



Atlantic States Marine Fisheries Commission

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Spud Woodward (GA), Chair

Joe Cimino (NJ), Vice-Chair

Robert E. Beal, Executive Director

Sustainable and Cooperative Management of Atlantic Coastal Fisheries

MEMORANDUM

Revised April 27, 2022

TO: Commissioners; Proxies; Atlantic Coastal Cooperative Statistics Program Coordinating Council; Atlantic Menhaden Management Board; Atlantic Striped Bass Management Board; Coastal Pelagics Management Board; Coastal Sharks Management Board; Executive Committee; Horseshoe Crab Management Board; ISFMP Policy Board; Law Enforcement Committee; Mid-Atlantic Fishery Management Council; Sciaenids Management Board; Shad and River Herring Management Board

FROM: Robert E. Beal *REB*
Executive Director

RE: ASMFC Spring Meeting: May 2-5, 2022 (TA 22-007)

The Atlantic States Marine Fisheries Commission's Spring Meeting will be held May 2-5, 2022 at **The Westin Crystal City** (Telephone: 703.486.1111), located at 1800 Richmond Highway, Arlington, VA. The room block is now closed; if you need assistance reserving a room, please contact Cindy Robertson at Crobertson@asmfc.org.

This will be a hybrid meeting (both in-person and remote) to allow for remote participation by Commissioners and interested stakeholders (meeting process details are provided later in this memo). The Law Enforcement Committee meeting will not be available remotely. Meeting materials are available on the Commission website at <http://www.asmfc.org/home/2022-spring-meeting>. Supplemental materials will be posted to the website on Wednesday, April 27, 2022.

The agenda is subject to change. The agenda reflects the current estimate of time required for scheduled Board meetings. The Commission may adjust this agenda in accordance with the actual duration of Board meetings. Interested parties should anticipate Boards starting earlier or later than indicated herein.

Board meeting proceedings will be broadcast daily via webinar beginning Monday, May 2 at 10 a.m. and continuing daily until the conclusion of the meeting (expected to be 12:30 p.m.) on Thursday, May 5. To register for the webinar, please go to <https://attendee.gotowebinar.com/register/6673024452273516048> (Webinar ID: 243-937-907). If you are joining the webinar but will not be using voice over Internet protocol (VoIP), you may also call in at +1 (562) 247-8422, access code 616-672-938. A PIN will be provided to you after joining the webinar; see [webinar instructions](#) for details on how to receive the PIN. For those who will not be joining the webinar but would like to listen in to the audio portion only, press the # key when asked for a PIN.

In terms of meeting process, Board chairs will ask both in-person and virtual Board members if they wish to speak. In-person members can simply raise their hands at the meeting without logging on to the webinar, while virtual members will raise their hands on the webinar. The Chair will work with staff to compile the list of speakers, balancing the flow of questions/comments between in-person and virtual attendees. The same process will be used for the public and interested stakeholders when the Board Chair provides an opportunity for public comment. Depending upon the number of commenters, the Board Chair will decide how to allocate the available time on the agenda (typically 10 minutes) to the number of people who want to speak.

Each day, the webinar will begin 15 minutes prior to the start of the first meeting so that people can troubleshoot any connectivity or audio issues they may encounter. If you are having issues with the webinar (connecting to or audio related issues), please contact Chris Jacobs at 703.842.0790.

We look forward to seeing you at the Spring Meeting. If the staff or I can provide any further assistance to you, please call us at 703.842.0740.

Enclosures: Final Agenda, Hotel Directions, TA 22-007, and Travel Reimbursement Guidelines



Atlantic States Marine Fisheries Commission

2022 Spring Meeting

May 2-5, 2022

Public Comment Guidelines

To provide a fair opportunity for public input, the ISFMP Policy Board has approved the following guidelines for use at management board meetings:

For issues that are not on the agenda, management boards will continue to provide opportunity to the public to bring matters of concern to the board's attention at the start of each board meeting. Board chairs will ask members of the public to raise their hands to let the chair know they would like to speak. Depending upon the number of commenters, the board chair will decide how to allocate the available time on the agenda (typically 10 minutes) to the number of people who want to speak.

For topics that are on the agenda, but have not gone out for public comment, board chairs will provide limited opportunity for comment, taking into account the time allotted on the agenda for the topic. Chairs will have flexibility in deciding how to allocate comment opportunities; this could include hearing one comment in favor and one in opposition until the chair is satisfied further comment will not provide additional insight to the board.

For agenda action items that have already gone out for public comment, it is the Policy Board's intent to end the occasional practice of allowing extensive and lengthy public comments. Currently, board chairs have the discretion to decide what public comment to allow in these circumstances.

In addition, the following timeline has been established for the **submission of written comment for issues for which the Commission has NOT established a specific public comment period** (i.e., in response to proposed management action).

1. Comments received three weeks prior to the start of a meeting week (April 11) have been included in the briefing materials.
2. Comments received by 5:00 PM on Tuesday, April 26th will be included in supplemental materials.
3. Comments received by 10:00 AM on Friday, April 29th will be distributed electronically to Commissioners/Board members prior to the meeting.

The submitted comments must clearly indicate the commenter's expectation from the ASMFC staff regarding distribution. As with other public comment, it will be accepted via mail and email.

Final Agenda

The agenda is subject to change. The agenda reflects the current estimate of time required for scheduled Board meetings. The Commission may adjust this agenda in accordance with the actual duration of Board meetings. Interested parties should anticipate Boards starting earlier or later than indicated herein.

Monday, May 2

10:00 a.m. – Noon

Atlantic Coastal Cooperative Statistics Program Coordinating Council

Partners: ASMFC, Connecticut, Delaware, District of Columbia, Florida, Georgia, MAFMC, Maine, Maryland, Massachusetts, NEFMC, New Hampshire, New Jersey, New York, NMFS, North Carolina, Pennsylvania, PRFC, Rhode Island, SAFMC, South Carolina, USFWS, Virginia

Chair: Carmichael

Staff: White

1. Welcome/Call to Order (*J. Carmichael*)
2. Council Consent
 - Approval of Agenda
 - Approval of Proceedings from October 2021
3. Public Comment
4. Consider Funding Decision Document and FY2023 Request for Proposals (*J. Simpson*) **Action**
5. Committee Updates
 - 2022 Data Accountability Report – Completed
 - Status Update on 2023-2027 Atlantic Recreational Implementation Plan
 - Status Update on Methodology for Logbook Estimates of Catch and Effort with Dockside Validation
6. Program Updates
7. Other Business/Adjourn

Noon – 1:00 p.m.

Lunch Break

1:00 – 2:00 p.m.

Coastal Pelagics Management Board

Member States: Rhode Island, New York, New Jersey, Delaware, Maryland, Virginia, North Carolina, South Carolina, Georgia, Florida

Other Members: NMFS, PRFC, SAFMC

Chair: Cimino

Other Participants: Giuliano, Hodge

Staff: Franke

1. Welcome/Call to Order (*J. Cimino*)
2. Board Consent
 - Approval of Agenda
 - Approval of Proceedings from October 2020
3. Public Comment
4. Consider Quota Block Timeframe for Cobia **Possible Final Action**
 - Technical Committee Report (*A. Giuliano*)
 - Consider Changes to the Three-Year Quota Block for Harvest Specifications for Cobia (*J. Cimino*)
5. Updates on Spanish Mackerel Stock Assessment Timeline and Federal Waters Management (*E. Franke*)
6. Elect Vice-Chair **Action**
7. Other Business/Adjourn

2:15 – 4:15 p.m.

Sciaenids Management Board

Member States: New Jersey, Delaware, Maryland, Virginia, North Carolina, South Carolina, Georgia, Florida

Other Members: NMFS, PRFC

Chair: Batsavage

Other Participants: Franco, Giuliano, Paramore, Rickabaugh, Hodge, Ballenger, Schueller

Staff: Bauer

1. Welcome/Call to Order (*C. Batsavage*)
2. Board Consent
 - Approval of Agenda
 - Approval of Proceedings from August 2021
3. Public Comment
4. Consider Red Drum Simulation Assessment and Peer Review Report **Action**
 - Presentation of Red Drum Simulation Assessment Report (*J. Ballanger*)
 - Presentation of Peer Review Panel Report (*A. Schueller*)
5. Progress Update on Black Drum Benchmark Stock Assessment (*J. Kipp*)
6. Review and Populate Advisory Panel Membership (*T. Berger*) **Action**
7. Other Business/Adjourn

Tuesday, May 3

8:30 – 10:00 a.m.

Horseshoe Crab Management Board

Member States: Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Delaware, Maryland, Virginia, North Carolina, South Carolina, Georgia, Florida

Other Members: NMFS, PRFC, USFWS

Chair: Clark

Other Participants: Ameal, Couch

Staff: Starks

1. Welcome/Call to Order (*J. Clark*)
2. Board Consent
 - Approval of Agenda
 - Approval of Proceedings from January 2022
3. Public Comment
4. Progress Update on Draft Addendum VIII (*C. Starks*)
 - Review Recommendations on Options for Implementing the Adaptive Resource Management Framework Revision
 - Provide Guidance to the Plan Development Team
5. Update on PDT Review of Biomedical Mortality and Best Management Practices for Biomedical Collections (*C. Starks*)
6. Other Business/Adjourn

10:15 – 11:45 a.m.

Shad and River Herring Management Board

Member States: Maine, New Hampshire, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Pennsylvania, Delaware, Maryland, Virginia, North Carolina, South Carolina, Georgia, Florida

Other Members: DC, NMFS, PRFC, USFWS

Other Participants: Neilan, Warner

Chair: Fegley

Staff: Boyle

1. Welcome/Call to Order (*L. Fegley*)
2. Board Consent
 - Approval of Agenda
 - Approval of Proceedings from October 2021
3. Public Comment
4. Consider American Shad Habitat Plans/Updates (*B. Neilan*) **Action**
 - Connecticut River
 - Merrimack River
5. Consider American Shad and River Herring Sustainable Fishery Management Plan Updates (*B. Neilan*) **Action**
 - New York (River Herring)
 - Delaware River Basin Cooperative (American Shad)
6. Consider Technical Committee Report from Board Task on Prioritizing Systems for Shad Recovery and Developing Inventory of Available Data to Support Development of Fish Passage Criteria (*B. Neilan*)
7. Consider Fishery Management Plan Review and State Compliance for 2020 Fishing Year (*J. Boyle*) **Action**
8. Update on the 2023 River Herring Benchmark Stock Assessment
 - Discuss Stock Assessment Subcommittee Membership (*K. Drew*)
9. Review and Populate Advisory Panel Membership (*T. Berger*) **Action**
10. Other Business/Adjourn

11:45 a.m. – 12:45 p.m. Lunch Break

12:45 – 5:15 p.m.

Atlantic Menhaden Management Board

Member States: Maine, New Hampshire, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Pennsylvania, Delaware, Maryland, Virginia, North Carolina, South Carolina, Georgia, Florida

Other Members: NMFS, PRFC, USFWS

Chair: Bell

Other Participants: Newhard, Kersey

Staff: Boyle

1. Welcome/Call to Order (*M. Bell*)
2. Board Consent
 - Approval of Agenda
 - Approval of Proceedings from January 2022
3. Public Comment
4. 2021 Landings Data Update (*J. Boyle*)

5. Consider Draft Addendum I to Amendment 3 for Public Comment (*T. Kerns*) **Action**
 - Review 2020 Landings Proposal
6. Other Business/Adjourn

6:30 – 8:00 p.m. 2020 and 2021 Annual Awards of Excellence Reception

Wednesday, May 4

8:00 – 10:00 a.m. Executive Committee

Breakfast will be available at 7:30 a.m. *(A portion of this meeting will be a closed session for Committee members and Commissioners only)*

Members: Abbott, Bell, Burgess, Cimino, Clark, Davis, Fegley, Gilmore, Keliher, Kuhn, McKiernan, McNamee, Miller, Patterson, Plumlee, Rawls, Woodward

Chair: Woodward

Staff: Leach

1. Welcome/Call to Order (*S. Woodward*)
2. Committee Consent
 - Approval of Agenda
 - Approval of Meeting Summary from January 2022
3. Public Comment
4. Review and Consider Approval of the Commission Budget for Fiscal Year 2023 (*L. Leach*) **Action**
5. Consider Changes to the Commission’s Appeals Policy (*R. Beal*)
6. Discuss Use of *De Minimis* in Interstate Fishery Management Plans (*T. Kerns*)
7. Conduct the Executive Director’s Performance Review (**Closed Session**)
8. Other Business/Adjourn

8:30 a.m. – 3:00 p.m. Law Enforcement Committee *(A portion of this meeting will be a closed session for the LEC Coordinator and Committee members only)*

1 hour lunch break

Included

Members: Aydelotte, Beal, Blanchard, Brown, Burrell, Couch, Gadomski, Hettenbach, Hodge, Hogan, Kersey, Moore, Moran, Noel, Pearce, Ray, Rogers, Seltzer, Snellbaker, Thomas, Walker, Williams

Chair: Snellbaker

Staff: Kerns

1. Call to Order/Roll Call of the LEC Representatives (*J. Snellbaker*)
2. Approval of Agenda
3. Public Comment
4. Introductions
5. Review Enforceability Guidelines and Consider Updates, as Needed
6. Review and Discuss ASMFC Species
 - Trackers in the American Lobster Fishery
 - Atlantic Herring: Update on Regulation Changes in Federal Waters
7. State Agency Reports
8. Elect Vice-Chair **Action**
9. Review and Discuss Ongoing Enforcement Activities (**Closed Session**)
10. Other Business/Adjourn

10:15 – 11:15 a.m.

Coastal Sharks Management Board

Member States: Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Delaware, Maryland, Virginia, North Carolina, South Carolina, Georgia, Florida

Other Members: NMFS

Chair: Bell

Other Participants: Willey, Thomas, Brewster-Geisz

Staff: Colson Leaning

1. Welcome/Call to Order (*M. Bell*)
2. Committee Consent
 - Approval of Agenda
 - Approval of Proceedings from October 2021
3. Public Comment
4. Consider Zero Retention Limit/Closure of the Shortfin Mako Fishery **Final Action**
 - Overview of the NOAA Fisheries Proposed Rule (*K. Brewster-Geisz*)
5. Review Convention in the International Trade in Endangered Species of Wild Fauna and Flora Proposal to List 54 Shark Species in Appendix II (*D. Colson Leaning*) **Possible Action**
6. Review and Populate Advisory Panel Membership (*T. Berger*) **Action**
7. Other Business/Adjourn

11:30 a.m. – 5:15 p.m.

Atlantic Striped Bass Management Board

1 hour lunch break included

Member States: Maine, New Hampshire, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Pennsylvania, Delaware, Maryland, Virginia, North Carolina

Other Members: DC, NMFS, PRFC, USFWS

Chair: Gary

Other Participants: Hoffman, Blanchard

Staff: Franke

1. Welcome/Call to Order (*M. Gary*)
2. Board Consent
 - Approval of Agenda
 - Approval of Proceedings from January 2022
3. Public Comment
4. Draft Amendment 7 to the Interstate Fishery Management Plan for Final Approval **Final Action**
 - Review Options and Public Comment Summary (*E. Franke*)
 - Advisory Panel Report (*E. Franke*)
 - Law Enforcement Committee Report (*K. Blanchard*)
 - Consider Final Approval of Draft Amendment 7
5. Review 2022 Stock Assessment Update Projection Scenarios (*K. Drew*)
6. Consider Next Steps for Draft Addendum VII to Amendment 6 **Possible Action**
 - *Motion from October 2021: Move to defer until May 2022 consideration by the Atlantic Striped Bass Board of Draft Addendum VII to Amendment 6 to allow further development and review of the transfer options*
7. Review and Populate Advisory Panel Membership (*T. Berger*) **Action**
8. Elect Vice-Chair **Action**
9. Other Business/Adjourn

Thursday, May 5

8:30 – 11:00 a.m.

Interstate Fisheries Management Program Policy Board

Member States: Maine, New Hampshire, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Pennsylvania, Delaware, Maryland, Virginia, North Carolina, South Carolina, Georgia, Florida

Other Members: DC, NMFS, PRFC, USFWS

Chair: Woodward

Other Participants: C. Upite

Staff: Kerns

1. Welcome/Call to Order (*S. Woodward*)
2. Board Consent
 - Approval of Agenda
 - Approval of Proceedings from January 2022
3. Public Comment
4. Executive Committee Report (*S. Woodward*)
5. Consider Changes to the Appeals Policy (*R. Beal*) **Final Action**
6. Update on Mode Split Work Group (*R. Beal*)
7. Report from *De Minimis* Work Group (*T. Kerns*) **Possible Action**
8. Update on East Coast Climate Change Scenario Planning (*T. Kerns*)
9. Committee Reports
 - Law Enforcement Committee (*T. Kerns*)
10. NOAA Report on Sea Turtle Bycatch in Trawl Fisheries (*C. Upite*)
 - Review Stakeholder Outreach on Action to Develop Bycatch Reduction Measure to Reduce Sea Turtle Takes
11. Update on MAFMC's Consideration of Re-initiating the Research Set Aside Program (*R. Beal*)
12. Review Information Related to Tautog Commercial Tagging Program (*J. Boyle*)
13. Review Noncompliance Findings (if necessary) **Action**
14. Other Business/Recess

11:00 – 11:15 a.m.

Business Session

Member States: Maine, New Hampshire, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Pennsylvania, Delaware, Maryland, Virginia, North Carolina, South Carolina, Georgia, Florida

Chair: Woodward

Staff: Beal

1. Welcome/Call to Order (*S. Woodward*)
2. Board Consent
 - Approval of Agenda
 - Approval of Proceedings from January 2022
3. Public Comment
4. Consider Approval of Amendment 7 to the Interstate Fishery Management Plan for Atlantic Striped Bass (*M. Gary*) **Final Action**
5. Consider Noncompliance Recommendations (if necessary)
6. Other Business/Adjourn

11:30 a.m. – 12:30 p.m. Interstate Fisheries Management Program Policy Board and Mid-Atlantic Fishery Management Council

Member States: Maine, New Hampshire, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Pennsylvania, Delaware, Maryland, Virginia, North Carolina, South Carolina, Georgia, Florida

Other Members: DC, NMFS, PRFC, USFWS

Chair: Woodward

Staff: Kerns

15. Reconvene with the MAFMC
16. Initial Discussion on Commission Harvest Control Rule Draft Addenda and MAFMC Framework
(*D. Colson Leaning, J. Beatty*)
17. Other Business/Adjourn

Atlantic States Marine Fisheries Commission

Horseshoe Crab Technical Committee

Call Summary

April 14, 2022

10:00 a.m. – 12:00 p.m.

TC: Jeff Brunson (SC, Chair), Natalie Ameral (RI, Vice Chair), Derek Perry (MA), Catherine Fede (NY), Jordan Zimmerman (DE), Steve Doctor (MD), Adam Kenyon (VA), Jeffrey Dobbs (NC), Chris Wright (NOAA), Joanna Burger (Rutgers)

Public/Other: Wendy Walsh (DBETC Chair), Ben Levitan (Earthjustice), Carol Amato, Jessica Lindgren (Blue Star Strategies), Jessica Ponder, David Mizrahi

Commission Staff: Caitlin Starks

1. Review Board Task on Biomedical Mortality Threshold and Best Management Practices

In October 2021, the Board assigned the following task to the Plan Development Team (PDT): review the threshold for biomedical use to develop biological based options for the threshold and to develop options for action when the threshold is exceeded; also, review the best management practices (BMPs) for handling biomedical catch and suggest options for updating and implementing BMPs. The PDT tasked the Technical Committee with reviewing available information to address this task and recommending potential methods for developing biologically based options for the biomedical mortality threshold. They also requested the TC review the BMPs and recommend any updates.

To provide context for the TC discussion staff presented background information on the biomedical mortality threshold, available biomedical mortality data, and BMPs. The 1998 Fishery Management Plan established a biomedical crab mortality threshold of 57,000 crabs. If exceeded, the FMP states “the Commission would reevaluate potential restrictions on horseshoe crab harvest by the biomedical industry.” With little information provided in the document, the group assumed this 57,000 was derived from a 15% estimate of mortality of the average 200,000-250,000 biomedical crabs collected per year at the time (~37,000) with a 20,000 crab buffer ($37,000 + 20,000 = 57,000$). The management threshold has been exceeded in 12 of the last 13 years but the management Board has determined that a management response is not warranted due to relatively low levels of biomedical mortality compared to bait.

States with biomedical harvest (past and present, varying timeframes) include MA, RI, NY, NJ, DE, MD, VA, and SC. The biomedical mortality rate used in the benchmark assessment was 15% based on a meta-analysis of 12 studies, with a 95% confidence interval of 4%-30%. The proportion of biomedical mortality to total mortality has increased over time, but biomedical remains under 20% of the total coastwide mortality (bait + biomedical). The sum of annual coastwide biomedical mortality and bait harvest has never exceeded the coastwide ASMFC annual bait quota.

Biomedical mortality was incorporated into the Catch Multiple Survey Analysis model that is used to produce horseshoe crab abundance estimates for the Delaware Bay stock. Biomedical losses are therefore accounted for in the revised Adaptive Resource Management framework.

In 2011, an Ad-hoc Work Group formed by the Board produced a document of BMPs for the collection, bleeding, and release of crabs collected for biomedical purposes. These BMPs are recommended but not required by the FMP. The document also recommends dual use of crabs when possible (crabs harvested under a bait permit, “rented” by the biomedical facility, then returned to the bait market).

2. Discussion on Methods for Biologically Based Biomedical Threshold

The TC noted that in the 2019 stock assessment coastwide biomedical data (because regional data are confidential) were considered as losses from the Delaware Bay population model. The CMSA was run with and without the biomedical and discard estimates to evaluate the contribution of these other sources of mortality. The levels of biomedical mortality through the terminal year of the assessment (2017) did not have a negative impact on the Delaware Bay stock abundance. Population estimates were largely unaffected by the estimated biomedical or discard numbers. Omitting biomedical harvest resulted in a decrease of fishing mortality (F) by a small number that did not affect stock status. These results indicate that the current biomedical mortality levels are sustainable for the Delaware Bay stock, however, the TC emphasized that the Delaware Bay stock is relatively large compared to the other regional stocks; therefore other regions may be more at risk of impacts from biomedical mortality if they have smaller population sizes.

Another concern raised by the TC was that the proportion of females versus males included in the biomedical mortalities could have an impact. The coastwide data indicate that in recent years more males than females have been bled, but there is no regulation in place regarding the sex ratio of biomedical crabs.

The TC agreed that given the lack of population estimates for the coast and all regions except for the Delaware Bay, establishing a mortality threshold based on biological reference points is not possible on the coastwide level. The only population for which this could be possible is the Delaware Bay. Therefore, the TC recommended running population simulations for the Delaware Bay to quantify risk associated with different levels of biomedical mortality and biomedical sex ratios. This information could be used to evaluate potential biomedical thresholds for the coast using the Delaware Bay population as a proxy, with the caveat that without regional biological reference points or the ability to evaluate region-specific biomedical data due to confidentiality laws, the impact of biomedical mortality will likely vary at the regional and state scales. Staff will work with the Stock Assessment Subcommittee to produce the requested analysis for the TC to review at a future meeting.

The TC also noted the following information:

- Derek Perry noted that MA expects to see an expansion of the biomedical fishery in the near future
- Adam Kenyon noted that VA has permitted a new biomedical facility to bleed crabs, and they are permitted to collect 120,000-180,000 crabs annually.

3. Discussion on BMPs for Biomedical Crabs

The TC reviewed the 2011 BMP document. They noted that there are differences in the biomedical permit requirements among the states, and in how the harvesters and biomedical facilities operate (fishing methods, holding, “rent-a-crab” program, etc.). Because of these differences the BMPs are meant to be adaptable to each industry. Some TC members also mentioned that many of the BMPs are difficult to enforce.

One TC member suggested that the seasonality of collections should be considered in the BMPs. In particular, some states restrict collections before June 7th to ensure more spawning occurs while migratory shorebirds are still in the area.

Staff suggested that the TC provide information on their state biomedical permit requirements, as well as any suggested revisions, new research, and research recommendations that could provide information to improve the BMPs. Staff sent a questionnaire to each TC member to collect this information and will present it to the TC at the next meeting.

4. Other Business

Moving forward, Natalie Ameral will take on the role as Chair of the TC. At the next meeting the TC will elect a Vice Chair.



Atlantic States Marine Fisheries Commission

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MEMORANDUM

TO: Atlantic Menhaden Management Board
FROM: Atlantic Menhaden Plan Development Team
DATE: April 19, 2022
SUBJECT: Recommendations on Draft Addendum I to Amendment 3

At the 2022 Winter Meeting, the Atlantic Menhaden Management Board provided guidance to the Plan Development Team (PDT) in further developing draft Addendum I to Amendment 3. The addendum considers changes to commercial allocations, the episodic event set aside (EESA) program, and the incidental catch and small-scale fisheries (IC/SSF) provision. This memo summarizes the PDT recommendations for the Board's consideration in approving the document for public comment.

Each section below includes justification for modifying and/or eliminating specific options. A decision tree for selecting state allocations is included in the Appendix. The topics are interconnected such that decisions made for one topic will impact alternatives under other topics. Because of this interconnectedness, the Board should carefully consider removal of some options to reduce complexity of the document. This will allow the public to effectively provide feedback to the Board before final action. Currently there are 48 total options in the Draft Addendum (27 combinations of allocation options; 5 options for the EESA program; and 16 options for the IC/SSF provision). **The PDT is very concerned with the number of options in the document, particularly under allocation and the IC/SSF sections, having 27 allocation options will make it very difficult for the public to discern the differences in the allocation approaches and provide comment on the options. In addition, such a large number of allocations options will be challenging to present to the public in a two hour public hearing, particularly to clearly demonstrate the differences between the options.**

2020 Commercial Landings Adjustments

In March, additional information was brought to the PDT regarding whether 2020 landings were representative due to the impacts of COVID-19, specifically the PDT heard a proposal from the State of Virginia to allow for adjusted 2020 landings data to account for fishing days lost to the COVID-19 pandemic. The PDT was concerned all states' fisheries may have been impacted by COVID-19, the extent of which is unknown and possibly variable; therefore, if the Board was going to allow for adjusted data, then all states should have the opportunity to bring forward proposals.

The Virginia proposal presented the PDT with evidence that 2020 landings are atypical of the recent time series. Not all states experienced impacts to their fisheries in 2020, and the impacts were disproportional across states. The PDT notes that addressing this issue could set a precedent for using 2020 data for allocation as well as set a precedent for not using it. The Menhaden Board may consider recommending the ISFMP Policy Board consider the utility of 2020 data in management decisions. The Policy Board could consider an overarching policy for this issue, although such a policy may be difficult due to the differing degree of data collected for each species' harvest.

The PDT developed the following four options to be considered by the Board, along with their potential impacts on the timeline of approval for Draft Addendum I, so the PDT can make the necessary changes to the Draft Addendum and all allocation options. **Of the options below, the PDT prefers option 4.** Table 1 provides information on the positive and negative impacts of the four options.

1. Status Quo: Continue to use data through 2020 and not allow for any changes to previously validated data. This would have no impact on the draft Addendum's timeline and implementation for 2023. Based on discussions with the PDT members who reviewed their states' 2020 data, the PDT has determined it is an abnormal year for more than one state.
2. Allow for adjustments to the 2020 data. All states would have the opportunity to present proposals for adjustments to their 2020 landings due to impacts from COVID-19. This would delay the Addendum process and could impact the ability to implement by 2023. The PDT is concerned about the precedent this would set for other species and that the process to develop standards to review proposals and the time to draft and review proposals would be a complicated and time-consuming process.
3. Remove 2020 data from the time series. Because there are concerns 2020 data was impacted by COVID-19, it could be dropped from the time series the Board is using to set menhaden allocations. This could delay the draft Addendum by one meeting cycle but the PDT does not anticipate this would delay implementation in 2023. Final action could be taken on the document at the Commission's Annual meeting. By removing 2020 data, the PDT is concerned the data time series will not reflect recent fishing activity. The most recent year would be 2019, which would be impacting management in 2023.
4. Remove 2020 data and add 2021 to the time series. This could delay the draft Addendum by one meeting cycle but the PDT does not anticipate it would delay implementation in 2023. By adding 2021 to the time series, it would alleviate the concerns the PDT has with only dropping 2020 data by allowing an additional year of data in the analysis that better reflects current fishing activity. This option is the preferred option of the PDT.

Table 1. Description of impacts of the four landing adjustment options

Option	Pros	Cons	Timeline impact	Other Considerations
Option 1: Status quo	Continuous time series	COVID-19 impacts to landings and effort	None: Data have been validated	
Option 2: Allow for changes to 2020	Could allow for adjustments to address COVID-19 impacts	Potential for a difficult process; A consistent process must be developed for submission, review and approval; Could be difficult to justify adjustments due to data limitations; Significant administrative burden for analysis and review	Significant Delay: Will not be able to implement in 2023	What body will determine if a rationale is a justified reason for change; In the end, changes may not accurately reflect the impact of COVID-19 because the availability of fish, as a moving target, makes this very difficult
Option 3: Drop 2020 data	Removes the uncertainty of COVID-19 impacted data; The data through 2019 has been validated	Not reflective of the most current data for changes in availability and effort that have occurred with newly available fish; Ending in 2019 does not address the goal of the addendum to reflect the current distribution of fish and the fishery	Delay of 1 Board meeting cycle to allow the PDT to make changes to the draft addendum; data has been validated; Implementation in 2023 possible	
Option 4: Drop 2020 & add 2021	More reflective of the most current data for changes in availability and effort that have occurred with newly available fish; Minimizes the COVID-19 impacts to the time series; Prevents the need for a cumbersome process of state-by-state 2020 landing adjustments		Delay of 1 Board meeting cycle to allow 2021 data to be validated and allow the PDT to make changes to the draft addendum; Implementation in 2023 possible	

Commercial Allocations

3.1.1 Fixed Minimum Allocations

Options B. and C. Two- and Three-tiered Fixed Minimum: The tiered fixed minimum approaches were originally drafted to provide the Board with alternatives that reduced the amount of TAC that was reserved for minimum allocations, while still allowing for states to acquire the necessary allocation through whichever time series would be chosen in 3.1.2. After the Board reassigned states to different tiers in the three-tiered option in February, the difference between the sum of minimums between Options B and C is now 0.02%, essentially creating no distinguishable difference between the two options. In addition, the PDT notes in altering the three-tier option the Board moved a few states from the lowest tier (0.01%) to the middle tier (0.25%), but those same states remain in the lowest tier (0.01%) in the two-tiered option. These states were placed in the lowest tier (0.01%) in both options because the PDT determined these minimums, combined with IC/SSF options in the addendum, would be sufficient to cover the minimal amount of landings these states have landed over the past 12 years. Therefore the PDT supports the original configuration of the options. **The PDT recommends either restoring the original draft of the options or removing one of the new fixed minimum approaches approved in February (option 3.1.1 B or C).** The PDT is concerned the Board has misunderstood the overall outcome of the fixed minimum approach. Under the original options there would be very few instances of lower tiered states exceeding their allocations at the end of the allocation process. However, those states that come up short (very minimal) would be “made whole” under the additional provisions (IC/SSF). The states that come up short do not have high volume landings thus would be able to land using IC/SSF, even if the IC/SSF were restricted (by gear type) through this addendum.

3.1.2 Timeframe for Allocating Remaining Available TAC

Option 4. Moving Average: In response to Board concerns about the types of landings that can affect the moving average (i.e. episodic and IC/SSF), the PDT split Option 4 into three sub-options, 4A-C. The PDT has drafted two new options based on Board feedback.

Option 4A represents the original moving average method that includes all catch types, including EESA and IC/SSF landings, to most accurately reflect the distribution of the stock and effort. **The PDT continues to support the retention of this option as it is the most responsive to the current fishery, but if the TAC is exceeded it could impact states that use their full quota.**

Option 4B only uses landings under or equal to the TAC in the moving average calculation. This option recognizes the importance of IC/SSF and EESA landings in a state’s total landings when there is “extra” fish available, such as when a state does not achieve its allocation due to low availability or low market demands. However, it does not reward states for activities that could

lead to overfishing (exceeding the TAC) and/or damage existing markets in other states (shifting quota from states that fully utilize their allocation). Proportional allocation of IC/SSF and EESA landings among participating states eliminates concerns about differences in timing/availability of when “extra” fish might be available to those states (e.g. as compared to “first come, first served”). **The PDT supports the retention of this option as it adds protections for states that fully utilize their fishery, but it is not as representative of the current fishery as Option 4A.**

Option 4C would eliminate EESA and IC/SSF landings from the calculation of the moving average, thereby limiting the average to landings acquired under a state’s annual allocation or through an official quota transfer. As written, this option no longer achieves the purpose of the moving average by inaccurately representing a state’s landings. Using such a limited amount of data in the calculation would not allow for movement of quota in a meaningful way and would not meet the goal and objective of the addendum. In addition, the PDT sees the three year timeframe of the average as sufficient in eliminating the outsized influence of a single year and preventing a race to fish. **The PDT recommends keeping the original version of this option and removing option 4C.**

3.1.2 Timeframe for Allocating Remaining Available TAC

Option 3B. Weighted Allocation Timeframe #2 (2009-2012 and 2017-2020): **The PDT recommends removal of timeframe #2.** The Board requested two versions of the weighted allocation timeframe be developed in October 2021. While the state allocations vary slightly between the two versions, they are conceptually the same. By having two options, it increases the possible state allocation options by four options for a total of 27 options. **The PDT reiterates its recommendation that Timeframe #2 be removed because the same objective is achieved with Timeframe #1, which utilizes the original time series plus the most recent three years.**

Episodic Event Set Aside Program

3.2.1 Increase the Set-Aside

Option 2. Increase up to 5%: For clarity, options related to the timing of establishing the Set-Aside have become sub-options under this option only. These sub-options would allow the Board to decide how the set aside could be adjusted, either as a static value during final action of Addendum I, or dynamically during specification proceedings.

3.3.5 Allow access to EESA at <100% state allocation

This topic is included in the Addendum in the Incidental Catch and Small-Scale Fisheries section due to the decision making process for addressing small-scale purse seines. This option can only

be pursued in the current version of the addendum if either Option 2 (no purse seines) or 3 (non-directed gears only) are chosen under Permitted Gear Types, or if option 4 (elimination of the IC/SSF provision) is selected under Timing of IC/SSF provision.

The PDT notes allowing states to participate in EESA when they have five percent of their allocation remaining may lead to fairness/equity concerns as five percent of one state's allocation may be significantly different than that of another state. Timing and availability of fish among the northern states could exacerbate this issue with one state having access to EESA while still having quota remaining, while another state has not yet had the fish migrate into their state waters and thus has not yet had the opportunity to harvest their quota and opt into EESA. Additionally, several other options in this management document, including revised commercial allocations and increasing the percentage allocated to the EESA, could alleviate the need for this option. **The PDT recommends this option be removed.**

Incidental Catch and Small-Scale Fisheries Provisions

3.3.4 Catch Accounting of the IC/SSF Provision

The PDT recommends all options under section 3.3.4 IC/SSF be removed due to the complexity of catch accounting based on preliminary landings and the timing of when accountability would be implemented. Options 2-4 would need to operate under a considerable time lag as landings are not finalized until the fall of the following year. Under Option 2, the Board will be unable to make timely decisions and take action until two years after the management trigger is tripped (e.g., if landings have exceeded the cap more than 10% in 2022, the Board would take action in 2023, and implementation would occur for the 2024 fishing season). Under Options 3 and 4, the proposed adjustments to the TAC or set-aside would similarly not be addressed until two years after an overage occurred (e.g., an overage in 2022 would be applied in 2024). Additionally, Option 3 could result in more latent quota if the set-aside is not fully used. The Board has indicated that latent quota is an issue that should be addressed through this addendum and this option may exacerbate that issue. Finally, both Options 3 and 4 could result in overages caused by a minority of states that impact many states. If there is an overage by one or a few states in one year, it would reduce the available set-aside (Option 3) that all states could access, or potentially reduce all states quotas (Option 4). Additionally, these options could therefore potentially result in a constant overage/payback cycle, creating a new management problem. **As a whole, the PDT believes these options are not effective or efficient, and the goal of the catch accounting approach can be achieved through a combination of the reallocation alternatives and IC/SSF sub-topics (gear restrictions and trip limit). Even after editing the options in this topic based on Board direction from February, the PDT's concerns still remain and they urge the Board to remove this section entirely.**

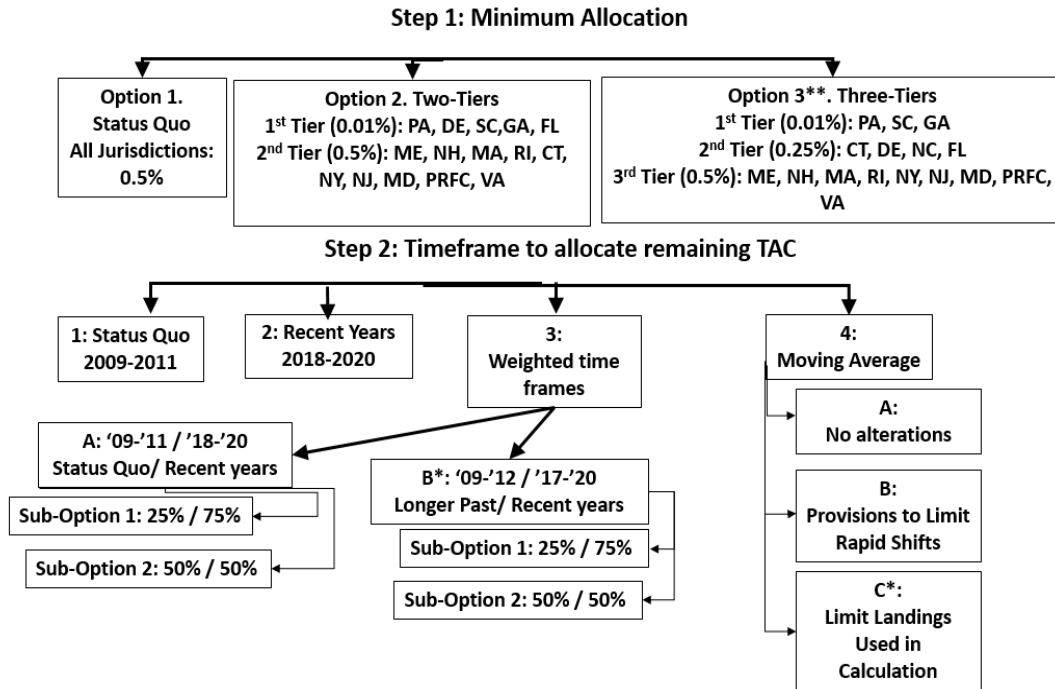
Appendix A. Decision Tree

The following provides a Decision Tree for selecting state allocations.

*The PDT recommends removing these options

**The PDT recommends either restoring the original version of this option or removing it.

Allocation Decision Tree



From: [Toni Kerns](#)
To: [Tina Berger](#)
Subject: FW: [External] UPDATE TO PUBLIC COMMENT OF PHIL ZALESK REGARDING DRAFT AMENDMENT 7 STRIPED BASS FISHERY MANAGEMENT PLAN
Date: Tuesday, April 26, 2022 2:25:25 PM
Attachments: [image001.png](#)

From: Phil Zalesak [mailto:flypax@md.metrocast.net]

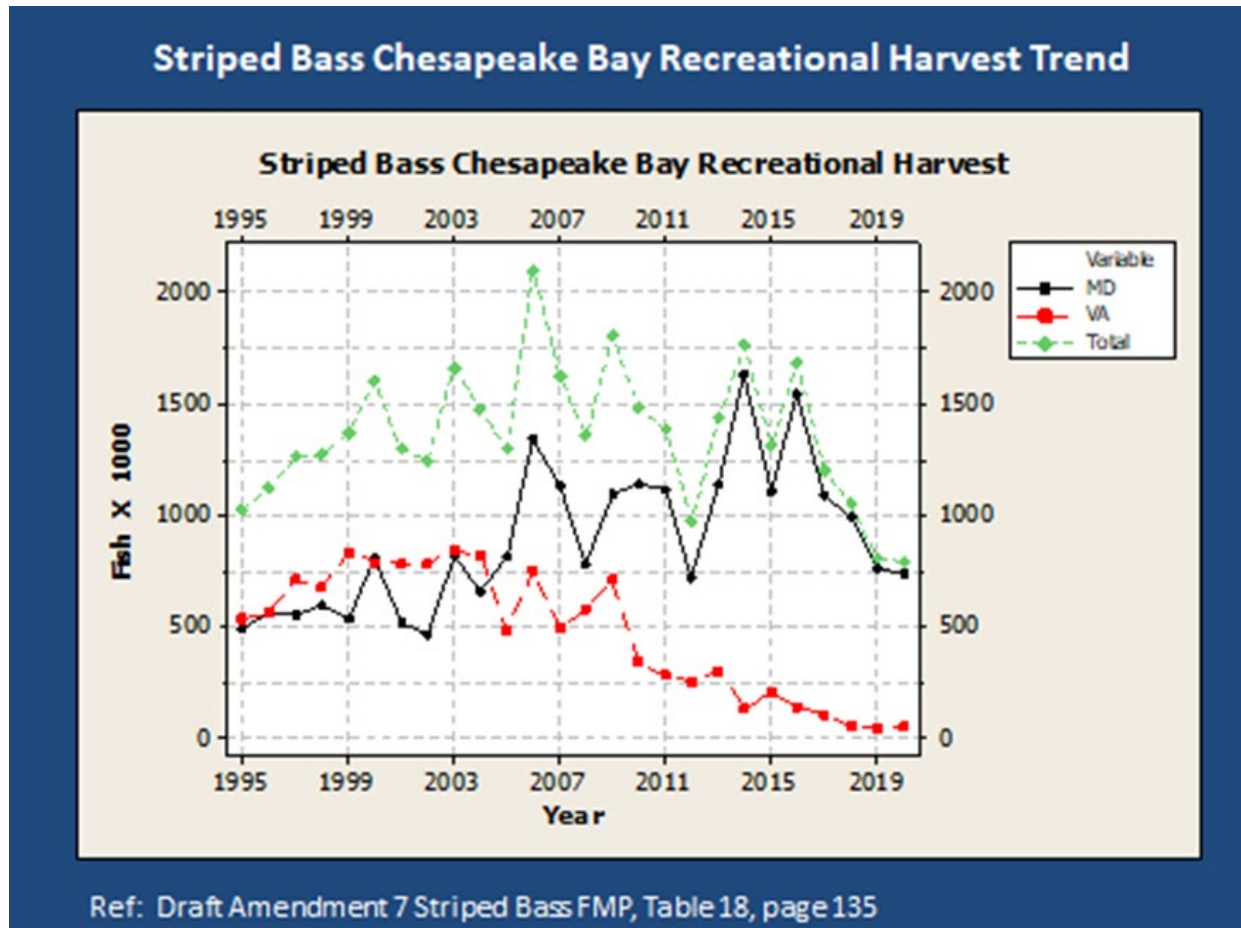
Sent: Monday, March 28, 2022 11:52 AM

To: Comments <comments@asmfc.org>

Cc: MICHAEL LUISI <michael.luisi@maryland.gov>; Colin Sweetin -GOVOffice- <colin.sweetin1@maryland.gov>; Edward Burchell <edward.burchell1@maryland.gov>; Bert Olmstead <boatman5@ymail.com>; Allen Seigel <buddyscrn@gmail.com>; Chris Linnetty <retriever@myactv.net>; Jim Cappetta <osea@comcast.net>; Kevin McMenamin <Kevin_mcmenamin@keysight.com>; Mark Kurth <rainoutroofing53@gmail.com>; Robert Fair <bfair@comcast.net>; Ron Smith <smitty3894@aol.com>; Skip Zinck <Skipzinck@comcast.net>; Stanley Cebula <stanleycebula@gmail.com>; Tom Wilkinson <Thwilkinson@comcast.net>; Mel Bell <bellm@dnr.sc.gov>; Robert Beal <Rbeal@asmfc.org>; Toni Kerns <Tkerns@asmfc.org>; Senator Jack Bailey <Jack.Bailey@senate.state.md.us>; Brian Crosby <brian.crosby@house.state.md.us>; wsmckeeper@gmail.com; steveatkinson52@verizon.net; dunnsville@gmail.com; Capt Chris Dollar <cdollar@cdollaroutdoors.com>; Jamie.RileyKolsky@washpost.com; jeannie.riccio@maryland.gov; Lenny@fishtalkmag.com; MICHAEL ACADEMIA <macademia@email.wm.edu>; noahbressman@gmail.com; DAVID SECOR <secor@umces.edu>; bdwatt@wm.edu; capletts@capgaznews.com; mpluta@shorerivers.org; josh.tulkin@mdsierra.org; PHILIP ZALESK <flypax@md.metrocast.net>
Subject: [External] UPDATE TO PUBLIC COMMENT OF PHIL ZALESK REGARDING DRAFT AMENDMENT 7 STRIPED BASS FISHERY MANAGEMENT PLAN

Atlantic States Marine Fisheries Commission Staff,

Maryland's official state fish is in poor condition. The **total recreational harvest of striped bass in the Chesapeake Bay has declined by 62% from 2006 to 2020 from 2,094,900 fish to 787,000 fish** (green line). This is due in part to overharvesting a critical forage fish, Atlantic menhaden, in Virginia waters by the last remaining industrial reduction fishery on the Atlantic Coast. Striped bass rely on Atlantic menhaden for their survival.



The Atlantic Menhaden Management Board has a special responsibility to protect predator fish such as striped bass, bluefish, and

weakfish which are dependent on Atlantic menhaden as forage fish for their survival.

The science supporting this position is in the Ecological Reference Points Stock Assessment Report dated January 2020 on page iii of http://www.asmfc.org/uploads/file/5e4c4064AtlMenhadenERPAssmt_PeerReviewReports.pdf

Here's a direct quote from an ASMFC press release of October 20, 2020:

“The 2021-2022 TAC was set based on the ecological reference points (ERPs) approved by the Board in August, and reaffirms the Board’s commitment to manage the fishery in a way that accounts for the species role as a forage fish.”

Currently the DRAFT Amendment 7 for Striped Bass fishery management plan is out for Public Comment; however, there is nothing in this document which reflects this commitment to protecting the survival of striped bass. Here's a direct quote from page 7 from that document:

“These ERPs allow ASMFC to take into account menhaden’s role as a forage fish, especially its importance to striped bass, when setting harvest limits for menhaden. However, the biological reference points for striped bass are still set using single-species modeling. ASMFC is working on refining the ERP model and improving the understanding of the role of striped bass in the ecosystem beyond the relationship with menhaden.”

The Atlantic Menhaden Management Board needs to **assess** prohibiting the commercial reduction fishing of Atlantic menhaden in the Virginia waters as soon as possible. The assessment needs to be **completed by July 15, 2022** to allow lead time for implementation in 2023 should that be necessary.

I respectfully request that you put this on the agenda for the upcoming May meeting.

Further, I request that I be given 10 minutes to address this issue at the May meeting.

Why an assessment?

There is no science which supports removing over 51,000 metric tons of Atlantic menhaden from the Virginia portion of the Chesapeake Bay . . . http://www.asmfc.org/uploads/file//5a4c02e1AtlanticMenhadenAmendment3_Nov2017.pdf, page v. This quota represents over 26% of the total allowable catch for the entire Atlantic Coast of 194,000 metric tons . . . <http://www.asmfc.org/uploads/file/5f8f5e30pr23AtlMenhaden2021-2022TAC.pdf>

If you have any questions, please contact me at your earliest convenience.

Thank you for your time and consideration.

Phil Zalesak (240-538-3626)
President
Southern Maryland Recreational Fishing Organization
www.smrfo.org
<https://www.facebook.com/groups/598428253621775/>

From: [Tom Lilly](#)
To: [Tina Berger](#); [Toni Kerns](#)
Subject: [External] Fwd: Material for menhaden board et al
Date: Tuesday, April 26, 2022 4:19:37 PM
Attachments: [Caucus- Noah B..pdf](#)
[Sierra-Shore Rivers.pdf](#)
[Fish in net February.pdf](#)

Tina and Toni this is to correct the www entries please use this one
Tom Thanks

please distribute this to the menhaden board, the menhaden PDT, the Policy Board and the CESS

Charter Section Six and Amendment 3 sect. 2.3 make it mandatory to use biological, economic and social information in preparing the addendum to be discussed May 3rd but the PDT is only using historic landings.

Preventing Omega from removing 51,000 tons of menhaden forage from the bay would increase Maryland fish and wildlife's health and abundance (n.1) and that would directly increase the amount of time Marylander's spend outdoors fishing and "ecotourism" This increased time outdoors has a proven positive impact on health and quality of life.(n.2) and in particular the mental health and character development of children. (see below)

This waste of all that menhaden can be largely prevented by requiring that fishing be in the US Atlantic zone....that is the management action every state but Virginia has taken and the one recommended by your own consultant thirteen years ago (n.3) That is the action that over a million Marylanders in the MD State Senate process on Resolution R06 have asked you to consider and decide on.(n.4) This Resolution was endorsed by the 70,000 member Maryland Sierra Club (n.5) charter captains, fishery and osprey scientists , the leadership of state wide fishing clubs and the Maryland Senators and Delegates in the Legislative Sportsmen's Caucus that represent over a million Marylanders.

Dr Sabrina Lovell of NOAA fisheries, a member of the CESS was the lead for a survey by NOAA that found Marylanders spent over eleven million days salt water fishing (2017)... for hire days fished was 211,000, private boat 3,414,000, shore 7,717,000 total 11,342,000 days. The Omega boats fish about 200 days a year but they disrupt the 11 million days Marylanders fish a year. This one company impacts 800 bay marinas, 2,000 Maryland charter and food fishermen, 10,000 plus businesses and jobs and the enjoyment of the bay by millions of Marylanders. They disrupt

the ospreys, eagles and great blue herons, the whales and porpoises. About everything that swims in the bay or flies over it is disrupted. It can be summed up in one photograph. see scan fish in net.

Osprey researcher Michael Academia from William and Mary College estimates there are 5,000 pairs of nesting ospreys on Chesapeake Bay. They are not shy of nesting very close to human activity. It is estimated that there are about thirty million encounters people have with bay nesting ospreys a year. They can observe and enjoy these ubiquitous birds soaring, hunting and feeding their young. This builds curiosity, stewardship and appreciation of nature. That is being disrupted.

The available scientific opinion is that the nesting ospreys (science's most reliable indicator of menhaden depletion) (n.6) and the striped bass spawning stock (n.7) are failing in producing enough young to sustain their iconic role in Chesapeake bay and that this failure is caused in large part by menhaden depletion (n.8) which in turn has a direct effect on their abundance. This, in turn, has a direct effect on the quality of life of Marylanders. Physical health benefits for adults yes (n.6), but much more important even brief exposure of children and adolescents to fishing skills by the family or at fish camps can begin to "develop decision making skills, promote activity, calmness and cooperation.. increase self-esteem and reduce negative behavior." (p 31)

www.parks.ca.gov/pages/795/files/benefits%20final%20online%20v6-1-05pdk . Fishing and Adolescents? see (n.9.)

We, respectfully, suggest this board and the Policy Board should think long and hard before continuing the level of factory fishing in Virginia and Chesapeake Bay. Just moving the fishing offshore would have no impact on Omega employment but it would positively affect the ecology of the bay and Atlantic and the social and economic life of Marylanders...The extent and nature of those benefits is what this board and the PRT need to determine and value in this process. Thank you
Tom Lilly menhadenproject.org Whitehaven MD (1.)

(n.1) MD DNR comment page 41 R06 testimony included in our first submission'

(n.2) California article cited 6 lines above.

(n.3) Page 3 Beal letter to Ross text at page 5-12 menhadenproject.org

(n.4) R06 text, testimony and endorsements are in our first submittal for the meeting

(n.5) Sierra endorsement above scan

- (n.6) Dr Bryan Watts mail to VA Gov Northam
page 17 menhadenproject.org
- (n.7) MD YOY results..3 years historic lows
page 13 R06 testimony and
- (n.8) CBF press release pp15-16 menhadenproject.org
menhaden in striped bass diet declined from
70% to 8%- fish malnourished
- (n.9) Dr Bryan Watts mail to Va Gov Northam
page 17 menhadenproject.org
- (n.10) Google "Benefits of Recreational Fishing in
Adolescents or www.researchgate.net/publication/301625620.
also Google "Identifying the Health and Well Being
Benefits of Recreational Fishing" , McManus etc
[https://www.researchgate.net/publication/323511734_
identifying_the_health_and_well-being_benefits_of
_recreational_fishing](https://www.researchgate.net/publication/323511734_identifying_the_health_and_well-being_benefits_of_recreational_fishing)

/

Senate Chair
JACK BAILEY
Legislative District 29
Calvert & St. Mary's Counties

Maryland Legislative Sportsmen's Caucus
James Senate Office Building, Room 402
410-841-3673 or 301-858-3673
1-800-492-7122 Ext. 3673

Senate Co-Chair
KATIE FRY HESTER
Legislative District 9



House Chair
NED CAREY
Legislative District 31A
Anne Arundel County

Maryland Legislative Sportsmen's Caucus
Lowe House Office Building, Room 161
410-841-3047 or 301-858-3047
1-800-492-7122 Ext. 3047

House Co-Chair
WENDEL BEITZEL
Legislative District 1A

The Maryland Legislative Sportsmen's Caucus

The Sportsmen's Best Friend in Annapolis

October 21, 2021

Steven G. Bowman
VMRC Chairman
Building 96, 380 Fenwick Road
Ft. Monroe, Virginia 23651

RE: "The Most Important Fish in the Sea" – IMMEDIATE ACTION

Mr. Bowman:

Each year the number of menhaden surviving the Virginia netting gauntlet to successfully reach Maryland's portion of the Chesapeake Bay is declining. This scientifically documented fact is detrimental to both avian and marine species dependent upon the "Most Important Fish in the Sea". This must change.

On October 15, 2021, a fishery biology professor from Salisbury University (Dr. Noah Bressman, PhD) formally addressed the dire menhaden issue in a statement to Maryland's DNR Secretary, et al. For the record, the Maryland's Legislative Sportsmen's Caucus within the Maryland General Assembly fully supports the position taken by Dr. Bressman and urges time-sensitive compliance by the Virginia Marine Resources Commission.

Here's what Dr. Bressman stated:

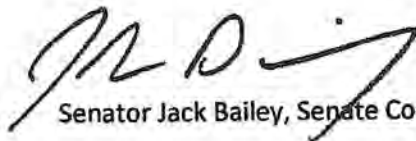
"Currently, the Virginia-based menhaden fishery is overfishing the stock of Atlantic Menhaden in and around the Chesapeake Bay, which is preventing this important forage fish from making its way into the bay and its tributaries. As an important prey item for many important species in the bay, such as Striped Bass and Osprey, the disappearance of most of the menhaden from the bay is contributing to the disappearance of many species that rely on menhaden.

Virginia has been allotted about 75% of the entire Atlantic Coast's quota, which is a drastically disproportionate amount relative to its coastline. Additionally, much of their harvesting occurs as menhaden migrate into the bay, where they enter Maryland's waters. What this essentially means is 75% of the quota for the entire Atlantic Coast is being taken in the bay or just before they enter the bay. While this may not be causing overfishing for the entire Atlantic Coast based on quotas, because all of these fish are being taken from essentially just the bay, it is having locally drastic effects on the ecosystem.

Therefore, I strongly suggest either delaying the start of the menhaden commercial season until after a significant amount of menhaden have migrated north along the Virginia coast into the Chesapeake bay (which occurs in spring/early summer), by pushing these factory fishing efforts at least 3 miles offshore into federal waters instead of along the coastline in state waters (as the fish in the state waters are most likely to migrate along the coast into the bay), pushing the commercial menhaden fishery north of the entrance to the Chesapeake bay during their migration, and/or significantly reducing the quotas of menhaden in and around the mouth of the Chesapeake bay.

These actions are necessary to ensure the long-term health of the Chesapeake Bay ecosystem and the associated fisheries and ecotourism."

What is happening to the "Most Important Fish in the Sea" is intolerable. VMRC must stand up and do what's right.


Senator Jack Bailey, Senate Co-Chair


Delegate Ned Carey, House Co-Chair



Cc:

Members, Virginia Marine Resources Commission
Dr. Noah Bressman, Salisbury University
Senator Emmett Hanger, Senate Co-Chair, Virginia Legislative Sportsmen's Caucus
Delegate James Easily Edmunds II, House Co-Chair, Virginia Legislative Sportsmen's Caucus
Jeff Crane, President, Congressional Sportsmen's Foundation
The Honorable Ann Jennings, Virginia Secretary of Natural Resources
The Honorable Jeannie H. Riccio, Maryland Secretary of Natural Resources

From: Noah Bressman noahbressman@gmail.com
Subject: Support for Action on Menhaden
Date: Oct 15, 2021 at 10:36:49 AM
To: jeannie.riccio@maryland.gov, bill.anderson@maryland.gov,
lynn.fegley@maryland.gov
Bcc: foragematters@aol.com

Dear Secretary Riccio and DNR Menhaden Delegates,

As a Fish Biology Professor at Salisbury University with multiple collaborations with the MD DNR, former nominee to the Mid-Atlantic Fisheries Management Council, an avid angler, science communicator, and concerned citizen of Maryland, I write to offer my support for action on menhaden in and around the Chesapeake Bay. Currently, the Virginia-based menhaden fishery is overfishing the stock of Atlantic Menhaden in and around the Chesapeake Bay, which is preventing this important forage fish from making its way into the bay and its tributaries. As an important prey item for many important species in the bay, such as Striped Bass and Osprey, the disappearance of most of the menhaden from the bay is contributing to the disappearance of the many species that rely on menhaden.

Currently, Virginia has been allotted about 75% of the entire Atlantic Coast's quota, which is a drastically disproportionate amount relative to its coastline. Additionally, much of their harvesting occurs as menhaden migrate into the bay, where they enter Maryland's waters. What this essentially means is 75% of the quota for the entire Atlantic coast is being taken in the bay or just before they enter the bay. While this may not be causing overfishing for the entire Atlantic coast based on quotas, because all of these fish are being taken from essentially just the bay, it is having locally drastic effects on the ecosystem.

Therefore, I strongly suggest either delaying the start of the menhaden commercial season until after a significant amount of menhaden have migrated north along the Virginia coast into the Chesapeake bay (which occurs in spring/early summer), pushing these factory fishing efforts at least 3 miles offshore into federal waters instead of along the coastline in state waters (as the fish in the state waters are most likely to migrate along the coast into the bay), pushing the commercial menhaden fishery north of the entrance to the Chesapeake bay during their migration, and/or significantly reducing to quotas of menhaden in and around the mouth for the Chesapeake Bay. These actions are necessary to ensure the long-term health of the Chesapeake Bay ecosystem and the associated fisheries and ecotourism.

Sincerely,

Dr. Noah Bressman, PhD
Assistant Professor of Physiology
Salisbury University

Dr. Noah Bressman, PhD
Assistant Professor of Physiology
Salisbury University
Fish Biology, Biomechanics, Functional Morphology, and Behavior
Noahbressman.wixsite.com/noah
He/him/his

Begin forwarded message:

From: Noah Bressman <noahbressman@gmail.com>
Date: October 18, 2021 at 9:54:57 AM EDT
To: Tina Berger <tberger@asmfc.org>
Subject: Re: FW: Final Supplemental Materials for ASMFC 2021 Fall Meeting

Thanks, Tina! I want to clarify that the most important thing I recommend is that the board take action now to evaluate the options to increase menhaden in Chesapeake Bay. If action was started at Tuesday's board meeting, some or all of the measures could be in effect for the 2022 season. This can be accomplished using qualitative management methods, such as seasonal and area closures without additional research. It can also be accomplished by moving the fishing into the US federal zone as every state except Virginia has seen the necessity for doing. While I am always in support of more research for any topic (because I am a scientist), waiting for additional research on this issue that is already clear will likely lead to menhaden continuing to plummet in the bay, which will further reduce the capacity for striped bass to recover in the bay, especially after the recent report showing their abysmal recruitment over the last 3 years. A delay in action, such as a several years-long stock and recruitment reassessment of the bay before action, will lead to the problem getting worse before it gets better.

Sincerely,
Dr. Noah Bressman, PhD
Assistant Professor of Physiology
Department of Biology
Salisbury University

On Fri, Oct 15, 2021 at 2:47 PM Tina Berger <tberger@asmfc.org> wrote:

Dr. Bressman – Thank you for your public comment on Atlantic menhaden management. It was sent to the Atlantic Menhaden Board today for its consideration. – Tina

Tina Berger



P.O. Box 278
Riverdale, MD 20738

Committee: Education, Health, and Environmental Affairs

Testimony on: SJ6 "Atlantic States Marine Fisheries Commission – Atlantic Menhaden – Prohibition on Commercial Reduction Fishing"

Position: Support

Hearing Date: March 1, 2022

The Maryland Chapter of the Sierra Club urges a favorable report on SJ6. This resolution asks the Atlantic States Marine Fisheries Commission to exercise its authority regarding the management of the menhaden fishery to consider prohibiting commercial reduction fishing of Atlantic menhaden, including the use of purse seines and spotter planes, in the Chesapeake Bay.

Atlantic menhaden are a keystone species for the Chesapeake Bay. As noted by this resolution, Atlantic menhaden form a critical connection between the bottom and the top of the food chain. Menhaden are filter feeders, eating plankton and rotifers and helping clear the water of nutrient-pollution.¹ They are also a vital source of food to predators, including predatory fish, dolphins, whales, osprey, and bald eagles. While this is incredibly important to the ecosystem of the Bay, it is also important to the fishing industry. Many species of fish that we harvest from the Bay rely on the menhaden as a food source, including rockfish (striped bass), bluefish, and weakfish.

The Chesapeake Bay is an important nursery for the menhaden that helps sustain the population along the entire Atlantic coast. It is deeply concerning that the number of menhaden juveniles have decreased significantly since 1976 and has stayed low in the last 20 years.²

In order to protect the natural wonders of the Chesapeake Bay, it is important that action be taken now. We urge the Committee to issue a favorable report.

Marc Imlay
Endangered Species Workgroup Coordinator
marc.imlay@mdsierra.org

Josh Tulkin
Chapter Director
Josh.Tulkin@MDSierra.org

¹ <https://www.vims.edu/research/units/projects/menhaden/research/modeling.php>

² Durrell, E. Q. & Weedon, C. (2019). Striped Bass Seine Survey Juvenile Index Web Page. DNR.Maryland.gov/Fisheries/Pages/Juvenile-Index.ASPX. Maryland Department of Natural Resources, Fisheries Service.

Founded in 1892, the Sierra Club is America's oldest and largest grassroots environmental organization. The Maryland Chapter has over 70,000 members and supporters, and the Sierra Club nationwide has over 800,000 members and nearly four million supporters.

ONE DRIVE

CAYOZZA-MAIL PDF



Testimony in SUPPORT of SJ6 - Atlantic States Marine Fisheries Commission - Atlantic Menhaden - Prohibition on Commercial Reduction Fishing

March 1, 2022

Dear Chairman Pinsky and Members of the Committee,

Thank you for this opportunity to submit testimony in **SUPPORT of SJ6** on behalf of ShoreRivers. ShoreRivers is a river protection group on Maryland's Eastern Shore with 3,500 members. Our mission is to protect and restore our Eastern Shore waterways through science-based advocacy, restoration, and education.

This bill sets forth a resolution by the Maryland General Assembly asking the Atlantic States Marine Fisheries Commission to take further action to prohibit the commercial reduction fishing of Atlantic Menhaden, including the use of purse seines and spotter planes in the Chesapeake Bay in order to maintain a sustainable fishery. This reduction fishery poses a major threat to many Bay species every year, and when these other fisheries suffer it increases the pressure on other fisheries, including crabs and oysters. Thus, it is of critical importance to protect a foundational species like menhaden as much as possible.

Menhaden are incredibly valuable to the Chesapeake Bay and the many other commercial and recreational fisheries that occur in the rivers of the Eastern Shore. As a vital part of the ecosystem, menhaden filter plankton from the water and help to improve water quality, and they are a necessary food source for other aquatic species like striped bass and bluefish, but also for ospreys and bald eagles. The Department of Natural Resources noted in their 2021 Striped Bass survey that while the stiped bass young-of-year showed a slight increase in population from 2020, what was of note was the increased numbers of menhaden in the rivers, notable the Choptank River. When the menhaden population thrives, so do our other fisheries. And when our fisheries are healthy, we know that water quality and habitat are at healthy levels to support those populations, which means that our economies and local communities will see a benefit.

For these reasons stated above, ShoreRivers urges the Committee to adopt a **FAVORABLE** report on SJ6.

Sincerely,

Matt Pluta,
Choptank Riverkeeper, on behalf of:

ShoreRivers

Isabel Hardesty, Executive Director

Annie Richards, Chester Riverkeeper | Matt Pluta, Choptank Riverkeeper
Elle Bassett, Miles-Wye Riverkeeper | Zack Kelleher, Sassafras Riverkeeper

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MULTIPLY THIS BY NINE OMEGA PURSE SEINERS WITH TWO FORTY FOOT SET BOATS EACH ,DIRECTED BY SPOTTER PLANES FISHING FIVE DAYS A WEEK FROM MAY TO DECEMBER VIRGINIA Virginia receives 78.6 of the entire Atlantic coast menhaden catch (TAC) For 2021-22 the TAC is 194,400 metric tons. VA quota 152,484 mt ,Omega quota 137,000 mt. of which 51,000mt can be caught in Chesapeake bay So, about 5,000 bay sized schools of 10 tons each with about 40-50,000 fish each are removed from the bay food chain every year. Virginia is the only state that allows factory fishing.

Draft Summary of the Executive Committee Meeting Webinar
January 26, 2022

**DRAFT MEETING SUMMARY OF THE
ATLANTIC STATES MARINE FISHERIES COMMISSION
EXECUTIVE COMMITTEE**

**Virtual via
GoToMeeting
Arlington, VA
January 26, 2022**

For Review & Action by the Executive Committee May 4, 2022

INDEX OF MOTIONS

- 1. Approval of Agenda** by Consent. (Page 1)
- 2. Approval of Meeting Summary from October 20, 2021** by Consent. (Page 1)
- 3. Adjourn** by Consent (Page 1).

ATTENDANCE

Committee Members

Pat Keliher, ME	Roy Miller, DE (GA Chair)
Cheri Patterson, NH	John Clark, DE
Dennis Abbott, NH (LA Chair)	Lynn Fegley MD
Dan McKiernan, MA	Bryan Plumlee, VA
Jason McNamee, RI	Kathy Rawls, NC
Justin Davis, CT	Mel Bell, SC
Jim Gilmore, NY	Spud Woodward, GA
Joe Cimino, NJ	Erika Burgess, FL
Kris Kuhn, PA	

Other Commissioners/Proxies

Chris Batsavage, NC	Craig Pugh, DE (Leg. Proxy)
Tom Fote, NJ (GA)	Mike Luisi, MD DNR)
Pat Geer, VA (AA Proxy)	Nichola Meserve, MA DMF
Bill Gorham, NC (LA Proxy)	Eric Reid, RI (LA Proxy)
Doug Haymans, GA	David Sikorski, MD (LA Proxy)
Bill Hyatt, CT (GA)	Ritchie White, NH (GA)
Raymond Kane, MA (GA)	Renee Zobel, NH (AA Proxy)
Rob LaFrance, CT (LA Proxy)	

Staff

Bob Beal	Jeff Kipp
Laura Leach	Dustin Colson Leaning
Toni Kerns	Kirby Rootes-Murdy
Tina Berger	Sarah Murray
Pat Campfield	Julie Simpson
Lisa Carty	Caitlin Starks
James Boyle	Anna-Mai Svajdlenka
Emilie Franke	Deke Tompkins
Lisa Havel	Geoff White

Guests

Max Appelman, NOAA
Karen Abrams, NOAA
Gary Allred
Pat Augustine, Coram, NY
Jason Avila, Avila Global
Megan Barrow, NYS DEC
Linda Barry, NJ DEP
Alan Bianchi, NC DENR
Simon Brown, MD DNR
Jeff Brust, NJ DEP
Colleen Brust, NJ DEP
Colleen Bouffard, CT DEEP
Tony Butch
Yong Chen, Stonybrook
Nathan Cowen
Greg Cudnik
Jessica Daher, NJ DEP
Laura Dinghan, NOAA
Steve Doctor, MD DNR
Peter Fallon, Maine Stripers
Marianne Ferguson, NOAA
Cynthia Ferrio, NOAA
Jesse Hornstein, NYS DEC
Adam Kenyon, VMRC
Wilson Laney
Elizabeth Lange, NJ DEP
Dee Lupton
Chip Lynch, NOAA
Samantha MacQuesten, NJ DEP
Patrice McCarron, Maine Lobstermen
Steve Meyers
Mike Millard, US FWS
Chris Moore, CBF
Trish Murphey, NC DENR
Allison Murphy, NOAA
Brian Neilan, NJ DEP
Adam Nowalsky, Port Republic, NJ
George O'Donnell, MD DNR
Christian Olla
Derek Orner, NOAA
Willow Patten, NC DENR
Rachel Peabody, VMRC
Nicholas Popoff, US FWS
Will Poston, SGA
Jill Ramsey, VMRC
Somers Smott, VMRC
ElizaBeth Steifeneder, NYS DEC
George Sylvestre
Helen Takade-Heumacher, EDF
Mike Waine, ASA
Craig Weedon, MD DNR
Kelly Whitmore, MA DMF
Lowell Whitney, US FWS
Angel Willey, MD DNR
Chris Wright, NOAA

CALL TO ORDER

The Executive Committee (EC) of the Atlantic States Marine Fisheries Commission convened January 26, 2022 virtually via a GoToMeeting webinar. The meeting was called to order at 8:02 a.m. by Chair Spud Woodward.

APPROVAL OF AGENDA

The agenda was approved with one addition; Near-term Staff Workload.

APPROVAL OF PROCEEDINGS

The summary minutes from the October 20, 2021 meeting were approved as presented.

PUBLIC COMMENT

There was no public comment.

OFFSHORE WIND ENERGY DEVELOPMENT

A lengthy discussion about the role of ASMFC in offshore wind energy along the Atlantic Coast was held. Several members endorsed the concept of the commission involvement for the following purposes; including 1) improved and timely sharing of information about processes and procedures related to siting, leasing, construction, and operation; 2) providing subject matter expertise regarding the science-based data and information used to evaluate environmental, social, and economic impacts; 3) evaluation of how siting of infrastructure might adversely affect fishery-independent surveys; 4) development of consistent approaches for mitigation and compensation; 5) advocacy for policy development and/or modification thereof that protects state interests and 6) evaluation of offshore wind energy in the larger context of marine spatial planning. Leadership and staff will develop a draft scope of work with an associated analysis of the capacity of ASMFC to address these tasks.

REMAINING CARES ACT FUNDS REALLOCATION

Mr. Beal presented information on member state responses to needs for unused CARES 1 funds. A unanimous decision was made to make available unspent funds to states that had further needs with the goal of zeroing out the remaining CARES 1 balance by the deadline of June 30, 2022. The details of the EC's decision will be forwarded to NOAA Fisheries for approval prior to implementation. The EC agreed this decision does not set a precedent for how any unused funds from CARES 2 will be allocated and spent.

APPEALS PROCESS

Mr. Beal presented the draft revisions to the appeals process policy. The ensuing discussion identified the need for further modification of the policy to reflect concerns of some members. The draft revised policy will be discussed at a future EC meeting.

STAFF WORKLOAD

The near-term workload of Commission staff was discussed. It is possible that there may need to be public hearings on four fishery management plan amendments/addenda between the winter and spring meetings. This will strain the capacity of staff especially considering that two veteran staff members have resigned. Possible mitigating measures include changing the timeline for some of the FMP actions and/or having management board actions originally scheduled for the May 2022 meeting occur at a meeting to be held in June 2022. This matter will be discussed during the ISFMP Policy Board meeting.

ADJOURN

The Executive Committee adjourned at 9:26 a.m.

Atlantic States Marine Fisheries Commission

Coastal Sharks Management Board

May 4, 2022
10:15 – 11:15 a.m.
Hybrid Meeting

Draft Agenda

The times listed are approximate; the order in which these items will be taken is subject to change; other items may be added as necessary.

1. Welcome/Call to Order (*M. Bell*) 10:15 a.m.
2. Board Consent 10:15 a.m.
 - Approval of Agenda
 - Approval of Proceedings from October 2021
3. Public Comment 10:20 a.m.
4. Consider Zero Retention Limit/Closure of the Shortfin Mako Fishery **Final Action** 10:30 a.m.
 - Overview of the NOAA Fisheries Proposed Rule (*K. Brewster-Geisz*)
5. Review Convention in the International Trade in Endangered Species of Wild Fauna and Flora Proposal to list 54 Shark Species in Appendix II (D. Colson Leaning) **Possible Action** 11:00 a.m.
6. Review and Populate Coastal Sharks Advisory Panel Membership (T. Berger) **Action** 11:10 a.m.
7. Other Business/Adjourn 11:15 a.m.

The meeting will be held at The Westin Crystal City (1800 Richmond Highway, Arlington, VA; 703.486.1111) and via webinar; click [here](#) for details

MEETING OVERVIEW

Coastal Sharks Management Board

Wednesday May 4, 2022

10:15 – 11:15 a.m.

Hybrid Meeting

Chair: Mel Bell (NC) Assumed Chairmanship: 05/21	Technical Committee Chair: Angel Willey (MD)	Law Enforcement Committee Representative: Greg Garner (SC)
Vice Chair: Erika Burgess (FL)	Advisory Panel Chair: Vacant	Previous Board Meeting: October 20, 2021
Voting Members: MA, RI, CT, NY, NJ, DE, MD, VA, NC, SC, GA, FL, NMFS (13 votes)		

2. Board Consent

- Approval of Agenda
- Approval of Proceedings from October 20, 2021

3. Public Comment – At the beginning of the meeting public comment will be taken on items not on the agenda. Individuals that wish to speak at this time must sign-in at the beginning of the meeting. For agenda items that have already gone out for public hearing and/or have had a public comment period that has closed, the Board Chair may determine that additional public comment will not provide additional information. In this circumstance the Chair will not allow additional public comment on an issue. For agenda items that the public has not had a chance to provide input, the Board Chair may allow limited opportunity for comment. The Board Chair has the discretion to limit the number of speakers and/or the length of each comment.

4. Consider Closing the Shortfin Mako Fishery Final Action (10:30-11:00 a.m.)

Background

- NOAA Fisheries recently published a [proposed rule](#) (**Briefing Materials**) that would establish a flexible shortfin mako shark retention limit with a default limit of zero in commercial and recreational HMS fisheries.
- The change in the retention limit to zero is to implement the 2021 International Commission for the Conservation of Atlantic Tunas (ICCAT) recommendation. NOAA Fisheries proposes to leave the default limit of zero in place until changed. During the fishing year, NOAA Fisheries could increase the shortfin mako shark retention limit from the default, or subsequently decrease the retention limit, for the commercial fishery, the recreational fishery, or both, based on regulatory criteria and retention allowed by ICCAT.
- NOAA conducted a public hearing for the proposed rule on April 27th.
- The Commission could consider closure of the shortfin mako fishery to have consistent regulations as federal waters.

Presentations

- Overview of the NOAA Fisheries Proposed Rule by K. Brewster-Geisz.

Board action for consideration at this meeting

- Consider a zero retention limit/closure of the shortfin mako fishery.

5. Review Convention in the International Trade in Endangered Species of Wild Fauna and Flora Proposal to list 54 Shark Species in Appendix II Possible Action (11:00-11:10 a.m.)

Background

- Panama has proposed to list 54 shark species in the Convention in the International Trade in Endangered Species of Wild Fauna and Flora (CITES) Appendix II (**Supplemental Materials**).
- A CITES Appendix II listing does not prohibit international trade but requires export permits and proof that the species was legally harvested and that the trade is not detrimental to the survival of the species.
- The USFWS has reached out to determine if state agencies have any input or edits to the draft proposal to list 54 sharks in CITES Appendix II (**Supplemental Materials**)

Presentations

- D. Colson Leaning will present an overview of the draft proposal

Board action for consideration at this meeting

- Provide comment on the draft proposal

6. Review and Populate Coastal Sharks Advisory Panel Membership Action (11:10-11:15 a.m.)

Background

- Thomas Newman from North Carolina has been nominated to the Coastal Sharks Advisory Panel.

Presentations

- Nominations by D. Colson Leaning.

Board action for consideration at this meeting

- Approve nomination.

7. Other Business/Adjourn

Panama April 06, 2022

DM-0630-2022

The Honorable Deb Haaland

Secretary of the United States Department of the Interior
United States of America

Support for Panama's proposal to list the grey reef shark (*Carcharhinus amblyrhynchos*), dusky shark (*C. obscurus*), smalltail shark (*C. porosus*), and the Ganges shark (*Glyphis gangeticus*) in Appendix II of CITES at CoP19

Dear Honorable Secretary Haaland,

Panama has long been committed to the effective management of marine biodiversity. Now, these efforts are even more topical. Between last year's Climate Change CoP commitments and this year's finalization of the Post-2020 Global Biodiversity Framework, governments around the world are working to ensure that our planet is sustainably managed and protected for the healthy future of all its people. Panama, like the United States, has taken these processes and their aims very seriously.

We are therefore honored to host yet another Convention aimed at the conservation of the world's wildlife, the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) this November 14-25, 2022, in Panama City, Panama. As a known shark conservation champion, we would be honored to have the USA's partnership and support to secure an ambitious ocean agenda and a future for the world's sharks at this crucial meeting.

At this Conference of the Parties (CoP19), in order to enact better management for marine species and prevent global trade driving shark species to extinction, Panama aims to list the grey reef shark (*Carcharhinus amblyrhynchos*), dusky shark (*C. obscurus*), smalltail shark (*C. porosus*) and Ganges shark (*Glyphis gangeticus*) in Appendix II of CITES. These species fully meet criteria adopted in Resolution Conf. 9.24 (Rev.Cop17) Annex 2a, Criterion A and B, to be included in Appendix II, with the rest of the family Carcharhinidae (requiem sharks) included as look-alike species under Annex 2b, Criterion A.

Each of these species have suffered global population declines of over 70%, driven by unmanaged trade in their fins. Trade is the major threat, not only to grey reef, dusky, smalltail and Ganges shark, but to

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the entire family. Together these species make up the majority of the unsustainable global trade in shark fins. Additionally, the grey reef shark, included in this proposal, is a predator that maintains the health of the world's coral reefs in the face of climate change. We are concerned that we have already seen this species disappear from many nation's reefs, despite their role in mitigating the worst effects of climate change on coral reefs, as well as their high value as an ecotourism resource. Strong intergovernmental action is needed now to end this serial depletion of the world's sharks and to secure the livelihoods of our coastal communities that depend on sustainable trade and tourism for their survival. Countries in our region do not have the widespread access to the international fishing grounds available to others and our coastal communities depend on coastal shark species of the requiem family for their food security.

Furthermore, Panama is convinced that the family level approach is essential, because this will bring the vast majority of the trade in shark fins under CITES control for the first time, an action that is long overdue. This approach will also assist in implementation efforts, as visual and genetic identification of traded products is simplest at the family level. Simply listing a few of these species would be incredibly complex and time consuming with regards to the visual identification of traded fins and meat, leading to customs officials searching for small numbers of fins that look very similar to large numbers of closely related unlisted ones. Ease of identification is essential for countries with limited customs enforcement capacity, a situation faced by many nations in our region. While the tools already exist to implement such a listing, an additional guide will also be produced to aid in implementation of our proposal, and we will be providing it to Parties before CoP19.

By listing species before they are critically endangered, fisheries management tools can still be effective. This is the case for several species in the requiem shark family, where effective uptake of available non-detriment finding (NDF) tools will be far easier to facilitate. Increasing examples of positive NDF's will also facilitate better relations between fisheries and environment departments in implementing CITES, and lead to far better provision of data on the overall trade in shark products.

As hosts of CITES CoP19, Panama looks forward to decisions by global governments to ensure that trade does not lead to further declines in wild populations of animals. This is especially true with regards to marine species, whose trade has often gone overlooked and undermanaged. We want to add your voice to ours, to tell countries that attend the CoP in Panama that the continued unsustainable trade in shark fins must end – full trade regulation is needed now to secure livelihoods and food security for future generations. Our proposal is attached here for your consideration.

We applaud the USA for its history of championing shark conservation efforts via CITES and providing critical support for capacity building and CITES implementation in our region. We hope that we can

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continue to count on support from the USA for shark conservation and sustainable trade. We have attached the updated version proposal here, with additional data included, and hope that you will consider joining us as a formal co-sponsor. We are also in discussions with several other shark champion nations around the world, as we look to build a coalition of champions to make our CoP a true success for the world's oceans. Should you be able to join us as a cosponsor, once you have formally notified CITES of your intention to join us, please let us know, and we will add you to a revised draft of the proposal. We look forward to working with you to ensure that Panama's CoP19 is remembered as the turning point where we prevented the extinction of the world's sharks and rays.

Sincerely,


MILCIADES CONCEPCION
Minister Ambient



C.C: MC/DL/AGA/SB/JJC

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1. Summary of the requiem shark listing proposal

PROPOSAL:

Panama is proposing the listing of two Critically Endangered and two Endangered requiem sharks, and are including the remaining members of the family (50 species) as lookalikes due to similarity of appearance of highly frequently internationally traded products (including fins and meat).

WHY THIS PROPOSAL:

This Appendix II proposal would help bring the majority of the shark fin trade under CITES Appendix II regulation (i.e., ensure sustainable, legal trade). Noting that 70% of the fin trade (Cardenosa et al, in press) and over 68% of the requiem shark family is threatened with extinction (Dulvy et al 2021), such action is clearly overdue given that the intent of CITES Appendix II is to regulate the trade in species not necessarily threatened with extinction but in which trade must be controlled in order to avoid utilization incompatible with their survival (CITES Res. Conf. 9.24).

Management of all species in this heavily traded family under CITES, with NDFs in place, is the minimum the precautionary approach and CITES convention text indicates is necessary, if commercial trade is to continue.

SIGNIFICANCE OF PROPOSAL:

International trade is the major threat to this family of sharks. At least 35 species in the requiem shark family have been documented in the fin markets of Hong Kong, representing 46% of all species recorded in this market (Fields et al. 2018). The proportional contribution (volume) of requiem shark species in the overall fin trade could be as high as 85.5% (Clarke et al. 2006, Fields et al. 2018, Cardenosa et al. 2018a, Cardeñosa et al. 2020).

IMPLEMENTATION:

The family level listing approach is essential as visual and genetic ID of traded products is simplest at the family level, and ease of ID across so many species threatened by international trade is essential for countries with limited customs enforcement capacity.

Panama are updating the proposal with additional information from the world's leading shark and ray ID experts, who have produced new guides for all currently listed sharks and rays launched at the Standing Committee in Lyon this March. That information further confirms why a family level listing approach is needed. An ID guide for the Family will be produced to enable implementation of the proposal and will be launched prior to the CoP.

SUPPORT:

Panama have already secured the support of Colombia, and Senegal as co-sponsors and are conducting further outreach to add additional co-proponents from several regions ahead of the June deadline for the submission of listing proposals for CoP19.

2. Decline information and proposal justification

Evidence of rapid recent declines of 70% or more in populations of the grey reef shark (*C. amblyrhynchos*), the dusky shark (*C. obscurus*), the smalltail shark (*C. porosus*), and the Ganges shark (*G. gangeticus*) are documented across much of their range. These low-productivity marine, estuarine, and freshwater species fulfil the CITES criteria for inclusion in Appendix II, and, in many locations approach or exceed the threshold for inclusion in Appendix I (Rigby et al. 2019 and 2021, MacNeil et al. 2020, Pacoureau et al. 2021).

All the lead species in the listing proposal - the grey reef shark (*C. amblyrhynchos*), the dusky shark (*C. obscurus*) the smalltail shark (*C. porosus*) and the Ganges shark (*G. gangeticus*) – are classified by the IUCN Red List as Endangered or Critically Endangered on the IUCN Red List, with all assessments conducted in the last two years.

To date CITES has mainly listed pelagic, offshore species caught in RFMO fisheries. The species in the requiem shark family include many coastal species, which are particularly critical for food security, livelihoods, and regulate balance within the marine ecosystem which in turn contributes to economic growth; all factors highlighting why sustainable utilization of this group, through trade controls brought about by a CITES Appendix II listing, is vital.

68% of the requiem shark family is currently considered threatened by the IUCN Red List of Threatened Species (Dulvy et al 2021) and this CITES Appendix II listing at the family level is justified if the intent of CITES Appendix II, to regulate the trade in species not yet threatened with extinction, is to be met. An Appendix II listing is the minimum required for all the species within this family under the precautionary approach. For many it may already be too late and we cannot wait until it is also too late for those that can still be traded sustainably.

3. Requiem shark listing proposal – links to implementation of current listings

This proposal, at the family level, would incorporate up to 85.5% of the fin trade on Appendix II. When adopted, most shipments of shark fins would contain CITES listed species and require associated paperwork. Such an approach has multiple benefits for data collection and traceability of the overall trade, reduction in the current time-consuming efforts needed to identify small amounts of CITES listed fins in large shipments, in addition to preventing further overexploitation driven by the international trade. With visual ID possible to the requiem shark family level, this listing could be implemented in the manner of current CITES shark listings, with visual ID guides and customs trainings used to enforce listings in all capacity settings.

The proposal offers an opportunity to fully utilize the NDF and identification tools developed for sharks and rays since the first commercial listings in 2013. The significant investment over the last decade to develop effective visual and genetic identification techniques, along with shark specific non-detriment finding development guides has led to a suite of tools readily available for use by governments around the world. With these tools able to be adapted simply to implement all species in Panama's listing proposal, and sharks recently confirmed as the second

most threatened vertebrate group on the planet, there may never be a better time to bring the vast majority of the shark fin trade under CITES Appendix II control to prevent even further population loss.

Those existing tools are comprehensive and carefully designed, but their effective use to inspect large containers full of shark fins has been challenged by the CITES listing to date of species that only make up a small percentage (25%) of the overall trade in shark fins and meat. This makes inspecting large shipments of shark fins challenging and time consuming, allowing easy concealment of listed species fins in large shipments of unlisted species.

Additionally, over 90% of the sharks listed on CITES Appendix II to date are already IUCN threatened, which given shark's biology makes sustainable trade via NDF's challenging. Far more proactive and precautionary Appendix II regulation of traded shark products is needed if the implementation of shark listings via sustainable catch and trade management is to be effective. Comprehensive Appendix II regulation of the trade in shark fins will bring about such a transition.

There can be no doubt that many species within the requiem shark family exceed the CITES Appendix II listing criteria, and approach that of Appendix I, even if a conservative interpretation of the CITES listing criteria for marine species is used. The key question is which species should be included as lookalikes. This is a greater challenge than for previous shark listing proposals, as many species within the family are visually similar, and the family contains many traded species. The following sections detail why a family level listing is needed to allow for the implementation of the listing proposal in a manner that works for countries of all capacity levels, as per the existing CITES Appendix II listings.

a) Identification implementation considerations

Listing the requiem shark family would help facilitate more efficient implementation and enforcement of all current CITES shark listings at the customs and border control level. With over 80% of the trade in shark fins Appendix II listed, it would be likely that every shipment of fins would contain CITES Appendix II species. Customs officials should then expect that each shipment be accompanied by the appropriate CITES permit or certificate. Such a shift will reduce the burden on customs and border control agents, who currently face time-consuming searches of large shipments of fins for small numbers of CITES listed species products. Additionally, the additional permitting required for the majority of the fin trade would lead to far better data on, and CITES regulation for sustainability and legality of all trade in shark fins.

For existing CITES listed sharks, dorsal fin visual ID has been used as the primary technique to identify species at the point of trade. Some species, such as the oceanic whitetip were able to be listed at the species level due to clear markings on their fins, and others such as wedgefish to the family level due to similarity of dorsal fins between all wedgefish species. Governments made these decisions based on the ease of visual identification of the unprocessed fins, the first point of trade/high value product from sharks. The use of visual ID guides to implement listings

has been crucial, as CITES-specific visual ID guides for listed species in their primarily traded form allow for simple implementation of shark listings for customs officials in countries of all capacity level. Via these tools, effective implementation of current listings has been documented in nations that vary greatly in both geography and capacity such as Hong Kong, Ecuador, Fiji and Bangladesh.

To ensure the development of an effective and enforceable proposal, Panama has taken this into account. Panama has undertaken an analysis of fin ID for the lead species in this proposal with the authors of the existing CITES shark and ray ID guides to determine which species within the family should be included as lookalikes. For the four proposed species, this analysis confirmed that there are visual lookalike fins throughout the family, but requiem shark dorsal fins can only be identified visually to the family level—resulting in our shared proposal.

CITES Parties must list species that clearly meet the criteria and are threatened by international trade. But they also must ensure that implementation is equitable for Parties of all capacity levels. By listing the rest of the requiem shark family to allow for simple visual identification of traded fins, we are accomplishing both. This has proven effective with other shark listings, such as wedgefish or mobulid rays—both listed at the family level due to ID concerns within the family.

A family level listing will be far simpler for customs staff to implement than only the four leading species of our proposal. If we just listed a few of these species, visual identification of traded fins and meat would be incredibly complex and time consuming, searching for small numbers of fins that look very similar to large numbers of closely related unlisted ones.

As noted in the proposal itself, a recent analysis of the implementation of existing CITES shark and ray listings reveals compliance issue due to similarity of appearance of shark products in trade, compounded by large shipments of mixed CITES and non-CITES listed species (Villate-Moreno 2021). All unlisted species found in the shipment analysed in this study, and misidentified as potentially CITES listed belong to the family Carcharhinidae. Listing the entire family as per this listing proposal, would remove this issue of mixed shipments and misidentification. With the vast majority of the shark fin trade consisting of CITES listed species, almost all legal shipments of shark fins would need to be accompanied by CITES paperwork. Furthermore, even shipments without paperwork would almost certainly contain CITES-listed species. Coupled with the ability to visually identify Carcharhinidae fins to the family level, this would make the basic steps of inspection and confiscation far simpler and more efficient for customs staff, especially in locations where genetic tools, or wider customs capacity are lacking or limited.

It is crucial to maintain the ease of visual ID we have had to date, and just like for the wedgefish and mobulid proposals at CoP's 17 and 18, any species within this family will need a family level listing due to similarity of fins. Avoiding listing requiem sharks at all is also not an option, with nearly 70% of the family already IUCN threatened, and many species already Endangered or Critically Endangered. CITES action is needed now.

Panama continues to partner with leading experts in visual and genetic shark identification to further strengthen the ID sections of the proposal (newer draft of the proposal attached to this note). In the coming weeks that will be finalized, and Panama will add a full visual identification guide to show the means of family level identification implementation before the CoP.

The revised version of the proposal contains a set of matrices that compares fins from all known requiem shark species and all currently CITES listed sharks. The green indicates where it is possible to visually distinguish between the fins of species (see table 5 for dorsal, table 6 for pectoral, table 7 for caudal and table 8 for meat). The left-hand side columns show that it is easy to distinguish between currently CITES listed species and unlisted species from the requiem family for most fin positions. The red sections on the right-hand side indicate that it is not possible to distinguish between the fins of many (currently unlisted) requiem shark species.

This shows the wide range of lookalikes within the family when visual ID is considered. With this wide range of lookalikes, and given that shark fins are typically traded in mixed shipments containing a range of species, a family level listing is by far the most resource-efficient way to regulate this trade. If a subset of species within the family were listed, customs level enforcement would be incredibly time consuming due to the numerous lookalikes identified in the matrix. But at the same time – the listing of threatened species within the family that meet the CITES listing criteria cannot be ignored, again supporting the need for a family level approach if any species within the family are to be listed.

Blue sharks are a lookalike for the four-lead species in terms of several of their fins, and particularly their meat. Given the increasing scale of the meat trade, with blue sharks one of the most commonly traded sharks, the species inclusion is an essential part of the proposal. The removal of the blue shark from Panama's proposal could lead to small numbers of Critically Endangered species easily being hidden in shipments predominated by lookalike blue shark fins or meat. This is already seen in Europe with current shark listings (Villate-Moreno 2021). Blue sharks would be an excellent candidate for sustainable, traceable CITES Appendix II trade via the NDF process, especially because unlike other sharks they are able to support higher sustainable catches—if listed before they reach endangered status (as per the intent of Appendix II).

b) Non-Detriment Finding (NDF) implementation

Led by the German government, new electronic Non-Detriment Finding (eNDF) software has been developed in an effort to simplify and standardize the approach governments take to conducting NDFs. Aimed at facilitating increased NDF use and improving the performance of those conducted, the eNDF software consolidates and simplifies the initial 136-page NDF shark guidance document (produced after CoP16), allowing for improved NDFs that ensure only trade that is demonstrated to be sustainable is permitted.

These NDF tools for sharks have facilitated a wide range of NDF's for listed shark and ray species, many of which are publically available on the CITES website. Similar to visual ID training, there has been a high level of investment in trainings and workshops for officials in lower capacity countries around the world, with strong results demonstrating that the NDF process (i.e., a CITES listing), drives positive change in ensuring the sustainability of sharks and rays.

The late listing of sharks on CITES Appendix II (see section C, below) has precluded positive NDF's in many situations, hampering the use of the new NDF tools for shark and ray species. With NDF's often negative, fostering closer relationships between countries fisheries and environment departments to implement listings has been challenging, and has often resulted in landing prohibitions for listed species and poor or absent provision of data to CITES on any ongoing trade (with good data provision an ongoing implementation concern, as noted in the outcomes of the Animals and Standing committees shark discussions).

Including the vast majority of the shark fin trade under CITES Appendix II will aid the use of NDF tools, which are already developed and ready to use for any shark or ray species that is listed. By listing species at a stage where fisheries management tools can still be effective, as is the case for several species in the requiem shark family, effective uptake of these NDF tools will be far easier to facilitate (which will ensure sustainable trade/catch, prevent further declines, and ensure these species would not become eligible for inclusion in CITES Appendix I). Increasing examples of positive NDF's will also facilitate better relations between fisheries and environment departments in implementing CITES, and lead to far better provision of data on the overall trade in shark products.

c) Why list more sharks on CITES?

A wide range of scientific and political action, including these CITES listings, has significantly raised the profile of the declines in shark populations (Dulvy et al 2014 MacNeil et al 2020, Pacoureau et al 2021). There is a growing recognition that sharks can strongly benefit from fisheries management (Davidson et al 2015) but cannot be treated the same as other fish from a management perspective. A range of domestic and intergovernmental interventions have been developed to reflect their conservative biology, rapid declines and the need for precautionary management (Dulvy et al 2017 and 2021, MacNeil et al 2020).

Unfortunately, given the ongoing controversy around the listing of heavily traded shark species, CITES is failing to take timely, precautionary action to regulate the trade in all shark species that meet the intent of Appendix II, which states that it should address:

'all species which although not necessarily now threatened with extinction may become so unless trade in specimens of such species is subject to strict regulation in order to avoid utilization incompatible with their survival' (CITES Convention Text).

However, given the ongoing concerns by some CITES parties around the listing of marine species, Appendix II Listings to date have often been for Endangered and Critically Endangered

species, and in many cases have come too late to support sustainable catch and trade. Any fisheries or trade pressure is inappropriate for sharks once they are found to be Endangered or Critically Endangered, and again scientific consensus is clear that for such species immediate policy action should be taken to prohibit all take and commercial utilization (Pacoureau et al 2021, Dulvy et al 2021) – measures in line with CITES Appendix I, not CITES Appendix II listing criteria.

d) Policy change and data collection

A peer reviewed paper that is currently in review (Bond et al), and likely to be published ahead of the CoP, summarizes the impact of CITES shark and ray listings, and how they have shaped implementation since the listing of the first commercially traded species in 2013. Some of the papers key findings are summarized here, as they have relevance to the discussion of implementation and the potential for additional listings:

The CITES-shark listings have been found to have driven regulatory and policy changes by 39 Parties, with the potential to improve global shark management if implemented correctly. These policy changes have adopted a variety of formats including continued trade via NDFs (13 parties including Peru, Australia, Indonesia), species protections (31 Parties), and trade prohibitions for shark fins or all shark products (9 Parties, including India, Gabon, Colombia, Canada).

While the evidence provided here suggests that the CITES listings have been a great driver of policy change, across a broad geography, it is clear from the dearth of examples, more is needed to translate such policy change into mortality reductions, which is the key challenge in the decade ahead. Indonesia's national manta moratorium, along with the trade bans (E.g., Canada) and catch prohibitions (E.g., Gabon) observed elsewhere, serve as examples of Parties going beyond just policy change to implement CITES and taken action required to effectively protect sharks and prevent trade driven extinctions.

Though the progress in global shark management as a result of the existing CITES measures is commendable, given the conservation crisis facing sharks and rays, it is far from sufficient at present. If we are to address overexploitation patterns and promote the future sustainability of shark fisheries, the issue requires greater political priority. One such step could be the regulation of the entire fin trade under CITES, with the view that such action would address lookalike issues, assist enforcement efforts (as all shark trade would require CITES permits), while giving greater political importance to properly regulating both catch and trade in all commercially exploited sharks.

In the CITES context, one non-marine example of a higher order listing that led to improved trade management is the crocodylians (Order Crocodylia). At the 1973 Plenipotentiary Conference (Washington DC) at which CITES was signed, a number of crocodylians were included in the initial proposals for Appendix I or II, which entered into force in 1975. Following the listing proposals at CoP1 (Bern, 1976), Switzerland proposed, and the Parties accepted, Family level listing of the Alligatoridae and Crocodylidae in Appendix II except those species

included in Appendix I – resulting in all recognized crocodylian taxa at that time appearing in at least Appendix II. Because of on-going debate about the higher-level systematics and taxonomy of crocodylians, as well as look-a-like issues with crocodylian skins and skin-based products, at CoP4 (1983, Gaborone) the Nomenclature Committee proposed to simplify the Appendix II listing by including the Order Crocodylia, with annotation including the Families Alligatoridae, Crocodylidae, and Gavialidae, instead of the Families individually (Doc. 4.16). This proposal was accepted by the Parties and entered into force in August 1983. Since then, several Parties have undertaken the burden of proof of non-detriment to downlist individual crocodylian species or specific national populations retained in Appendix I to Appendix II, allowing for trade to resume under certain conditions. Though there are clear biological differences between the Crocodylia and sharks and rays, notably those that facilitate ranching and farming of crocodylians, the Crocodylia is a successful example of a higher Order listing.

Following this model by listing all elasmobranchs on CITES Appendix II may lead to more immediate improvements in the management of the entire fin trade and reduced shark/ray mortality in the wild. It would also reduce enforcement and compliance issues currently confronting Parties, at least partially also due to the look-a-like issue among others and would also likely facilitate improved reporting. Further examples of where CITES Parties have taken a similar approach to listing broad-level taxa to best safeguard wild populations include seahorses (Family Syngnathidae) and parrots (Suborder Psittacidae).

4. The blue shark

Blue sharks are a lookalike for the four-lead species in terms of some of their fins in trade (e.g., lower caudal fin), and more importantly, their meat. Given the increasing scale of the global meat trade, with blue sharks one of the most commonly traded sharks, the species inclusion is an essential part of the proposal, as without it, small numbers of Critically Endangered species can easily be hidden in shipments predominated by lookalike blue shark meat (or fins); something already seen in Europe with the current shark listings (Villate-Moreno 2021).

Blue sharks are included as lookalikes, so their declines are not relevant to their inclusion in the proposal (only the identification of commonly traded products is).

However, they are likely the planets most caught and traded shark, are already assessed by the IUCN Red List as Near Threatened, and are only managed by one RFMO. They would be an excellent candidate for sustainable, traceable CITES Appendix II trade via the NDF process and unlike other sharks would be able to be traded at higher (sustainable!) volumes if listed now, before they inevitably become threatened with extinction (as per the intent of Appendix II).

CONVENTION ON INTERNATIONAL TRADE IN ENDANGERED SPECIES
OF WILD FAUNA AND FLORA



Nineteenth Meeting of the Conference of the Parties
(Panama City, 14th-25th November 2022)

CONSIDERATION OF PROPOSALS FOR AMENDMENT OF APPENDICES I AND II

A. Proposal

Inclusion of the grey reef shark (*Carcharhinus amblyrhynchos*), dusky shark (*C. obscurus*), smalltail shark (*C. porosus*), and the Ganges shark (*Glyphis gangeticus*) in Appendix II in accordance with Article II paragraph 2(a) of the Convention and satisfying Criterion A and B in Annex 2a of Resolution Conf. 9.24 (Rev. CoP17).

Inclusion of all other species in the Family Carcharhinidae (Requiem sharks): Genus *Carcharhinus*, Genus *Isogomphodon*, Genus *Loxodon*, Genus *Nasolamia*, Genus *Lamiopsis*, Genus *Negaprion*, Genus *Prionace*, Genus *Rhizoprionodon*, Genus *Scoliodon*, Genus *Triaenodon* and any other putative species of Family Carcharhinidae in Appendix II in accordance with Article II paragraph 2(b) of the Convention and satisfying Criterion A in Annex 2b of Resolution Conf. 9.24 (Rev. CoP17).

Qualifying Criteria (Conf. 9.24 Rev. CoP17)

i) Annex 2a, Criterion A. It is known, or can be inferred or projected, that the regulation of trade in the species is necessary to avoid it becoming eligible for inclusion in Appendix I in the near future:

The grey reef shark (*C. amblyrhynchos*), the dusky shark (*C. obscurus*) the smalltail shark (*C. porosus*) and the Ganges shark (*G. gangeticus*) are all assessed as Endangered or Critically Endangered on the IUCN Red List of Threatened Species, as a result of unsustainable fishing mortality driven at least partly by international trade demand for their products.

Evidence of rapid recent declines of 70% or more in populations of the grey reef shark (*C. amblyrhynchos*), the dusky shark (*C. obscurus*), the smalltail shark (*C. porosus*), and the Ganges shark (*G. gangeticus*) are documented across much of their range. These low-productivity marine, estuarine, and freshwater species fulfil the CITES criteria for inclusion in Appendix II, and, in many locations approach, or exceed the threshold for inclusion in Appendix I (Rigby et al. 2019 and 2021, MacNeil et al. 2020, Pacoureau et al. 2021).

Given most of these species' large size, in many cases restricted range, and the high fishing pressure and lack of trade or catch management throughout their range (Quiroz et al. 2019), Appendix II listing is clearly justified now, before they reach the Appendix I listing criteria threshold.

ii) Annex 2a, Criterion B. It is known, or can be inferred or projected, that regulation of trade in the species is required to ensure that the harvest of specimens from the wild is not reducing the wild population to a level at which its survival might be threatened by continued harvesting or other influences.

Declines in the grey reef shark (*C. amblyrhynchos*), the dusky shark (*C. obscurus*), the smalltail shark (*C. porosus*) and the Ganges shark (*G. gangeticus*), due to unsustainable fishing pressure and the high value of dried shark fins in international trade, are reported throughout much of their range (Rigby et al. 2019, Simpfendorfer et al 2020, MacNeil et al 2020, Pacoureaux et al 2021, Dulvy et al 2021). These species all occur in the global shark fin trade hubs in China (Hong Kong Special Administrative Region and Guangzhou; Fields et al 2018, Cardeñosa et al 2020), where even small percentages of the overall trade equate to tens, or hundreds of thousands of individual Critically Endangered or Endangered sharks entering the international fin trade every year.

With limited fisheries management measures in place across their known ranges, in the absence of international trade regulation, the value of their fins and meat will encourage continued targeted fisheries, or the retention of bycatch that could otherwise be released alive, and drive these species to extinction in the near future.

iii) Annex 2b, Criterion A: The specimens of the species in the form in which they are traded resemble specimens of a species included in Appendix II under the provisions of Article II, paragraph 2 (a), or in Appendix I, so that enforcement officers who encounter specimens of CITES-listed species are unlikely to be able to distinguish between them.

There is a close visual resemblance between the most commonly traded forms of the four threatened species proposed here for listing, primarily their fins (Clarke et al. 2006, Fields et al 2018) but also dressed carcasses (i.e., headless, finless trunks) and meat (FAO 2015), and the same products from many currently unlisted species in the family Carcharhinidae, along with already Appendix II listed members of the family, such as the silky shark (*C. falciformis*).

Several other species within Family Carcharhinidae have caudal and pectoral fins that are similar in appearance to those of currently listed species, such as scalloped and great hammerhead sharks (family Sphyrnidae). This further justifies the benefit of a family-level listing of requiem sharks (Family Carcharhinidae), to aid the enforcement of existing CITES listings.

Regional and global identification guides are available for whole bodies of the proposed species, and all other members of the family Carcharhinidae. These enable species or genus-specific identifications at the point of landing, which will aid implementation and enforcement of this listing. However, for traded products such as dressed carcasses, meat and fins, many of the proposed species are similar in appearance to those of other members of family Carcharhinidae. However, visual identification is possible at the family level, with the use of a fin identification guide (under development and summarized in Annex 1).

The international trade in shark fins continues to drive population declines of shark species globally, with recent studies finding that over 70% of species traded for their fins are already IUCN threatened (Cardenosa et al in press), twice the background level for all chondrichthyans. CITES must regulate this trade comprehensively now, before widescale Appendix I listings are needed.

At least 35 species in the family Carcharhinidae have been documented in the fin markets of Hong Kong, representing 46% of all species recorded in this market (Fields et al. 2018). The proportional contribution of carcharhinid species to the overall volume could be as high as 85.5%, as many of species traded in the highest volumes are in this family (Clarke et al. 2006, Fields et al. 2018, Cardeñosa et al. 2018a, Cardeñosa et al. 2020). Due to the complications of identifying products in trade within the family Carcharhinidae, and the large proportion of the fin trade that this family represents, it would be challenging for customs officials to separate a subset of listed Carcharhinidae species from unlisted species within the family in a timely and easy manner.

However, a listing at the family level would bring the majority of the shark fin trade under CITES Appendix II regulation, and given that 70% of the fin trade (Cardenosa et al in press) and over 68% of the family

Carcharhinidae is already considered threatened according to the IUCN Red List of Threatened Species Categories and Criteria (Dulvy et al 2021), such action is clearly justified if the intent of CITES Appendix II, to regulate the trade in species not yet threatened with extinction, is to be met.

This step would assist the implementation and enforcement of all shark listings at the customs and border control level, since almost every shipment of fins would contain CITES Appendix II species, and should be accompanied by the appropriate CITES permit or certificate. This would also limit the ability to hide small quantities of listed species among large quantities of unlisted fins, a common issue encountered in the implementation of current shark listings (Villate-Moreno 2021), with around 25% of the fin trade already being CITES Appendix II listed (Cardeñosa et al. 2018a).

Therefore, to facilitate the implementation of this, and existing CITES shark listings, all members of the family are included in this proposal, under criteria Annex 2b, Criterion A.

B. Proponent

Government of Panama

C. Supporting statement

1. Taxonomy

1.1 Class: *Chondrichthyes*

1.2 Order: Carcharhiniformes

1.3 Family: Carcharhinidae

1.4 Species: *Carcharhinus amblyrhynchos*, *Carcharhinus obscurus*, *Carcharhinus porosus*, *Glyphis gangeticus* (and all remaining species found within the family Carcharhinidae under Annex 2b, Criterion A, as detailed in section 9 of this proposal)

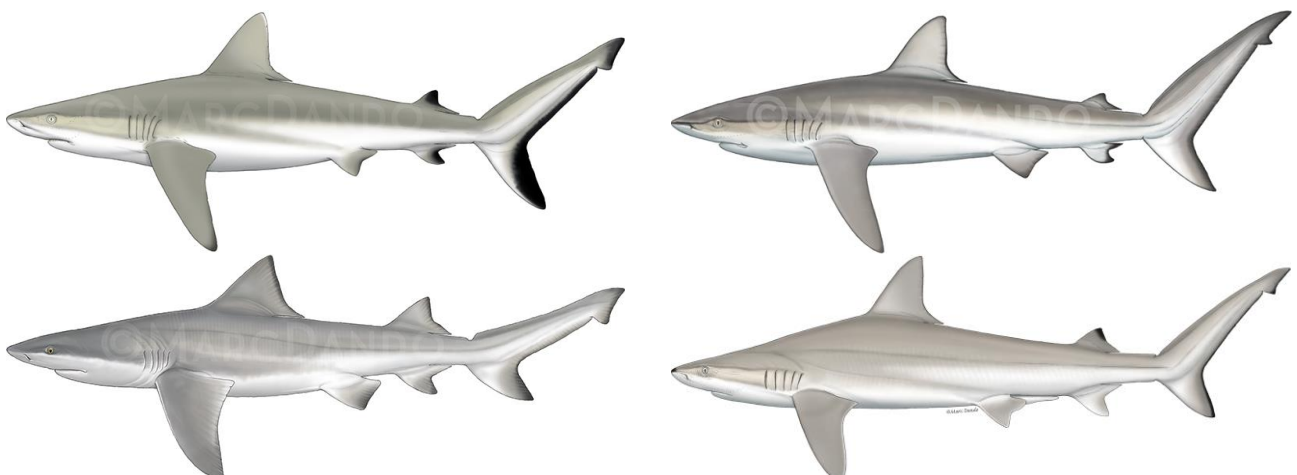
1.5 Scientific synonyms:

1.6 Common names:

English: Grey reef shark, dusky shark, smalltail shark, Ganges shark

1.7 Code Numbers: Not applicable.

Figure 1 - Grey reef shark (*C. amblyrhynchos*) top left, dusky shark (*C. obscurus*) top right, Ganges shark (*Glyphis gangeticus*) bottom left, smalltail shark (*C. porosus*), bottom right



2. Overview

Grey reef shark (*C. amblyrhynchos*) summary:

The grey reef shark (*Carcharhinus amblyrhynchos*) is a medium-sized coastal shark that occurs in coral reef habitats in tropical waters of the Indian and Pacific Oceans from the surface down to a depth of at least 280 meters. The species has relatively low biological productivity. *C. amblyrhynchos* is assessed as Endangered globally on the IUCN Red List of Threatened Species (Simpfendorfer et al. 2020).

The declines in the populations of reef associated sharks around the world are well represented by the grey reef shark (*C. amblyrhynchos*). Historically this species was thought to have been abundant on coral reef ecosystems throughout its Indo-Pacific range, but it has declined significantly due to overfishing. In the coming decades, these declines will be compounded by the impacts of climate change, thus extirpating a key predator from coral reefs, further impacting reef health.

A recent global survey highlighted the poor status of reef-associated sharks, including *C. amblyrhynchos*, finding widespread depletion of reef sharks across much of the world's tropical oceans (MacNeil et al. 2020). The key finding was the profound impact that fishing has had on reef shark populations: on almost 20% of reefs surveyed, no sharks were found at all, and they were almost completely absent from reefs (effectively functionally-extinct) in several countries, particularly in the Western Pacific and Indian Ocean regions. Grey reef sharks were not detected on reefs from 8/40 countries where they should occur based on historical range; in over half of the remaining countries they were rarely sighted. This indicates widespread declines, far exceeding the CITES listing threshold. Grey reef shark fins still occur in landings sites around the Indo-Pacific, are found in illegal seizures on high seas vessels, and are commonly sampled in random surveys of the Hong Kong SAR fin trade hub (Fields et al. 2018, Cardeñosa et al. 2018a, Bonaccorso et al 2021, Appleyard et al 2018).

Ganges shark (*Glyphis gangeticus*) summary:

The river sharks of the genus *Glyphis* are represented by three described species (the speartooth shark *Glyphis glyphis*, northern river shark *G. garricki*, and Ganges shark *G. gangeticus*). All are considered threatened and restricted to freshwater, estuarine and occasionally adjacent nearshore systems in Australasia and South and Southeast Asia. They are rare, poorly known and hard to accurately identify. Undescribed species may still exist, if they are not already extinct, in South and South East Asia.

The most widely distributed, the Ganges shark (*G. gangeticus*) is among the world's most threatened shark species, and is considered Critically Endangered on to the IUCN Red List due to high human pressures on its restricted habitat throughout its South Asian range (Rigby et al. 2021). Despite their rarity, river sharks are recorded as being processed for the fin trade at landing sites and have been detected in random surveys of the shark fin trade hub of Hong Kong SAR (White et al 2015, Fields et al. 2018, Cardeñosa et al. 2018a).

Continued trade, even in small quantities, is of high concern, given the species' low numbers, highly restricted ranges, poorly understood life history, and the high extinction risk to surviving unprotected populations.

Dusky shark (*C. obscurus*) summary:

The dusky shark (*Carcharhinus obscurus*) is a large (to 420 cm total length) coastal and pelagic shark with a patchy distribution in tropical and warm temperate seas from the surface down to depths of 500 m. The species has low biological productivity with late age-at-maturity and a long reproductive cycle. It is highly migratory and listed in Appendix II of the Convention on the Conservation of Migratory Species (CMS). Significant declines have been recorded throughout much of the species' range and it is assessed as

Endangered in the IUCN Red List of Threatened Species (Rigby et al. 2019). The species is still regularly found in the global shark fin trade (Fields et al. 2018, Cardeñosa et al. 2018a).

Smalltail shark (*C. porosus*) summary:

The smalltail shark (*Carcharhinus porosus*) is a small (<150 cm total length) Central and South American coastal requiem shark. It is heavily fished and in at least part of its range has declined by over 90% in ten years. It is assessed as Critically Endangered globally on the IUCN Red List of Threatened Species (Pollom et al. 2020). The species been detected in the most recent random surveys of the shark fin trade hub of Hong Kong SAR (Fields et al. 2018, Cardeñosa et al. 2018a).

Family level summary

The family Carcharhinidae forms the core of the global shark fin trade, with estimates from recent studies conducted in trade hubs indicating these species make up 46% of all the species recorded in trade (Fields et al. 2018, Cardeñosa et al. 2018a). Given the relative contribution of some of the species within the family to that trade, the family Carcharhinidae make up as much as 85.5% of fins found for sale in the world's largest shark fin retail markets (estimate determined via an index of relative species contribution to the trade, see Fields et al. 2018, Cardeñosa et al. 2018a, 2020 for details on this index).

As highlighted in this proposal to amend the Appendices, many species within the family are already Critically Endangered or Endangered, and meet, and in many cases greatly exceed the threshold for CITES Appendix II listing, several meeting the Appendix I listing criteria. Recent global analysis of shark populations found 37.5% of shark, ray, and chimaera species to be threatened with extinction, the second highest of all vertebrate lineages (Dulvy et al 2021). However, within the family Carcharhinidae the situation is far worse, with 68.4% of species considered threatened (Dulvy et al 2021 – supplementary information), one of the highest rates among all shark families. Given that this family forms the majority of the trade in shark fins and meat, this clearly makes the case for CITES Appendix II regulation, as the family is clearly already deeply impacted by unregulated international trade.

The global trade in shark fins, and increasingly other products such as meat, is highly reliant upon species in family Carcharhinidae. Most species in this family are caught in multi-species fisheries in which it is not possible to target one species over another and in most cases caught individuals are dead when the fishing gear is collected. Optimal conservation outcomes require management of the entire group, with regulations and limits based on the needs of the most threatened species caught. Under current management regimes, international trade will continue to drive fisheries for these ecologically important species, sequentially depleting species after species as each one declines and become harder to source. The precautionary solution is to bring most of the high value international fin trade under CITES regulation control now, as proposed here. This will secure their legal, sustainable, traceable and well-regulated use, with associated economic benefits, and allow depleted stocks to recover, thus averting the need for future Appendix I listings.

3. Species characteristics

3.1 Distribution

Grey reef shark (*C. amblyrhynchos*) – top left image (figure 1)

Tropical Indo-West and Central Pacific Oceans; some parts of the Eastern Tropical Pacific Ocean (Last and Stevens 2009, Simpfendorfer et al 2020, Ebert et al. 2021).

Ganges shark (*G. gangeticus*) – bottom right image (figure 1)

Relatively poorly known, patchy distributions in tropical rivers, estuaries and adjacent coastal waters in South Asia (Compagno, L.J.V. 2007, Ebert et al. 2021).

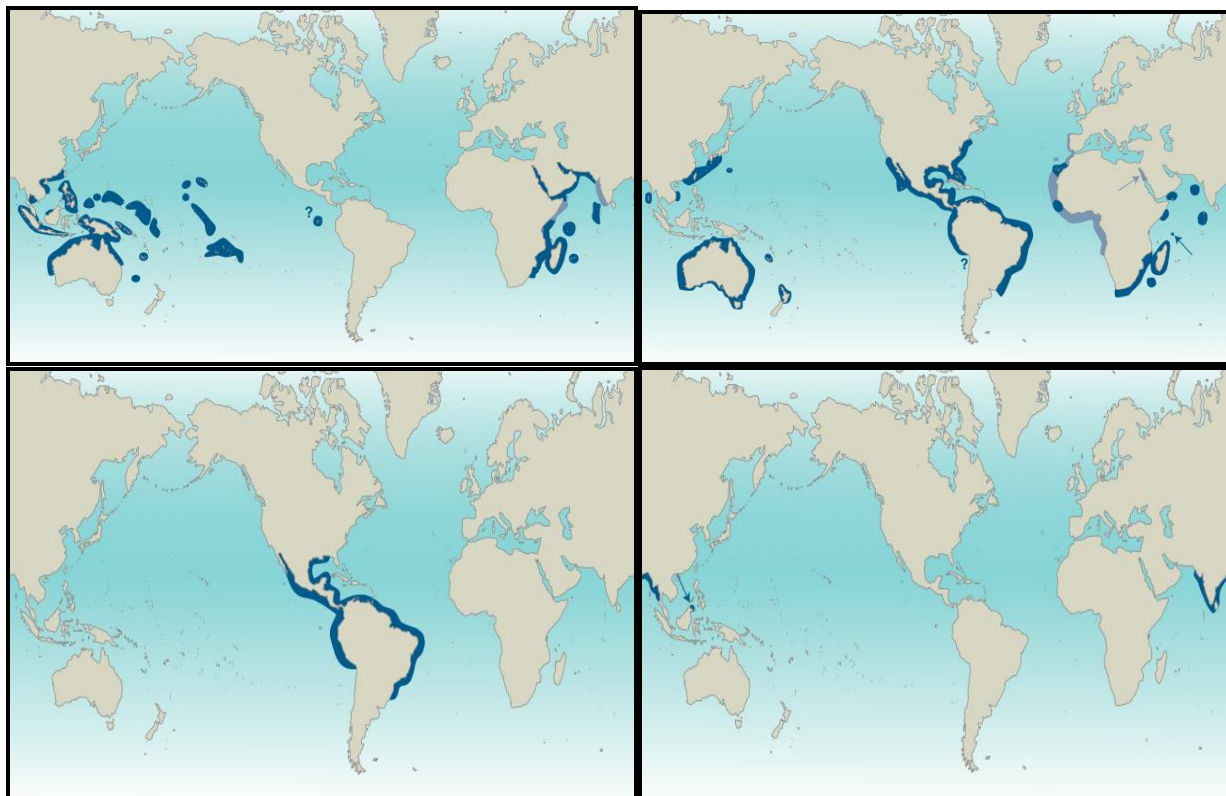
Dusky shark (*C. obscurus*) – top right image (figure 1)

Wide-ranging migratory species with a mainly coastal global distribution in tropical, sub-tropical and temperate oceans (Compagno 1984, Ebert et al. 2021).

Smalltail shark (*C. porosus*) – bottom left image (figure 1)

West Atlantic from the Gulf of Mexico and mainland Caribbean coast to southern Brazil, and central East Pacific (Ebert et al. 2021).

Figure 2 – range maps



3.2 Habitat

All species included in this proposal are members of the family Carcharhinidae (Requiem sharks). This is the dominant family of sharks in tropical continental shelf and offshore habitats, but some also occur in subtropical and warm temperate seas. Several requiem sharks prefer coral reefs and oceanic islands, while other species, including the Appendix II silky and oceanic whitetip sharks, range far into open ocean ecosystems.

The grey reef shark (*C. amblyrhynchos*) is found in clear tropical waters from the surface to depths of around 280 m (Last and Stevens 2009) and is common around coral reefs, particularly near drop-offs and fringing coral reefs. Its distribution is patchy in continental shelf waters (Simpfendorfer et al 2020)

Ganges shark (*G. gangeticus*) are restricted to turbid waters in large rivers, estuaries; also adjacent coastal areas during the monsoon, when salinity is reduced (Compagno, L.J.V. 2007).

The dusky shark (*C. obscurus*) is found on continental and insular shelves, from the shoreline to the outer reaches of the continental shelf and adjacent oceanic waters, at depths 0-500m where it is generally a mid-level to bottom feeder (Rigby et al 2019).

The smalltail shark (*C. porosus*) inhabits muddy inshore areas and estuaries down to a depth of 84 m (Ebert et al. 2021, Weigmann et al. 2016). The species is strongly associated with mangrove forests, which can be considered as essential habitat for the species on the basis of probability of occurrence and patterns of habitat use (Feitosa et al. 2020, Pollom et al 2020).

3.3 Biological characteristics

All species included in this proposal are members of the family Carcharhinidae (Requiem sharks), which currently includes 56 species. Most are viviparous with a yolk sac placenta; litters range in size from just one or two pups to (rarely) over 100. They are active, strong swimmers. Some species are ‘ram-ventilators’ needing to swim continually to oxygenate their gills, while others are capable of resting motionless for extended periods on the bottom. Many are more active at night, or dawn and dusk, than during the daytime. Some are solitary or socialize in small groups, and some are social schooling species.

Table 1 - Life history characteristics of proposed species

Species	Maximum size (total length TL)	Size of maturity (M - male/F - female)	Litter size	Frequency of reproduction/gestation period	Estimated three generation length	References
<i>C. amblyrhynchos</i>	265 cm	M - 130–145 cm TL, F 120–142 cm TL	1–6 pups	Biennial	43.5 years	Wetherbee et al. 1997, Ebert et al. 2021 Compagno 1984, Anderson and Ahmed 1993, Last and Stevens 2009, Simpfendorfer et al 2020
<i>G. gangeticus</i>	275 cm, possibly larger	M – 178 cm	Unknown	Unknown	Unknown	Ebert et al 2021, Compagno, L.J.V. 2007
<i>C. obscurus</i>	420 cm	M- 265–280 cm, F- 257–310 cm	7	Biennial, 18-24 month gestation	90-114 years, depending on region	Cortés 1998, Romine 2009, Hoffmayer 2014 Castro 2009, Compagno 1984, Ebert and Stehmann 2013
<i>C. porosus</i>	150 cm	M- 70cm TL, F- 71cm TL	2–7 pups	Biennial	27 years	Weigmann 2016, Lessa and Santana 1998, Pollom et al 2020

3.4 Morphological characteristics

See section 6.3 for details.

3.5 Role of the species in its ecosystem

Requiem sharks are, in lightly disturbed or well managed environments, the dominant group of tropical sharks, both in biodiversity and abundance (MacNeil et al. 2020). These are major predators, feeding on a wide range of prey, including bony fishes, elasmobranchs, cephalopods, crustaceans, and a wide range of other marine fauna including sea birds, turtles, sea snakes, marine mammals, benthic invertebrates, and marine carrion. Smaller species tend to specialise on a fairly narrow selection of prey, but larger species take a wider range of prey items (Ebert et al. 2021).

4. Status and trends

4.1 Habitat trends

See section 3.2 for habitat preferences; these species are all found predominantly in the inshore/coastal and riverine zones. For all species included in this proposal, particularly heavy fisheries mortality (targeted and bycatch) takes place virtually throughout their range, driving population declines globally.

4.2 Population size

Data are not available to determine the precise global population size of any species in the family Carcharhinidae. However, all species highlighted in this proposal are caught by artisanal and commercial fisheries, both as target species and as bycatch in trawl, net, and longline fisheries. Their high susceptibility to multiple fishing gear types, and geographic range along some of the world's most heavily fished coastal and riverine regions correlate with estimates of severe population decline, even when data are incomplete.

4.3 Population structure

Data are not available on population structure.

4.4 Population trends

Based on evidence of population reduction due to fisheries exploitation, habitat deterioration, conservative life history characteristics and demand for their fins in trade, all four species highlighted in this proposal have been assessed by experts as Endangered or Critically Endangered on the IUCN Red List, with extensive, continuing declines noted throughout much of their range, driven by a lack of appropriate catch and trade management.

4.4.1 - Population trends by region

The grey reef shark (*C. amblyrhynchos*)

In the **Pacific Ocean**, data from 15 locations found that grey reef shark populations far from human populations (Jarvis Reef, Phoenix Islands, Line Islands, Johnston Atoll, Wake Island, Northwest Hawaiian Islands and western and northern Mariana Islands) were likely close to their original population size, while those close to human populations (Main Hawaiian islands, American Samoa and southern Mariana Islands) were heavily depleted (<3% of carrying capacity) (Nadon et al. 2012, Simpfendorfer et al 2020)

The Global FinPrint project sampled in countries containing 88.6% of the coral reefs within the species' global historic range, creating the largest and most recent data set available to assess the status of this species. Reef-level depletion estimates were aggregated, weighted by jurisdictional coral reef area (relative to global coral reef area), to produce an estimate of global depletion. This research concluded that the grey reef shark has undergone a global population reduction of 59% in the last three generation lengths (44 years) and is classified on the IUCN Red List as **Endangered** (MacNeil et al 2020, Simpfendorfer et al 2020).

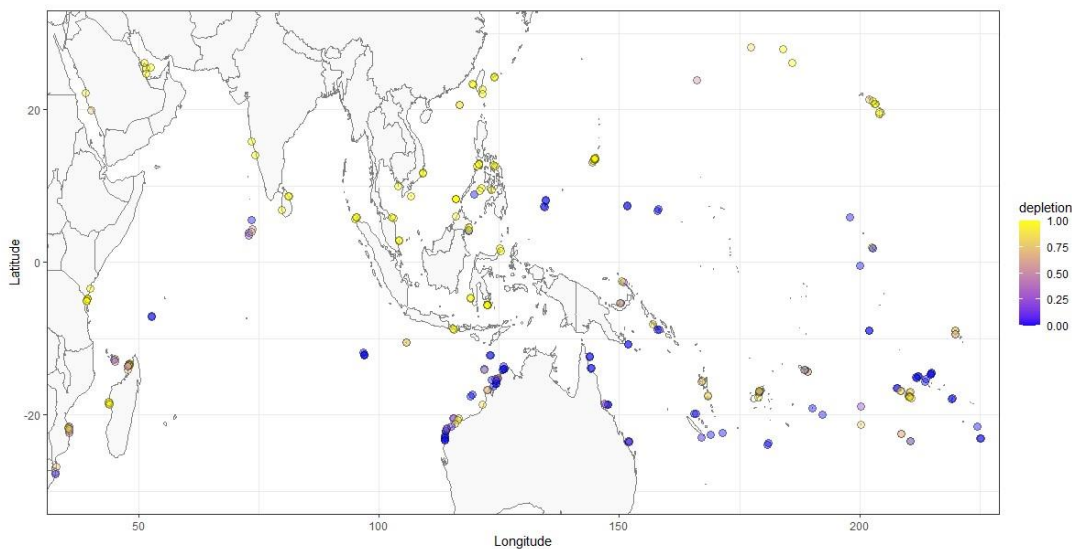


Figure 3. Estimated reef level depletion of grey reef sharks from Global Fingerprint data (IUCN Red List Assessment supplementary note, from Simpfendorfer et al 2020).

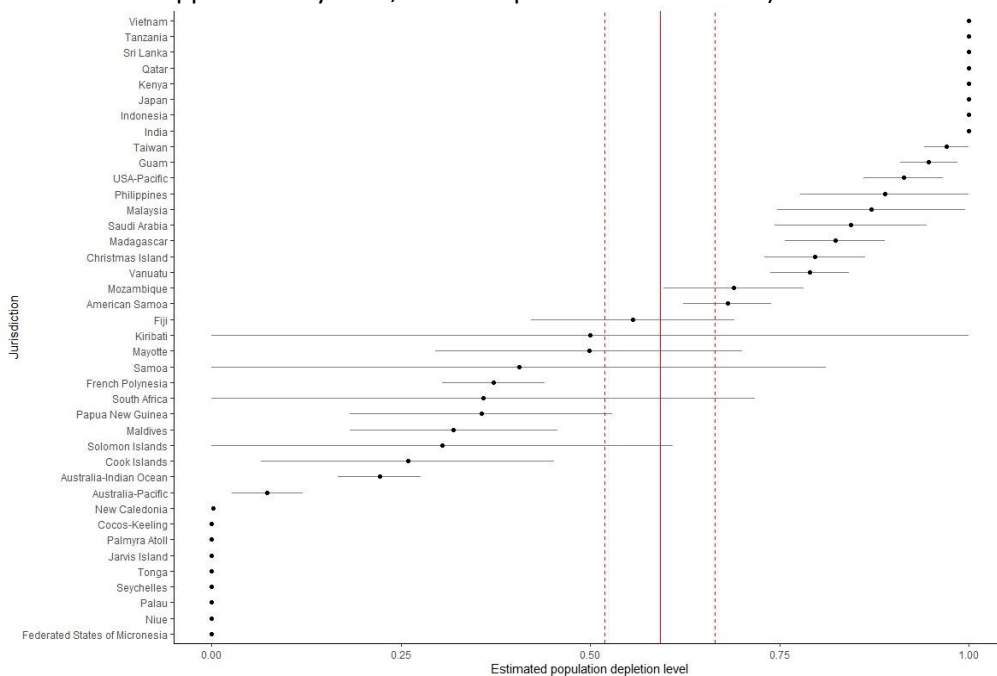


Figure 4. Estimated depletion of grey reef sharks by jurisdiction from Global FinPrint data. Error bars represent standard error. Red solid line indicates the global coral reef weighted depletion estimate (59% - Endangered), red dashed lines represent standard error, which also fall within the **Endangered** category (IUCN Red List assessment supplementary note, Simpfendorfer et al 2020).

As seen in Figure 4, in almost half of the countries sampled, the grey reef shark has declined by more than 60%, making its globally Endangered status a conservative estimate of declines. In locations in Vietnam, Tanzania, Sri Lanka, Qatar, Japan, Indonesia, India, Taiwan, Guam, the Philippines, Malaysia, Saudi Arabia and Vanuatu, the species is estimated to have declined by over 75 percent within three generations, satisfying IUCN Red List **Critically Endangered** status and CITES Appendix I listing criteria.

Ganges shark (*G. gangeticus*)

The Ganges shark is assessed as **Critically Endangered** on the IUCN Red List due to small population size and reduction exceeding 80% over three generations (Jabado et al 2017, Rigby et al 2021)

Records of the Ganges shark (*Glyphis gangeticus*) from its **South Asia** range in the northern Indian Ocean are sparse and the species is considered to be extremely rare, although its historical population size is unknown. Its known range extends from the Indus River outside Karachi, Pakistan, to Bangladesh and Myanmar. Its reliance on riverine and estuarine habitat makes it particularly susceptible to intensifying threats across its limited range from fishing, habitat degradation, increased river use, and dams and barrages which have altered flow, river productivity and migration pathways.

The species is possibly locally extinct in Pakistan, Myanmar, and Borneo with recent records only known from west and east India and Bangladesh. It is suspected that the Ganges Shark has undergone a population reduction of >80% over the past three generation lengths (54 years) due to levels of exploitation and given the rarity of contemporary records, it is estimated that the number of mature individuals of the Ganges Shark is very small (< 250) with an inferred continuing decline due to ongoing intensive and unmanaged fishing pressure and habitat degradation across its entire range (Rigby et al 2021).

The dusky shark (*C. obscurus*)

New research has identified ‘an alarming, ongoing, worldwide decline in oceanic shark populations across the world’s largest ecosystem over the past half-century’. This study, which found average declines of pelagic sharks globally of >70% since 1970, included dusky sharks as well as the previously-listed CITES Appendix II Carcharhinids: silky and oceanic whitetip sharks (Pacoureau et al 2021). The dusky shark is the only pelagic shark in an IUCN Red List threatened category (CR, EN, VU) not yet listed in CITES Appendix II.

In the Americas: a stock assessment in the Northwest Atlantic estimated that the dusky shark stock is overfished and overfishing has been occurring since the mid-1980s, with a prohibition on retention in the United States in 2000 that has reduced, but not ceased, overfishing (SEDAR 2016). The estimated population reduction over three generations (89.4 years) is 89.9%, qualifying for **Critically Endangered** in the region (Rigby et al 2019).

In Southeast Asia and Oceania: following serious historical stock depletion, the species now appears to be beginning to recover in Western Australia under sustainable fisheries management (Braccini and O’Malley 2018). The Eastern Indian Ocean CPUE trend for 1975–2015 (41 years) revealed annual rates of reduction of 3.8%, consistent with an estimated median reduction of 98.7% (i.e. to less than 2% of baseline) over three generation lengths (114 years), and the species qualifies for **Critically Endangered** in the region.

In Africa, the trend analysis of the Western Indian Ocean CPUE for 1978–2003 (26 years) revealed annual rates of reduction of 0.9%, consistent with an estimated median reduction of 60.9% over three generation lengths (114 years), and the species qualifies for **Endangered** in the region.

The **global** estimated median reduction was 75.8%, slightly below the highest probability of >80% reduction over three generation lengths (89.4–114 years), and the species is assessed as **Endangered** globally.

Region	GL (years)	Data length (years)	PA weighting	Median change	LC	NT	VU	EN	CR	Likely Status
N.W. Atlantic ¹	29.8	56	0.21	-89.9	0	0	0	0.9	99.1	CR
N.E. Atlantic	No trend data		0.13	–	–	–	–	–	–	–
S. Atlantic	No trend data		0.14	–	–	–	–	–	–	–
N. Pacific	No trend data		0.09	–	–	–	–	–	–	–
S. Pacific	No trend data		0.12	–	–	–	–	–	–	–
E. Indian ²	38	41	0.11	-98.7	0	0	0	0.1	99.9	CR
W. Indian ³	38	26	0.19	-60.9	25.6	4.1	11.6	32.1	26.6	EN
Global	–	–	–	-75.8	16.9	5.9	12.2	21.7	43.3	CR

Table 2 - *Carcharhinus obscurus* – Population change (%) and posterior probabilities for changes falling within the IUCN Red List categories (Rigby et al 2019).

The smalltail shark (*C. porosus*)

Due to documented declines in catches in several areas, combined with the level of unmanaged fishing pressure it is exposed to, it is suspected that the smalltail shark has undergone a population reduction of 50–79% over the past three generations (27 years), qualifying as **Endangered** in the West Central Atlantic.

In Northern Brazil, this species was the most commonly captured elasmobranch in shrimp trawl and gillnet fisheries targeting Acoupa Weakfish (*Cynoscion acoupa*) and Brazilian Spanish mackerel (*Scomberomorus brasiliensis*) off Amapá, Pará and Maranhão states at depths of 50–80 m (Pollom et al 2020). During the 1980s, it comprised up to 70% of the total catch weight in the artisanal gillnet fisheries. Catch rates declined from 2.87 kg per hour to 0.43 kg per hour in the 2000s, which is equivalent to a **population reduction of 85%** over the equivalent of three generation lengths (27 years) (Santana et al 2020). Demographic modelling suggests that fishing mortality far exceeded population growth rates and a population reduction of >90% over three generations, qualifying for **Critically Endangered** status for the core distribution of this species (Santana et al. 2020). In Maranhão State, it was the most common shark in the 1980s, but is now scarce, although it is still caught in landings in Raposa, Maranhão state (R. Lessa unpubl. data 2020), where it has undergone a 90% decline over the past 27 years (Santana 2020).

Due to the intense and largely unmanaged nature of fisheries in the region, the decreasing probability of catches, documented declines in some areas, and the relative lack of recent records in many parts of its range, combined with alarming declines in other elasmobranchs in the core of its range (northern South America), it is inferred that the smalltail shark has undergone a population reduction of >80% over the past three generations (27 years) and is considered **Critically Endangered** globally (Pollom et al 2020).

Table 3- Summary of declines by region:

Region	Noted declines
Global	Grey reef – over 75% in more than half of the countries surveyed (Simpfendorfer et al 2020, MacNeil et al 2020) Ganges shark – near 100% depletion , possibly extinct in several countries (Compagno, L.J.V. 2007, Rigby et al 2021) Dusky- over 80% (Rigby et al 2019) Smalltail- 50-90% (Santana et al. 2020)
Southeast Asia - Oceania	Grey reef - 50–79% in the last three generation lengths (MacNeil et al 2020) - 90% plus in some locations (Nader 2012) Dusky – 98.7% – with declines now halted and initial signs of recovery (Rigby et al 2019) Ganges shark (if present) – likely near extirpation (approaching 100% declines) Compagno, L.J.V. 2007)
Southern Asia/Gulf/Arabia	Grey reef - 50–79% in the last three generation lengths (MacNeil et al 2020) Grey reef - 50-80% with declines ongoing (Jabado et al 2017) Ganges shark – Over 80% (Jabado et al 2017, Rigby et al 2021) Dusky - >80% plus over the last 50 years (Rigby et al 2019)
Africa	Grey reef - 50–79% in the last three generation lengths (MacNeil et al 2020) Dusky - >80% over three generation lengths (Pacoureaux et al 2021)
Americas	Grey reef - 50–79% in the last three generation lengths (MacNeil et al 2020) Dusky – 89% in three generations (Rigby et al 2019, SEDAR 2016) >70% over the last 50 years in the Atlantic Ocean (Pacoureaux et al 2021) Smalltail - 50–79% in the Western Central Atlantic Smalltail - 90% over three generations in Northern South America (Santana et al. 2020)

4.5 Geographic trends

See 4. 4.1

5. Threats

All species are listed as Endangered or Critically Endangered on the IUCN Red List of Threatened Species, with the primary threat to these species taking the form of unsustainable and unregulated fisheries mortality throughout their range (see section 4.4 for additional detail).

All species are caught by artisanal and commercial fisheries both as a target species and as bycatch in demersal trawl, net, and longline fisheries – with retention incentivized due to the significant value of their fins in international trade. Their use of inshore and riverine habitats and susceptibility to multiple gear types makes them particularly vulnerable, which is compounded as their range includes some of the world’s most heavily fished rivers and coastal regions (Dulvy et al. 2014, Jabado et al., 2017, Quieroz et al 2019).

Their dependence upon inshore and freshwater habitats adds additional significant threats, namely those of habitat loss and degradation, with the river systems in South Asia that support species such as the Ganges shark already deeply compromised by anthropogenic activity (Aggarwal et al 2020). The inshore habitats used by species in the family, such as coral reef ecosystems on which grey reef sharks act as key predators, are already suffering catastrophic reductions globally due to climate change (Hoegh-Guldberg 2017). This additional threat, compounded by this global overfishing only heightens the concern for these species’ survival (MacNeil et al 2020).

6. Utilization and trade

The grey reef shark (*C. amblyrhynchos*), river sharks (Genus *Glyphis*), the dusky shark (*C. obscurus*) and the smalltail shark (*C. porosus*) were all recorded in recent assessments of the global shark fin trade, during a study that has now been underway for seven years (Fields et al. 2018, Cardeñosa et al. 2018a and 2020, Cardenosa et al. in press). With the high value of shark fins in retail markets in East Asia, the global fin trade remains a key threat to shark and ray populations globally, where species aren’t subject to formal catch or trade management, as is the case for these species in most locations globally (Dulvy et al 2021).

Grey reef sharks were encountered in 28.3% of sampling events in the Hong Kong SAR retail fin market from 2014-2018. The dusky shark accounted for 1.4% of the shark fin imported in Hong Kong SAR in 1999-2001, translating to hundreds of thousands of individuals per year (Clarke et al 2006). More recently, dusky sharks were encountered in 70.7% of sampling events in the retail market 2014-2018. Both the smalltail shark and river sharks are rarely sampled in the fin trade (Fields et al 2018, Cardeñosa et al 2018a and 2020), but due to their Critically Endangered status and limited geographical range, any unregulated trade in their products is of acute conservation concern.

Cardenosa et al. (in press) have reviewed the global distribution (number of FAO regions occupied) and IUCN status of shark species occurring in the dried shark fin trade in Hong Kong during 2014-2018 (methodology described by Fields et al. (2018) and Cardeñosa et al. (2018)). Table 3 is sourced from that work, and highlights species found in this analysis that are IUCN threatened and heavily traded, but non-CITES listed.

Species	Common Name
<i>Carcharhinus acronotus</i>	Blacknose shark
<i>Carcharhinus albimarginatus</i>	Silvertip shark
<i>Carcharhinus altimus/plumbeus</i>	Bignose/Sandbar shark
<i>Carcharhinus amblyrhynchos</i>	Grey reef shark

<i>Carcharhinus amboinensis</i>	Pigeye shark
<i>Carcharhinus cf. dussumieri/dussumieri</i>	Whitecheek shark
<i>Carcharhinus obscurus/galapagensis</i>	Dusky/Galapagos shark
<i>Carcharhinus porosus</i>	Smalltail shark
<i>Glyphis spp.</i>	River shark
<i>Hemipristis elongata</i>	Snaggletooth shark
<i>Lamiopsis temminckii</i>	Broadfin shark
<i>Mustelus mustelus</i>	Common smoothhound shark
<i>Mustelus schmitti</i>	Narrownose smooth-hound shark
<i>Negaprion acutidens</i>	Sicklefin lemon shark
<i>Dalatias licha</i>	Kitefin shark
<i>Galeorhinus galeus</i>	School shark

Table 4: Sixteen species combining threatened (Critically Endangered – CR; Endangered – EN; or Vulnerable – VU) and Data Deficient status that were commonly encountered in Hong Kong fin market surveys 2014-2018 (~1-15% incidence in sampling events). Lead species in this proposal are all included in this analysis and highlighted (yellow) for reference, with wider species in the family, included in the proposal as look-alikes also highlighted (beige).

This analysis reveals 16 species/species groups that combine threatened IUCN Red List status and common incidence (> ~ 1% of sampling events) in the dried fin trade. All but four of these species also exhibit restricted geographic range (occupying < 7 FAO regions), which implies they have much a smaller global population than some of the more common species in trade. This may cause them to be even less likely to sustain exploitation and suggests that there are fewer geographic refuges for these species. Eleven of these species/groups (69%) are members of family Carcharhinidae. The conclusion of this study is a recommendation that Parties consider the CITES Appendix II listing of river sharks (Genus *Glyphis*), the dusky shark (*C. obscurus*) and the smalltail shark (*C. porosus*), along with many other coastal species within the family Carcharhinidae, as such action is needed to properly manage the shark fin trade (Cardenosa et al in press).

The shark meat trade is also increasingly recognized to be a contributory threat to many shark and ray species (FAO 2015), although there are limited data on the species composition of the meat trade. Given the utilization of the fins of grey reef shark (*C. amblyrhynchos*), river sharks (genus *Glyphis*), dusky shark (*C. obscurus*) and smalltail shark (*C. porosus*), and the retention of carcasses for their meat (Rigby et al 2019, Simpfendorfer et al 2020), these species' meat, as well as oil, skins, jaws and other secondary products are likely being utilized (albeit mostly in domestic markets). A recent study noted that global shark catches are dominated by members of the family Carcharhinidae, with the blue shark alone making up 16% of global shark landings in 2017, with the study noting that the blue shark may now be dominating the meat trade via international commerce to meat markets in Japan, Spain, Taiwan PoC, and Uruguay (Okes, N. and Sant, G. 2019).

In summary, it is clear that when the grey reef shark (*C. amblyrhynchos*), river sharks (Genus *Glyphis*), the dusky shark (*C. obscurus*) and the smalltail shark (*C. porosus*) are targeted in fisheries, or retained when incidentally caught, their products, particularly fins, enter international trade (Fields et al 2018). Given the comparatively high value of the shark fin trade, and the growing threat of the meat trade (FAO 2015), it is clear that this trade continues to drive both illegal and poorly regulated fisheries and therefore drives declines in these species' and wider members of the Family Carcharhinidae populations throughout much of their range (Davidson et al 2016).

6.1 National utilization:

The grey reef shark (*C. amblyrhynchos*), river sharks (*Glyphis* spp.), the dusky shark (*C. obscurus*) and the smalltail shark (*C. porosus*) form important, but decreasing, components of mixed inshore, and occasionally offshore (particularly for the dusky shark) fisheries throughout their range (Rigby et al 2019, Simpfendorfer et al 2020, Jabado et al., 2017, McNeil et al 2020, Pacoureaux et al 2021). Key products produced from this catch includes fins (usually for export) and meat, oil and skins that are used domestically, but are also, for some species likely to be exported to key shark meat consuming countries (Rigby et al 2019, Simpfendorfer et al 2020, FAO 2015).

The requirement to issue CITES Non-Detriment Findings (NDFs) encourages Parties to assess and improve the sustainability of all sources of fisheries mortality for listed species; therefore, a CITES Appendix II listing for these species will also facilitate sustainable domestic use.

For species such as the grey reef shark (*C. amblyrhynchos*), dive tourism revenue can outweigh the value found in fisheries. With the species of particular significance to dive and snorkel tourism globally, studies have shown the huge economic value of healthy populations of reef associated sharks. For example, shark diving is a major contributor to the economy of Palau, generating US\$18 million per year and accounting for approximately 8% of the gross domestic product of the country (Vianna et al 2012). This is common in many small island, dive tourism-focused countries, which are often those where such sustainable, long term high value industries are badly needed for local livelihoods (and far outweighs any benefits from commercial trade). It offers another strong rationale for precautionary management of any extractive use (such as sale and trade) for these species, to safeguard their use as a source of tourism revenue in the long term.

6.2 Legal trade

Products enter trade legally, unless taken in contravention of national legislation or regional fisheries management measures (see sections 6.4 and 7) and enforced accordingly.

6.3 Parts and derivatives in trade

a) **Identification at the point of landing to aid traceability:**

At the point of landing, all species within the family Carcharhinidae can be identified to a species level, allowing for species specific management and monitoring, and the issuance of CITES permits before products enter international trade (with the appropriate non-detriment and legal acquisition findings). This will allow for the effective implementation of this listing proposal. Multiple regional guides for members of this family are already available (FAO elasmobranch field identification guide series and WCS CITES species full carcass ID guide (Jabado & Abercrombie 2021)).

b) **Identification at the point of trade – fin ID:**

As per the introduction to section 6, the fin trade is the major trade based threat to the grey reef shark (*C. amblyrhynchos*), river sharks (*Glyphis* spp.), the dusky shark (*C. obscurus*) and the smalltail shark (*C. porosus*) along with the wider family (Carcharhinidae). Identifying traded fins visually is important to allow for effective implementation of the proposal in all capacity settings, as seen with the effective implementation of CITES shark listings at the customs level since regularly commercially traded species were first listed on CITES Appendix II in 2013 (Cardenosa et al 2020).

At the first point of trade, all the lead species included in this listing proposal can be visually identified to the family (Carcharhinidae) level using their unprocessed dorsal fins (and pectoral fins for some species), as per the techniques used in existing CITES shark ID guides:

https://static1.squarespace.com/static/5be1cec125bf028361db95dc/t/5f34579e0d86192a0f01a02e/1597265832828/2018_PEW_SharkFinGuide_English_09-2018_r2_WEB.pdf

However, depending on the type of product, identification is not always possible to the species level, with multiple look-alike species within the wider family Carcharhinidae (Ebert et al. 2021, Jabado 2021, personal communication). This necessitates the family level approach of this listing proposal.

Overall, at the point of landing visual identification is possible to species level, aiding traceability and facilitating continued CITES-regulated trade. At the point of trade, visual identification is possible in a manner that allows for implementation of this listing in all capacity settings to the family level, allowing customs officials to easily hold shipments without the proper CITES permits, but necessitating a family level listing. Full details of the visual identification of fins from the family Carcharhinidae, showing the close similarity of many species fins, and the techniques for identification using dorsal and pectoral fins to the family level is included in Annex 1 to this proposal.

Additionally, a specific visual identification guide using the same techniques as existing CITES shark fin ID guides is in development to accompany this proposal, and support its implementation. This guide will be annexed to this proposal when complete, ahead of CoP 19.

Some species within the family can be identified to the species level by their fins, notably the oceanic whitetip, silky and blue shark. Those species would not be lookalikes from the perspective of visual fin ID, but, for those that aren't currently listed on CITES Appendix II, they are lookalikes when the trade in other products, such as meat, or processed fins is considered.

c) Identification at the point of trade – meat and carcass ID

As noted in the introduction to section 6, the lead species in this proposal are not major components of the shark meat trade. However, other members of the family Carcharhinidae are, with blue sharks and members of the *Rhinozprionodon* genus likely the most traded shark species for their meat. Identification of meat and carcasses (along with processed fins) is more challenging than for unprocessed fins, and depending on the carcass processing isn't possible to the species level. However the meat trade is predominated by fewer countries than the fin trade, and most countries that reportedly trade meat in significant quantities have a higher capacity to implement CITES listings, such as Japan, Spain, Taiwan PoC, and Uruguay (Okes, N. and Sant, G. 2019).

Genetic ID would be needed to identify traded meat in those higher capacity countries that trade large quantities of meat, and that is simplest when conducted to the family level. This gives further justification to a family level listing approach, to allow for the simplest testing regime for traded meat products, and to prevent small quantities of meat from the grey reef shark (*C. amblyrhynchos*), river sharks (*Glyphis* spp.), the dusky shark (*C. obscurus*) and the smalltail shark (*C. porosus*) being concealed within shipments of other members of the family Carcharhinidae that are more heavily traded for their meat.

There is a robust publicly available database of cytochrome oxidase I sequences that allows lab-based genetic identification of products from all sharks in the family Carcharhinidae (Wong et al. 2009). There are research laboratories all over the world conducting DNA barcoding studies of these species that could be engaged to identify products for CITES enforcement applications (Sembiring et al 2015, Almeron-Souza et al 2018, among many others). Hong Kong SAR and some other countries and territories are currently using real time PCR to detect and prosecute illegal trade in CITES-listed sharks (Cardenosa et al. 2018b). The technology used is low cost (USD\$1 per sample), fast (15-94 samples processed in 3.5 hours) and easily implemented in port settings (Cardenosa et al. 2018b) with efforts now underway in Spain, Indonesia, Belize, Peru, Guatemala and Colombia to implement it.

A test for the family Carcharhinidae could be developed if this proposal were adopted, and there are emerging real time PCR methods that are applied to bony fish that initial testing also shows works for sharks and could be also used to identify any shark product to the species level in the field (Naaum et al. 2021).

Additional information on species ID and lookalike species is included in Annex 1.

6.4 Illegal trade

The grey reef shark (*C. amblyrhynchos*), river sharks (*Glyphis* spp.), the dusky shark (*C. obscurus*) and the smalltail shark (*C. porosus*) are subject to limited management globally, and with their inshore range are subject to the national laws of countries throughout their range, rather than those of regional fisheries bodies and agreements. It is assumed that the vast majority of international trade in their fins and other products is legal, but from widely unregulated fisheries. While shark finning is banned in most fisheries with many requiring landings of animals with fins attached, it still occurs and these species could be illegally finned due to the high value of their fins when traded internationally, and the comparatively low value of their meat.

See section 7 for details on countries that are thought to have management measures in place for these species.

A recent analysis of the implementation of existing CITES shark and ray listings reveals compliance issue due to similarity of appearance of shark products in trade, compounded by large shipments of mixed CITES and non-CITES listed species (Villate-Moreno 2021). All unlisted species found in the shipment analysed in this study, and misidentified as potentially CITES listed belong to the family Carcharhinidae. Listing the entire family as per this listing proposal, would remove this issue of mixed shipments and misidentification, as with the vast majority of the shark fin trade consisting of CITES listed species, almost all legal shipments of shark fins would need to be accompanied by CITES paperwork. Those shipments without paperwork would almost certainly contain CITES-listed species. Coupled to the ability to visually identify Carcharhinidae fins to the family level, this would make the basic steps of inspection and confiscation far simpler and more efficient for customs staff, especially in locations where genetic tools, or wider customs capacity are lacking or limited.

6.5 Actual or potential trade impacts

While overfishing is the major threat to sharks and rays globally (Pacoureau et al 2021), the demand from international shark fin markets is a major driving economic force behind the unsustainable mortality of these species (Fields et al 2018), driving that overfishing. Regulation of the fin trade through an Appendix II listing of these species is necessary to ensure that the trade is sustainable, and does not drive them to extinction, helping facilitate national level sustainable management and conservation.

7. Legal instruments

7.1 National

Few legal instruments exist that specifically apply to the grey reef shark (*C. amblyrhynchos*), the Ganges shark (*Glyphis gangeticus*), the dusky shark (*C. obscurus*) and the smalltail shark (*C. porosus*), although where species or family specific measures are known, they are listed in section 8.1. They are often managed as part of mixed inshore fisheries, with limited or no species-specific controls to limit overexploitation (see sections 4 and 5 for detail).

7.2 International

The mainly coastal distribution of the grey reef shark (*C. amblyrhynchos*), river sharks (*Glyphis* spp.), the dusky shark (*C. obscurus*) and the smalltail shark (*C. porosus*) limits the application of high seas Regional Fisheries Management Organizations (RFMO) regulations, and none of these species has been prioritized for conservation action in other Regional Fisheries Bodies (RFB's).

In 2017, the 124 Parties to the Convention on the Conservation of Migratory Species of Wild Animals (CMS) listed the dusky shark (*C. obscurus*) on Appendix II of the Convention, thereby recognizing this species in need of collaborative, international conservation action. No collaborative action has yet been taken outside of the subsequent listing on the CMS Shark Memorandum of Understanding (MoU); however, listing the species on CITES Appendix II would represent a strong commitment to co-operative, global action by those CITES Parties that are also signatories to CMS.

8. Species management

8.1 Management measures

The 15 countries that have declared their waters shark sanctuaries (no retention or sale of sharks), that amount to 3% of the world's oceans (Ward Paige 2017) protection should be in place for any of these species found in their waters. Of the species included in this proposal, this is likely to hold the greatest benefit for the grey reef shark (*C. amblyrhynchos*), as the majority of these shark sanctuary countries are small island states with high levels of coral reef habitat and a recent global survey found reef sharks were abundant in sanctuary nations (MacNeil et al. 2020). However, few additional countries with significant coral reef habitat have offered any protections or management to sharks more generally, or grey reef shark specifically.

Australia and the United States (US) have implemented fishery management measures aimed specifically at reducing dusky shark mortality, and US commercial and recreational fishers are prohibited from retaining the species. South Africa has imposed a recreational bag limit for dusky sharks. Outside of these countries, however, there is no evidence of specific management of the dusky shark, despite its vulnerability and extensive global range (Rigby et al 2019, CMS dusky shark listing proposal 2017).

There are no species-specific protections or conservation measures in place in the Western Central Atlantic range of the smalltail shark, although some wider fisheries management measures may offer the species limited management and protection (Pollom et al 2020).

In India, the Ganges Shark is one of 10 species of chondrichthyans protected under Schedule I, Part II A of the Indian Wildlife (Protection) Act, 1972 (Government of India Ministry of Environment and Forests 2006). However, the effectiveness of this measure is unknown, with ongoing issues in enforcement and compliance. In Bangladesh, the Ganges Shark has been protected since 2012 under Schedule I of the Wildlife (Conservation and Security) Act, 2012, however the effectiveness of this measure is limited due to a general lack of awareness of the protection among fishers and traders. To conserve the population and to permit recovery, a suite of measures will be required which may include species protection, spatial management, bycatch mitigation, and harvest and trade management measures (including international trade measures) (Rigby et al 2021).

Outside of this limited range of management measures, it is assumed that the grey reef shark (*C. amblyrhynchos*), river sharks (Genus *Glyphis*), the dusky shark (*C. obscurus*) and the smalltail shark (*C. porosus*) are largely unmanaged throughout their range. Even when protected by the measures noted here, or measures not publically available, trade could be continuing without inspection or enforcement, due to a lack of complementary trade management, monitoring and enforcement that a CITES Appendix II listing can offer.

8.2 Population monitoring

Outside of the US and Australia, there are no formal programs dedicated specifically to monitoring any of these species' populations. In addition, the lack of species-specific catch and effort data and the difficulties in species identification and clear nomenclature have resulted in difficulties in monitoring the population status to a species level. The management priority that a CITES Appendix II listing will provide will help prioritize data collection for these species.

9. Information on similar species

As noted throughout the proposal, particularly in sections 4 and 6, a listing at the family level (Carcharhinidae) is needed, due to identification issues within the family, and fully in line with Article II.2.(b) of the CITES treaty.

The full list of species contained in the proposal is found in Annex 1.

10. Consultations

11. Additional Remarks

12. References

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Annex 1- full species list and visual ID guidance

The unlisted members of the family Carcharhinidae, included in this proposal in accordance with Article II paragraph 2(a) of the Convention and satisfying Criterion A and B in Annex 2a of Resolution Conf. 9.24 (Rev. CoP17), along with Annex 2b, Criterion A of Resolution Conf. 9.24 (Rev. CoP17) are detailed as follows:

1. **BLACKNOSE SHARK** *Carcharhinus acronotus*
2. **BIGNOSE SHARK** *Carcharhinus altimus*
3. **SILVERTIP SHARK** *Carcharhinus albimarginatus*
4. **GREY REEF SHARK** *Carcharhinus amblyrhynchos*
5. **GRACEFUL SHARK** *Carcharhinus amblyrhynchoides*
6. **PIGEYE SHARK** *Carcharhinus amboinensis*
7. **BORNEO SHARK** *Carcharhinus borneensis*
8. **NERVOUS SHARK** *Carcharhinus cautus*
9. **BRONZE WHALER** *Carcharhinus brachyurus*
10. **SPINNER SHARK** *Carcharhinus brevipinna*
11. **PACIFIC SMALLTAIL SHARK** *Carcharhinus cerdale*
12. **COATES'S SHARK** *Carcharhinus coatesi*
13. **WHITECHEEK SHARK** *Carcharhinus dussumieri*
14. **CREEK WHALER** *Carcharhinus fitzroyensis*
15. **GALAPAGOS SHARK** *Carcharhinus galapagensis*
16. **PONDICHERRY SHARK** *Carcharhinus hemiodon*
17. **HUMAN'S WHALER SHARK** *Carcharhinus humani*
18. **FINETOOTH SHARK** *Carcharhinus isodon*
19. **SMOOTHTOOTH BLACKTIP SHARK** *Carcharhinus leiodon*
20. **BULL SHARK** *Carcharhinus leucas*
21. **BLACKTIP SHARK** *Carcharhinus limbatus*
22. **HARDNOSE SHARK** *Carcharhinus macloti*
23. **SMALLTAIL SHARK** *Carcharhinus porosus*
24. **BLACKTIP REEF SHARK** *Carcharhinus melanopterus*

25. **LOST SHARK** *Carcharhinus obsoletus*
26. **DUSKY SHARK** *Carcharhinus obscurus*
27. **CARIBBEAN REEF SHARK** *Carcharhinus perezi*
28. **SANDBAR SHARK** *Carcharhinus plumbeus*
29. **NIGHT SHARK** *Carcharhinus signatus*
30. **BLACKSPOT SHARK** *Carcharhinus sealei*
31. **SPOTTAIL SHARK** *Carcharhinus sorrah*
32. **AUSTRALIAN BLACKTIP SHARK** *Carcharhinus tilstoni*
33. **INDONESIAN WHALER SHARK** *Carcharhinus tjutjot*

34. **GANGES SHARK** *Glyphis gangeticus*
35. **NEW GUINEA RIVER SHARK** *Glyphis garricki*
36. **SPEARTOOTH SHARK** *Glyphis glyphis*

37. **DAGGERNOSE SHARK** *Isogomphodon oxyrinchus*

38. **BROADFIN SHARK** *Lamiopsis temmincki*
39. **BORNEO BROADFIN SHARK** *Lamiopsis tephrodes*

40. **SLITEYE SHARK** *Loxodon macrorhinus*

41. **WHITENOSE SHARK** *Nasolamia velox*

42. **SICKLEFIN LEMON SHARK** *Negaprion acutidens*
43. **LEMON SHARK** *Negaprion brevirostris*

44. **BLUE SHARK** *Prionace glauca*

45. **MILK SHARK** *Rhizoprionodon acutus*
46. **BRAZILIAN SHARPNOSE SHARK** *Rhizoprionodon lalandii*
47. **PACIFIC SHARPNOSE SHARK** *Rhizoprionodon longurio*
48. **GREY SHARPNOSE SHARK** *Rhizoprionodon oligolinx*
49. **CARIBBEAN SHARPNOSE SHARK** *Rhizoprionodon porosus*
50. **AUSTRALIAN SHARPNOSE SHARK** *Rhizoprionodon taylori*
51. **ATLANTIC SHARPNOSE SHARK** *Rhizoprionodon terraenovae*

52. **SPADENOSE SHARK** *Scoliodon laticaudus*
53. **PACIFIC SPADENOSE SHARK** *Scoliodon macrorhynchus*

54. **WHITETIP REEF SHARK** *Triaenodon obesus*

A visual ID guide for the family will be produced ahead of CoP19, that can be used to identify all species in the family to a species level at point of landing, and identify dorsal fins to a family level at point of trade, and will be included in this proposal as Annex 2. Specific fin identification cues for each lead species are detailed below, but show that for many products there is confusion within the family, so necessitating a family level listing approach to aid implementation.

Cues for the identification of traded products from the four focal species in the proposal:

1. Grey reef shark

- a. First dorsal fin
This fin can be confused with a range of other carcharhinids that have plain/non-colored and short dorsal fins
- b. Pectoral fins
Fins with prominent black markings – this could be confused with a range of other carcharhinids, especially from the blacktip complex
- c. Caudal fin
Very distinct from other shark species – has a dark black/grey line that comes down along the caudal fin. No other shark species has this so is easy to identify and unlikely to be mistaken for another species.
- d. Trunk
If all fins except the dorsal and caudal fin are retained, then it is possible to ID to a species level.
- e. Meat
The meat in any form (filet, chilled, frozen etc.) cannot be distinguished from other carcharhinids in trade.

2. Glyphis

- a. First dorsal fin
The base is very broad and these would be distinct – but could also be confused with other smaller carcharhinid species if they are mixed together in a bag.
- b. Pectoral fins
Quite distinct due to width – very different from most carcharhinids but could be confused with others within the family, such as Lamniopsis, depending on the size of the animal.
- c. Caudal fin
Characteristic of all carcharhinids with a subterminal notch on the upper caudal fin. Would be easy to confuse with other CITES listed species within the family, such as silky sharks.
- d. Trunk
Could be confused with other species within the family such as the bull shark or the pigeye shark.
- e. Meat
The meat in any form (filet, chilled, frozen etc.) cannot be distinguished from other carcharhinids in trade.

3. Smalltail shark

- a. First dorsal fin
Not able to tell it apart from many of the other small carcharhinids.
- b. Pectoral fins
These have no markings like most of the other small carcharhinids creating look-alike issues within the family.
- c. Caudal fin
Characteristic of all carcharhinids with a subterminal notch on the upper caudal fin. Would be easy to confuse with other carcharhinids, especially the black tip complex species.
- d. Trunk

If all fins except the dorsal and caudal fin are retained, then it is possible to ID but only to a family level.

e. Meat

The meat in any form (filet, chilled, frozen etc.) cannot be distinguished from other carcharhinids in trade.

4. Dusky shark

a. First dorsal fin

Challenging to differentiate from other carcharhinids.

b. Pectoral fins

Fins with black markings – could be confused with a range of other carcharhinids, especially from the blacktip complex

c. Caudal fin

Characteristic of all carcharhinids with a subterminal notch on the upper caudal fin. Would be easy to confuse with other CITES Appendix II listed species within the family, such as the silky shark.

d. Trunk

If all fins except the dorsal, pectorals, caudal fin are retained, then it is possible to ID but only to a genus level.

e. Meat

The meat in any form (filet, chilled, frozen etc.) cannot be distinguished from other carcharhinids in trade.

The following matrices (tables 5, 6, 7, and 8) compare the ability to identify fins and meat from all known requiem shark species and all currently CITES listed sharks in additional detail. The green indicates where it is possible to visually distinguish between the fins of species (see table 5 for dorsal, table 6 for pectoral, table 7 for caudal and table 8 for meat). The left-hand side columns are predominantly green, showing that it is easy to distinguish between currently CITES listed species and unlisted species from the requiem family for most fin positions. The red sections on the right-hand side indicate that it is not possible to distinguish between the fins and meat of many (currently unlisted) requiem shark species.

With this wide range of lookalikes, and given that shark fins are typically traded in mixed shipments containing a range of species, a family level listing is by far the most resource-efficient way to regulate this trade. If a subset of species within the family were listed, customs level enforcement would be incredibly time consuming due to the numerous lookalikes identified in the matrices.

This proposal, at the family level, would incorporate up to 85.5% of the fin trade on Appendix II, and therefore most shipments of shark fins would contain CITES listed species and require the associated paperwork. Such an approach has multiple benefits for data collection and traceability of the overall trade, in addition to preventing further overexploitation driven by the international trade. With visual ID possible to the requiem shark family level, this listing could be implemented in the manner of current CITES shark listings, with visual ID guides and customs trainings used to enforce listings in all capacity settings.

Tables 5-8 - identification analysis matrices:

Annex 2 - Requiem shark family level shark fin ID guide (in the process of being finalized)



Atlantic States Marine Fisheries Commission

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MEMORANDUM

April 25, 2022

To: Coastal Sharks Management Board
From: Tina Berger, Director of Communications
RE: Advisory Panel Nomination

Please find attached a nomination to the Coastal Sharks Advisory Panel – Thomas Newman, a inshore gillnetter from North Carolina. Thomas replaces Dewey Hemilight on the AP. Please review this nomination for action at the next Board meeting.

If you have any questions, please feel free to contact me at (703) 842-0749 or tberger@asmfc.org.

Enc.

cc: Dustin Colson Leaning

M22-52

COASTAL SHARKS ADVISORY PANEL

Bolded names await approval by the Coastal Sharks Management Board

April 25, 2022

Rhode Island (2)

Stephen C. Segerson (rec)
37 Myrna Road
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Phone (day): 401.467.3143 ext. 108
Phone (eve): 401.439.5349
FAX: 401.941.2453
Email: ssegerson@etco.com
Appt. Confirmed 2/20/06
Appt Reconfirmed 5/10

Captain Rick Bellavance (commercial rod and reel/for-hire)
140 Jerry Lane
North Kingstown, RI 02852
Phone: 401.741.5648
rickbellavance@gmail.com
Appt Confirmed 2/3/21

New York (2)

Steve Witthuhn (charterboat)
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Appt. Confirmed 2/20/06
Appt Reconfirmed 5/10

Charles Witek (rec)
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West Babylon, NY 11704-5047
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Cell: 631.587.2211
charleswitek@gmail.com
Appt Confirmed 10/24/16

New Jersey (2)

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Phone (eve): 609.465.5776
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Appt. Confirmed 5/19/06
Appt Reconfirmed 5/17/10

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Phone (eve): 973.454.0315
FAX: 973.696.1411
Email: peterg@njoutdooralliance.org
Appt Confirmed 8/3/10

Delaware (2)

Daniel T. Dugan (rec)
20 South Woodward Avenue
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Phone: 302.636.9300
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Appt. Confirmed 2/20/06
Appt Reconfirmed 5/10

1 Vacancy – commercial or for-hire

Maryland (2)

Mark Sampson (for-hire)
10418 Exeter Road
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Phone (home): 410.213.2442
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SharkQuest2@gmail.com
Appt Confirmed 8/3/10

Vacancy – comm gillnet/pots

Virginia (2)

Ernest L. Bowden Jr. (comm./gillnet)
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Chincoteague, VA 23336
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Phone (eve): 757.336.5792
Appt. Confirmed 2/20/06
Appt Reconfirmed 5/10

Vacancy – recreational

COASTAL SHARKS ADVISORY PANEL

Bolded names await approval by the Coastal Sharks Management Board

April 25, 2022

North Carolina (2)

Thomas E. Newman, III (inshore gillnet)
7821 Holly Springs Church Road
Williamston, NC 278892
Phone: 252.542.0449
Thomas.Newman03@gmail.com

1 Vacancy – for-hire or recreational

South Carolina (2)

Terry Annibale (comm)
1511 Holly Drive
North Myrtle Beach, SC 29582
Phone: 843.224.2104
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Appt Confirmed 8/3/10

Reese (Chip) Michalove (charterboat)
PO Box 6257
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Appt Confirmed 8/3/10

Georgia (2)

Capt. Greg Hildreth (charterboat/rec)
477 Midway Circle
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Phone: 912.261.1763
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Appt. Confirmed 2/20/06
Appt Reconfirmed 5/10

1 Vacancy – commercial

Florida (2)

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Appt. Confirmed 5/19/06
Appt Reconfirmed 4/22/10

1 Vacancy – recreational

Non-Traditional Stakeholders (2)

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OR

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Washington, DC 20009
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kwestfall@edf.org
Appt Confirmed 8/2/16



ATLANTIC STATES MARINE FISHERIES COMMISSION

Advisory Panel Nomination Form

This form is designed to help nominate Advisors to the Commission's Species Advisory Panels. The information on the returned form will be provided to the Commission's relevant species management board or section. Please answer the questions in the categories (All Nominees, Commercial Fisherman, Charter/Headboat Captain, Recreational Fisherman, Dealer/Processor, or Other Interested Parties) that pertain to the nominee's experience. If the nominee fits into more than one category, answer the questions for all categories that fit the situation. **Also, please fill in the sections which pertain to All Nominees (pages 1 and 2). In addition, nominee signatures are required to verify the provided information (page 4), and Commissioner signatures are requested to verify Commissioner consensus (page 4). Please print and use a black pen.**

Form submitted by: Chris Batsavage State: NC
(your name)

Name of Nominee: Thomas E Newman, III

Address: 7821 Holly Springs Church Rd.

City, State, Zip: Williamston, NC 27892

Please provide the appropriate numbers where the nominee can be reached:

Phone (day): (252) 542-0449

Phone (evening): (252) 542-0449

FAX: _____

Email: Thomas.Newman03@gmail.com

FOR ALL NOMINEES:

1. Please list, in order of preference, the Advisory Panel for which you are nominating the above person.

1. Weakfish
2. Coastal Sharks
3. _____
4. _____

2. Has the nominee been found in violation of criminal or civil federal fishery law or regulation or convicted of any felony or crime over the last three years?

yes _____ no X

3. Is the nominee a member of any fishermen's organizations or clubs?

yes X no _____

If "yes," please list them below by name.

North Carolina Fisheries Association

Coastal Carolina Riverwatch

4. What kinds (species) of fish and/or shellfish has the nominee fished for during the past year?

Spanish Mackerel

Coastal Sharks

Bluefish

King Mackerel

Spot

Sea Mullet

5. What kinds (species) of fish and/or shellfish has the nominee fished for in the past?

Monkfish

Oysters

Sea Scallops

Croakers

Shrimp

Spiny Dogfish

FOR COMMERCIAL FISHERMEN:

1. How many years has the nominee been the commercial fishing business? 25 years
2. Is the nominee employed only in commercial fishing? yes _____ no _____
3. What is the predominant gear type used by the nominee? Gillnets
4. What is the predominant geographic area fished by the nominee (i.e., inshore, offshore)? Inshore

FOR CHARTER/HEADBOAT CAPTAINS:

1. How long has the nominee been employed in the charter/headboat business? _____ years
2. Is the nominee employed only in the charter/headboat industry? yes _____ no _____
If "no," please list other type(s) of business(es) and/occupation(s): _____

3. How many years has the nominee lived in the home port community? _____ years
If less than five years, please indicate the nominee's previous home port community.

FOR RECREATIONAL FISHERMEN:

1. How long has the nominee engaged in recreational fishing? _____ years
2. Is the nominee working, or has the nominee ever worked in any area related to the fishing industry? yes _____ no _____

If "yes," please explain.

FOR SEAFOOD PROCESSORS & DEALERS:

1. How long has the nominee been employed in the business of seafood processing/dealing? _____ years
2. Is the nominee employed only in the business of seafood processing/dealing?
yes _____ no _____ If "no," please list other type(s) of business(es) and/or occupation(s):

3. How many years has the nominee lived in the home port community? _____ years
If less than five years, please indicate the nominee's previous home port community.

FOR OTHER INTERESTED PARTIES:

1. How long has the nominee been interested in fishing and/or fisheries management? _____ years
2. Is the nominee employed in the fishing business or the field of fisheries management?
yes _____ no _____
If "no," please list other type(s) of business(es) and/or occupation(s):

FOR ALL NOMINEES:

In the space provided below, please provide the Commission with any additional information which you feel would assist us in making choosing new Advisors. You may use as many pages as needed.

Please see attached Bio

Nominee Signature: TE Newman III

Date: 4-14-2022

Name: Thomas E Newman III
(please print)

COMMISSIONERS SIGN-OFF (not required for non-traditional stakeholders)

Chris Batsavage

State Director

State Legislator

Governor's Appointee

Thomas Newman, Williamston, NC

Mr. Newman is the owner/operator of the 40-ft. F/V Gotta Go with his homeport in Hatteras, NC. He has been commercial fishing for 25 years mostly in North Carolina, but ranging as far north as New York and has fished many seasons in Virginia. He is currently serving on the Mackerel Cobia Advisory Panel (South Atlantic Fishery Management Council) and Northern Regional Advisory Panel (North Carolina Division of Marine Fisheries). Mr. Newman holds permits and fishes for Spanish mackerel, bluefish, spiny dogfish, smooth dogfish, king mackerel, croakers, large and small coastal sharks and monkfish, species which are mainly managed by the Mid-Atlantic Fishery Management Council, the South Atlantic Fishery Management Council, the Atlantic States Marine Fisheries Commission. He is a member of the Coastal Carolina River Watch, serves on the Citizen Science Projects Advisory Team (SAFMC), and is involved in state and federal fisheries management issues working directly with fisheries managers and industry groups.

Mr. Newman received a B.S. in biology from Furman University in 2008. His focus was towards wildlife management but he also did a study abroad marine biology program in the Florida Keys and Belize directly observing habitats and multiple aquatic species. For his senior project he traveled to New Mexico to study an isolated population of desert bighorn sheep in the Fra Cristobal Range. The results of this study was published in *The Southwestern Naturalist*:

Evaluation of Methods Used to Estimate Size of a Population of Desert Bighorn Sheep (*Ovis canadensis mexicana*) in New Mexico

Author(s): Travis W. Perry, Thomas Newman, and Katherine M. Thibault

Source: *The Southwestern Naturalist*, 55(4):517-524. 2010.

Mr. Newman is also involved in climate change scenario planning and is looking forward to continue working with recreational, commercial, and ecosystem stakeholders to get ahead of these issues we are already seeing while planning for the future. He believes that flexibility, adaptation, and all user groups working together are going to be imperative for the future of our oceans.

Atlantic States Marine Fisheries Commission

ISFMP Policy Board

May 5, 2022

8:30 – 11:00 a.m. and 11:30 a.m.-12:30 p.m.

Hybrid Meeting

Draft Agenda

The times listed are approximate; the order in which these items will be taken is subject to change; other items may be added as necessary. **Part of this meeting will be conducted with the Mid-Atlantic Fishery Management Council (MAFMC).**

1. Welcome/Call to Order (*S. Woodward*) 8:30 a.m.
2. Board Consent (*S. Woodward*) 8:30 a.m.
 - Approval of Agenda
 - Approval of Proceedings from January 2022
3. Public Comment 8:35 a.m.
4. Executive Committee Report (*S. Woodward*) 8:45 a.m.
5. Consider Changes to the Appeals Policy (*R. Beal*) **Final Action** 9:00 a.m.
6. Update on Mode Split Work Group (*R. Beal*) 9:15 a.m.
7. Report from *De Minimis* Work Group (*T. Kerns*) **Possible Action** 9:25 a.m.
8. Update on East Coast Climate Change Scenario Planning (*T. Kerns*) 9:45 a.m.
9. Committee Reports 9:55 a.m.
 - Law Enforcement Committee (*T. Kerns*)
10. NOAA Report on Sea Turtle Bycatch in Trawl Fisheries (*C. Upite*) 10:05 a.m.
 - Review Stakeholder Outreach on Action to Develop Bycatch Reduction Measure to Reduce Sea Turtle Takes
11. Update on MAFMC's Consideration of Re-initiating the Research Set Aside Program (*R. Beal*) 10:35 a.m.
12. Review Information Related to Tautog Commercial Tagging Program (*J. Boyle*) 10:45 a.m.
13. Review Noncompliance Findings (If Necessary) **Action** 10:50 a.m.
14. Other Business/Recess 10:55 a.m.

The meeting will be held at The Westin Crystal City (1800 Richmond Highway, Arlington, VA; 703.486.1111) and via webinar; click [here](#) for details

This part of the meeting will be conducted with the MAFMC

- | | |
|---|------------|
| 15. Reconvene with the MAFMC | 11:30 a.m. |
| 16. Initial Discussion on Commission Harvest Control Rule Draft Addenda and MAFMC Framework (<i>D. Colson Leaning, J. Beatty</i>) | 11:30 a.m. |
| 17. Adjourn | 12:30 p.m. |

The meeting will be held at The Westin Crystal City (1800 Richmond Highway, Arlington, VA; 703.486.1111) and via webinar; click [here](#) for details



Atlantic States Marine Fisheries Commission

1050 N. Highland Street • Suite 200A-N • Arlington, VA 22201
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ASMFC De Minimis Discussion Paper

May 2022

Background

The Atlantic States Marine Fisheries Commission (Commission) includes *de minimis* provisions in interstate Fishery Management Plans (FMP) to reduce the management burden for states that have a negligible effect on the conservation of a species. The *de minimis* provisions in the FMPs vary by species and include a range of requirements for management measures, reporting requirements, and *de minimis* qualification periods. Current *de minimis* provisions in Commission FMPs are summarized at the end of this document.

The ISFMP Charter includes a definition of *de minimis* and the requirement to include *de minimis* provisions in the FMP.

Definition: De minimis – A situation in which, under existing conditions of the stock and the scope of the fishery, conservation and enforcement actions taken by an individual state would be expected to contribute insignificantly to a coastwide conservation program required by an FMP or amendment.

FMP Provisions: ... and provided that each fishery management plan shall address the extent to which States meeting de minimis criteria may be exempted from specific management requirements of the fishery management plan to the extent that action by the particular States to implement and enforce the plan is not necessary for attainment of the fishery management plan's objectives and the conservation of the fishery.

Previous ISFMP Policy Board Discussions

In May of 2021 the Policy Board had discussions that focused on the balance between standardization across FMPs for consistent application of the provisions and the flexibility for the species management boards in developing *de minimis* provisions to address data collection needs (fishery-independent and - dependent), commerce issues, and management loopholes. The Board formed a small work group to provide a recommendation for addressing *de minimis* that addresses the concerns raised by the Board. The work group met and developed recommendations for the Policy Board's review. The work group did not want to bring forward these recommendations until the Commission resumed in-person meetings.

Work Group Recommendations:

1. By definition states that meet *de minimis* standards would have a negligible effect on the conservation of a species, therefore those states should not have

- to change regulations year-to-year to meet FMP requirements. A Board could establish a set of measures for *de minimis* states to follow that would not have to change year-to-year. These measures would establish a minimal level of the specie conservation s as well as potentially prevent regulatory loop holes. For each FMP the Commission manages, the specific species board could establish a set of *de minimis* measures. These measures could be for both the commercial and recreational fishery or different measures could be set for each fishery.
2. *De minimis* can apply to commercial or recreational fisheries or both. In some cases, a state could meet *de minimis* requirement for one fishery but not both, and depending on how the FMP defines *de minimis* the state may not meet the requirement and thus would not be consider *de minimis* (e.g. The FMP for species x sets the *de minimis* requirement by looking at total commercial and recreational landings together, state A has a very small commercial fishery but a recreational fishery that brings them just above the *de minimis* threshold. If the requirements had be separate, State A would have met *de minimis* for the commercial fishery but not the recreational fishery). Each species board should review the *de minimis* provisions to determine how *de minimis* should be considered (both fisheries together or separated). Alternatively, the Policy Board could make the decision that all FMP should consider *de minimis* provisions either both fisheries together or separated. The work group did not come to consensus if this should be a broad policy issue or species specific issue but there was agreement it should be reviewed and addressed. If there was a broad policy, some FMPs may need exceptions to address a unique characteristic of the fishery.
 3. Currently, there is not a consistent amount of landings that determines *de minimis* thresholds. The work group looked at several FMPs and did not find a consistent method of evaluating *de minimis* thresholds. The group recognized the benefits of looking at average landings, which would prevent a state from taking action as a result of a rare event. But the Work Group was not prepared to comment if the same percentage across all FMPs was appropriate. The Policy Board could task the species boards to have the technical committees review the *de minimis* thresholds to determine an appropriate level that would have a negligible effect on the conservation of the species.
 4. The work group discussed if all *de minimis* states should be exempt from sampling requirements. Members noted it may be difficult to meet the sampling requirements of the plan but for some stock assessments it is important to have some biological samples on the outer edges of a species range where *de minimis* states often fall. The work group concluded the assessment sub committee should review the sampling requirements for *de minimis* states to determine what level, if any, is appropriate.

Species	De Minimis Qualification (include # of landing years if applicable)	Sector Application: Commercial and/or Recreational; Both (can not split them)	Exemption From:
American Eel	Applicable by life stage if, for the proceeding 2 years, the average commercial landings (by weight) of that life stage constitute less than 1% of coastwide commercial landings for that life stage for the same 2 year period.	Commercial	Having to adopt the commercial and recreational fishery regulatoins for that particular life stage and any fishery-dependent monitoring elements for that life stage and any fishery-dependent monitoring elements for that life stage.
American Lobster	Average of last 2 years commercial landings is not more than 40,000 lbs	Commercial	All FMP requirements except coastwide measures and those deemed necessary by the Board when de minimis is granted
Atlantic Croaker	Average commercial or recreational landings (by weight) constitute <1% of the average coastwide commercial or recreational landings for the most recent three years in which data is available.	Commercial and/or recreational	A state that qualifies for de minimis for commercial and/or recreational fisheries is exempt from implementing management response for the de minimis fishery when the 30% moderate response level from the Traffic Light Approach is triggered.
Atlantic Herring	Average of last three years' combined commercial landings (weight) is < 1% of coastwide for same two years	Commercial	Not specified in Plan
Atlantic Menhaden	A state's bait landings must be less than 1% of the total coastwide bait landings for the most recent two years. State(s) with a reduction fishery are not eligible for de minimis	Commercial (There is no management of the recreational fishery)	If granted de minimis status by the Board, states are exempt from implementing biological sampling as well as pound net catch and effort data reporting.

	consideration		
Atlantic Sturgeon	NA	NA	NA
Black Drum	The average combined commercial and recreational landings (by weight) constitute less than 1% of the average coastwide commercial and recreational landings in the most recent three years in which data is available.	Both	Not specified in Plan
Black Sea Bass	NA	NA	NA
Bluefish	Commercial landings less than 0.1% of the total coastwide commercial landings in the last preceding year for which data is available	Commercial	Allocated 0.1% of commercial quota. Exempt from the Biological Monitoring Program.
Cobia	In order for a state to be considered de minimis for its recreational fishery, its recreational landings for 2 of the previous 3 years must be less than 1% of the coastwide recreational landings for the same time period. In order for a state to be considered de minimis for its commercial fishery, its commercial landings for 2 of the previous 3 years	Commercial and/or recreational	A recreational de minimis state may choose to match the recreational management measures implemented by an adjacent non-de minimis state (or the nearest non-de minimis state if none are adjacent) or limit its recreational fishery to 1 fish per vessel per trip with a minimum size of 33 inches fork length (or the total length equivalent, 37 inches). Commercial de minimis states are subject to the same commercial regulations as the rest of the coastwide fishery but are not required to monitor their in-season harvests.

	must be less than 2% of the coastwide commercial landings for the same time period.		
Horseshoe Crab	For the last 2 years, a state's combined average landings, based on numbers, must be < 1% of coastwide landings for same 2-year period	Commercial	States that qualify for de minimis status are not required to implement any horseshoe crab harvest restriction measures, but are required to implement components A, B, E and F of the monitoring program.
Jonah Crab	States may qualify for de minimis status if, for the preceding three years for which data are available, their average commercial landings (by weight) constitute less than 10 1% of the average coastwide commercial catch	Commercial	States who qualify for de minimis are not required to implement fishery independent and port/sea sampling requirements
Northern Shrimp	NA	NA	NA
Red Drum	The PRT chose to evaluate an individual state's contribution to the fishery by comparing the two-year average of total landings of the state to that of the management unit.	Not specified in Plan	De minimis status does not exempt either state from any requirement; it may exempt them from future management measures implemented through addenda to Amendment 2, as determined by the Board.
Scup	NA	NA	NA

Shad and River Herring	A state can request de minimis status if commercial landings of river herring or shad are less than 1% of the coastwide commercial total.	Commercial	De minimis status exempts the state from the subsampling requirements for commercial biological data.
Spanish Mackerel	The previous three-year average combined commercial and recreational catch is less than 1% of the previous three-year average coastwide combined commercial and recreational catch.	Both	Those states that qualify for de minimis are not required to implement any monitoring requirements, as none are included in the plan.
Spiny Dogfish	Commercial landings are < 1% of coastwide commercial landings	Commercial only	State is exempt from the monitoring requirements of the commercial spiny dogfish fishery for the following fishing year. However, must continue to report any spiny dogfish commercial or recreational landings within their jurisdiction via annual state compliance reports.
Coastal Sharks	Not specified in Plan; determined on a case by case basis.	Not specified in Plan	Not specified in Plan, but unnecessary to implement all regulatory requirements in the FMP
Spot	A state qualifies for de minimis status if its past 3-years' average of the combined commercial and recreational catch is less than 1% of the past 3-years' average of the coastwide combined commercial and recreational catch.	Both	A state that qualifies for de minimis for both fisheries is exempt from implementing management response for the de minimis fisheries when the 30% moderate response level from the Traffic Light Approach is triggered.
Spotted Sea Trout	A state qualifies for de minimis status if its previous three-year average combined commercial and recreational catch is less than 1% of the previous three-year average	Both	Those states that qualify for de minimis are not required to implement any monitoring requirements, as none are included in the plan.

	coastwide combined commercial and recreational catch.		
Striped Bass	Average of last two years' combined commercial and recreational landings (lbs) is < 1% of coastwide for same two years	Both	State requested requirements that the Board approves (except annual reporting)
Summer Flounder	Landings from the last preceding calendar year which data are available are less than 0.1% of the total coastwide quota for that year	Commercial	State quota will be 0.1 % of the coastwide quota and subtracted from the coastwide quota before allocation to the other states (state waters only)
Tautog	Most recent years commercial landings are < 1% of coastwide commercial landings or less than 10,000 lbs	Commercial	The de minimis state is required to implement the commercial minimum size provisions, the pot and trap degradable fastener provisions, and regulations consistent with those in the recreational fishery (including possession limits and seasonal closures). The state must monitor its landings on at least an annual basis. If granted de minimis status, a state must continue to collect the required 200 age/length samples.
Weakfish	Combined average commercial and recreational landings (by weight) constitute less than 1% of the coastwide commercial and recreational landings for the most recent two year period.	Both	The recreational or commercial fishing provisions of Amendment 4, except BRD requirements and annual reporting
Winter Flounder	Preceding three years landings for which sector data are available	Commercial and/or recreational	Biological monitoring/sub-sampling activities for the sector for which <i>de minimis</i> has been granted

	average <1% sector coastwide landings		
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NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Marine Resources

123 Kings Park Blvd. (Nissequogue River State Park), Kings Park, NY 11754

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www.dec.ny.gov

New York State Tautog Tagging Feedback Survey DRAFT Results

The New York State Department of Environmental Conservation (DEC) received considerable feedback during the first year of the coastwide Commercial Tautog Tagging Program. In an effort to quantify the issues raised by the commercial fishing industry, a survey was developed and distributed to commercial food fish and shipper/dealer license holders the week of February 7, 2022. This document contains a preliminary summary of the results of these two surveys.

Commercial Tautog Harvester Feedback

Demographics:

This survey received a total of 56 responses (12%) out of the 479 license holders that received tautog tags during 2021. The responses were from hook and line fishers (57%), pot and trap fishers (38%), and trawlers (5%). This matches the 2021 fishery closely with 53% of landings coming from hook and line, 40% of landings coming from pots and traps, 4% of landings coming from trawlers, and 3% other. Respondents reported using a total of 43,923 tags (31%) out of the 142,488 tags reported used in 2021. Total tags used from individual respondents ranged from 3 to 4,800. Live storage was used for 65% of respondents.

Preliminary Results:

The three largest issues reported were tags not locking and falling out of the fish (32%), tags appearing to cause excess mortality (32%), and tags causing excessive damage (27%). Dying fish were reported throughout the season and for both management areas.

81% of respondents preferred changing the current style of tag that is used for the tagging program.

Tautog Shipper/Dealer Feedback

Demographics:

This survey received a total of 10 responses (22%) out of approximately 46 dealers that reported dealing tautog in 2021. Respondents reported that 89% sold live tautog during 2021. Live stored fish spent on average less than 2 months in storage for 43% of the respondents and greater than 2 months in storage for 57% of respondents.

Preliminary Results:

The three largest issues reported were tags not locking and falling out of the fish (27%), tags causing excessive damage (23%), and tags causing lesions to appear on the fish (19%). Dying fish were reported throughout the entire season.

50% of respondents preferred changing the current style of tag that is used for the tagging program. 50% did not respond to this question.

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

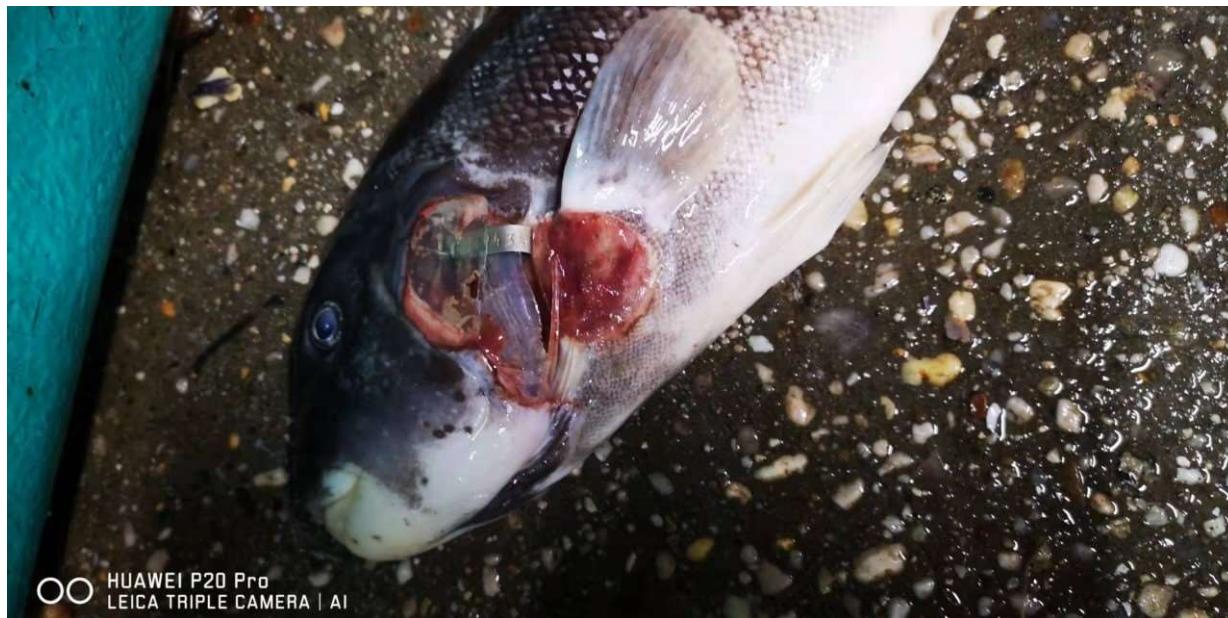
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Pictures of lesions submitted by respondents:



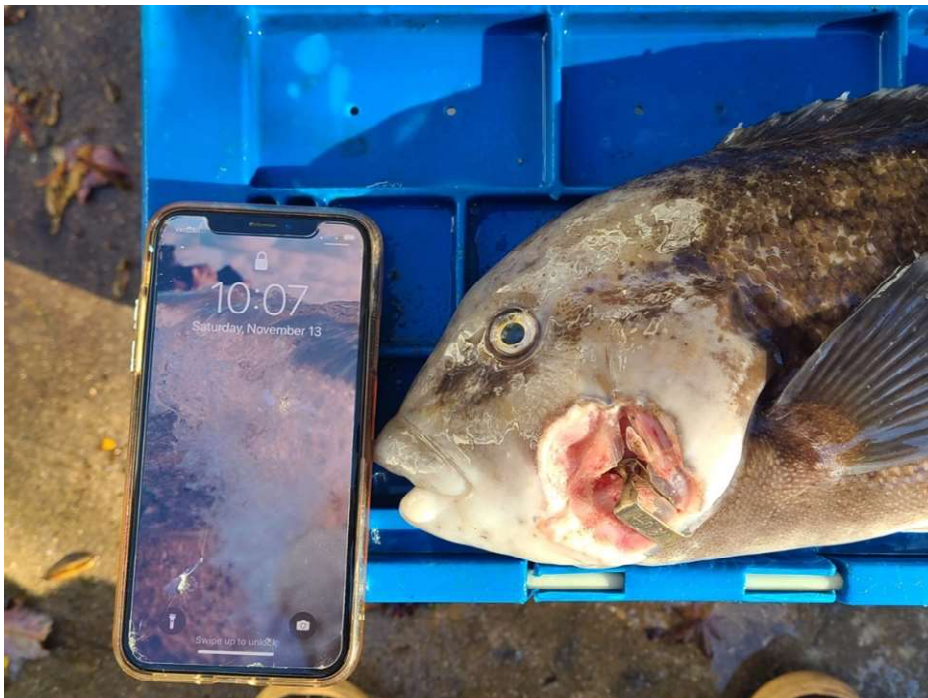
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James Boyle

From: Tor Vincent <duckislandmarine@gmail.com>
Sent: Tuesday, April 26, 2022 2:30 PM
To: MICHAEL LUISI
Cc: Michael Pentony
Subject: [External] Tautog Infected Tag Syndrome
Attachments: sea turtle tagging.webp; Cow ear tag.jpg; tank sample (2).pdf

Hello Michael,

It is disappointing that there is no spring meeting as James had thought there would be. The problems we have will continue this new fishing season. It was May 28 last year when I sent the first pictures of infected fish to NYSDEC.

Let's start with the basics. Your tag study was done in well water at the Flax Pond Lab. The water was drawn from a 121 ft deep pipe in a salt water aquifer. That water has seeped slowly through a massive silicate sand filter to get there. That travel is well known to remove biological matter including pathogens. There was no pathogen testing done of that basically sanitized water pumped into the tank continuously diluting and removing the bacteria the fish may have brought with them. It's similar to running the garden hose in a goldfish tank continuously. The data from that study was used to determine that the metal strap tags were safe. Then an arbitrary decision was made somehow to go from the small animal ear tag used in the study to a large animal ear tag with the massive bulky aluminum applicator meant to wrestle the tag onto seal flippers, sea turtle flippers and shark fins. The vendor states the tag could be used on fish over 10lbs. This is all available on their website. James was sent a copy of the page.

The effect of the infection is a disfiguring infected legion that expands over time. From a market perspective it is similar to lobster shell disease. The customer who purchases the live fish or lobster wants to take home a healthy looking creature to eat. A visible infection is a deal breaker.

It should be common knowledge that lobster and tautog are sold side by side in tanks. They often share the same water from my experience. These tanks are almost all closed system tanks with a biological filter. We could use the term "reef tank" to describe these. An expert I consulted saw two known fish pathogens in my tank sample, one that causes lesions that appear similar to what we have experienced. These are both common in local waters. For humans it is advised to avoid swimming with an open cut as it gives the bacteria an entry route. In reef tanks the most common reason a bacterial infection got started was because the fish suffered a cut first. The skin and slime layer is the natural barrier. The large animal ear tag puts a large incision in the gill plate which breaks the barrier then continues to wiggle and enlarge the opening. The mechanical damage that compromised the natural defense of the fish was caused by your rules.

Quotes from NOAA Technical Memorandum NMFS-F/NEC-74

. Shell disease in rock crabs and lobsters has been noted by biologists and commercial fishermen, and is recognized as affecting marketability because of their unsightly appearance .

s a cause of mortality. Death may also result from secondary systemic infections after the exoskeletal barrier has been breached, especially in the presence of high populations of facultative pathogens.

s been reported in numerous freshwater and marine species of economic importance, i.e., lobsters, crabs, shrimp, crayfish and prawns (Sindermann, 1989). Shell disease may result from mechanical damage due to

wounds or abrasions that permit invasion by chitin destroying bacteria or fungi, or from overcrowding and contact with infectious organisms that may gain access to the shell through surface pores. The disease in natural or "wild" populations usually occurs at low levels, but may be enhanced by (1) overcrowding in traps or discard handling during commercial fishing operations, which increase the likelihood of shell damage, (2) stresses from unhealthy environments, or (3) high organic loading of containment waters which contributes to the multiplication of microorganisms, some of which may be pathogenic to crustaceans.

There clearly were people educated enough to understand what commercial holding facilities are. They were not fooled by a garden hose type experiment and had competent observations.

In my opinion the combined staff of the tautog boards and committees had to have had at least a few people educated enough to understand what you were doing here. The obvious question is were they silenced to expedite an agenda ? Harm has been done and it's time to own up to it. I think it is time for NOAA to step up and provide a competent researcher and document what has been done.

A Tautog Infected Tag Syndrome technical memorandum could have a good ending. The harmful practice was stopped, the harm was compensated for and the ASMFC staff got a basic education on commercial holding facilities.

I have attached my tank water study and some pictures of the large animal tag used on a properly sized animal. For your next meeting I will do a more complete job on this for the public comment.

Regards,

Tor Vincent





AquaBiomics Microbiome Test Report



About this report

Generated on: Fri Mar 18 18:13:15 2022

These data provide detailed information on the community of microbes ([Bacteria](#) and [Archaea](#)) living in your aquarium. For this analysis we extracted DNA from microbes sampled from water and biofilm communities. Universal primers were used to amplify a genetic marker from this combined sample, and thousands of individual DNA molecules from this mixture were sequenced. Each sequence was then compared with public DNA databases to identify its origin.

This report summarizes the different kinds of microbes in your sample, and their relative abundance, with a special focus on beneficial and harmful microbes for the saltwater aquarium industry and hobby.

Information about the sample

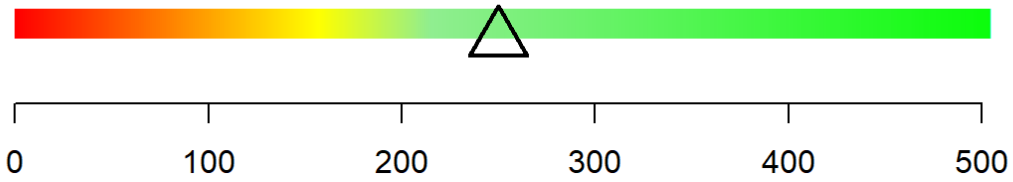
Sample ID	1001125
Sample Name	Tor first sample
Tank Name	garage indoor tank
Sample Date	2022-02-04 10:49 AM

Diversity

This score is a measurement of the number of different types of Bacteria or Archaea in the sample. Read more about Microbial Diversity [here](#).

Diversity Score (Percentile)

250 (69)



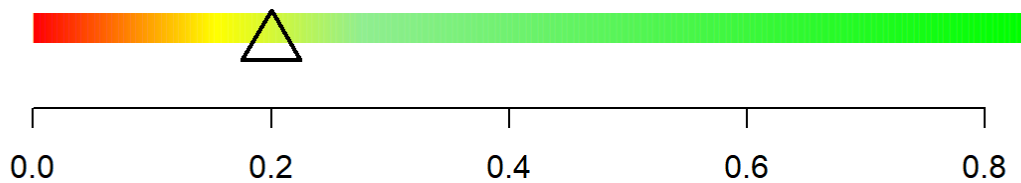
Your sample had a higher diversity than most tanks we've sampled. This is the kind of diversity we aim for in our tanks.

Balance

This score compares the microbiome in your tank with that of a typical reef tank. High scores indicate a typical community, while low scores indicate an atypical community. Read more about this score [here](#).

Balance Score (Percentile)

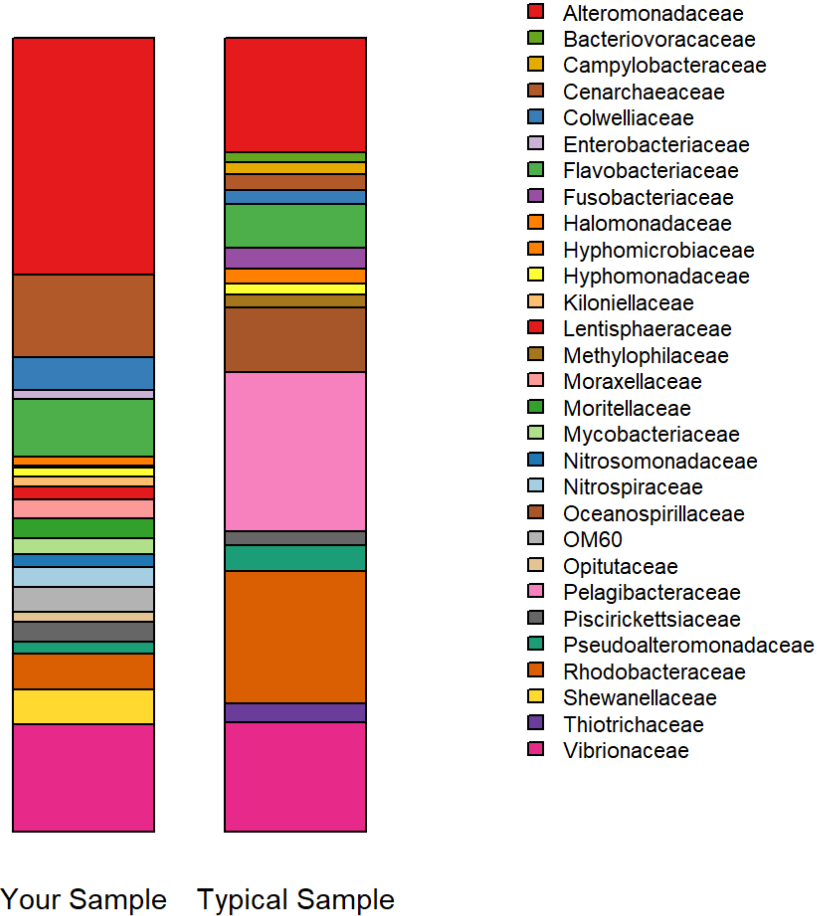
0.2 (38)



The balance of microbial groups in your tank differs from the typical tank. If you're interested in increasing this score, please see [these notes](#).

Community Composition

This figure shows the reasons for your balance score. Compare your sample with the typical community to identify families that are unusually high or low in your sample. Read more about the major families of microbes in reef tanks [here](#).



The size of each bar indicates the relative abundance of each microbial family, coded by color. For clarity, only the families accounting for at least 1% of either community are shown here.

Your sample showed differences in the relative abundance of one or more of the major microbial families, compared with the typical reef tank. Learn more about these families [here](#) or at the links below.

Higher than typical

[Cenarchaeaceae](#)

[Alteromonadaceae](#)

Lower than typical

[Rhodobacteraceae](#)

[Pelagibacteraceae](#)

[Oceanospirillaceae](#)

Nitrifying Community

These communities include ammonia-oxidizing Bacteria (AOB), ammonia-oxidizing Archaea (AOA), and nitrite-oxidizing Bacteria (NOB). Although present at detectable levels in most tanks, there turns out to be more variation in the levels of

these groups than many aquarists expected.

Ammonia-Oxidizing Microbes

Group	Your Frequency	Typical Range
Total	0.05744	0.00085 - 0.05915
Nitrosococcus	0	0 - 0
Nitrosomonadaceae	0.00651	0 - 0.00157
Nitrososphaeraceae	0	0 - 0
Cenarchaeaceae	0.05093	0.00085 - 0.05758

Note:

Typical range is between the 10th and 90th percentiles. High levels (>50th percentile) are color coded green, intermediate levels (between 10th and 50th percentiles) are coded yellow, and low levels (< 10th percentile) are coded red.

Nitrite-Oxidizing Bacteria

Group	Your Frequency	Typical Range
Total	0.00821	0 - 0.0036
Nitrobacter	0	0 - 0
Nitrococcus	0	0 - 0
Nitrotoga	0	0 - 0
Nitrospinaceae	0	0 - 0
Nitrospiraceae	0.00821	0 - 0.0036
Nitrolancea	0	0 - 0

Note:

Typical range is between the 10th and 90th percentiles. High levels (>50th percentile) are color coded green, intermediate levels (between 10th and 50th percentiles) are coded yellow, and low levels (< 10th percentile) are coded red.

Your sample showed a healthy nitrifying community with levels similar to a typical reef tank.

Cyanobacteria

Group	Your Frequency	Typical Range
Total	0	0 - 3e-04
Acaryochloridaceae	0	0 - 3e-04
Chlorarachniophyceae	0	0 - 0
Cyanobacteriaceae	0	0 - 0
Nostocaceae	0	0 - 0
Oscillatoriaceae	0	0 - 0
Phormidiaceae	0	0 - 0
Prochloraceae	0	0 - 0
Pseudanabaenaceae	0	0 - 0
Rivulariaceae	0	0 - 0
Spirulinaceae	0	0 - 0
Schizotrichaceae	0	0 - 0
Scytonemataceae	0	0 - 0
Synechococcaceae	0	0 - 0
Xenococcaceae	0	0 - 0

Note:

Typical range is between the 10th and 90th percentiles. High levels (>90th percentile) are color coded red, intermediate levels (between 50th and 90th percentiles) are coded yellow, and low levels (< 50th percentile) are coded green.

Your sample showed little or no evidence of Cyanobacteria.

Fish Pathogens

None of the DNA sequences from this sample matched known fish pathogens.

► [View the full table](#)

Coral Pathogens

None of the DNA sequences from this sample matched known coral pathogens.

▶ [View the full table](#)

None of the DNA sequences from this sample matched suspected coral pathogens.

DNA analysis conducted by [AquaBiomics LLC](#).

