



Monday Aug 16, 2024

Richard Merrick  
Chair, Atlantic Scientific Review Group

Francine Kershaw  
Vice-Chair, Atlantic Scientific Review Group

Dear Drs. Merrick and Kershaw:

Thank you for the letter to Janet Coit, Assistant Administrator for Fisheries, transmitting recommendations from the February 2024 annual meeting of the Atlantic Scientific Review Group (Atlantic SRG). The Atlantic SRG has made many valuable recommendations to help guide NOAA Fisheries' marine mammal science and management, which are addressed below. We appreciate the continued service and contributions by members of the Atlantic SRG in providing advice and support to NOAA Fisheries in accordance with the Marine Mammal Protection Act. We look forward to our continued partnership to improve the science supporting the conservation of marine mammals.

Sincerely,

Cisco Werner  
Director of Scientific Programs and Chief Science Advisor

Samuel D. Rauch III  
Deputy Assistant Administrator for Regulatory Programs

cc:

Evan Howell, Director, Office of Science and Technology  
Kim Damon-Randall, Director, Office of Protected Resources



### *Passive Acoustic Monitoring*

1. 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 Atlantic SRG meeting.

*Response:* We will prepare a joint PAM deployment strategy and will present it at the next Atlantic SRG meeting, which will be in 2026. As a reminder, in 2025, we are hosting a joint SRG meeting, and while there will be an opportunity for the SRGs to meet independently, the schedule will be compressed.

### *Protected Species Assessments*

2. AMAPPS—We have been particularly impressed by the extraordinary amount of information developed during the fifteen years of the BOEM-funded Atlantic Marine Assessment Program for Protected Species (AMAPPS) I through III research program. We strongly **recommend** to NOAA (and BOEM) that a mechanism be found to fund at least another five years of AMAPPS.

*Response:* We recognize the importance of maintaining survey data collection. BOEM is currently providing funding support to NOAA Fisheries and collaborators for various short-term projects related to, but not under, AMAPPS, such as seal and sea turtle tagging and passive acoustics. Our conversations with the Navy have resulted in funds to support a FY25 winter shipboard survey in the mid-Atlantic (the time and area with the largest data gap) with the opportunity for future collaborations.

3. GoMMAPPS- Similarly, we view the continued funding of the GoMMAPPS survey program in the Gulf of Mexico to be of equal importance, 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.

*Response:* We are having conversations with BOEM to establish a new Gulf of Mexico marine mammal monitoring program. While we are optimistic that the new program will be funded, it is not of the same scope as the original GoMMAPPS program. The new funding will likely continue some data collection similar to parts of GoMMAPPS and may include directed Rice's whale survey efforts.

### *Rice's whales*

4. 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.

*Response:* We appreciate the Atlantic SRG's support of this research. We agree there is an ongoing need for targeted monitoring of Rice's whales in the Gulf of Mexico using a variety of survey techniques given their low population size, low density, and high level of human activities in the Gulf of Mexico. We have successfully leveraged funds and partnerships for Rice's whale research and will continue to prioritize collecting Rice's whale data as resources allow. Currently, there is no dedicated funding to implement a targeted Rice's whale research and monitoring program.

### *Caribbean waters*

5. We **recommend** the Agencies focus resources on the science and conservation of marine mammals in Caribbean waters, particularly in Puerto Rico and the U.S. Virgin Islands. Establishing baseline information in this region is particularly important considering the emerging interest in renewable energy development in U.S. Territories.

*Response:* We agree about the importance of baseline information on marine mammals in Caribbean waters. We will continue to look for ways to leverage funds whenever possible. NOAA Fisheries recently obtained funds from NOAA's Uncrewed Systems program to conduct a collaborative pilot study with researchers at the University of Miami, the University of the Virgin Islands, and Rutgers University. The study will examine the utility of PAM-equipped gliders for obtaining baseline data on cetacean presence around Puerto Rico and the U.S. Virgin Islands, with glider deployments planned for summer 2024 and winter 2025. This will be an important, first step toward marine mammal data collection in the U.S. waters of the Caribbean.

### *Barataria Bay*

6. 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. 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.

*Response:* We agree that there is both urgency and importance to standing up monitoring effort. The monitoring workshop held in December was an important step in identifying the strategy, components, sequencing, and timing of Barataria Bay Estuarine System dolphin monitoring that sufficiently captures pre-operational conditions, accounts for the significant uncertainty of the timing of the start of operations, and ensures adequate

funding remains available for post-operational monitoring. We expect a workshop summary to be publicly available once the details are finalized, as resources allow.

7. The Atlantic SRG **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.

*Response:* We agree that the monitoring of Barataria Bay dolphins, as well as their health, habitat usage, and salinity conditions, is critical. The monitoring workshop held in December, 2023 was an important step in laying out the specific elements of this work, sequencing them appropriately in both time and space and getting the funding mechanisms in place to implement them. Elements identified at the workshop include capturing health assessment(s) and implementing any salinity tag (or other health monitoring tool) that is developed and meets the needs of the monitoring plan.

*Status of integrating various NARW modeling exercises*

8. We have two significant recommendations. The first **recommendation** is that the Decision Support Tool (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 a 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.

*Response:* In response to the Atlantic SRG peer review in February 2023, a hazards model was integrated into the framework of the DST, such that simulated management scenarios calculate risk with two methods. The first is the traditional Relative Risk Units that have historically been used in ALWTRT discussions to inform risk reduction coincident with management scenarios. The second method utilizes a mortality rate, an output of the hazards model. A scenario run implementing management measures from the 2021 amendment to the ALWTRP was used to compare the estimated risk reduction using both units and produced similar results. These results, in addition to other analyses and updates made to the DST in response to Atlantic SRG review, were presented to the ALWTRT at a [webinar](#) in June 2023.

Converting mortality estimates to the estimated number of fishery mortalities raises concerns with respect to apportionment by country (e.g., U.S./Canada) and cause (e.g., Vessel Strike/Entanglement). The hazards model mortality rate is tuned using the NARW stock assessment total mortality rate estimate. Suppose the stock assessment estimates a 10% annual mortality rate and we assume a 50% country apportionment and 50% cause apportionment - with these assumptions, the U.S. entanglement mortality rate would be 2.5%, a quarter of the 10% total annual mortality. Assuming a population of 360 right whales, this rate estimates 9 annual U.S. entanglement mortalities. This rate and associated mortalities would be distributed across over 70 discrete fixed-gear fisheries described in the DST, the interpretation of which would be difficult (and subject to huge uncertainties) for all fisheries. Fisheries contributing the least relative risk and mortality rate would contribute NARW mortalities in the range of hundredths of a whale. This could be more difficult to communicate and understand, rather than saying that this fishery contributes 5% of the U.S. entanglement mortality risk, a value that would not change with updated population estimates or apportionment by country or cause. Alternatively, a fishery that contributed 30% of the U.S. entanglement mortality risk would contribute between 0.9 and 5.3 NARW mortalities depending on the country and cause apportionment. Additionally, variability from retrospective updates to the stock assessment, total mortality rates, and whale distributions would change these values beyond apportionment by country and cause, adding to the complicated nature of reporting estimated mortality by individual whale numbers.

Quantifying and documenting these other sources of uncertainty were also requested by the Atlantic SRG peer review of the DST. Some of these requests were addressed at the ALWTRT webinar in June 2023, and a framework to present a comprehensive analysis of variability and uncertainty around risk reduction estimates will be provided for scenario packages under consideration at future ALWTRT meetings. This includes accounting for interannual variability in fishery effort, distribution of this effort based on trip reporting resolution, uncertainty in NARW spatial and vertical distributions, and the rope strength threat model. Scenario risk reduction precision will also be expressed based on each

source of variability independently and for all evaluated sources of uncertainty as a whole.

#### *Strategic stocks without SAR updates*

9. As NOAA and the Atlantic SRG 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 Atlantic SRG 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 Fisheries staff for allowing us to review the stocks proposed for SAR updates. This review has resulted in the Atlantic SRG 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 nationwide.

*Response:* We appreciate the Atlantic SRG recommendation on this process as we strive to balance staff workload, meet our mandates under the MMPA, and ensure timely updates to SARs. We agree that establishing a national process would be useful. Starting late 2024 and early 2025, we will consider this as we review and update our policy *Reviewing and Designating Stocks and Issuing Stock Assessment Reports under the Marine Mammal Protection Act*.

#### *Maps and climate in SAR Chapters*

10. We **recommend** that SAR chapters include improved maps to better inform the reader of the stock's distribution. 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.

*Response:* NOAA Fisheries has been working to improve the maps associated with the SARs over the past several years, and we will strive to improve the maps as data and resources allow. Concerning a climate change section, this topic was addressed in our recent revisions to the *Guidelines for Preparing Stock Assessment Reports* (please see Topic 6 for a summary). Per the updated Guidelines, climate change impacts will be included in the "Other Factors That May Be Causing a Decline or Impeding Recovery" section of the SARs as appropriate. Thus, we do not believe a section specifically dedicated to climate change is warranted in the SARs.

*Consistent approaches to setting transboundary PBR*

11. It is clear from the materials presented that NOAA Fisheries 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.

*Response:* We agree and plan to further discuss PBR for transboundary stocks at the upcoming Joint SRG meeting in 2025.

12. 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.

*Response:* In the past few years, we have increased our collaborations with Mexico through the LISTEN GoMex project, expanding PAM deployments, and working with partners at Universidad Veracruzana and Universidad Nacional Autonoma de Mexico. We have also been engaging with researchers throughout the Caribbean to develop relationships there.

As the Atlantic SRG is likely aware, there are currently very strong and engaged relationships with Canadian colleagues in Fisheries and Oceans Canada (DFO) and science institutions. Specifically:

1. NOAA Fisheries, Transport Canada, and DFO typically have three formal bilateral meetings per year focused on North Atlantic right whales- a senior executive staff and agency leadership meeting, and two senior executive staff and science/management staff meetings.
2. There are transboundary working groups of agency and academic scientists working on NARW and copepod habitat distribution models, decision support/risk analysis tools, Unusual Mortality Event investigations, and the NARW PVA.
3. There are frequent virtual meetings between agency and academic science, management, and law enforcement staff on implementing on-demand fishing technologies.
4. There are annual NOAA Fisheries aerial surveys of NARWs in the Gulf of Saint Lawrence staffed with dual nation observer teams.
5. There is regular coordination on passive acoustic receiver deployment between DFO, NOAA Fisheries, and academic scientists.
6. Canadian stakeholders have increased engagement in the NARW and Ropeless consortiums. Canada has also taken to hosting it across borders, and this serves as an additional active venue for coordination and collaboration on science and management issues.

7. There is regular coordination between DFO scientists and our NEFSC Conservation Ecology branch to coordinate on everything from large scale multi-species ship and aerial surveys to sea-turtle and gray seal tagging and population assessments.

#### *Harbor porpoise and ZMRG*

13. 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.

*Response:* We acknowledge the Atlantic SRG’s concern regarding harbor porpoise takes; however, the MMPA does not require NOAA Fisheries to make an explicit determination relative to ZMRG.

#### *Mid-Atlantic Bottlenose Dolphin TRT Management*

14. The Atlantic SRG was asked for guidance on which of two approaches to reassessing PBR was considered best: 1) a probabilistic approach to PBR that characterizes uncertainty in M/SI estimates to deal with stock assignment and stranding probabilities and results in a probability distribution of M/SI to be compared to stock PBRs, or 2) population model- based PBR benchmark. The Atlantic SRG’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 calculating PBR provided in the MMPA.

*Response:* To continue exploring these concepts and ensure that we analyze the full range of options, we are planning a two to three-day workshop in September, 2024 focused on improving the management of bottlenose dolphin stocks along the U.S. East Coast, specifically those covered by the Bottlenose Dolphin Take Reduction Plan. At this workshop, we plan to share the Atlantic SRG’s recommendation, discuss a potential path forward, and solicit and explore additional concepts that participants may identify.

15. The Atlantic SRG **recommends** that NOAA Fisheries 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.

*Response:* Genomic analyses focused on identifying population structure in estuarine and coastal waters of North Carolina are complete, and the SEFSC and partners are drafting a



manuscript. This work will help us understand if current stock structure aligns with biological meaningful population structure. Furthermore, the results from this work will inform a recently funded NOAA Fisheries Protected Resources Toolbox Initiative project focused on using genomic data and established population identification methods to develop and optimize genomic panels to use for assigning individuals to the appropriate populations with an associated level of confidence. This funding includes hiring staff to conduct laboratory and analytical work, which is underway.

#### *Assessing M/SI for seals*

16. The Atlantic SRG met during an intersessional in the 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 Atlantic SRG guidance. The Atlantic SRG suggests that the first alternative, to apply an entanglement rate measured from field surveys to regional estimates of abundance, provided the closest estimate to true M/SI, but before this can be implemented, NOAA Fisheries staff need to provide the precision of the estimates and consider how they will implement the approach in the long run. In the interim, we **recommend** NOAA Fisheries add the number of observed entangled seals to the bycatch estimate of M/SI.

*Response:* We will incorporate the number of live seals entangled, as reported to the National Strandings Database and following NOAA Fisheries guidelines for Level A strandings data, into the SAR. The observed entangled seals, added to SI animals documented from bycatch, will represent a minimum count of M/SI.

#### *Negatively biased groundfish fishery bycatch estimates*

17. 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).

*Response:* We agree that differences in observer protocols can potentially introduce bias in estimates of marine mammal bycatch. Readers of the SAR can gain some insight into the relative use of the different observer protocols, such as the gillnet bycatch reports referenced in the SAR report and how much observer data was gathered under the

fish-focused and mammal-focused observer protocols. We will investigate model-driven or similar approaches to gillnet bycatch estimation as well as a way to make adjustments to the bycatch estimates.

Until such an approach can be developed, we plan to reduce the  $F_r$  from 1.00 to 0.75 as suggested for the Northwest Atlantic gray seal stock, one of the three stocks addressed in the study on bias in bycatch estimates. In doing so, the average annual human-caused mortality of gray seals from 2018-2022 will now exceed the PBR calculated for U.S. waters. However, this does not necessarily warrant designating the stock as strategic based on the GAMMS IV guidelines for stocks in which range-wide estimates of  $N_{min}$  are available, yet there is incomplete human-caused mortality and serious injury (HCM/SI). While HCM/SI is unknown in Canada, it is unlikely to be of such magnitude to exceed the range-wide PBR, even when  $F_r=0.75$ . The other two stocks in the study on bias in bycatch estimates, the Northwest Atlantic harbor seal and the Gulf of Maine/Bay of Fundy harbor porpoise, already use  $F_r=0.5$  for the PBR calculation, so we do not plan on adjusting  $F_r$  for these stocks.