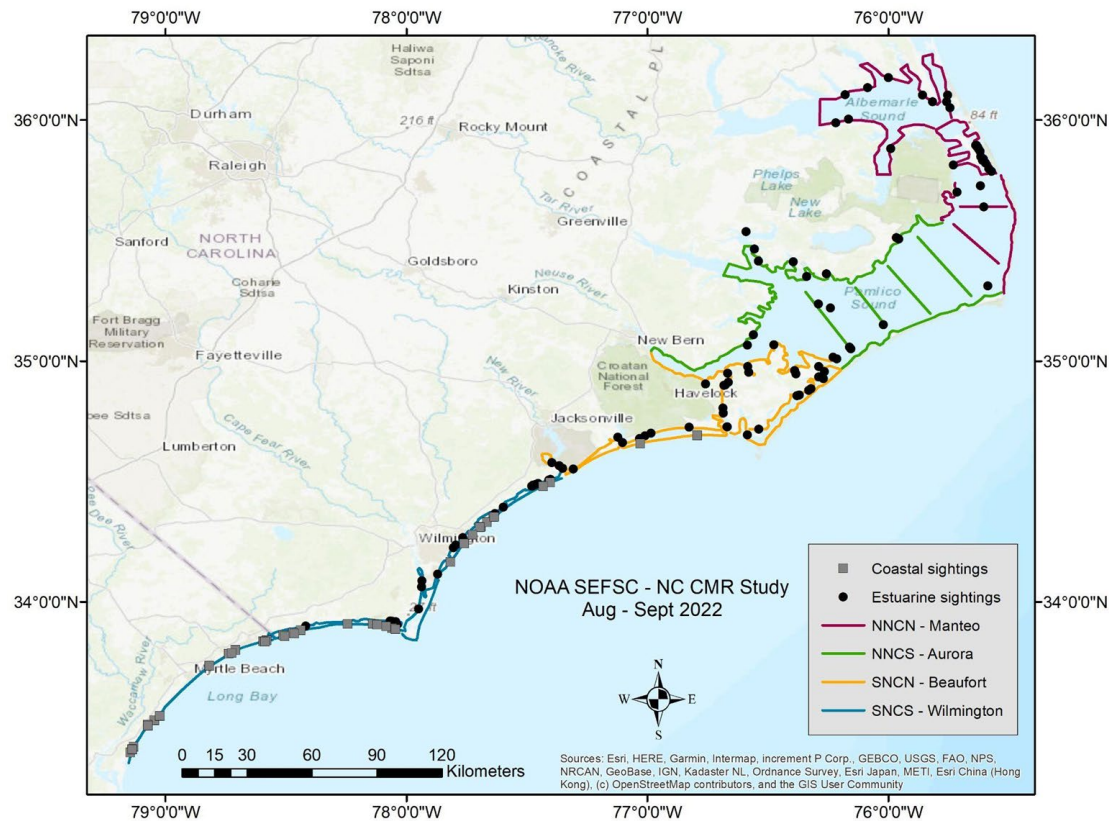
- Define manageable demographically independent populations by incorporating genetics and photo-ID
- Understand the distinctiveness and boundaries of migratory stocks
- Understand ecological factors that may drive stock delineation and effective management
  - Incorporate BDTRT bycatch priorities as a focal point for research

# BOTTLENOSE DOLPHIN STATUS UPDATES



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# Updating Abundance Estimates for NNCES and SNCES Stocks: Summer 2022 Capture-Mark Recapture Photo-id Survey



- 4 teams conducted small boat photo-identification surveys from 22 Aug - 21 Sep 2022
- Winyah Bay, SC - Currituck/Albemarle Sounds, NC
- 142 total sightings of 2,214 dolphins (not unique individuals)
- Completed sorting of 73,456 photographs and beginning matching process
- Will review individual sighting histories to develop separate abundance estimates for the two delineated stocks

# Additional Research to Improve Understanding of Stock Structure and Spatial Distribution

## Matching between NMFS North Carolina Bottlenose Dolphin Catalog and MABDC Catalog

- Initiated matching project with Kim Urian (MABDC curator) in 2021 to improve understanding of spatial movements of delineated stocks
- Integrating NMFS catalog with other regional catalogs
- Completed matching with Duke-UNCW, Outer Banks NC, and SC-CCU catalogs
- Work will continue after completion of NC CMR analyses

## Next Generation Genetic Analysis of North Carolina Stock Structure

- RADseq data from 142 biopsy and live capture samples
- Samples throughout NC waters including both estuarine and nearshore coastal waters
- Analyzed data to reassess the number of demographically independent populations within NC

# Gillnet Bycatch Estimate

- Previous bycatch estimate: 2015-2018
- 2019-2022
  - Very limited observer coverage in NC
  - One observed gillnet mortality in 2019 from trip landed in VA
    - Northern Migratory Stock

# Questions?



Photo: NMFS

# BOTTLENOSE DOLPHIN STRANDINGS UPDATES



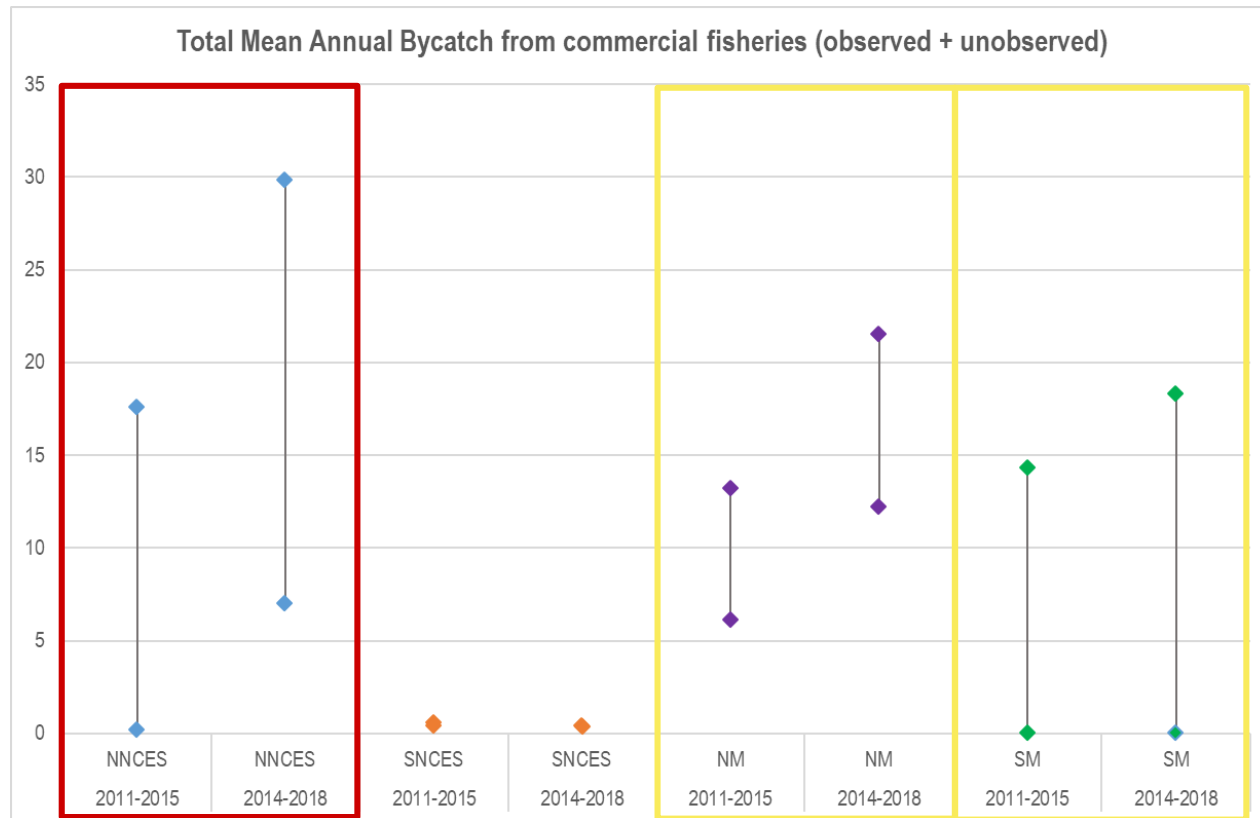
# Stock Assessment Reports: 2014-2018

Stock	PBR	Mean Annual Bycatch from observed commercial mid-Atlantic gillnet fishery		Mean Annual Bycatch from unobserved commercial fisheries (drawn from stranding data & public reports)		Total Mean Annual Bycatch from commercial fisheries (observed + unobserved)
NNCES	7.8	Min=6.6 (0.32) Max=28.2 (0.15)	+	Min=0.4 Max=1.6	=	7.0 - 29.8
SNCES	Unk	0.2	+	0.2	=	0.4
NM	48	Min=11.8 (0.18) Max=19.5 (0.14)	+	Min=0.4 Max=2.0	=	12.2 - 21.5
SM	24	Min=0 Max=16.3 (0.23)	+	Min=0 Max=2.0	=	0 - 18.3

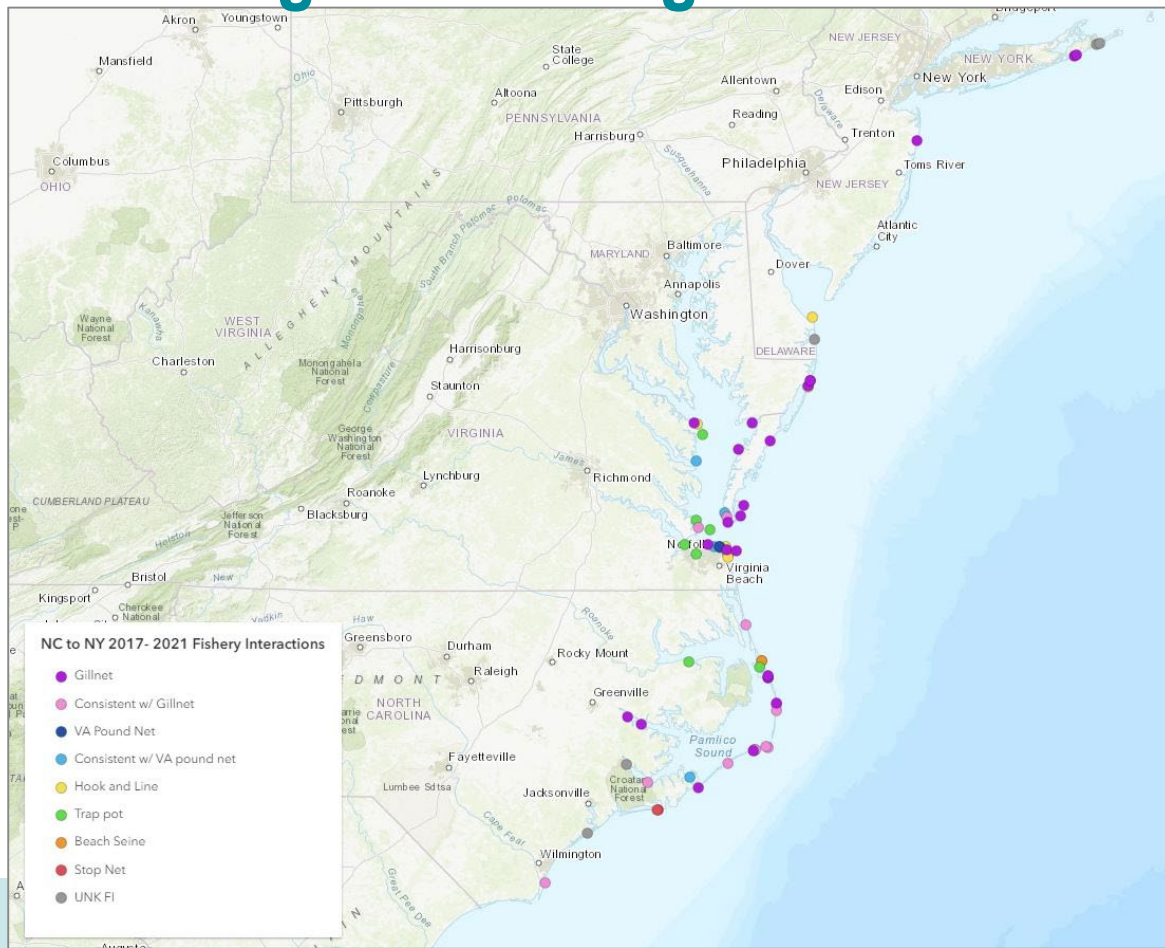


# Stock Assessment Reports: Comparison

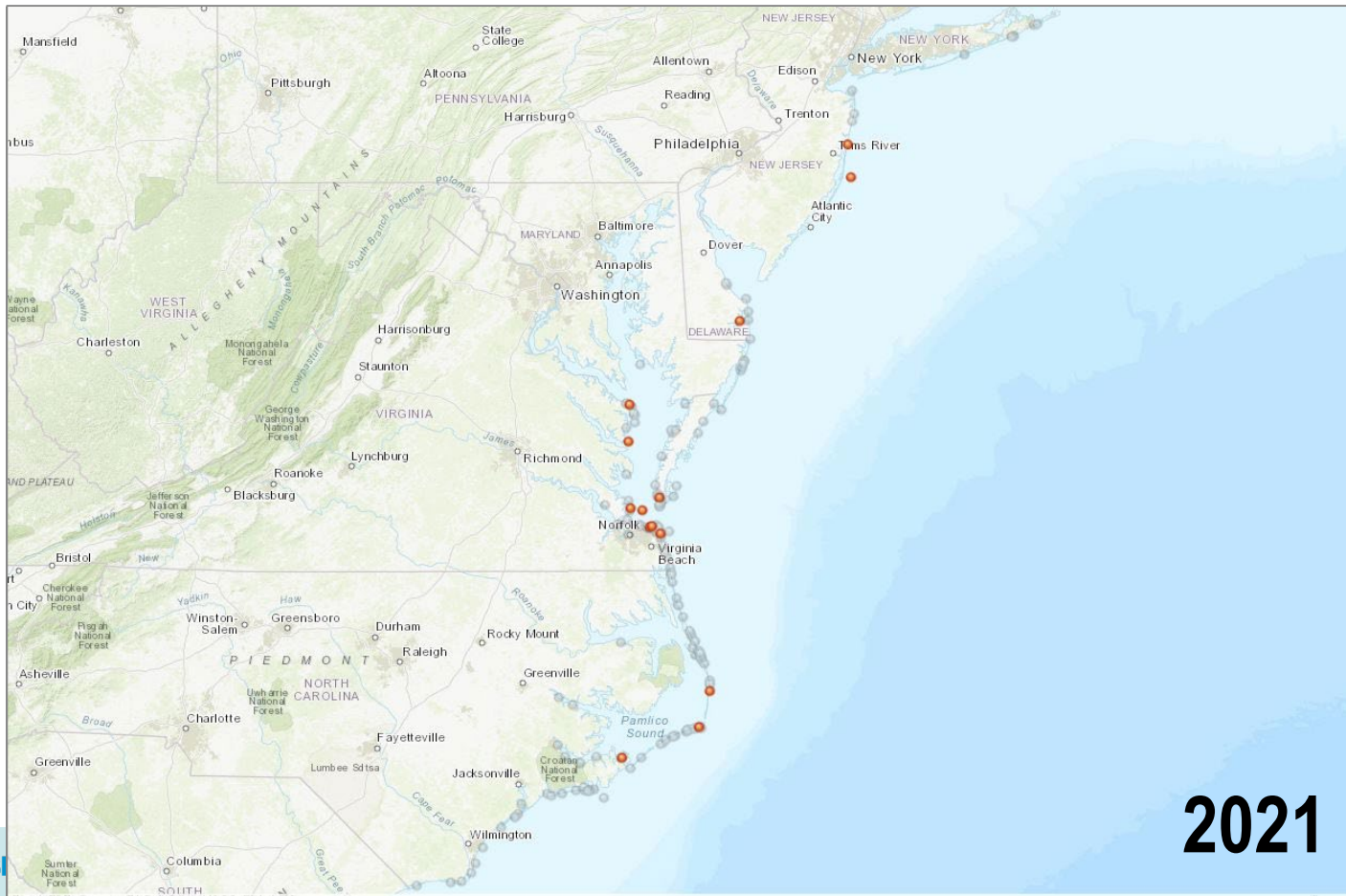
Stock	PBR	Total Mean Annual Bycatch from commercial fisheries (observed + unobserved)	
Years		2011-2015	2014-2018
NNCES	7.8	0.2 - 17.6	7.0 - 29.8
SNCES	Unk	0.4 - 0.6	0.4
NM	48	6.1 - 13.2	12.2 - 21.5
SM	23	0 - 14.3	0 - 18.3



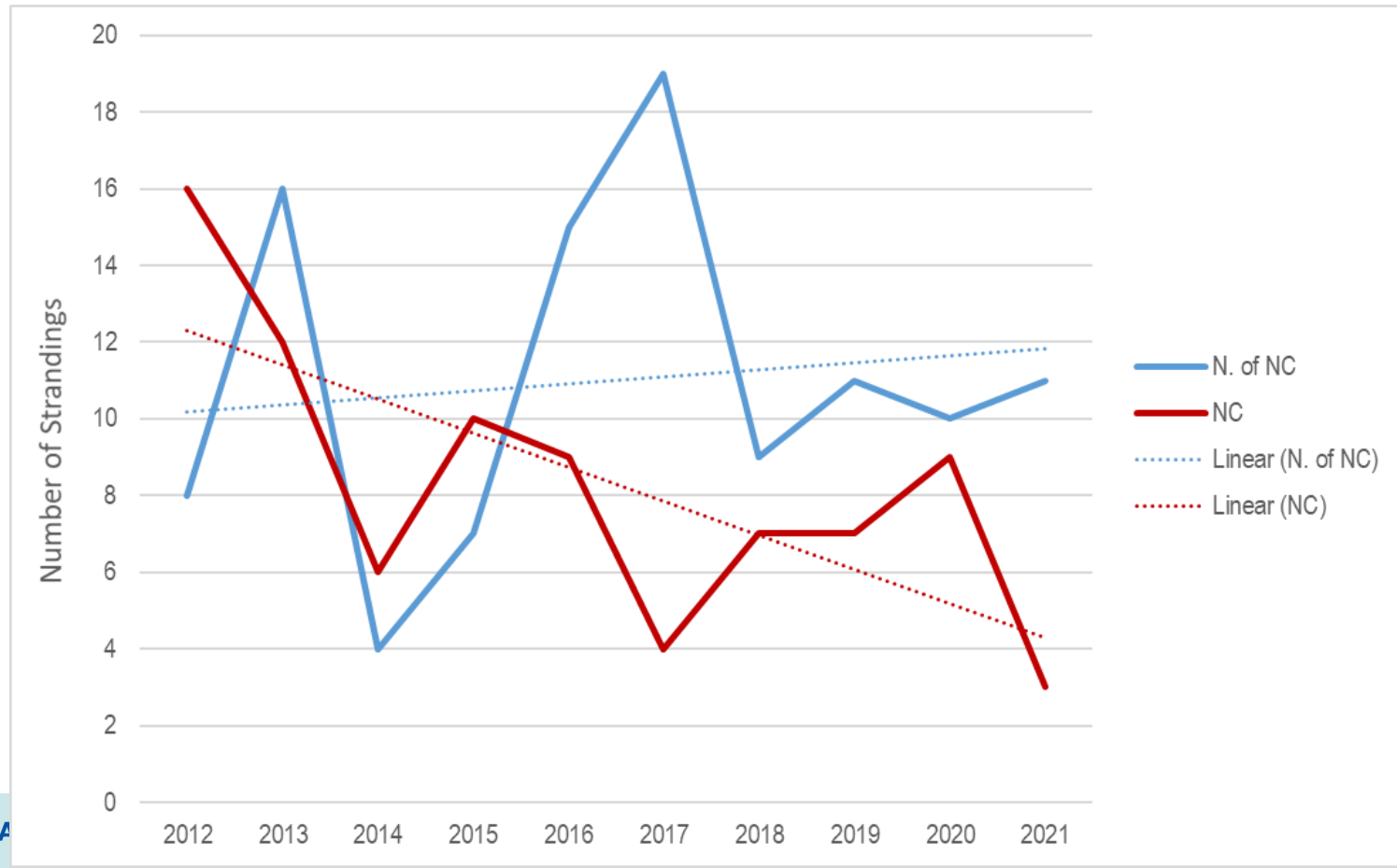
# 2017-2021: Strandings with Assigned Fisheries



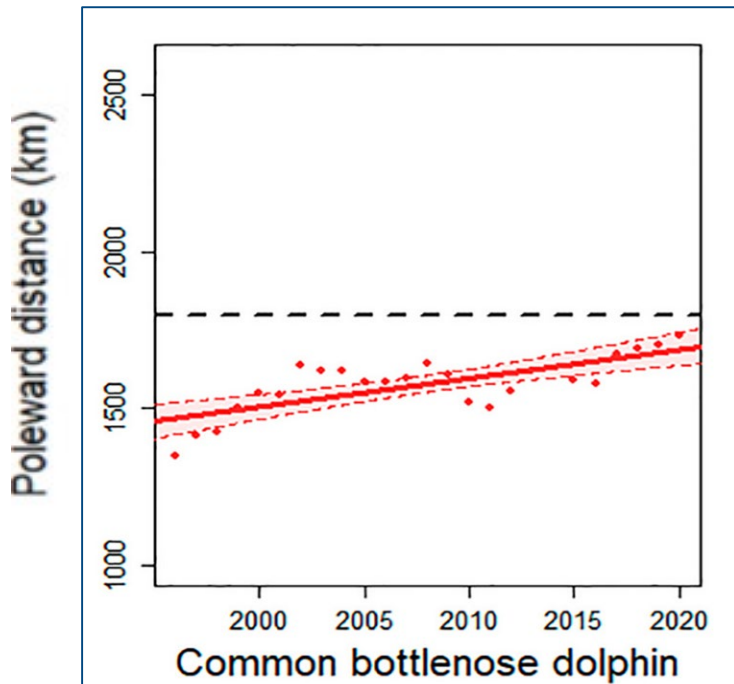
# 2012-2021: Strandings Time Series



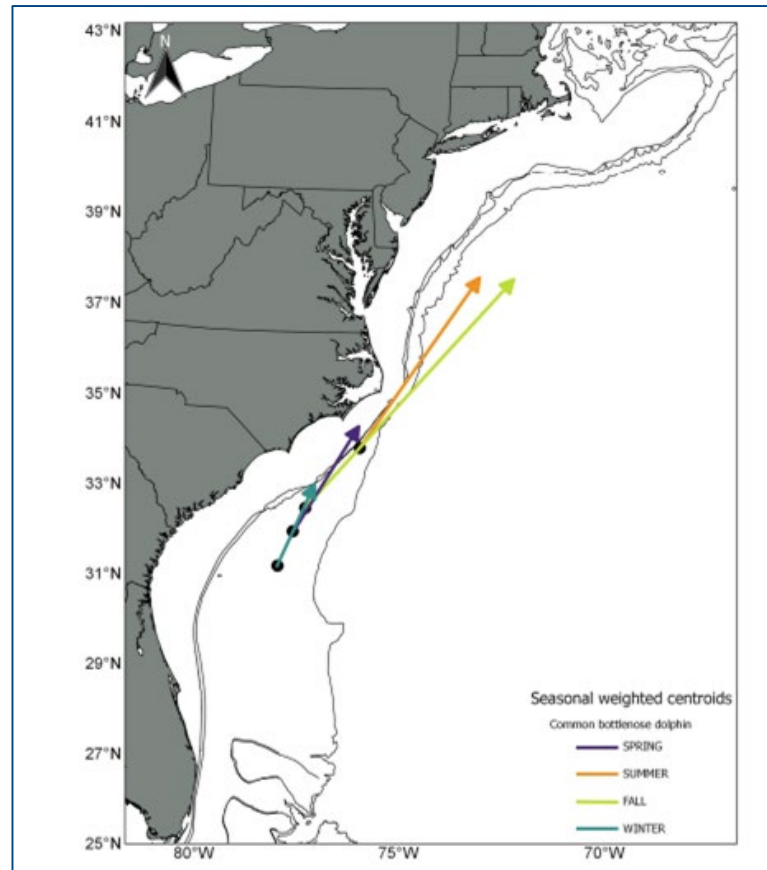
# 2012-2021: ALL Stranded Fishery Interactions



# Supporting Research



**Thorne *et al.* 2022.** Rapid restructuring of the odontocete community in an ocean warming hotspot.



**Chavez-Rosales *et al.* 2022.** Detection of habitat shifts of cetacean species: A comparison between 2010 and 2017 habitat suitability conditions in the Northwest Atlantic Ocean

# Questions?



Photo: NMFS



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# Public Comment

Public comments on issues related to the agenda are welcome

- Raise hand to indicate interest to comment
- May need to adjust length of comments if many speakers
- Please keep all comments...
  - on-point
  - respectful
  - focused on issues within the BDTRT's purview

**Note:** Facilitators will intervene if ground rules are not honored, and members of the public may be asked to leave

For follow-up, email:

[Jessica.Powell@noaa.gov](mailto:Jessica.Powell@noaa.gov)



Photo: NMFS

# What's Next?

- Backfill Team seats to provide needed perspectives
- Support the Team with best available information and analysis
  - Update abundance estimates
  - Update gillnet bycatch estimate
  - Improve understanding of stock structure and distribution with photo-id and genetic data
  - Explore solutions to increasing observer coverage in NC
- Explore strategies to best manage changes in dolphin movements and fishery interaction strandings
  - Welcome the Team's input
- Next Steps
  - New team member orientation: target spring 2024
  - In-person meeting: target winter 2024/25