GARFO-2017-00031
https://doi.org/10.25923/cfsq-qn06

May 2021

North Atlantic Right Whale Conservation Framework for Federal Fisheries in the Greater Atlantic Region

Purpose

During the development of an Endangered Species Act (ESA) section 7 consultation on the authorization of federal fisheries in the Greater Atlantic Region, we identified the need to implement measures to further reduce entanglement of North Atlantic right whales (hereafter "right whales") to meet the mandates of the ESA. As described below, the Conservation Framework includes the measures proposed in a December 2020 rulemaking to modify the Atlantic Large Whale Take Reduction Plan (ALWTRP) and three additional phases. This Conservation Framework outlines NMFS' commitment to implement measures that are necessary for the recovery of right whales, while providing a phased approach and some flexibility to the fishing industry. NMFS is currently conducting an ESA section 7 consultation on the authorization of eight federal fisheries managed under the Magnuson-Stevens Act and two interstate fishery management plans under the Atlantic Coastal Act and the implementation of the New England Fisheries Management Council's Omnibus Essential Fish Habitat Amendment 2 (Batched Fisheries Opinion). The Batched Fisheries Opinion includes fisheries managed under the American lobster, Atlantic bluefish, Atlantic deep-sea red crab, Jonah crab, monkfish, Northeast multispecies, Northeast skate complex, spiny dogfish, Atlantic squid/mackerel/butterfish, and summer flounder/scup/black sea bass fishery management plans. It is our intent that these measures be considered as part of the proposed action in the consultation on the Batched Fisheries. The Conservation Framework includes fixed gear fisheries authorized under the respective fishery management plans included in the Batched Fisheries Opinion. The Conservation Framework does not specify particular measures but identifies the level of reductions in mortalities and serious injuries (M/SI) that NMFS is committed to achieve in order to meet its ESA mandates. Although we believe the Conservation Framework targets can be met through gear and operational measures, NMFS has the authority[1] to implement other measures (e.g., partial/complete closures) to reduce risk and will exercise that authority if needed.

Background

North Atlantic right whales, one of the world's most endangered large whale species, are protected under the Marine Mammal Protection Act (MMPA) and the ESA. While these two laws have different objectives, they work together to protect and recover North Atlantic right whales, restoring stocks to sustainable levels. NMFS has developed this North Atlantic Right Whale Conservation Framework to further reduce M/SI due to entanglements in federal fisheries to meet the mandates of the ESA, while recognizing the important role that the MMPA take reduction program goals and ongoing actions have in reducing mortalities and serious injuries in U.S. commercial fisheries and recovering the North Atlantic right whale species.

[1] Marine Mammal Protection Act (16 U.S.C. 1361 et seq.), the Endangered Species Act (16 U.S.C. 1531 et seq.), the Magnuson-Stevens Fishery Conservation and Management Act (16 U.S.C. 1801 et seq.) and other statutes, as appropriate.

Primary threats to the species include climate change, entanglement in fishing gear, and vessel strikes. The fisheries included in this Conservation Framework are fixed gear fisheries in federal waters managed by NMFS' Greater Atlantic Regional Fisheries Office (GARFO) under the Magnuson-Stevens Fishery Conservation and Management Act and the Atlantic Coastal Fisheries Cooperative Management Act. Some of these fisheries are also regulated under the ALWTRP regulations issued pursuant to section 118 of the MMPA. Under the ESA, the impacts of federally-authorized activities are considered under the consultation requirements of section 7 of the ESA. In developing the ESA section 7 Biological Opinion on these fisheries, entanglements in the federal fisheries listed above were estimated to seriously injure or result in the death of an average of approximately five right whales each year[2]. This Conservation Framework outlines ongoing and planned actions to reduce M/SI of right whales incidental to these fisheries under the MMPA and the further reductions needed to meet the mandates of the ESA.

MMPA: Atlantic Large Whale Take Reduction Program Ongoing and Planned Activities
When incidental mortality or serious injury of marine mammals from commercial fishing exceeds a stock's "potential biological removal" (PBR) level, the MMPA directs NMFS to convene a take reduction team made up of stakeholders from the fishing industry, fishery management councils and commissions, state and federal resource management agencies, the scientific community, and conservation organizations to consider the best available information and develop recommended modifications to commercial fishery operations to reduce M/SI to below a stock's PBR. NMFS considers these recommendations in implementing regulatory and non-regulatory measures under a take reduction plan. The MMPA specifies that the goal of a take reduction plan shall be to reduce M/SI incidental to commercial fishing to below a stock's PBR. First implemented in 1997, the ALWTRP has been modified several times to reduce the risk of mortality and serious injury of large whales incidentally taken in commercial gillnet and trap/pot fisheries. The most recent final rule was published in May 2015 (80 FR 30367, May 28, 2015).

Because of the declining population and the persistent incidental entanglements resulting in M/SI above the stock's PBR, ALWTRP modifications have, and continue to be, directed primarily at reducing the risk of commercial fisheries on right whales. In late 2017, the evidence of a declining population exacerbated by high right whale mortalities caused NMFS to refocus the Atlantic Large Whale Take Reduction Team (ALWTRT) on new modifications to the ALWTRP. NMFS has proposed measures to reduce M/SI (85 FR 86878, December 31, 2020) and is planning to reconvene the ALWTRT to consider additional measures.

In the current proposed rule, NMFS has proposed modifications to the ALWTRP that focus on the Northeast Region lobster and Jonah crab trap/pot fisheries. In developing this action, NMFS estimated that to reduce M/SI to below PBR for right whales, entanglement risk across U.S. fisheries (state and federal) needs to be reduced by 60 to 80 percent.

[2] For information on how these estimates, which include an estimate of observed/unknown cause and unobserved (i.e., cryptic) mortality resulting from entanglement in the fisheries, were calculated, see section 7.2 of the Biological Opinion on the Continued Implementation of Management Measures for the American Lobster, Atlantic Bluefish, Atlantic Deep-Sea Red Crab, Mackerel/Squid/Butterfish, Monkfish, Northeast Multispecies, Northeast Skate Complex, Spiny Dogfish, Summer Flounder/Scup/Black Sea Bass, and Jonah Crab Fisheries.

However, given additional sources of uncertainty in the 80-percent target, as well as the challenges achieving such a target without substantial economic impacts to the fishery, the ALWTRT focused on recommendations to achieve the lower 60-percent target. Therefore, under the ALWTRP, NMFS has proposed measures to reduce M/SI in the American lobster and Jonah crab pot/trap fisheries in both state and federal waters[3] by an estimated 60 percent. For a full description of how these targets were determined, the ALWTRT discussions, and the proposed measures, see the Draft Environmental Impact Statement for Amending the Atlantic Large Whale Take Reduction Plan: Risk Reduction Rule. The measures proposed under the ALWTRT are included as the first phase in this Conservation Framework.

In 2021, the ALWTRT will be asked to recommend modifications to the ALWTRP to address risk in the remaining fixed gear fisheries that use buoy lines, including other trap/pot fisheries and gillnet fisheries coastwide. The ALWTRT has begun discussing risk reduction considerations for late summer scoping. NMFS will consider how any changes to the ALWTRP under this future action contribute to meeting the goals of the Conservation Framework.

As described above, the MMPA and ESA work together to protect and recover right whales. While recommendations from the ALWTRT inform the development of measures integrated into the ALWTRP and associated regulations to meet the mandates of the MMPA, they also contribute to progress towards the ESA goals described below.

*ESA: Section 7 Consultation of Federal Fisheries Managemen*t

Under the ESA, the consultation considers the impacts of the federal fisheries (i.e, federally-permitted vessels operating in federal waters) on ESA-listed species. The implementation of the proposed modifications to the ALWTRP related to the Northeast Region lobster and Jonah crab trap/pot fisheries in federal waters is expected to reduce M/SI in the American lobster and Jonah crab pot/trap fisheries by approximately 60 percent[4]. Once the ALWTRP measures are implemented, NMFS estimates that, without further action, the federal fisheries are anticipated to result in the death of approximately an annual average of 2.69 right whales (27 right whales over a 10-year period).

We recognize that the fishing industry has implemented all the required mitigation measures since 1997. However, data suggest that mortalities and serious injuries of right whales continued at higher rates than are sustainable even with the measures implemented under the Take Reduction Plan. As a result of climate change and exposure to mortality in unregulated areas, the persistent deaths and injuries in U.S. fisheries cannot be sustained by the reduced North Atlantic right whale population. As the population of right whales continues to decline, we must acknowledge that previous efforts have not reduced

[3] The area include in the ALWTRP proposed rule is north of 40°00' N latitude and east of 71° 51.5' W longitude.

[4] It should be noted that the ALWTRP rulemaking includes both state and federal waters. The proposed measures across the state and federal waters are designed to achieve at least a 60 percent reduction in M/SI. For the purposes of this analysis, we do not apply a "credit" for measures that were previously implemented in the Massachusetts Restricted Area. Without this, the proposed rule achieves 58.1% reduction; 26.6% of that reduction is expected to occur in federal waters. Reduced impacts in state waters would contribute to an improved baseline. The impacts to the baseline from these measures are considered in the Biological Opinion.

entanglements to the degree needed to satisfy ESA and MMPA requirements, and additional efforts are necessary to recover this critically endangered species.

Our analyses indicate that further reductions in entanglements and M/SI in the federal fisheries under this Conservation Framework are needed to ensure the fisheries will not appreciably reduce the likelihood of the survival and recovery of the species as required by the ESA. To determine the extent to which additional measures are needed, we used qualitative and quantitative analyses. We developed a population projection model to predict the population trajectory over 50 years (Linden, 2021)[5]. We recognize that the fisheries are likely to be modified in the next 10 years; however, there is no information available at this time to predict how any future modifications will change the operation of the fisheries. While these changes cannot be considered in the projections now, we have developed and are committing to the comprehensive adaptive management approach and schedule described below so that as new information becomes available, the changes can be considered in the future. The adaptive management approach will also consider changes to calving rates and reductions of M/SI from other non-fishery sources (e.g., vessel strikes).

Using the population projections, we compared the trajectory of the female population after implementing the proposed ALWTRP measures to the trajectory projected if the remaining M/SI in the federal fisheries was further reduced by 25, 50, 75, or 95 percent. With no further reduction in M/SI, our analyses indicate the federal fisheries are impacting the survival and recovery of right whales. We also concluded that reductions below 95 percent were insufficient to meet the ESA mandates as survival and recovery would still be appreciably reduced due to the federal fisheries that would continue to occur, albeit at a lower level. We further refined our analysis and determined that M/SI in the federal fisheries needs to be reduced to 0.136 on average annually[6], within 10 years under a phased implementation (see below), to ensure that the fisheries will not appreciably reduce the likelihood of survival and recovery of the species. Unless M/SI from other sources (i.e., U.S. vessel strikes, non-federal U.S. fisheries, Canadian fisheries and vessel strikes (see below)) are reduced and/or calving rates increase, this level of reduction in M/SI in the federal fisheries is necessary to ensure the goals of the ESA, namely survival and recovery of the species, are met.

Therefore, through this Conservation Framework, we are committing to use our authorities to implement measures to further reduce entanglements and M/SI in federal fisheries, reducing M/SI from an annual average of 2.69 after the implementation of the proposed rule to no more than 0.136. The reduction in entanglements is also expected to reduce sublethal effects that may affect the health and reproductive output of right whales. These reductions will be phased in over the 10-year period (2021-2030). The Conservation Framework describes the targets to be achieved and the dates by which they must be implemented to ensure the Framework's goals are achieved. At this time, the Conservation Framework does not specify the measures that will be implemented. When developing

[5] Linden, D. 2021. Population projections of North Atlantic right whales under varying human-caused mortality risk and future uncertainty National Marine Fisheries Service, Greater Atlantic Region, Gloucester, MA.

[6] Note that the numbers included here differ slightly from the numbers included in the draft Conservation Framework. This is a result of updates to the data considered and new runs of the population projections using the updated information.

measures at each phase, we will be able to consider gear innovations, ALWTRT recommendations, fishing and shipping changes, and evidence of impacts of U.S. and Canadian right whale conservation.

M/SI in Canadian waters

In the Biological Opinion, we estimate the total M/SI of right whales across their full range. The estimated mortality was then partitioned between the United States and Canada following the methods used for M/SI in fisheries to develop the ALWTRT target. These methods were peer reviewed, and while the reviewers did not come to consensus on accuracy, they considered the approach reasonable. We estimate that, on average, approximately 21 right whales die or are seriously injured annually under current conditions. Of these, 11.10 are estimated to occur in Canadian waters and 10.02 in U.S. waters. In Canada, right whales are protected under the Species at Risk Act and the Fisheries Act. As described in the Opinion, the population projections demonstrate that action is needed in both countries to turn the population trajectory positive. Since 2017, the Government of Canada has implemented measures to protect North Atlantic right whales from impacts from both the fishing and shipping industries. Canada has modified their measures annually to reduce M/SI. Given the limited time these measures have been in effect as well as annual changes to and the dynamic nature of the measures, at this time, we have no way to accurately assess the benefit to right whales from Canada's recent measures. As such, in our current analysis, we are not able to quantify the level of risk reduction in Canada and include it in the analysis. However, we assert that the measures taken by Canada are and will continue to benefit right whales, and as part of our evaluation of new data and measures (see table below), we will periodically consider whether it is possible to attribute a benefit from Canadian measures in our analysis. Until this benefit can be assessed, this Conservation Framework takes a conservative approach that considers the retrospective recent serious injury and mortality rates and plans as if the Canadian measures are not benefitting the right whale population. As more information becomes available on risk reduction in Canadian waters and from other U.S. sources (e.g., vessel strikes), the Conservation Framework may be modified to reduce the degree to which additional measures are needed while ensuring that the fisheries in the Framework are not appreciably reducing survival and recovery of the species.

Adaptive Management within the Conservation Framework

This Conservation Framework is designed to increase the likelihood of not only survival but also successful recovery of right whales, as required by the ESA. To accomplish this, the Conservation Framework recognizes and addresses many sources of uncertainty. Conservative assumptions are made about future conditions, including environmental conditions, threats, and the species' response to management actions in the United States and Canada. We recognize that there are efforts to reduce M/SI from other sources, uncertainty associated with available data, and changing environmental conditions. To maintain the maximum likelihood of recovery success over time, this Conservation Framework is adaptive and allows for revisions as additional information becomes available or should any of the assumptions require revisions. Adaptive management, that is, adjusting management as management results, needs, and other events become better understood, provides a systematic means of addressing uncertainties and is an important component of this Conservation Framework. A primary tenet of adaptive management is

to evaluate the efficacy of management actions. Therefore, the Conservation Framework includes a comprehensive evaluation mid-way through implementation to determine whether the target reductions in M/SI currently specified for the final five years of the Framework need to be fully implemented. During the evaluation period, we will assess the U.S. and Canadian risk reduction measures, the population status, and calving and survival rates to determine the extent to which additional measures are needed. The Conservation Framework currently assumes no changes to the species' status or reductions in M/SI from other sources, with the exception of actions in state waters from the proposed ALWTRP rule or related state measures. If reductions in M/SI from sources other than the federal fisheries or improvements to the species status are identified during the evaluation, we will revisit this assumption to determine whether it is necessary for all elements of the Conservation Framework to be fully implemented to achieve its conservation goals.

Conservation Framework Actions

The Conservation Framework actions include the current ALWTRP rulemaking and anticipates three additional rulemakings over the next ten years. We will conduct evaluations at defined periods and adapt the Conservation Framework as appropriate. At year five, we will comprehensively evaluate whether and to what extent the fourth and final rulemaking needs to be implemented.

Phase	Year	Conservation Framework Action Description
	Annually	Provide updates, as appropriate, on the implementation of the Framework to the New England and Mid-Atlantic Fishery Management Councils, Atlantic States Marine Fisheries Commission, and ALWTRT.
1	2021	NMFS implements the MMPA ALWTRP rulemaking focused on 60% reduction in right whale M/SI incidental to the American lobster and Jonah crab trap/pot fisheries. In federal waters, this action reduces M/SI from entanglement, on average annually, to 2.69. Implementation for certain measures will begin in 2021; others will be phased over time.
2	2023	NMFS implements rulemaking to reduce M/SI in federal gillnet and other pot/trap (i.e., other than lobster and Jonah crab fisheries included in Phase 1) fisheries by 60%, reducing M/SI from entanglement, on average annually, to 2.61. As described above, the ALWTRT will convene in 2021 to recommend modifications to the ALWTRP to address risk in the remaining fixed gear fisheries. This phase will consider how any changes to the ALWTRP contribute to achieving the target reduction under this Framework.
Evaluation	2023-2024	NMFS evaluates any updated or new data on right whale population and threats to assess progress towards achieving the conservation goals of this Framework. At this time, we will also assess measures taken by Canada to address serious injury and mortality in Canadian waters.
3	2025	NMFS implements rulemaking to further reduce M/SI by 60% in all federal

Phase	Year	Conservation Framework Action Description
		fixed gear fisheries, reducing M/SI from entanglement, on average annually, to 1.04.
Evaluation	2025-2026	NMFS evaluates measures implemented in the 2025 action as well as new data on the right whale population and threats to assess progress towards achieving the conservation goals of this Framework. Based on the results of this evaluation, NMFS will determine the degree to which additional measures are needed to ensure the fisheries are not appreciably reducing the likelihood of survival and recovery. As described above, if actions outside the federal fisheries reduce risk to right whales by 0.5 M/SI on average annually (1 whale every two years), the M/SI reduction requirement in Phase 4 will be reduced from 87 to 39 percent. If M/SI from other sources is reduced by greater than one M/SI on average annually, we will evaluate whether further action in the federal fisheries is needed.
4	2030	In accordance with the goals identified in the 2025-2026 evaluation, NMFS implements regulations to further reduce M/SI (up to 87%) in fixed gear fisheries. With an 87% reduction, M/SI will be reduced to 0.136.

Evaluation of Reductions by 2030 Needed to Achieve Conservation Framework Goals
NMFS will evaluate population metrics and threats including, but not limited to:

1. Population status.
2. Population distribution and habitat use.
3. Calving and survival rates.
4. Entanglements in U.S. state, U.S. federal, and Canadian commercial fisheries.
5. Changes to the federal fisheries (e.g., changes in co-occurrence due to shifts in areas the fishery operates or changes in effort).
6. Vessel strikes in U.S. and Canadian waters.
7. Apportionment of M/SI (including cryptic mortality) to federal fisheries and other sources, including M/SI in Canada, and between vessel strikes and entanglement.

In 2025-2026, we will re-run the population projections to assess the female population trajectory given any new information. These population projections will help inform the level of further reductions in M/SI that will be needed to achieve the conservation goals of the Conservation Framework and to ensure the federal fisheries are not appreciably reducing the likelihood of survival and recovery. According to the current analysis, a reduction in M/SI in U.S. commercial fisheries of up to 87 percent would be required. That M/SI reduction may be reduced from the 87 percent target to a target of 39 percent if an action outside the federal fisheries reduces risk to right whales by 0.5 M/SI on average annually (1 whale every two years).

It is possible that population-wide risk reduction measures or population growth will reach a level at which further action in the federal fisheries is not needed. If M/SI from other

sources is reduced by greater than one M/SI on average annually, we will evaluate whether further action in the federal fisheries is needed and, if so, at what level.[7]

Development of Measures - Engaging and Coordinating With Partners

As described above, this Conservation Framework specifies targets rather than particular measures to be implemented. We are committed to working with our partners on the implementation of measures to meet the goals of the Conservation Framework. Examples of potential conservation measures may include, but are not limited to, measures such as further buoy line reduction by increasing traps per trawl, further weakening of vertical buoy lines, converting to bottom-stowed vertical lines with remote retrieval devices (referred to as 'ropeless' fishing), targeted seasonal restricted areas closed to buoy lines, broad buoy line restrictions, and managing the number of vertical lines through a buoyline allocation program.

NMFS will consider input from the New England and Mid-Atlantic Fishery Management Councils and the Atlantic States Marine Fisheries Commission in developing and implementing mitigation measures under this Conservation Framework. We anticipate that the ALWTRT will be convened at least annually to evaluate incidental entanglement mortality and serious injury, right whale population status, gear monitoring, gear research, and compliance, as required by the MMPA. Any ALWTRT recommendations and associated MMPA rulemaking will be considered. Additionally, at the ALWTRT meetings, as appropriate, we will provide updates on the implementation of the Conservation Framework. Team members' individual input received during these updates, along with other new information, will be considered when developing mitigation measures to meet the objectives of the Conservation Framework. We are committed to implementing this Conservation Framework to further reduce M/SI in the federal fisheries to meet the mandates of the ESA and plan to work closely with our partners throughout the process. We will consider all input received by stakeholders in developing and implementing measures to reach the conservation targets by the dates specified in this Conservation Framework.

Other Sources of Mortality

While this Conservation Framework is specific to the federal fisheries in the Greater Atlantic Region, NMFS and our partners are also working to address other sources of M/SI in the United States and in Canada, as described below.

U.S. Commercial Fisheries in State Waters

We continue to work with states and the ALWTRT to reduce M/SI of large whales, not just right whales, incidentally captured in both state and federal fisheries. The current ALWTRP rulemaking includes measures that apply in state (as well as federal) lobster and crab trap/pot fisheries. Additionally, to obtain authorization for incidentally taking ESA-listed marine mammals, such as right whales, states must apply for an ESA section 10(a)(1)(B) incidental take permit for state fisheries. Those applications must include conservation plans that specify the anticipated impact of the state fisheries on the species

[7]We understand that any changes to the Framework may require reinitiation of the Batched Fisheries Opinion under section 7 of the ESA.

and its habitat, measures to monitor, minimize, and mitigate such impacts, as well as other information. The Commonwealth of Massachusetts has indicated they are preparing an application, and other New England states have expressed interest or reached out for information on this process. Regardless of whether states apply for ESA section 10 incidental take permits, as noted previously, the ALWTRT will continue its work to identify take reduction measures for state fisheries as part of the MMPA take reduction process. In addition to the efforts of NMFS and the ALWTRT, states such as the Commonwealth of Massachusetts have enacted their own measures (e.g., time/area closures) that expand upon the ALWTRP measures.

U.S. Vessel Strikes

NMFS has implemented a number of measures to reduce the risk of vessel strikes to right whales in U.S. Atlantic waters. These include mandatory speed restrictions for most vessels greater than 65 feet in length transiting through designated Seasonal Management Areas, vessel routing measures to reduce the co-occurrence of vessels and whales, and the establishment of Dynamic Management Areas and Right Whale Slow Zones where vessels are requested to either slow down or avoid areas where aggregations of right whales have recently been detected. Additionally, NMFS maintains a longstanding 500-yard minimum approach distance for right whales to prevent accidental strikes and regularly reaches out to mariners through the USCG Mandatory Ship Reporting system, port meetings, and other avenues to educate vessel operators about speed restrictions and alert them to the presence of right whale aggregations.

However, vessel strike remains a threat to right whales in U.S. (and Canadian, see below) waters. In early 2021, NMFS released an assessment of the vessel strike reduction measures, including an assessment of the effectiveness of mandatory vessel speed restrictions, as it pertains to right whale management. NMFS collected comments on that assessment and, considering these public comments, is currently evaluating the need for future action or potential modifications to the vessel strike reduction efforts to enhance protection of right whales.

In addition to NMFS' efforts, the Commonwealth of Massachusetts has enacted its own measures in the Cape Cod Bay area, mandating a 10-knot speed limit for most vessels less than 65 feet in length during March and April when right whales commonly aggregate in the Bay.

Entanglements and Vessel Strikes in Canadian Waters

NMFS remains committed to working with Canada through various bilateral fora including the U.S.-Canada bilateral working group to focus on the cross-boundary conservation and protection of right whales. Specifically, NMFS continues to regularly engage with Fisheries and Oceans Canada and Transport Canada at both the senior leadership and staff levels to share information and explore opportunities for collaboration on transboundary resource management issues. This includes the efforts of the bilateral right whale working group to identify jointly data and management gaps that are impeding recovery of right whales in both Canada and the United States. NMFS is committed to working with Canada through the MMPA Import Provisions process to evaluate whether applicable Canadian fisheries have regulatory programs that are comparable in effectiveness to the regulatory

program governing U.S. fisheries for protecting marine mammals, including right whales.[8] These bilateral efforts are important to achieving the United States's and Canada's shared goals of conserving and restoring this species.

Each year, the Government of Canada implements a number of measures to address entanglements and vessel strikes involving right whales in Canadian waters. The measures that Fisheries and Oceans Canada has implemented currently include, but are not limited to, a new season-long closure area protocol in the Gulf of St. Lawrence, expansion of the dynamic fishery closure areas into the Bay of Fundy, and mandatory gear markings for all fixed gear fisheries in eastern Canada. Transport Canada's measures currently include, but are not limited to, a variety of mandatory (static and dynamic) and voluntary vessel speed restriction zones in the Gulf of St. Lawrence between April and November for most vessels greater than 13 meters (43 feet) in length. Canada has continued to modify their mitigation measures annually in response to interactions and information on right whale distribution and movements. However, entanglement and vessel strikes continue to be a threat to right whales in Canadian waters within and possibly beyond the areas under management. It is also not possible currently to quantify the level of reduction in M/SI that is achieved through existing Canadian management measures. It is important that evaluation of the effectiveness of Canadian's measures must be accomplished in the near future in order to fully assess the impacts of the measures on the overall survival and recovery of right whales.

Conclusion

Significant efforts to recover North Atlantic right whales are currently underway and planned throughout the species' range. This Conservation Framework provides an additional commitment by NMFS GARFO to further efforts in federal waters to reduce mortalities and serious injuries due to entanglement in the fisheries managed by GARFO. Protecting and conserving this critically endangered species is especially important given the reduced rate of calving, the rapid decline in the population, and the evidence of a continued high rate of mortality. To ensure the species' recovery, the United States and Canada must introduce additional efforts to reduce right whale mortalities and serious injuries. NMFS remains committed to recovering right whales and is continuing to work to reduce mortalities and serious injuries.

[8] It is likely that the MMPA Import Provisions will be increasingly important, as environmental changes are likely to continue to shift lobster and right whale distribution into Canadian waters.