



Mid-Atlantic Fishery Management Council
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Michael P. Luisi, Chairman | P. Weston Townsend, Vice Chairman
Christopher M. Moore, Ph.D., Executive Director

MEMORANDUM

Date: March 23, 2022
To: Chris Moore, Executive Director
From: Karson Coutre, Staff
Subject: Sea Turtle Bycatch in Trawl Fisheries

On Wednesday, April 6th, NOAA Protected Resources staff will provide an update and solicit Council feedback on their recent public outreach efforts related to sea turtle bycatch and gear research in trawl fisheries in the Greater Atlantic Region. NOAA Protected Resources staff conducted virtual stakeholder webinars and call-in days throughout February and March to gather information from the fishing industry and other stakeholder groups to inform any future bycatch mitigation measures. In addition, NMFS staff presented and sought feedback at a joint meeting of the Summer Flounder, Scup, Black Sea Bass and Mackerel, Squid, Butterfish Advisory Panels held via webinar on February 15, 2022.

Materials listed below are provide for the Council's discussion of this agenda item.

- 1) NOAA Protected Resources Overview of Sea Turtle Bycatch.
- 2) Summary of February 15, 2022 Joint Advisory Panel meeting.
- 3) AP comment received February 15, 2022, recirculating a relevant letter dated August, 10, 2009.

SEA TURTLE BYCATCH IN TRAWL FISHERIES

SUMMARY OF ISSUES

APRIL 2022

BACKGROUND: As we [presented](#) at the December Council meeting, fisheries bycatch is a primary threat to sea turtles in our region, and the highest trawl bycatch occurs in the Atlantic croaker, longfin squid, and summer flounder fisheries. We have tested gear (e.g., Turtle Excluder Devices (TEDs)) and operational (e.g., data loggers to monitor tow durations) modifications in these three fisheries. While there is still research to be completed, the results indicate that these modifications can be effective at reducing the severity of interactions with sea turtles and are operationally feasible.

UPDATES SINCE DECEMBER PRESENTATION: Decomposed sea turtles were removed from the numbers presented at the December Council meeting. As a result, the total number of observed sea turtle interactions in trawl gear from 2000 to 2019 was 264, with 95 occurring on croaker trips (identified by the top landed species by haul weight), 50 on longfin squid trips and 45 on summer flounder trips.

POTENTIAL MITIGATION: While final operational feasibility research is completed, NMFS is gathering early input and information from the public, fishing industry, and other stakeholder groups to inform any future measures. Given the results of previous research, we are considering:

- 1) Requiring TEDs with a large escape opening in trawls that target Atlantic croaker, weakfish, and longfin squid to reduce injury and mortality resulting from accidental capture in these fisheries;
- 2) Moving the current northern boundary of the TED requirements in the summer flounder fishery (i.e., the Summer Flounder Fishery-Sea Turtle Protection Area) to a point farther north to more comprehensively address capture in this fishery;
- 3) Amending the TED requirements for the summer flounder fishery to require a larger escape opening to allow the release of larger hard-shelled and leatherback sea turtles; and
- 4) Adding an option requiring limited tow durations, if feasible and enforceable, in lieu of TEDs in these fisheries to provide flexibility to the fisheries.

SUMMARY OF INFORMATION RECEIVED: Council/Commission meetings, public webinars, call in days, and additional public responses resulted in approximately 30 questions and 30 comments. Feedback consisted of questions on the sea turtle bycatch estimates, observer data, and research. Comments were received on the geographical range of the measures, tow duration issues, fishery definitions, and economic impacts. Several information needs were also identified related to additional data and research.

ADDITIONAL INFORMATION: Background information (including the latest trawl bycatch estimate), descriptions of TED designs, research results, type of information needed, recordings of the public webinars, and how to comment can be found at our [website](#).



Summer Flounder, Scup, and Black Sea Bass & Mackerel, Squid, and Butterfish Advisory Panel Meeting Summary

Tuesday, February 15, 2022, 2:30 pm - 4:00 pm

Advisory Panel Members in Attendance: George Topping, Bonnie Brady, Eleanor Bochenek, Harvey Yenkinson, Kenny Hejducek, Greg DiDomenico, Katie Almeida, Meghan Lapp, Pam Lyons Gromen, Mike Waine, Gerry O'Neill, Jeff Kaelin, Bob Pride, Joseph DeVito, Mike Plaia, Daniel Farnham, Jr., Emerson Hasbrouck, Jeff Deem.

Other Attendees: Carrie Upite (NMFS Staff), Jeff Gearhart (NMFS Staff), Karson Coutre (Council Staff), Kiley Dancy (Council Staff), Peter Hughes (Council), Adam Nowalsky (Council), Sonny Gwin (Council), Chris Batsavage (Council), Carly Bari (NMFS Staff), Colleen Coogan (NMFS Staff), Henry Milliken (NMFS Staff), Emily Keiley (NMFS Staff), Jason Didden (Council Staff), Wes Townsend (Council), Dan Farnham (Council), Alissa Wilson, Nick, JB, JN.

Summary:

The Advisory Panels met via webinar and reviewed a presentation from Carrie Upite (NMFS Protected Resources Division) on sea turtle trawl bycatch issues and the ongoing research on mitigation measures in the Greater Atlantic Region. Advisors provided the following questions and comments; however, these do not represent consensus statements.

Several advisors asked clarifying questions regarding the sea turtle bycatch estimate including how the estimate was derived and how the estimate compares to the observed sea turtle interactions. NMFS staff described the estimation process and responded that they would share the bycatch estimate paper which describes the methodology and data in more detail.

Multiple advisors were interested in more information about how many turtles were released alive versus dead and details of the calculated mortality rate estimate. Advisors felt this information is important when determining the scale of the issue. An advisor added that the bycatch estimate of 571 interactions across all trawl fisheries is lower than the number of turtles that are found cold stunned each year and felt it was misleading to say that trawl fisheries are the largest threat to sea turtles. Because of this, they added that it is unfair to impose draconian measures on the trawl fleet.

Advisors also asked how fisheries were defined and commented that haul weight by species was not always the best way to define a fishery. One advisor asked whether different trawl net types were analyzed and if there were different turtle bycatch estimates depending on the net. NMFS

staff responded that different net types within the bottom otter trawl category were not analyzed separately but this was something that could be explored further. Another advisor requested more specific regional information and the percent of trips where sea turtle takes have been observed, noting that in the past there had been an estimate of 5 takes for an area with no observed takes. NMFS staff noted that they would send this advisor the paper that provides regional information.

An advisor asked whether interactions with sea turtles were different during the day versus at night. This advisor also asked about sea turtle behavior when in front of the trawl net and whether sea turtles get herded in or try to escape. NMFS staff indicated day versus night interactions had not been looked at yet. Staff also noted that sea turtle behavior can differ based on the size of the net, for example with larger nets turtles are already in the back of the net when they realize it and therefore cannot escape. Furthermore, in lower visibility turtles will not react as quickly.

One advisor requested that more information be provided to the public about the health and regional status of the different sea turtle populations and how the TEDs have worked in fisheries where they have been required. They asked if there are success stories that can inform current decision making. This advisor also suggested that flexible TEDs may be the preferred modification out of the different TED options. They noted that they were not aware that there was a current croaker fishery, however linking summer flounder and squid for this analysis would make sense because often the same boats fish for both species. They added that getting the word out to commercial fishermen needed to be prioritized and felt that this issue was coming as a surprise after not being discussed for several years. Another advisor noted that comments to NMFS regarding sea turtle bycatch issues were sent in 2009 on behalf of the Garden State Seafood Association and they never received a response. While rulemaking never occurred at that time for a variety of reasons, it was discussed that this letter was sent to Council staff recently and would be sent to NMFS staff for their review since many of the comments are still relevant.

One advisor voiced concern over interactions with sea turtles in recreational fisheries due to vessel strikes or fishing hook and line injuries and asked whether these were monitored and mitigated. They noted that the large number of sport boats moving at high speeds in the summer may be a source of sea turtle interactions that needs to be documented. NMFS Staff responded that there are different reporting mechanisms for when these interactions occur; for example, stranding networks record information about the condition of turtles when they wash up on beaches. Watercraft injuries are a major concern and there are efforts underway to minimize those injuries and interactions.

An advisor asked whether cameras could be used on the gear so that if an operator sees a turtle go in the net they can tow for a shorter amount of time. NMFS staff responded that this had been looked at in the past. There were some water clarity issues and it is a high-cost monitoring system to obtain a live feed of the net camera. Another advisor commented that in the squid fishery there is no option to compensate for reductions in catch by targeting another species on the same trip using squid mesh, therefore reductions would be a direct economic loss.

Overall, several advisors agreed that in order to have meaningful solutions, more information needs to be provided to the public such as the number of strandings, other sources of mortality such as vessel strikes, observed takes by region, and population assessments for the sea turtle species of concern. Another advisor reiterated that the trawl data needs to be analyzed at a finer scale to determine if there are gear configurations or net types where turtle interactions are not occurring.



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August 10, 2009

Alexis Gutierrez
Office of Protected Resources
NMFS
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Silver Spring, MD 20910
Sent Via Fax (301-713-4060)

Comments on: Sea Turtle Strategy for Conservation (See NMFS Scoping Document 5/11/2009) and Intent to Prepare an Environmental Impact Statement (EIS) See 74 FR 21627 and 31411

Dear Ms. Gutierrez:

Please accept these comments on behalf of the Garden State Seafood Association (GSSA) regarding sea turtle conservation issues and the intent to prepare an environmental impact statement. *See* 74 FR 21627. The GSSA is comprised of commercial fishermen, shore-based seafood processors, commercial dock facilities, seafood markets and restaurants, and various NJ-based commercial fishing industry support businesses. The GSSA membership represents every major port in the State, harvesting approximately \$125 million dollars worth of seafood products annually, supporting 2000 jobs, and contributing significantly to the coastal economy of the State of New Jersey.

The GSSA intends to evaluate the degree to which sea turtle gear mitigation measures are required in the Mid-Atlantic within the context of the NMFS' framework and evaluation process and the various mortality components in the most recent Biological Opinion ("BiOp") for the Summer Flounder, Scup and Black Sea Bass Fishery Management Plan (*See* Draft FLS/SCP/BSB BiOp, 12-06-01, NMFS). NMFS initiated the draft information framework and criteria for a sea turtle "Strategy" in 2004 (*See* 69 FR 30627). The criteria

for evaluating gear types cited in the framework were to be used to develop future conservation measures. The Agency recognized back in 2004 that it “must gather and evaluate comprehensive information on gear types, fisheries practices, sea turtle bycatch, and existing management regulations.” *See* 69 FR 30628

The Agency also denoted “first priority” characteristics for gear types that would be evaluated for sea turtle bycatch. These characteristics included but were not limited to frequent documented interactions, frequent and expected interactions, high rates of interactions and mortality, and lack of effective management measures that benefit sea turtles. *See* 69 FR 30631.

The 2001 BiOp conclusion that the 2002 FLS/SCP/BSB fisheries could adversely affect loggerhead sea turtles was based solely on the fact that 1,303 commercial permits were being afforded a total combined quota increase of 8.5 million pounds for a total harvest of 38.86 million pounds in 2002 (BiOp, pp.3-6). In addition, the BiOp indicated that sea turtle mortality attributed to boat strikes and ingestion of marine debris was considerably greater than the numbers involving entanglement in fishing gear (BiOp, p.44). It is unclear whether these numbers are for leatherback turtles only or if the numbers are similar for loggerheads. Each of these elements must be considered in the context of the Agency’s current approach to developing gear-based mitigation measures in the Mid-Atlantic region.

In developing our comments on the DEIS Notice/Strategy Scoping Document the GSSA reviewed the agency’s supporting documentation on the Estimated Average Annual Bycatch Estimate (NMFS 2008); Loggerhead 5-Year Review: Summary and Evaluation (NMFS 2007); the Assessment of the loggerhead Turtle Population conducted by the Turtle Expert Working Group (NMFS 2009); and all related FR notices dating back to 2004. All of these documents must be considered in the context of the analyses used to determine the need for gear mitigation measures in the Mid-Atlantic region.

The following comments are offered on behalf of the GSSA membership.

In NMFS 2008, the agency indicates (p.4) that “bycatch estimates are provided only for 1996-2004.” The GSSA believes that more recent data (than 1996-1999) would more accurately reflect current fishing operations and the potential for turtle interactions. NERO requested that data from 2000-2004 be used to calculate the average annual bycatch of loggerhead turtles by FMP group versus the 1996-2004 data set (p.25). Despite the NERO request, it appears to the GSSA that while the 2000-2004 VTR data were used to estimate the commercial harvest – the actual bycatch rate applied to the current harvest level was generated from 1994-2004, if not 1996-2004 data (pp.26-28).

The Agency justifies including the old data by suggesting that pooling all years and averaging the estimated accounts for changes in the fishery. Unfortunately, this still assumes a consistent trend across 9-years. We do not agree this assumption is valid and recommend the agency utilize 2000-2004 data to estimate both the rate and harvest for

purposes of extrapolation. We also note that the average percent observer coverage for Mid-Atlantic bottom otter trawl gear during 2000-2004 was 4 times higher compared to 1996-1999 (Table 1a; p.13).

We also remained very concerned about the grouping of categorical variables into two “latitude zone” categories. It is unclear exactly how these Temporal Alternatives were chosen to be where they are and how these lines relate to NMFS’ statistical area reporting in terms of effort and catch. Further, it is unclear how such broad groupings permit the agency to determine appropriate and specific time/area requirements.

Despite our misgivings regarding data periods and subjective latitude zones one thing is abundantly clear – the best scientific information indicates relatively few turtle interactions (8 total, and 12% of observed interactions, p.8) are observed north of 38 degrees North latitude. In fact, during 2000-2004 approximately just 3 interactions that occurred in the summer flounder fishery appear to have been observed north of this location (Table 3, p.17). The percentage of observed days fished in Lat 39.41 was 75.3%, fully 3 times higher than the percentage of days covered in Lat 34.38 (p.14).

The agency concluded in the 2001 BiOp that the projected 8.5 million pound quota increases from 30.36 to 38.86 million pounds for the 2002 FLS/SCP/BSB could adversely affect loggerhead sea turtles (BiOp 2001, pp.3-6). The quota increase and subsequent effort increase was the sole reason for concern and the updated Biological Opinion. Those same concerns do not reflect the current status of the fishery. In the 2008 fishing year the total FLS/SCP/BSB quota was 16.586 million pounds. The MAFMC preferred alternatives for the 2009 quota total 17.21 million pounds. These current quota levels (and the associated effort) are less than half of what they were in 2002 when the agency raised concerns regarding bottom trawl gear and sea turtles.

The Agency is contemplating trawl gear mitigation measures and time/area requirements but has yet to put the trawl interactions in the context of other sources of interactions and mortality such as boat strikes, disease and interactions in recreational fisheries. In NMFS 2007, the agency indicates as many as 20.5% of loggerhead strandings show signs of vessel interactions.

In Florida during some years the State reports as much as 60% of strandings show signs of vessel interaction. A long term monitoring program coordinated by the Florida Fish and Wildlife Commission reported that during 1980-2005 over 4,000 stranded sea turtles were documented (500 live; 3,500 dead) with propeller wounds accounting for 30% of all known strandings during the period.

Disease is also causing turtle mortality. In NMFS 2009 the agency reported increased numbers of disease-related strandings during 1995 through 2005, especially in years 1995, 1996, 2000, 2001, 2002, 2003 and 2005 (pp. 81-82). In northeast Florida during 2006 about 100 loggerheads were impacted by a single epizootic event.

Recent data (2000-2008) on sea turtle interactions (strandings and MRFSS data) and annual take estimates related to recreational fishing have not been provided to the MAFMC or the public by the NMFS. The agency was required pursuant to the 2005 Biological Opinion (See BiOp 2005, pp.96-97) to implement a survey by 2006 in the recreational and charterboat sectors to evaluate and estimate takes in recreational fisheries. Strandings data for the same period should also be available. Before accepting sole responsibility for gear-based mitigation changes in commercial fisheries, especially summer flounder, the GSSA requests the agency produce the annual and total estimates for recreational fishing gear.

The sea turtle sightings from aerial and shipboard surveys contained in NMFS 2009 (pp. 43-46) indicate a paucity of loggerhead sea turtles north of the VA-NC border during the fall and winter seasons, but especially during the winter (January-March). Therefore we do not support additional TED regulations north of the VA-NC border.

The following recommendations are offered on behalf of the GSSA.

1) The scoping document (p.5) contains the statement that “NMFS is responsible for in-water conservation of sea turtles. The principal anthropogenic in-water threat to sea turtles is bycatch in fisheries.” NMFS makes this statement and proposes to regulate only commercial trawl gear without any regard or quantification of other in-water sources of mortality for which they are also responsible -- namely vessel and sport/charter fishing interactions. These interactions are known to occur, NMFS is required to log this information in the stranding database, and NMFS is required to evaluate and estimate takes in the sport/charter fishing sectors. None of this information has been made available or considered in the context of relative sources of mortality. This information must be made available and thoroughly considered before the agency can justify moving ahead with only commercial gear-based regulations.

2) NMFS provides trawl gear bycatch estimates for 2000-2004 using a rate estimated from data collected during 1996-2004. The GSSA believes that more recent data (younger than 1999) would more accurately reflect current fishing operations and the potential for turtle interactions in the fishery as it now exists. We recommend the Agency utilize the most recently available scientific information (2000-2004) to estimate both the rate and harvest for purposes of extrapolation. We also note that the average percent observer coverage for Mid-Atlantic bottom otter trawl gear during 2000-2004 was 4 times higher compared to 1996-1999.

3) Based on the bycatch model's predictive limitations, changes in fishing effort and quotas, and using the most current data to apply a commonsense measure of what is reasonable and prudent to the alternatives from a cost/benefit perspective -- we recommend the summer flounder fishery be addressed only. We also recommend abandoning Trawl Phases Two and Three. We do not support any of the Fisheries Alternatives offered in the Options Document and request the Agency conduct bycatch percentages analysis by directed fishery and not by Fishery Management Plan.

4) Regarding the summer flounder trawl fishery, before the agency initiates rulemaking we request a re-examination of the relevant catch and rate estimate using 2000-2004 data; a more precise latitudinal explanation of where takes have occurred and are predicted to occur (rather than “subjective latitude zones”) vis a vis the current Summer Flounder Fishery Sea Turtle Protection Area and the proposed latitude time frame designations. We do not support any of the Temporal Alternatives and believe an additional analysis should be conducted. The Agency should consider a different set of spatial and temporal options for the current TED regulations already in place in the summer flounder fishery. We feel strongly that an expansion of the current TED temporal requirements already in place in the Sea Turtle Protection Area (STPA), would address known incidental takes. Furthermore, an adjustment of the current northern boundary of the STPA could easily reduce the risk to sea turtle entanglements by moving that boundary to the VA/ NC border.

5) For all trawl fisheries other than shrimp and summer flounder, it is unclear what type of TED testing has been conducted. We note that relatively extensive work was conducted in the shrimp and flounder fisheries. The GSSA is very concerned that “generic” trawl gear TED requirements for these other fisheries that have not experimented with TEDs during normal fishing operations could lead to catch reductions and problems with no little/benefit to turtles. We request an accurate accounting of the results of all on-the-water research that NMFS has conducted in these other fisheries that are targeted for TED requirements in the various phases of the Scoping Document.

6) Finally, we question the justification for this entire action. NMFS’s own assumptions are the existence of a constant 9-year trend in both effort and sea turtle bycatch, and that the primary reason for the 2001 BiOp was due to a substantial quota and subsequent trawl gear effort increase to 38.86 million pounds in 2002 combined summer flounder, scup and black sea bass quotas. Based on these NMFS assumptions, how does NMFS justify requiring TED’s in all Mid-Atlantic bottom trawl fisheries if the 2008 quotas were 16.586 million pounds?

On behalf of the GSSA I thank you for the opportunity to comment on the Sea Turtle Scoping Document and Strategy for fisheries in the Mid-Atlantic region. We look forward to continuing our participation in this process.

Sincerely,

Gregory DiDomenico
Executive Director
Garden State Seafood Association

Rick Marks
Hoffman, Silver, Gilman & Blasco

cc: James Lecky, Chief, Office of Protected Resources
Dan Furlong, Executive Director, MAFMC
Rick Robbins, Chairman, MAFMC

Literature Cited

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