



*Bottlenose Dolphin Take Reduction Team  
Conference Call 1:00 - 4:00 p.m. EDT  
March 24, 2009*

## **Summary**

On March 24, 2009, members of the Bottlenose Dolphin Take Reduction Team (BDTRT) and affiliated National Marine Fisheries Service (NMFS) staff participated in a conference call and webinar of approximately three hours (1:00-4:00 EST). The call and webinar included time for questions, comments and discussion. Please see Appendix 1 for a list of participants and Appendix 2 for the meeting agenda. More detailed notes follow.

The primary purpose of the call was to provide updates to the BDTRT about coastal bottlenose dolphin stock structure and mortality estimates. Key topics covered during the call were:

- Summary of March 2008 meeting key outcomes and updates on accomplishments
- Update about GAO Final Report regarding Take Reduction Teams
- Update about stock structure revisions and challenges associated with the western North Atlantic Coastal Stock and new Bays, Sounds, and Estuarine Stocks
- Presentation about evaluation of bias in estimating bycatch rate
- Update about gear research projects: modified leaders in Virginia pound net fishery and pingers in Spanish Mackerel gillnet fishery
- Update about relevant fisheries: spiny dogfish and North Carolina beach seine
- Discussion: management issues and potential implications to be considered for the next BDTRT meeting; and timeframe for the next BDTRT meeting

### **I. Update: GAO Final Report on Take Reduction Teams (TRTs) *Melissa Andersen***

Melissa Andersen, NMFS, provided an update on the report. In 2007, the House Committee on Natural Resources asked the Government Accountability Office (GAO) to conduct a review and complete a report on the establishment of TRTs pursuant to the Marine Mammal Protection Act (MMPA). The final report was published in December 2008. GAO was tasked to review four elements determining if NMFS:

1. Can accurately identify marine mammal stocks that meet the MMPA's requirement for establishing TRTs
2. Established TRTs for those stocks meeting the MMPA's requirement
3. Met the MMPA's deadlines for teams convened
4. Evaluates effectiveness of take reduction regulations

The report made three recommendations for Congress to consider in light of the data and funding limitations faced by NMFS:

1. Directing NMFS to report on the key factors that affect its ability to meet the MMPA's requirements for establishing teams and meeting statutory deadlines including data, resources, or other limitations;
2. Amending MMPA's provisions for establishing TRTs to stipulate not only must a marine mammal stock be strategic and interacting with a Category I or II fishery but that the fishery in question causes at least occasional incidental mortality or serious injury of that particular marine mammal stock;
3. Amending the MMPA to ensure that the deadlines give NMFS adequate time to publish proposed and final take reduction plans and implementing regulations while meeting all other requirements of federal rulemaking.

The report also recommends that NMFS develop a comprehensive strategy for assessing the effectiveness of each take reduction plan and implementing regulations, including steps for monitoring and analyzing rates of compliance with take reduction measures.

NOAA agreed with the GAO recommendations to NMFS and is currently working to develop a strategy that, among other things, will include holding an internal NMFS TRT staff meeting to discuss the TRT process, planning and development, and implementation.

#### *Questions and Comments from participants*

- Q: When is the first NMFS report due to Congress? Is it an ongoing report or a one time action?
- A: Congress has not yet indicated whether or not it will follow GAO's recommendation and request a report on TRT/TRP information. NMFS is not intending to report to Congress until requested. NMFS is not planning to respond directly to Congress on the GAO report having already submitted comments to GAO.
- Q: How is the report different from the annual report on marine mammal programs?
- A: The MMPA103(f) states that NMFS and the Fish and Wildlife Service annually report to the public and to the Congress on the current status of marine mammals species/stocks, and the Agencies' actions under the

MMPA. This mandatory nature of this reporting requirement ceased in December 1999, under the Federal Reports Elimination and Sunset Act of 1995 (Public Law 104-66). The last report issued by NMFS was in 2000. NMFS has not issued a report since then because the NMFS reports appeared to be redundant with the annual Marine Mammal Commission Report coupled with NMFS resource and staff limitations.

## **II. Summary of March 2008 Webinar Key Outcomes and Update on Accomplishments** *Stacey Horstman*

BDTRT members received a summary of key outcomes from the June 2007 meeting and March 2008 conference call prior to the call (to view the key outcomes, see materials presented at the webinar at: <http://www.keystone.org/BDTRT/>). Stacey Horstman, NMFS, provided an update of the accomplishments and developments since the March 2008 call, noting that for some of these key outcomes, more in-depth updates will be provided later in the call. Key points included:

### *North Carolina Beach Seine Fishery*

- Expanded the observer program to enhance coverage as requested by the TRT through continued coordination of the North Carolina Alternative Platform Observer Program (APOP) with the Northeast Fishery Observer Program (NEFOP).
- The Atlantic Ocean Striped bass beach seine fishery opened the first week in December, and the NC APOP observed 6 beach seine trips in addition to the NEFOP's four observed trips. This is the second year in which there has not been much of a beach seine fishery in North Carolina because the striped bass did not show up, resulting in weekly openings/closings of the fishery for several months and increased challenges in allocating observer coverage. Despite these challenges, the APOP helped to monitor the weekly opening/closings and respective fishing effort to establish the need for additional observer coverage.

### *Medium Mesh Restrictions for the Winter-Mixed Management Unit*

- On August 22, 2008, NMFS published the proposed rule amending the BDTRP by extending the nighttime medium mesh gillnet fishing restrictions in North Carolina state waters, during the winter, for three years. NMFS received five comments on the proposed rule and the regulation was promulgated as proposed on January 20, 2009.
- The final amendment: Continues, without modification, current night-time medium gillnet fishing restrictions in North Carolina state waters until May 26, 2012.

### *Summer Northern North Carolina Management Unit*

- In 2008, Duke University was awarded a Request for Proposal through North Carolina Sea Grant to examine whether pingers can be used to deter dolphins from nets without increasing depredation on nets, which was a June 2007 BDTRT consensus recommendation. The project was awarded for two years, pending results of the first year and whether the pingers were practical to use in gillnets. The study area for the project is the Summer Northern NC Management Unit area where mortality estimates previously indicated serious injuries and mortality may be exceeding PBR. The fishery in which the pingers are being investigated is the Spanish Mackerel fishery using small mesh gillnets. Duke completed the first year of the project and provided recommendations for the second year. Andy Read will provide a brief overview of the project later during the conference call.

#### *Gear Research*

- Virginia Aquarium recently completed the awarded Request for Proposal through North Carolina Sea Grant. The project examined the use of modified pound net leaders to determine if they can help reduce bottlenose dolphin interactions in the VA pound net fishery while maintaining catch efficiency, which was a June 2007 BDTRT consensus recommendation. The modified pound net leader used in this project mirrored current pound net leader requirements established for sea turtle conservation in the Chesapeake Bay. The study area for the project was the Cape Henry/ Lynnhaven Inlet area in VA where many bottlenose dolphin strandings have occurred. The project took place during the 2008 VA pound net fishing season. Project analyses are currently being completed with a final report to follow. Mark Swingle will provide a brief overview of the project later during the conference call. The final report will be provided during the next in person BDTRT meeting.

#### *Enhanced Monitoring Strategies and Observer Program*

- NMFS worked to improve observer coverage accuracy and precision through two efforts:
  1. The NC APOP observed 22 new vessels (not previously observed) and added 215 database entries from fishermen.
  2. A pilot "pulsed" observer effort was also conducted in the Summer Northern North Carolina Management Unit from September to October 2008. This approach was a recommendation from the 2008 Joint Scientific Review Group meeting to try concentrating observer sea days over a short time period during peak effort as an alternative to proportional allocation of sea days by month and port. The theory of this approach was that it may be a more effective way of allocating observer sea days to monitor coastal bottlenose dolphin take events given limited resources and the rarity of observing takes.

- Approximately 5% (30 trips) coverage was completed, averaging 3.75 trips per day over 8 days (not including APOP trips). A minimum of one to a maximum of six observers were onboard different vessels on a given day.
  - No takes were observed, but two dolphins stranded with signs of fishery interactions in the following two weeks after the pulsed effort ended.
  - The overall implementation of the approach was successful in achieving higher coverage over a shorter time period. However, there were a couple limitations to this effort, including, a required sacrifice in coverage in other areas and observers brought in from other areas to achieve the coverage.
  - This approach was presented to the Atlantic SRG during their 2009 meeting, and they recommended the approach be conducted at least three times total to evaluate potential effectiveness. Current funding limitations will prevent trying this approach again in 2009.
- To help enhance monitoring strategies, NMFS worked closely with the Northeast and Southeast Fishery Science Centers to explore alternate units of fishing effort for increased accuracy in estimating fishing effort
  - Three key questions were identified to help focus the investigation of alternate measures of fishing effort:
    1. Are the mortality estimates biased when using landings data compared to other "true effort" variables?
    2. What is the actual mortality estimate when using true effort data?
    3. How can true effort data be collected?
  - NMFS followed an initial two fold approach to answer key questions:
    1. To help address questions 1 and 2, the NEFSC conducted simulations to investigate bias in bycatch estimates between various measures of fishing effort, as well as examining those variables with different levels of observer coverage. Marjorie will provide a presentation on this effort later in the conference call.
    2. To help address question 3, a pilot project was conducted to collect effort data from a sub-sample of fishermen to determine feasibility of voluntarily collecting this data.
      - The main focus of this pilot project was to help determine the feasibility of voluntarily collecting true effort data. The goal was to recruit 5 fishermen to collect the data to represent approximately 10% of the fleet, and we were able to recruit 2 (<5% participation by the fleet).
      - What worked well was being able to develop a comprehensive datasheet that would meet our needs in

collecting true effort data, and the fishermen helped successfully collect a full summer season of data.

- Challenges included busy fishing seasons and schedules preventing participation of fishermen or the ability to participate for a full season; and the fishermen who did participate found it cumbersome to fill out datasheets while aboard their vessel. The initial conclusion is that it may be too difficult to collect data this way.

### **III. Presentation Update: Stock Structure Revisions**

Lance Garrison, Southeast Fisheries Science Center, presented updates on coastal bottlenose dolphin stock structure revisions, focusing on the North Carolina waters. This work is a collaborative effort with Andy Read and Kim Urian of Duke University, and Patty Rosel and Larry Hansen, from the Southeast Fisheries Science Center. To view this presentation see materials presented on the webinar at: <http://www.keystone.org/BDTRT/>. This analysis addressed three outstanding questions identified during the last TRT meeting and in the draft 2008 Stock Assessment Reports: 1) Are there distinct estuarine resident stocks along the coast from Florida to North Carolina?; 2) Are there multiple coastal stocks in waters off South Carolina and Georgia?; and 3) Are there resident estuarine stocks in North Carolina and what are their boundaries and seasonal overlap with the Northern and Southern migratory stocks? The bulk of the analysis and discussion focused on the question of North Carolina stock structure.

#### **1) Are there distinct estuarine resident stocks from Florida to North Carolina?**

Yes, there is a significant amount of evidence from localized photo-identification studies suggesting that there are resident bottlenose dolphins occupying the various estuaries along the U.S. Atlantic coast between Florida and South Carolina. Specifically, genetic analyses of samples collected in the estuaries of Georgia and South Carolina indicated significant population differentiation between animals sampled within estuarine and coastal waters and differentiation among estuaries.

These findings, and others, prompted the development of draft stock assessment reports for 2009 for nine distinct estuarine stocks: Florida Bay, FL; Biscayne Bay, FL; Indian River Lagoon, FL; Jacksonville, FL; Southern Georgia; Northern Georgia/Southern South Carolina; Charleston, SC; Southern North Carolina; and Northern North Carolina. The degree of information varies among these stocks with relatively few abundance estimates. There are no observed commercial fisheries impacting these stocks, but interactions with crab and lobster pots are seen throughout the range considered here.

2) Are there multiple coastal stocks in waters of South Carolina and Georgia?

The genetic analyses described above do not support differentiation of animals occupying coastal waters off South Carolina from those occupying waters off Georgia. Therefore, the currently defined coastal stocks of South Carolina and Georgia will likely be combined into a single stock. It is currently not possible to test for differences between animals in coastal waters of Georgia/South Carolina and those of Northern Florida.

3) Are there resident estuarine stocks in North Carolina, and what are their boundaries and seasonal overlap with the Northern and Southern migratory stocks?

There are four stocks that occupy waters of North Carolina for at least some portion of the year:

Northern Migratory: Based on tag telemetry studies, the northern migratory stock occupies waters of New Jersey during the summer months (July-September) and migrates south into North Carolina waters during Winter and Spring. The stock occurs primarily in waters near Cape Hatteras and north from November-April.

Southern Migratory: The southern migratory stock is presumed to occur in waters north of Cape Hatteras to north of the Chesapeake Bay mouth from June-August. The stock occurs further south to Cape Fear, NC through November, and migrates as far south as Northern Florida during winter (January-March).

Northern North Carolina Estuarine Stock (NNCES): This group was examined using a combination of satellite tag telemetry data and long-term photo-identification data of freeze-branded animals. The stock occupies waters inside Pamlico sound during summer months and moves out into nearshore coastal waters from Cape Hatteras to south of Cape Lookout during winter and spring. Some NNCES animals have been documented near Virginia Beach, VA during summer months.

Southern North Carolina Estuarine Stock (SNCES): This group was also examined primarily with photo-identification data and a small number of tags. SNCES animals were observed in waters near Beaufort, NC (south of Cape Lookout) and inside Bogue sound during summer and fall months (June-October). During winter months, these animals appear to occupy nearshore coastal waters and estuarine waters south of the New River to the SC/NC border.

There is overlap between the resident (NNCES and SNCES) stocks and the two migratory stocks in nearshore coastal waters (< 3km from shore) during certain

times of year. Resident stock animals were rarely documented at distances > 3 km from shore.

For most stocks, abundance estimates can be obtained for specific areas and times of year. For stocks within estuarine waters, photo-identification mark-recapture estimates are most appropriate while for coastal waters estimates will be derived from aerial surveys.

The greatest assessment challenge is attributing observed mortalities and developing mortality estimates for each stock. In most areas and times of year where observed mortalities in gillnet fisheries have occurred, stocks overlap. There are recent observed mortalities that may impact either the NNCES or the Southern Migratory stock.

NMFS (NEFSC and SEFSC) will be working to develop mortality estimates during the coming months and evaluate the risk of exceeding PBR for one or more stocks.

#### *Next steps for finalizing NC stock assessments*

- Additional photo-identification data is available to test the hypotheses outlined here. These data will be examined in the coming months to verify and refine the movement patterns. (Mid-Atlantic Bottlenose Dolphin Catalog, K. Urrian).
- Abundance estimates from aerial survey data will be developed. An updated mark-recapture abundance estimate for Pamlico Sound and coastal North Carolina is forthcoming (A. Read, Duke University).
- Mortality estimates will be developed using spatial-temporal strata and assignments of observed takes.

#### *Questions and comments from participants*

Q: Is there a genetic difference between estuarine or coastal stock?

A: We cannot run a test on an animal to identify whether it is from one stock or another. What defines an observed or tagged animal to a stock is its movement pattern.

Q: How do you assign an animal to an estuarine or coastal stock when it's stranded on the beach?

A: We cannot genetically test and assign stranded animals to a particular stock at this time. Stranded animals have been preliminarily assigned to a specific stock (when possible) based upon the location of the stranding.

Q How did you assign an animal to a stock in this analysis?



A: Based primarily on the tagging location and the observed movements of the different groups of animals. For example, the animals captured and tagged at Holden Beach were captured at the same time and place. However, they showed different movement patterns and were assigned to the SNCES or the Southern Migratory stock based on where they traveled. So, this analysis involves considerable *post-hoc* evaluation from multiple data sources to infer seasonal movements of the stocks in question.

Q: What is the longest observation of a single tagged animal?

A: The longest observation has been 12 months, a full migration cycle for the Cape May, New Jersey animals. Animals tagged in Beaufort (both April and November) were observed for four months. Animals tagged near Holden Beach were observed for approximately nine months, but the tags did not operate during summer months, which create some uncertainty. Photo identification provides lower resolution over a longer period of time. It is good to have both tagged and photo identification data as each data type provides a different perspective on the movements of these animals.

Q: Where do the photo identification data come from?

A: There are dedicated photo identification efforts at Cape Fear and Beaufort that have been ongoing for some time. There are also more sporadic photo-id efforts at specific sites within the spatial range considered here. Data collected within the Mid-Atlantic Bottlenose Dolphin Catalog will be included in further analyses to address some of the issues considered here.

Q: What were the sources of entanglement for estuarine stocks? What fisheries?

A: There are no observed fishery takes in estuarine areas. The most reported fishery interactions with bottlenose dolphins within estuarine areas are crab pots and recreational gear. Recreational gear interactions are well-documented along the Gulf Coast and East Coast in terms of either entanglement in fishing line or ingestion of recreational gear, but we cannot always associate this with mortality. The TRT process is concerned with the commercial fishery interactions, and the main interactions observed in estuarine waters due to commercial fisheries are from crab pots. We cannot put a magnitude on the amount of crab pot interactions because the fishery is not systematically observed.

Q: Fishermen in South Carolina and Georgia have a problem with dolphins tipping pots, so they used inverted bait wells and dolphins moved up the coast. North Carolina has more blue crab pots than any other state, and there may be only two interactions in all North Carolina.

A: Yes, we do not constantly hear about crab pot entanglements. But, if there are 10,000 pots and 1 interaction in every 100 – that is a lot of

interactions. However, we cannot systematically estimate the total number of interactions because we hear of these haphazardly and the fishery is not observed. This issue is important especially in estuarine stocks with small populations.

Q: Where is the NNCES stock in January-February?

A: Tags on animals tagged in Pamlico Sound stopped working by January, so there are no available data on those animals. The gray dots are animals tagged in Beaufort during November, and we are currently assuming that they are the NNCES. There are photo-ID data that confirm that assumption. We will be working to confirm that Pamlico Sound summer animals move out to the coast in the winter.

Q: Is the boundary between northern and southern stocks Beaufort?

A: No. Some NNCES animals have been documented to move south of Cape Lookout to the New River during at least part of the year. There is summer overlap around Beaufort and no evidence that the SNCEs go into the main portion of Pamlico Sound during the summer. In winter the two estuarine stocks seem separated with the SNCEs occurring in waters from the New River south to the North Carolina/South Carolina border.

#### **IV. Presentation: Evaluation of Bias in Estimating Bycatch Rates**

Marjorie Rossman, Northeast Fisheries Science Center, provided preliminary information from a study that evaluates the degree of bias present in gillnet bycatch estimates as a result of using different units of effort that can be used to estimate bycatch. To see this presentation go to materials provided for the webinar at: <http://www.keystone.org/BDTRT/>

Study Objective: How do other units of effort compare to kept tons in terms of accurately estimating bycatch mortality? Does bias exist? What is the magnitude of bias? How does observer coverage impact the magnitude of bias?

- NEFSC compared harbor porpoise and coastal bottlenose dolphin bycatch with six different units of effort. A two part approach was used to investigate potential bias: 1) Linear relationships (takes versus different units of effort); and 2) Re-sampled (bootstrapped) NEFOP data.
- The units of effort evaluated included: trips, hauls, kept tons (presently being used to estimate bycatch), soak duration, gear length, and the product of soak duration and gear length (kilometer hours).

Data Used:

- Harbor porpoise data from 1999-2007; stratified by region and included 191 observed takes in the Northeast and 44 observed takes in mid-Atlantic
- Coastal bottlenose dolphin data from 1996-2006 (1996-2000 were modified to reflect implementation of BDTRP); data stratified by management unit and included three takes in the Summer Northern North Carolina Unit and six takes in the Winter-Mixed Unit

#### Methods I (Linear relationship):

- P-values from permutation tests and linear regressions were used to show strength of linear relationships between the different units of effort and coastal bottlenose dolphins and harbor porpoise, respectively.
- Preliminary results show a significant relationship between takes of harbor porpoise and all units of effort evaluated (including landings). For bottlenose dolphins, no significant relationships were present; however, it is likely that the coastal bottlenose dolphin bycatch data were too sparse to accurately evaluate linear relationships.

#### Methods II (Evaluating Bias using Re-sampling):

- NEFOP data were used as the population or “universe” of commercial gillnet effort in the fishery; coverage levels ranging from 1, 2, 3, 5 and 10-50 or 100 % of hauls were randomly selected from each universe and resampled 1,000 times; mean and (median) bycatch mortality estimate and associated CV's were generated for each coverage level; bias was evaluated as the mean relative difference between estimated mean mortality and the ‘true’ observed mortality.
- Preliminary results for bottlenose dolphin in the Summer Northern North Carolina management unit show bias with all effort variables between 1-2% coverage with bias decreasing around 3% sampling. However, more recent results show that bias cannot be evaluated for coastal bottlenose dolphins until coverage reaches 30% when there is at least a 50% chance of observing a take from the universe used in the analysis.
- More recent results show, in general, all units of effort were equally biased (all produced similar estimates) with more bias present at smaller sample sizes. However, the relative frequency of observed bycatch had an effect on minimum sample size required to evaluate bias, magnitude of bias at smaller sample sizes, and precision of mortality estimates.
- Preliminary results showed that precision for the mortality estimates used to evaluate bias are much lower for coastal bottlenose dolphins than harbor porpoise due to the difference in sample sizes for these two species. However, the preliminary CV's were not corrected for finite populations (in other words, this analysis treated the Northeast

Observer Program data as the total "universe" or population of gillnet effort and bycatch in the fishery). Therefore, if the population is known it is a finite population. If more than 10% of the finite population is sampled, a correction factor should be applied to reduce the variance at higher sampling levels (Cochrane 1977). After applying the finite population correction factor to the CV's preliminary results showed that CV's are at an acceptable level (0.30) between 10-20% coverage and 50-60% for harbor porpoise and coastal bottlenose dolphins, respectively. As a result, bias could not be evaluated in this analysis with reasonable certainty for coastal bottlenose dolphins at the lower (<30%) coverage levels. Furthermore, it is important to note that the coverage levels described are dependent on the input data set used for the purpose of this analysis (to evaluate statistical bias in mortality estimates using different units of effort). Hence, the aforementioned coverage levels can not be translated into the real fishery where real or 'true' total bycatch and effort is greater than the 'universe' described above. The purpose of the CV's shown in the presentation was to demonstrate the uncertainty in the mortality estimates that were generated to evaluate statistical bias; not to estimate the true total mortality in the gillnet fisheries.

#### Next Steps:

- Final results will be presented as a poster at the International Fisheries Observer and Monitoring Conference in Portland, Maine in July and at the next BDTRT meeting anticipated to convene in September of this year.

#### *Questions and comments from participants*

- Q: Any idea why in this bottlenose dolphin case, the bias seems unidirectional? Why is the bias always the same at 1%--always overestimating?
- A: Further investigation showed that the results at 1% coverage were due just to chance. Additional analysis shows that bias can be either positive or negative at the lower coverage levels. These results are not reliable because the chance of observing a take from the universe used in the resampling exercise is less than 50% until coverage reaches 30%. The uncertainty in the mortality estimates at the lower coverage levels is also demonstrated by the very high CV's (540%-90%).
- Q: Should we expect that with 1% observer coverage that we are likely to have a positive bias?
- A: If the frequency of take continues to be rare, then it seems we will be overestimating at lower sample sizes. It is just random variability at 1% where the magnitude of bias is larger due to extreme values in the right-hand tail of the distribution. The mean statistic is biased in this case and

would be more accurate to present the median bias at the lower coverage levels. If you use the median then results show that we are under-estimating mortality equally regardless of the unit of effort used. See the comment to question #1 above.

Q: Three takes in hauls with landing data?

A: There were a total of three takes in the Northern North Carolina 'universe'. The Northern North Carolina universe included 846 haul; six takes in the Winter Mixed 'universe' which included 5,300 hauls. The hauls used in both bottlenose dolphin universes reflect current fishing practices only, yes.

## **V. Update: Gear Research** *Andy Read*

### *Pingers in Spanish mackerel gillnet fishery*

Andy Read provided information on the pinger trial conducted in northern North Carolina during the summer. The purpose was to see if the gear was feasible for use in the Spanish mackerel gillnet fishing industry, not to test for bycatch reduction. The trial used pingers similar to those used in Maine for the HPTRP designed to be in the floatline of gillnets. Four fishermen were provided active and passive pingers, and observers on their vessels recorded 375 sets spanning the entire Spanish mackerel fishery season from May to November. There was no significant catch difference between the nets with active and control pingers. There were fewer dolphin depredation instances observed with active pingers, but pingers did not eliminate depredation. There seemed to be more diversions of dolphins around nets with active pingers. One bottlenose dolphin entangled in gillnet gear with an inactive pinger, and it was released unharmed.

A questionnaire, distributed at the end of the season to fishermen involved in the trial, asked if pingers worked and if there were any concerns with their use. Fishermen suggested that the pingers were easy to use and did not affect operations. Fishermen also suggested that pingers did not completely deter or prevent dolphin/net interactions, which matched the results found by researchers. Fishermen indicated they would voluntarily buy pingers if the pingers completely eliminated the depredation.

Bottlenose dolphins are not the only predators eating target species, but they are the only ones that are affected by the pingers. Other predator species unaffected by pingers include rays.

The hope is to conduct a second trial this season using a new pinger with a different combination of frequency and source level to improve effectiveness. Duke University is currently working with the pinger manufacturer in developing a higher frequency and slightly higher source level to test this summer.

## **VI. Update: Relevant Fisheries – Spiny Dogfish, NC Beach Seine** *Red Munden*

To see materials provided for this update, go to: <http://www.keystone.org/BDTRT/>

### *Spiny Dogfish*

- In North Carolina, the 18-day spiny dogfish fishing season opened on January 1, 2009 with a 3000 lb trip limit for Spiny Dogfish at 16% of the 8 million lb quota, which was 1.2 million pounds for North Carolina; quota was exceeded by 32,000 lbs and will have to be repaid next year. The current 16% quota allocated to North Carolina is 10% of the historic fishery landings in the state.
- There were a surprising number of vessels this year; forty-one vessels landed spiny dogfish; and up to 10 dealers purchasing dogfish and shipping to New England.
- Local fish dealers intended to set up a processing plant but the quota was taken before they could build it.
- Unaware of any bottlenose dolphin takes observed
- Atlantic States Marine Commission will increase quota to 12 mil pounds next year, which will allow a quota of 1.9 million pounds to NC (minus the over-quota amount from this year)

### *North Carolina Beach Seine*

- Atlantic Ocean Striped bass can only be harvested in state waters since NMFS closed federal waters. The fishery managed in state waters by NCDMF with one-third of quota allocated to traditional beach seine fishery; one-third to gillnet fishery; and one-third to trawls.
- Striped bass fishery opened/closed by NCDMF proclamation. For the beach seine portion of the fishery, proclamation included information defining a more traditional beach seine, such as webbing material (no monofilament), net length, mesh size, and twine size.
- Fisherman bought gear reflecting the new requirements for harvesting striped bass via beach seine, but unsure how many rigged up to participate. The striped bass are not showing up in state waters now, so NCDMF extended the beach seine season until the end of March. Also unsure if this new beach seine definition with multi-filament webbing will be critical in reducing Bottlenose Dolphin takes.

### *Questions and comments from participants*

*Comment:* Regarding the spiny dogfish fishery, the Mid-Atlantic Fishery Management Council sent NMFS a letter with a recommendation to continue monitoring the fishery, especially in New Jersey, due to increased quotas and trip limits in federal waters. NMFS has two potential options for monitoring: (1) observer coverage; and (2) comparing stranding data across years. There are funding limitations associated with observer coverage, however, we currently have 12 observer sea days allocated for gillnet coverage in New Jersey during the month of May when the new dogfish fishing season opens.

*Q:* Did more fishermen have beach seine gear but couldn't use it because of lack of fish?

*A:* Fishermen purchased the multifilament webbing for the beach seine gear and were prepared to go, but did not given the lack of fish. There were various attempts to locate fish all to no avail.

*Q:* Both the striped bass beach seine and gillnet striped bass fishing season were opened at the same time this year. Because of this, did you see beach seiners not purchasing the same gear and just switching to gillnetting?

*A:* Fishermen complained when seasons opened at the same time. Fishermen had both types of gear and it turned out that gillnet fishery was more profitable.

*Q:* What happened to North Carolina's rule for designating only use of one gear type (i.e., beach seine, gillnet, or trawl) for the Atlantic Ocean striped bass fishery?

*A:* The rule was suspended because it was problematic to get permits to that many people. The state could not limit the number of permits and everyone with a commercial license could get the permit, resulting in low shares. It remains a work in progress. Technically the rule continues in place and the commission has to suspend it every time it meets. There have been recommendations to require some sort of limited access but the state lacks statutory authority to enforce it.

## **VII. Next Meeting Planning and Discussion**

Stacey Horstman indicated the next in person meeting would likely be held during the last week in August or sometime in the first two weeks in September. Potential meeting location is the Wilmington, NC area. The Keystone Center will solicit schedule availability in the coming weeks.<sup>1</sup> Stock structure and mortality estimates will be finalized and reviewed by the ASRG prior to the next in person

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<sup>1</sup> Note that the meeting is currently scheduled for September 9-10, 2009 in Wilmington, North Carolina

meeting. Therefore, the main purpose of the next meeting is to review the final data changes and modifications that will need to be made to the BDTRP based on these changes.

Participants on the call offered several comments and questions in response to the updates provided regarding stock structure and mortality estimates. Among the key questions and comments:

Q: Have we seen any spike in mortality of which we should be aware?

A: No observed takes since fall 2006.

Q: Could you give us a percentage of observer coverage other than the “pulse” coverage?

A: Hovering 2-3 percent with a spike of 5% a couple of times. The spike was a temporal spike in coverage.<sup>2</sup>

Q: Anything more on abundance? Fishermen are reporting, anecdotally, that there seem to be a lot of dolphins around.

A: No hard information to rely upon as no survey work since 2005. From aerial survey data, there appears to be an important relationship between water temperature and bottlenose dolphin distribution. It will be interesting to see if there is a water temperature change in the last few years and evidence of a corresponding shift in the population.

Q: Given what NMFS has to report on resource limitations, does that make it difficult to support the President’s budget? On one hand, Congress is asking you report your progress and whether more resources are needed. Given that you have to support the President’s budget can you advocate for more resources? How get around quandary—be honest with Congress and support the President?

A: Yes, we support the President’s budget. That does not mean, however, NMFS must say it can do impossible things with potential limited resources. Congress can ask our Agency about its operations and intentions for funds, and we can and do answer honestly about what can and cannot be done under certain budget conditions. However, we cannot lobby Congress for more funding.

Q: Does it help to have resource need documents if NMFS wants to succeed in implementing mandates?

A: The National Bycatch Report has a section requesting needs/costs of implementation. NMFS is having an internal TRT workshop in May and will bring up the question of documented resource needs.

Q: Do we really need to meet if no abundance estimates and no mortality?

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<sup>2</sup> NMFS later reported in the call that observer coverage was roughly 4%



- A: We are likely to meet. Need to revisit the plan and it will have been over two years since our last in person meeting. Stock structure and mortality estimates will be completed and reviewed by the ASRG prior to the next meeting. These changes are likely to dictate BDTRP changes, and we will need to meet to look at the complete and final information and how to move forward given changes.

**Appendix 1: Roll Call**Members/Alternate:

Vicki Cornish  
Tara Cox  
Greg DiDomenico  
Steve Early  
Lewis Gillingham  
Mike Greco  
Elizabeth Griffin  
Jessica Koelsch  
Bill McClellan  
Melissa Andersen

Laura Engleby  
Red Munden  
Melissa Paine  
Andy Read  
Mark Swingle  
Chris Walker  
Randy Wells  
Rob West  
Nina Young  
Sharon Young

NOAA/NMFS:

Barbie Byrd  
Stacey Horstman  
Trip Kolkmeyer  
Amanda Johnson  
David Bernhart  
Glenn Salvador

Debra Palka  
Lance Garrison  
Patty Rosel  
Margery Rossman

## Appendix 2: Agenda

*Conference Call 1:00-4:00 p.m. EDT  
March 24, 2009*

### Call Purpose

*The primary call purpose is to provide updates to the BDTRT and begin planning for the next full BDTRT meeting*

### Agenda

- |      |  |                       |
|------|--|-----------------------|
| 1:00 | Roll Call  | TKC                   |
| 1:05 | Agenda Review/Discussion Guidelines  | TKC                   |
| 1:10 | Update: GAO Final Report on TRTs   | M. Anderson           |
| 1:20 | Summary of March 2008 Webinar Key Outcomes and Update on Accomplishments   | TKC/S. Horstman       |
| 1:40 | Update: Stock Structure Revisions  | L. Garrison           |
|      | <ul style="list-style-type: none"> <li>• Presentation: Update on stock structure revisions and challenges associated with the Western North Atlantic coastal stock and new Bays, Sounds, and Estuarine stocks</li> <li>• Next steps for finalizing stock structure</li> <li>• Data and information needs for next BDTRT meeting</li> <li>• Clarifying questions</li> </ul> |                       |
| 2:30 | Measure of Fishing Effort  | M. Rossman            |
| 2:50 | Update: Gear Research  |                       |
|      | <ul style="list-style-type: none"> <li>• Modified leaders in Virginia Pound Net</li> <li>• Pingers in Spanish mackerel gillnet fishery</li> </ul>  | M. Swingle<br>A. Read |
| 3:10 | Update: Relevant Fisheries   | R. Munden             |
|      | <ul style="list-style-type: none"> <li>• Spiny dogfish</li> <li>• North Carolina beach seine</li> </ul>  |                       |
| 3:30 | Discussion   | All                   |
|      | <ul style="list-style-type: none"> <li>• Management issues and potential implications to be considered for the next BDTRT meeting</li> <li>• Timeframe for next BDTRT meeting</li> </ul>   |                       |
| 4:00 | Summary and Closing  | TKC/S. Horstman       |