Summary of July 11, 2023
Bottlenose Dolphin Take Reduction Team Update Webinar

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1. Overview

The Bottlenose Dolphin Take Reduction Team met by Zoom on July 11, 2023 for an update webinar. The objectives of the meeting were to:

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

Below is a high-level summary of key information shared and Team discussion. Presentation slides are available under the Team Section of the Bottlenose Dolphin Take Reduction Team web page and a recording of the meeting is available upon request from the BDTRT coordinator.

Participants

There are 42 Team seats, of which eight are presently vacant. NMFS is currently recruiting for representatives for the Georgia blue crab and shrimp fishery, the South Atlantic Fishery Management Council, and the North Carolina gillnet fishery, and is processing new appointments for North Carolina

Division of Marine Fisheries, researcher/academic, North Carolina gillnet, conservationist, and Marine Mammal Commission representatives.

Participating in the webinar were 26 Team members (including selected members currently being added to the Team), or their alternates (in parentheses): Regina Asmustis-Silvia; Gib Brogan; Barbie Byrd; Alex Costidis (Mark Swingle); Tara Cox; Jane Davenport; Laura Engleby; Sonny Gwin; Dennis Heinemann (Dee Allen); Chris Hickman; Jimmy Hull; Kristy Long; Chris McDonough; Bill McLellan; Pete Nixon; Tom Pitchford; Jessica Powell; Andy Read; Somers Smott; Courtney Vail; Stacy VanMorter; Randall Wells (Katie McHugh); and Angel Willey.

2. Status of Team recommendations

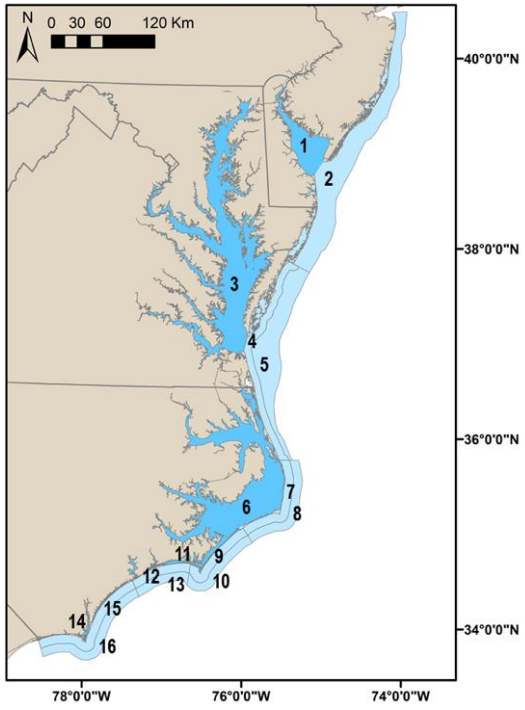
Jessica Powell, Southeast Regional Office (SERO) Small Cetacean Conservation and BDTRT Coordinator, shared an update on the analysis and status of the Team's 2017 recommendations. Covid pandemic disruptions, resource reallocation to Endangered large whale conservation, and unforeseen SERO staffing changes contributed to a delay in analyzing and then reconvening the Team to discuss the status of these recommendations.

Updates on Team's regulatory recommendations

The Team's 2017 regulatory recommendations were as follows:

North Carolina coastal state waters (Coastwide)
1. All small, medium, large mesh subject to 100-yard fishing setback year-round a. Exempt strike nets, runaround gear, or drop nets that are used to surround fish and immediately retrieved 2. Extend existing BDTRP gillnet gear length requirement (≤1,000 feet) to coastwide, year-round, and for all small, medium, and large mesh gillnets
Stratum 7* Only
3. 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 a. Location: NC/VA border to Cape Lookout
Stratum 15* Only
4. 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 a. Location: New River to South Carolina State line

*This map shows the numbered strata referenced in the recommendations:



The recommendations aimed to achieve a 70% reduction in bycatch, however subsequent analysis for all the recommended regulatory recommendations resulted in calculable reductions of only about 20%. Given this shortfall, efforts for a proposed rulemaking were postponed until NMFS could reconvene the Team. As a result, none but the first of the Team's regulatory recommendations listed above were implemented. For this first recommendation that was implemented, the associated bycatch reduction is unknown due to challenges analyzing changes in inputs of fishing effort and distribution.

For details on the analysis of each of the recommendations, see webinar slides posted on the BDTRT website: https://www.fisheries.noaa.gov/national/marine-mammal-protection/bottlenose-dolphin-take-reduction-plan

Questions and comments from Team members *(where applicable, direct responses from NMFS are in italics)*:

- Why not implement the North Carolina State Waters recommendations to get the 20% benefit? The Team has made a lot of recommendations with only minimal data to support decision-making, though we were happy with our effort to reach consensus.
    - *Given that we were well short of reaching PBR and that rulemaking is a multi-year process, we wanted to bring this analysis back to the Team. This is not to say that this recommendation can't be put forward at a later date, but we didn't have a package that got us to PBR.*
- The goal of the first recommendation was to get the dolphins off the beach. This recommendation was made based on observed take, so it seems counterintuitive that its benefit to reduce bycatch was not calculable. It is difficult to continue to make recommendations blind and then be told they are not effective.

- Notably, the most tangible actions that came from 2017 were by state proclamation and voluntary and collaborative efforts at the state level. I hope we will focus on non-regulatory measures to give more data on where to prioritize our discussion.
- It would be helpful to understand why we can't analyze the benefits of the 100-yard setback. There may be some approaches that might lend some insight.

Updates on Team's non-regulatory recommendations

The Team's 2017 recommendations included several non-regulatory measures. Updates on these measures since 2019, when the Team last met and discussed them, focus on the following:

- Outreach efforts
- Observer coverage (data on New England Fisheries Observer Program observers, combining coverage for both protected species and fisheries)
- Enforcement
- North Carolina internal waters bycatch estimate

For details on each of these topics, see webinar slides posted on the BDTRT website: https://www.fisheries.noaa.gov/national/marine-mammal-protection/bottlenose-dolphin-take-reduction-plan

Questions and comments from Team members *(where applicable, direct responses from NMFS are in italics)*:

- The proportion of trips covered by observers presented in these updates only addresses federal waters, outside of three miles. We are not seeing any rates of coverage for the strata where most interactions occur, inside three miles.
    - *That is correct. We will continue to work on getting information on rates of coverage for state waters from the observer program.*

3. Other BDTRT updates

Tursiops researcher workshop, October 2021

The Team reviewed the outcomes of a Tursiops researcher meeting (summary linked here) that was requested by the Atlantic Scientific Review Group. The purpose of this meeting was to 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.

The major themes for research that came from discussions in that meeting included:

- 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

Questions and comments from Team members *(where applicable, direct responses from NMFS are in italics)*:

- The report from the October 2021 meeting does not include estimates for funding required or indications of where to seek funding for the recommended research activities. In the Southeast Region, there are many competing priorities for funds among those for the Gulf of Mexico and the Atlantic Coast. Has there been discussion of sources of potential funding, whether from NMFS or external funds, given the collaborative nature of compiling all Tursiops data?
    - *The funding for genetic work and capture-mark-recapture studies has been provided through national Take Reduction program funds; this will likely remain a focus for future planning efforts.*
- The Mid-Atlantic Bottlenose Dolphin catalog is not supported by NMFS at all; it is the effort of a volunteer to curate. Because it helps understand a lot of the stock structure on the east coast, there is a desire from some for NMFS to support it.
- Is the Science Center's impression that the northern stock has enlarged or the southern stock doesn't exist? Can you provide a rough approximation?
    - *It's not possible to make an estimate at this point. We saw animals in places we were not expecting to see them, and can't say whether estimates would go up or down.*

4. Bottlenose Dolphin status updates and future direction

NMFS provided available high-level updates on efforts to calculate bottlenose dolphin abundance, bycatch and mortality estimates. More detail on these updates is available in the meeting slides.

Efforts to improve understanding of stock structure and spatial distribution

- In 2022, there were efforts to update abundance estimates for NNCES and SNCES stocks via a capture-mark-recapture and photo-ID survey. Work is underway to review sighting histories to develop separate abundance estimates for the two delineated stocks.
- Efforts began in 2021 to conduct additional research to improve the understanding of bottlenose dolphin stock structure and spatial distribution. This includes work to conduct matching between the NMFS North Carolina Bottlenose Dolphin Catalog and the Mid-Atlantic Bottlenose Dolphin Catalog (MABDC) as well as a genetic analysis of the North Carolina stock structure to understand better the number of demographically independent populations within North Carolina waters.

Gillnet bycatch estimate

- The last bottlenose dolphin bycatch estimate for gillnet was generated for 2015-2018, reflected in the latest Stock Assessment Report. Limited to minimal observer coverage in NC since 2020 poses a challenge to calculating a more updated estimate. NMFS is working to get an updated estimate and provide it to the Team.

Bottlenose dolphin strandings updates

- NMFS provided information on trends in strandings over the past 10 or more years. In general, available data shows a decreasing trend in the number of fisheries-interaction strandings in North Carolina from 2012 to 2021, while an increasing trend in Virginia, Delaware, Maryland, New Jersey, and New York over roughly the same period.

- At this point, it is not possible to conclude what is driving this shift. It is possible that we are seeing a trend in strandings further north because of changes in bottlenose dolphin distribution due to changing oceanographic conditions and shifts in prey. Increased bycatch could also be due to new fisheries opening up, or changes in fishing effort. The shift could be attributed to one or a combination of these variables.

Questions and comments from Team members *(where applicable, direct responses from NMFS are in italics)*:

- Team members asked for various clarifications on the strandings data presented on the slides:
    - *Due to the resolution on the maps, some of the "dots" are overlapping points, representing more than one interaction*
    - *These data points represent mortalities*
- The range represented suggests we are anywhere from under to way over PBR. It looks very challenging to pin down where we are.
    - *Yes, this is one of our challenges in calculating PBR.*
- It can be challenging to get across open waters and into Chesapeake Bay. With work to photo-ID animals up into the Bay, is there enough coverage in that area to detect strandings that would occur in river mouths that flow into the Bay?
    - *NMFS is working to ensure we have the coverage we need, particularly as we are starting to see an increasing trend of strandings in the Chesapeake.*
- Is there any effort to try to estimate unobserved mortality, as was done for Tursiops in Sarasota and California?
    - *We are interested in this question. However, the fundamental challenge of not understanding which populations are occurring in the Bay and how they overlap with others is a hurdle to overcome. Once we understand stock structure and distribution and can estimate stock population sizes, we can get to the complicated question of unobserved mortality.*
- Most in the Chesapeake are unaccounted for in terms of stock, but they are most likely North Carolina estuarine stock. There is additional mortality not included in calculations, which only makes the situation more dire. There are photo-ID efforts ongoing to match animals there. I believe the unobserved strandings are likely dying from fisheries interactions.
    - *We know we don't have estimates of total mortality and that we are missing a number of strandings for all the reasons noted. We do assign strandings to relevant or potential stocks, including the North Carolina estuarine. It may be an underestimate but we try to be as accurate as we can.*
- Consider the impact of the pandemic on high-level evaluations of mortalities and consider excluding 2021 data, which indicates a significant drop-off, from analysis. For example, evaluations that required 10 people to stand around an animal may not have happened that year.
- The presentation included mention of an unusual mortality event in 2013, centered in Virginia. There was a big swing between 2013 and 2014. Use caution in interpreting that data. Beginning in 2016, more resources were put into evaluations of mortalities there. It is, therefore, hard to say if this represented an increase in mortality or if it was a steady high state.

5. Next steps

NMFS outlined the following priority actions moving forward with the BDTRT:

- 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 and provide state waters observer data to the Team
- Explore strategies to best manage bottlenose dolphin stocks in light of changes in dolphin movement patterns and fishery interaction strandings. Team members are invited to share ideas on how to structure this inquiry.

Timing for upcoming meetings:

- New team member orientation: target spring 2024
- In-person meeting: target winter 2024/25

6. Appendices

Appendix A: Meeting Agenda

1:30PM **WELCOME**

- Welcome; review meeting objectives
- Team member introductions
- Review agenda and webinar ground rules

1:45 **TAKING STOCK OF CHANGES SINCE TEAM'S MEETING**

- Update on Team composition, staffing, pandemic impacts
- Opportunity for Team member questions and discussion

2:00 **STATUS OF TEAM RECOMMENDATIONS**

- Update on analysis and status of the Team's 2017 regulatory recommendations
- Review status and progress of non-regulatory recommendations
- Opportunity for Team member questions and discussion

2:30 **BOTTLENOSE DOLPHIN STATUS UPDATES**

- Provide high-level updates, as available, on bottlenose dolphin abundance, mortality estimates, and strandings
- Opportunity for Team member questions and discussion

3:15 **PUBLIC COMMENT**

3:20 **WRAP-UP**

- Share Agency thinking regarding future work and direction given current status and needs
- Review immediate and longer-term next steps

3:30 **ADJOURN**