Atlantic Scientific Review Group

15 April 2024

Ms. Janet Coit
Assistant Administrator for NOAA Fisheries
National Marine Fisheries Service
1315 East-West Highway
Silver Spring, MD 20910

Dear Assistant Administrator Coit:

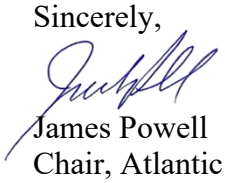
The ASRG is very grateful to NOAA Fisheries and USFWS staff for the time and effort they put into the field studies, analyses and presentations that made this meeting possible. We are also grateful to NOAA for the addition of five new members to the ASRG: Drs. Bonde, Meyer-Gutbrod, Serano-Solis, Thomas and Thorne. We also thank departing members of the ASRG, Drs. Powell and Wells, for their many years of service to the ASRG and NOAA/USFWS.

The addition of Dr. Serano-Solis marks the first time a Mexican scientist has joined the ASRG and will, with Dr. Lawson from Canada's DFO, enhance the conservation of US transboundary marine mammal stocks. In this regard, we endorse any activities the Agencies can take to enhance science cooperation on marine mammal issues with Canada and Mexico.

This was an excellent meeting marked by numerous conversations important to the two Agencies' conservation of marine mammals. We, of course, have some comments on what we heard and a number of recommendations. These are provided in the attached document, which is organized by the meeting's Terms of Reference.

The ASRG stands by to offer additional support to NOAA and USFWS as needed. Otherwise, we look forward to interacting with our peers at the Joint Scientific Review Group meeting scheduled for 2025 in Seattle!

Sincerely,



James Powell
Chair, Atlantic Scientific Review Group

Attach.

CC

Dr. Peter Thomas, Executive Director
Marine Mammal Commission

Michael Pentony, Regional Administrator
Greater Atlantic Regional Office

Andy Strelcheck, Regional Administrator
Southeast Regional Office

Dr. Jon Hare, Director,
Northeast Fisheries Science Center

Dr. Clay Porch, Director
Southeast Fisheries Science Center

Jennifer Anderson, ARA
Office of Protected Resources
Greater Atlantic Regional Office

David Bernhart, ARA
Protected Resources Division
Southeast Regional Office

Dr. Mridula Srinivasan, Director
Marine Mammal and Turtle Division
Southeast Fisheries Science Center

Dr. Evan Howell, Director
Office of Science and Technology

Dr. Patrick Lynch, Chief
Fish and Protected Species Assessments
Office of Science and Technology

Kimberly Damon-Randall, Director
Officed of Protected Resources

Dr. Shannon Bettridge, Chief
Marine Mammal and Sea Turtle Division
Office of Protected Resources

2024 Atlantic Scientific Review Group Meeting
Recommendations and Findings

Charleston, SC
27-29 February 2024

The following, organized by the Terms of Reference for the meeting, summarizes the results of this meeting. Agenda for the meeting is included as attachment.

Receive brief updates from NOAA Fisheries and USFWS staff on issues relevant to the status of Northwest Atlantic Ocean and Gulf of Mexico marine mammal stocks

The funding available to support North Atlantic right whale conservation is truly impressive. We encourage NOAA to make this information publicly available, perhaps as spending plans shown on the Office of Protected Resources website, updated as Congressional appropriations and Agency allocations are realized.

We understand that it is unlikely that the North Atlantic humpback whale's stock structure will be revised by the Agency before we will receive the 2023 SAR. We eagerly await the updated 2023 humpback whale SAR and will quickly review it once it is received.

The NARW health assessment presentation was excellent but we did not have sufficient time to review or discuss the materials. We request that an intersessional webinar be held, which could include the same presentation, but would allow time for a better exploration of the materials.

Science Center Updates

This appears to have been another productive year for SEFSC research staff. Following on to a previous comment on the Caribbean, we were excited to hear about the work the SEFSC was carrying out with glider support and passive acoustic monitoring (PAM) in Puerto Rico and the Dominican Republic.

Much of the research program in the SE now includes PAM, which is a good development. We emphasize the need to coordinate deployments with other Gulf of Mexico and Atlantic Ocean researchers using PAM, and to make all these data available for use by researchers through a single data base. We **recommend** that the SEFSC and NEFSC jointly prepare a strategy for PAM deployments along the Atlantic Coast and present this strategy at the 2025 ASRG meeting.

Like the SEFSC, the NEFSC's protected species scientists should be commended for their research efforts over the past year. We have been particularly impressed by the extraordinary amount of information developed through the fifteen years of the BOEM-funded Atlantic Marine Assessment Program for Protected Species (AMAPPS[1]) I through III research program, and

[1] https://www.fisheries.noaa.gov/resource/publication-database/atlantic-marine-assessment-program-protected-species-annual-reports

strongly recommend to NOAA (and BOEM) that a mechanism be found to fund at least another five-years of AMAPPS. This seems particularly important considering the enormous expansion of offshore wind farms within the US EEZ from Maine south to the Carolinas, and the potential for climate-driven shifts in habitat use in the rapidly warming waters of the Northwest Atlantic Ocean. Similarly, we view the continued funding of the GoMAPPS survey program in the Gulf of Mexico[2] to be of equal import, given the commencement of offshore wind leasing in that region, and the existing knowledge gaps regarding vulnerable Rice's whales and coastal bottlenose dolphin populations.

Marine Mammal Commission Update

This was the first time in memory that the ASRG met directly with staff of the Marine Mammal Commission (MMC), and we thank Drs. Peter Thomas (Executive Director), Lori Schwacke (Scientific Program Director), and Andy Read (Commissioner) for their direct participation in the meeting. We hope this will be a regular part of future ASRG meetings.

We discussed several items (see attached agenda). The most significant perhaps was the status of Barataria Bay bottlenose dolphin conservation. The ASRG and the MMC are both concerned about the lack of recent efforts to monitor and mitigate the impact of the Barataria Bay Diversion Project. Based on this conversation the ASRG recommends:

- The SEFSC begins monitoring of bottlenose dolphin use of the Barataria Bay habitat as soon as possible, prior to activation of the project, to establish an updated baseline (no monitoring has occurred since 2019)
- Tools and protocols be developed to monitor the health status of dolphins in the Bay and to respond to animals in distress, including:
    - A salinity-measuring, geolocating satellite-linked tag should be developed and attached to individual animals to measure salinity around animals so that their response to changes in Bay salinity can be evaluated (e.g., are animals seeking out refugia?)
    - A catch-and-release health assessment program for free-ranging dolphins in the Bay.

We further **recommend** that the results of the recent Barataria Bay monitoring workshop be publicly released and used to provide guidance for the monitoring and mitigation efforts.

Receive briefings from Canadian and Mexican scientist's issues relevant to the status of transboundary marine mammal stocks.

The ASRG received excellent briefings from Drs. Alvarez and Serano-Solis on Caribbean and Gulf of Mexico marine mammal stocks shared with the US. Of particular interest were their presentations on the endangered Rice's whales in Mexican and Cuban waters, and the West Indian manatee in the Caribbean. We commend the Caribbean states for their efforts to conserve manatees through the development of 3 Marine Protected Areas in Cuban waters and 2 transboundary MPAs shared by Haiti and the Dominican Republic.

[2] https://www.fisheries.noaa.gov/inport/item/67243

As the ASRG commented after their 2023 meeting in Puerto Rico, we **recommend** the Agencies focus resources on the science and conservation of marine mammals in Caribbean waters, particularly in Puerto Rico and the US Virgin Islands. Establishing baseline information in this region is particularly important considering the emerging interest in renewable energy development in US Territories.

Discuss, review and provide advice to NOAA Fisheries, USFWS and Foreign States on specific marine mammal stock issues of concern to the ASRG

Status of Barataria Bay dolphins including results from monitoring workshop

We continued the preceding conversation with the MMC now with staff from SERO. From this presentation upwards to $60M are available to begin the monitoring and mitigation effort. Like SERO staff we too are concerned that several years of monitoring will be necessary prior to activation of the diversion, which is scheduled to occur, roughly, within 4 years of the present. Time is quickly running out to implement an adequate monitoring program, and we **recommend** that NOAA implement a program sooner rather than later, when it will be too late to understand impacts of the diversion.

Rice's whale status and research

NOAA staff continue an excellent effort to better understand Rice's whale status, distribution, and abundance in the Gulf. The finding of acoustically distinct vocalizations in the Western and Eastern Gulf is important, as are the first detections of Rice's whale vocalizations in Mexico waters. Pursuing alternative means of locating animals, beyond PAM, seems important, and we urge SEFSC staff to continue to investigate tagging and eDNA approaches to the problem.

As requested, discuss, review, and provide advice to NOAA Fisheries, USFWS and Foreign States on specific marine mammal stock issues of concern to the Agencies

Assessing Stock Level SI/M for harbor and grey seals

Dr. Murray met with ASRG members in fall 2023 to discuss approaches to allow observed entangled gray and harbor seals to be added to the Serious Injury and Mortality estimates used in the respective SARs. The presentation at this meeting provided three alternative approaches to dealing with the issue and asked for ASRG guidance:

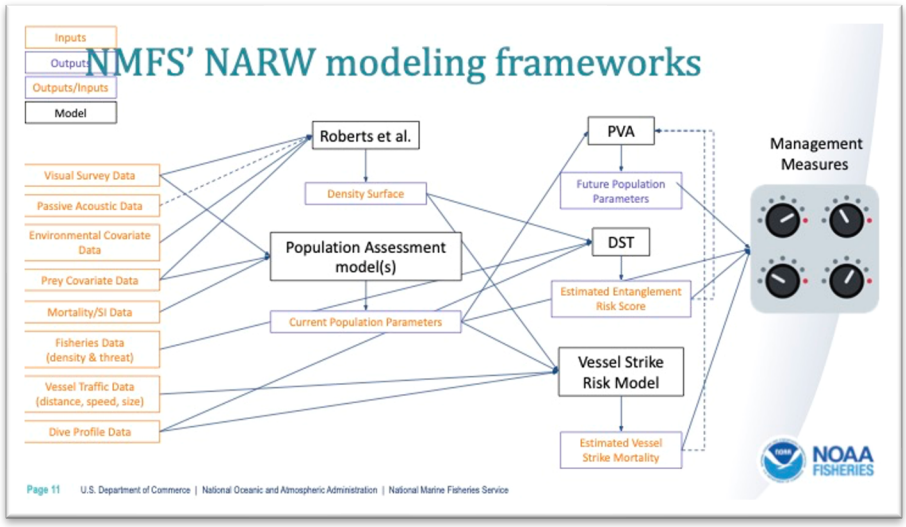
1. One alternative was a data-driven approach which developed entanglement rates from a series of focused drone surveys of 4 haul-out sites in Massachusetts, where 1.5% of the seals were observed entangled. This percentage could then be applied to Nbest to estimate the number of entangled seals. This would then be added to the fishery bycatch estimate of SI/M seals.

2. A second alternative is to add in the number of seals observed entangled to the SI/M estimate from the fishery.
3. The final alternative is to lower the recovery factor (Fr) to reflect the uncertainty in the estimate of SI/M.

The ASRG suggests that the first alternative provided the closest estimate to true SI/M, but before this can be implemented NOAA staff needs to provide the precision of the estimates and consider how they will implement the approach on the long run. In the interim, we **recommend** NOAA add the number of observed entangled seals to the bycatch estimate of SI/M.

Status of integrating various NARW modeling exercises

The ASRG was previously aware of, and remains impressed with, the scope of the various NARW modeling exercises. We welcome seeing for the first time a conceptual framework for the greater NARW modeling universe:



We have two significant recommendations. The first **recommendation** is that the DST should produce estimates in animal (rather than risk) units, as do all the other major NARW models (i.e., the Population Assessment Model, the PVA, and Vessel Strike Risk Model). This will allow the model outputs to be more easily related. Using the DST to estimate the number of fishery-related mortalities measures the absolute contribution a gear modification scenario has to reducing SI/M to reach the stock's PBR. Risk scores do not directly measure progress the ALWTRP can make to reach PBR. This was key recommendation of the DST peer review, and was a core concern about the DST provided by the two peer reviewers from the Pacific SRG.

Additionally, we **recommend** (as did the two independent peer reviews of the DST) that the precision of the DST risk estimates should be made explicit in any scenario considered for management action.

Progress on developing consistent approaches to setting transboundary PBRs.

It is clear from the materials presented that NOAA is moving towards a reasonable approach under the GAMMS IV guidelines to setting transboundary PBRs and accounting for SI/M for these stocks. We **recommend** that the conversation continue at the 2025 Joint SRG meeting so that all transboundary stocks are following similar, but stock specific, approaches to setting PBR.

Further, we **recommend** that NOAA strengthen and formalize relationships with science agencies in neighboring countries to facilitate sharing of marine mammal population and bycatch data to improve transboundary PBR setting.

Solutions to negatively biased groundfish fishery bycatch estimates

The ASRG previously commented to NOAA on its concern that having electronic monitoring replace fishery observers would mean that marine mammal bycatch would not be recorded for trips in the Northeast multispecies groundfish fishery. A recent publication by NEFSC scientists has now highlighted missed seal and porpoise bycatch in all New England and Mid-Atlantic gill net fisheries when observers follow the fish observing protocol (rather than the marine mammal observing protocol). Together these will result in the underestimation of bycatch in many Northwest Atlantic Ocean fisheries. This is particularly relevant to gray seals whose bycatch is already close to PBR.

NEFSC staff presented several approaches to dealing with bias in bycatch estimates, either through a data/model driven approach to adjust the bycatch estimate or to reduce the recovery factor (Fr) to account for the uncertainty. We **recommend** that bias be accounted for in the next SAR for the affected stocks and would prefer a data or model driven solution. An effective, data-driven solution would be to revise the electronic monitoring protocols to require contracted electronic monitoring analysts to record marine mammal bycatch and share summary reports with NEFSC. Until this can be developed, we **recommend** the PBRs for the affected stocks be reduced (e.g., from 1.00 to 0.75).

Windfarm impacts on marine mammal scientific studies.

The ASRG appreciates that the development of windfarms along the US Atlantic Coast will impact NOAA marine mammal (and fish) surveys, and we are glad that the NEFSC has developed a strategy for mitigating these impacts. We **agree** (as asked) to provide a review of the strategy.

Review, edit, and advise on the annual marine mammal Stock Assessment Reports with special attention on strategic stocks.

Stock Assessment Report Reviews

ASRG members have provided a variety of technical and grammatical edits to the individual SAR chapters posted on a NOAA Fisheries Google drive, and do not need to be repeated here.

We do, however, have two overarching **recommendations** about maps and climate discussions in the SAR chapters.

We **recommend** that SAR chapters include improved maps to better inform the reader of the stock's distribution. The maps included in the draft harbor porpoise SAR, which show harbor porpoise density by season, are an example of what the ASRG considers to be an appropriate map. Most other chapter maps should be revised when those SARs are updated. Posting a map simply showing all sightings across lengthy time periods (e.g., data for all seasons across multiple decades) uncorrected for effort should generally be considered as the worse case for mapping in the SARs. Seasonal surface density maps may be the best case, but an assessment of the robustness of the data sets from which the density maps are derived should be conducted. For migratory species, a schematic map identifying seasonal habitat use may be more appropriate; for example, for the North Atlantic right whale, a schematic could delineate foraging, breeding and migratory habitat. The maps should include labels for all locations referenced in the SAR.

We also **recommend** that all SAR chapters have a subsection devoted to the effects of climate change on the stock. We further **recommend** that this discussion includes information from and reference to NOAA's climate vulnerability assessment tool's results for the stock (https://www.fisheries.noaa.gov/data-tools/climate-vulnerability-assessment-tool).

<u>Discussion of other strategic stocks without SAR updates</u>

As NOAA and the ASRG understand, the MMPA requires the status of all marine mammal strategic stocks be reviewed annually. Of the 116 stocks in the Atlantic Ocean and Gulf of Mexico, 54 are considered strategic. The ASRG reviewed 5 of these stocks this year, while most of the remaining stocks have been reviewed in the past 3-4 years. We understand why all stocks are not tabled annually and thank NOAA staff for allowing us to review the stocks proposed for SAR updates. This review has resulted in the ASRG requesting 2+ additional stocks to be updated annually. This has been an *ad hoc* process, and we understand NOAA staff has considered that a formal process be established for defining, in consultation with the 3 SRGs, which strategic stocks will be updated each year. We **recommend** that this process be adopted nation wide.

As called out in the MMPA, discuss, and provide additional recommendations to NOAA/USFWS

During this session, the ASRG received reports on the status of three of the Take Reduction Teams –Bottlenose Dolphin, Atlantic Large Whale, and Harbor Porpoise.

Mid-Atlantic Bottlenose Dolphin TRT Management Discussion on challenges and potential paths forward

SERO staff explained to the ASRG the difficulties they were having accounting takes against PBR on a stock specific basis as a result of: multiple stock's structure and range, identifying the stock associated with bycaught animals, low observer coverage producing an imprecise mortality estimate, range shifts of stocks resulting from environmental change, and evolving patterns of fishery interaction. SERO's goal is to develop a management strategy to implement conservation measures for overlapping and shifting stocks in a changing environment, and they are proposing a workshop to develop strategies to assess bycatch.

The ASRG was asked for guidance on which of two approaches to reassessing PBR was considered best: 1) a probabilistic approach to PBR which characterizes uncertainty in SI/M estimates to deal with stock assignment and stranding probabilities and results in a probability distribution of SI/M to be compared to stock PBRs, or 2) Population Model based PBR benchmark. The ASRG's **recommendation** was to use Option 1 in the near term but continue to develop Option 2 in the long term. Note that while Option 2 might be the best approach biologically, its use would be constrained by the guidance for the calculation of PBR provided in the MMPA.

In addition, we recommend that NOAA allocate resources to undertake a population genomic analysis to delineate stocks of Mid-Atlantic bottlenose dolphins (collaborating with other regional research efforts may assist in obtaining the necessary type specimens) and develop genomic tools capable of reliably assigning a bycaught animal back to the correct stock of origin. This would enable more accurate estimates of mortality, directly informing TRT discussions.

Atlantic Large Whale TRT status of the team and implementation of new ALWTRP

GARFO staff provided a brief update of the current TRP and progress towards the next TRP. No advice was requested.

HPTRT - Progress towards achieving Zero Mortality Rate Goal (ZMRG)

The ASRG had asked for this presentation to better understand how NOAA was addressing the MMPA mandate to reach ZMRG (10% of PBR), if "economically and technologically practicable" within 7 years after the enactment of Section 118 (April 30, 2001). We had asked this question specifically about harbor porpoise given there was an active Take Reduction Team and Plan for the stock, and that takes had been reduced to levels that were approaching ZMRG. This appeared to be a stock that NOAA could use to flag their success in implementing the requirements of the MMPA. We **recommend** that NOAA either take actions to further reduce harbor porpoise takes to reach ZMRG or make an explicit determination that reaching ZMRG is not "economically or technologically feasible" for this stock.

Agenda for 2024 ASRG meeting
Charleston SC
May Forest State Park
27-29 February 2024

Tuesday 27 February

8:00-8:30 Travel to May Forest State Park

8:30 – 9:00 Introductions, adoption of agenda, logistics, etc

9:00-10:30 NOAA OST/OPR updates
- ASRG letter and Response
- National Updates: SRG membership updates, Terms of Reference, Code of Conduct, stock policy update, Joint SRG meeting planning - Schakner/Patterson
- Funding for Atlantic and Gulf of Mexico marine mammal stock assessment related work
- Status of re-evaluation of North Atlantic humpback whale stock structure
- UME updates, especially the Humpback whale UME
- NARW health assessment updates

10:30-10:45 Break

10:45-11:45 Neighboring States Science Updates
- Canada
- Mexico (Gulf of Mexico only)
- Caribbean (Cuba only)

11:45-12:15 Marine Mammal Commission update (tentatively Barataria Bay dolphins, NARW and HUBW stock structure)

12:15-1:15 Lunch (brought in?)

1:15-2:15 Science Center marine mammal science updates
- Science accomplishments from 2023
- Fieldwork and research plans for 2024

2:15-3:15 Status of Gulf of Mexico stocks of special interest
- Barataria Bay dolphins including results from monitoring workshop
- Rice's whale status and research

3:15-3:30 Break

3:30-4:30 USFWS update

4:30-5:00 ASRG Executive Session (closed)

6:00 – ASRG dinner (welcome for the 5 new members); Agency staff free evening

Wednesday 28 February

8:00-8:30 Travel to May Forest State Park

8:30 – 8:45 Announcements, recap Day 1, plan for day/morning session, lunch order if needed?

8:45-11:45 Discussion with NOAA Fisheries, USFWS and Foreign States on specific marine mammal stock assessment issues requiring discussions between ASRG and Agencies

- Assessing stock level SI/M for harbor and grey seals based on field sampling
- Status of integrating various NARW modeling exercises
- Progress on developing consistent approaches to setting transboundary PBRs
- Solutions to negatively biased groundfish fishery bycatch estimates resulting from missed drop outs from nets (Precoda and Orphanides 2024) and unrecorded observations on marine mammal bycatch in video imagery (ASRG 23 May 2023 letter to AA Coit)
- Wind farm impacts on associated marine mammal scientific research

11:45-1:00 Lunch (brought in?)

1:00-2:00 SAR discussion - Gulf of Mexico and Southeast Atlantic Marine Mammal Stocks

SC/GA Coastal bottlenose dolphins
NFL Coastal bottlenose dolphins
CFL Coastal bottlenose dolphins
Biscayne Bay bottlenose dolphins
Garrison et al. in prep. ATLSRG2024-RD1
Bowers et al. in prep. ATLSRG2024-RD2
Maze-Foley and Garrison in prep. SI determination table ATLSRG2024-RD3

2:00-3:00 SAR discussion - Northeast Atlantic Marine Mammal Stocks

North Atlantic right whale
Humpback whales
Gray seals
Harbor Porpoise
True's beaked whale
Gervais beaked whale
Blainville's beaked whale
Sowerby's beaked whale
Cuvier's beaked whale

3:00-3:30 Break and travel to SC Aquarium

3:30-5:00 Potential Visit to Charleston Aquarium

6:00 - Dinner nearby with NOAA/USFWS/ASRG+ invited Charleston folks

Thursday 29 February

8:00-8:30 Travel to May Forest State Park

8:30 – 8:45 Announcements, recap Day 2, any outstanding items

8:45-9:15 Discussion of other strategic stocks without SAR updates

9:15-11:15 Take Reduction Team/Plan Updates

BDTRT - Mid-Atlantic Bottlenose Dolphin Management Discussion on challenges and potential paths forward (1hr)

ALWTRT – status of the team and implementation of new ALWTRP

HPTRT - Progress towards achieving ZMRG using harbor porpoise as an example

11:15-11:30 Wrap up/convene