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## Maine Lobsterman and the North Atlantic Right Whale: The Ongoing Conflict and the Obvious Solution

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# MAINE LOBSTERMEN AND THE NORTH ATLANTIC RIGHT WHALE: THE ONGOING CONFLICT AND THE OBVIOUS SOLUTION

*Allison K. Briggs\**

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## ABSTRACT

*The majestic North Atlantic right whale is on the brink of extinction. With fewer than seventy breeding females left, every loss contributes to a decrease in biodiversity and brings us closer to an unrecognizable planet. Like most critically endangered species, the plummeting number of North Atlantic right whales is a direct result of human activity. Specifically, gear used by the lobster fishing industry is entangling and killing right whales off the coast of Maine. The federal Endangered Species Act, meant to protect vulnerable species like the North Atlantic right whale, is violated every time the State of Maine permits Maine lobstermen to use this gear. The solution is twofold: implementation of new, anti-entanglement lobstering gear and a shorter fishing season for Maine lobstermen. Although the federal government has taken steps in the right direction, their efforts are simply inadequate. As the Maine Lobstermen's Association continues to fight for fewer regulations, conservationists urge the federal government to do more, and to do so quickly.*

## INTRODUCTION

*There is no folly of the beasts of the earth which is not indefinitely outdone by the madness of men.*<sup>1</sup>

In 2000, a North Atlantic right whale named Churchill became entangled off the coast of Cape Cod and, after several unsuccessful attempts to free him, a team of veterinarians and engineers from the Woods Hole Oceanographic Institution worked together to deliver a sedative to Churchill using a “spring-loaded, three-prong system which could rapidly deliver the drug into the whale’s tissue.”<sup>2</sup> However, after Churchill was sedated, the team was not able to remove or cut the embedded line and Churchill eventually died, “so emaciated from months of starvation that his carcass likely sank, never to be recovered.”<sup>3</sup>

In another case of entanglement, fishing gear was wrapped so tightly around the back and flippers of a young whale that he was cut in half as he grew and “part of the dorsal blubber coat was peeled back by the incising rope.”<sup>4</sup> Sometimes, a line attached to heavy fishing equipment remains wrapped around a whale’s tail for so long that the line “cut[s] into the leading edge of the flukes and peduncle, eventually severing major arteries.”<sup>5</sup> These stories of entanglement by fishing gear are “the most gruesome deaths imaginable” and “represent the worst form of right whale morbidity and mortality in terms of animal welfare.”<sup>6</sup> Although there have been some successful disentanglements through the years, they are few and far between.<sup>7</sup> In some cases, such as when the whale is unable to return to the surface of the water to breathe, fishing gear entanglement results in immediate death.<sup>8</sup>

Our planet is currently facing a “global extinction crisis never witnessed by humankind[,]” and over one million species will be wiped

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1. HERMAN MELVILLE, *MOBY DICK* 262 (1851).

2. PHIL CLAPHAM, *RIGHT WHALES* 64-65 (2004).

3. *Id.* at 65.

4. Michael J. Moore et al., *Right Whale Mortality: A Message from the Dead to the Living*, *THE URBAN WHALE: NORTH ATLANTIC RIGHT WHALES AT THE CROSSROADS* 368 (2007).

5. *Id.*

6. *Id.*

7. CLAPHAM, *supra* note 2, at 65.

8. Moore, et al., *supra* note 5.

out “in the coming decades.”<sup>9</sup> The Center for Biological Diversity explains the impacts of a loss of biodiversity and the dire need for action:

Each time a species goes extinct, the world around us unravels a bit. The consequences are profound, not just in those places and for those species but for all of us. These are tangible consequential losses . . . but also spiritual and cultural ones. Although often obscured by the noise and rush of modern life, people retain deep emotional connections to the wild world. Wildlife and plants have inspired our histories, mythologies, languages and how we view the world. The presence of wildlife brings joy and enriches us all—and each extinction makes our home a lonelier and colder place for us and future generations. The current extinction crisis is entirely of our own making. More than a century of habitat destruction, pollution, the spread of invasive species, overharvest from the wild, climate change, population growth and other human activities have pushed nature to the brink. Addressing the extinction crisis will require leadership—especially from the United States—alongside bold, courageous, far-reaching initiatives that attack this emergency at its root.<sup>10</sup>

The North Atlantic right whale (*Eubalaena glacialis*) has been listed as an endangered species for fifty years.<sup>11</sup> Despite five decades of federal protection, however, the species has not recovered.<sup>12</sup> In October 2020, the National Marine Fisheries Service (NOAA Fisheries), the federal agency assigned to protect this “critically endangered” species, reduced its 2018 population estimate from 412 to 383, in light of “new scientific analysis of an unprecedented number of . . . deaths.”<sup>13</sup> A year later, the New England Aquarium “released an alarming drop in the right whale

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9. *Halting the Extinction Crisis*, CTR. FOR BIOLOGICAL DIVERSITY, [https://www.biologicaldiversity.org/programs/biodiversity/elements\\_of\\_biodiversity/extinction\\_crisis/](https://www.biologicaldiversity.org/programs/biodiversity/elements_of_biodiversity/extinction_crisis/) [<https://perma.cc/3MJG-S5BM>].

10. *Id.*

11. *North Atlantic Right Whale*, NOAA FISHERIES, <https://www.fisheries.noaa.gov/species/north-atlantic-right-whale> [<https://perma.cc/T3DK-RR3T>].

12. *Petition for Rulemaking to Prevent Deaths and Injuries of Critically Endangered North Atlantic Right Whales from Ship Strikes*, HUMANE SOC’Y OF THE U.S. (June 28, 2012), [https://www.biologicaldiversity.org/campaigns/boat\\_strikes/pdfs/NARWShipSpeedPetition\\_6-28-12.pdf](https://www.biologicaldiversity.org/campaigns/boat_strikes/pdfs/NARWShipSpeedPetition_6-28-12.pdf) [<https://perma.cc/YPR2-3FN2>].

13. Jake Bleich, *Right Whale Consortium: Only 356 North Atlantic Right Whales Survive*, DEFENDERS OF WILDLIFE (Oct. 30, 2020), <https://defenders.org/newsroom/right-whale-consortium-only-356-north-atlantic-right-whales-survive> [<https://perma.cc/ZV93-VSBB>].

population to 336 individuals . . . an 8% decline since 2019.”<sup>14</sup> Further, because only about seventy “breeding females survive” and the species already suffers from low birth rates and high death rates, we may only have ten to twenty years before there are no females left.<sup>15</sup> Right whale births are simply not keeping up with right whale mortalities.<sup>16</sup> One reason for this is “ongoing stress from previous entanglement.”<sup>17</sup>

Philip Hamilton, a research scientist at the Anderson Cabot Center for Ocean Life at the New England Aquarium, was devastated by the news:

Gut wrenching. Feeling like the floor is falling out from underneath you . . . . To us it’s a lot more than just a number. These are individuals that we’ve known, for me, for my entire professional life . . . . We have to [act] now. We cannot say, OK, let’s do a few more studies . . . . We know they’re dying. We know they’re getting entangled.<sup>18</sup>

According to Jane Davenport, senior attorney at Defenders of Wildlife, we have known since 2017 that the status of the North Atlantic right whale is grim, and human activity has been a bigger driver of the species’ decline than was originally anticipated.<sup>19</sup> The North Atlantic right whale is currently experiencing an unusual mortality event (UME), as declared by National Marine Fisheries Service in 2017.<sup>20</sup> Since June 2017, there have been thirty-four confirmed North Atlantic right whale mortalities, ten in U.S. waters and twenty-one in Canada.<sup>21</sup>

The message from scientists and conservationists is clear: to prevent the extinction of the North Atlantic right whale, we must act now. According to NOAA Fisheries, in order for the species to “survive and recover,” there can only be less than one take per year.<sup>22</sup> Since 2011,

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14. *North Atlantic Right Whale*, MARINE MAMMAL COMM’N, <https://www.mmc.gov/priority-topics/species-of-concern/> [<https://perma.cc/7HWS-959N>].

15. *Id.*

16. Emily Greenhalgh, *Right Whale Consortium Releases 2020 Report Card Update*, ANDERSON CABOT CTR. FOR OCEAN LIFE (Nov. 9, 2020), <https://www.andersoncabotcenterforoceanlife.org/blog/2020-narwc-report-card/> [<https://perma.cc/9KQN-4ZSK>].

17. *Id.*

18. *Id.*

19. Bleich, *supra* note 13.

20. MARINE MAMMAL COMM’N, *supra* note 14.

21. *Id.*

22. HUMANE SOC’Y OF THE U.S., *supra* note 12 (noting the potential biological removal (PBR) for the North Atlantic right whale is 0.8). PBR is “the maximum number of animals, not including natural mortalities, that may be removed from a marine mammal stock while allowing that population to reach or maintain its optimum sustainable population [“OSP”].”

though, twenty-four North Atlantic right whales have been killed every year as a direct result of human activity.<sup>23</sup> In July of this year, the species was moved from “endangered to critically endangered” on the International Union for Conservation of Nature’s Red List of Threatened Species, making the North Atlantic right whale the only large whale species to make the list.<sup>24</sup>

“Considered ‘the most comprehensive legislation for the preservation of endangered species ever enacted by any nation,’ the [Endangered Species Act (ESA)] embodies the ‘plain intent’ of Congress to ‘halt and reverse the trend toward species extinction, whatever the cost.’”<sup>25</sup> Accordingly, the ESA states that “all Federal departments and agencies shall seek to conserve endangered species and threatened species and shall utilize their authorities in furtherance of the purposes [of the ESA].”<sup>26</sup> Nevertheless, the lobster fishing industry continues to contribute to the extinction of the North Atlantic right whale by entangling whales in their gear.<sup>27</sup> The steps taken by NOAA Fisheries to prevent entanglements are insufficient, as the survival of the species is dependent on protecting every individual, and the loss of even a single whale may contribute to their extinction.<sup>28</sup>

In the Gulf of Maine, like in coastal Massachusetts, the conflict between the state’s lobstermen and the right whales began many years ago and continues today.<sup>29</sup> Environmental protection organizations are currently fighting in the D.C. Federal District Court to force NOAA Fisheries to require additional management action by the U.S. lobster

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16 U.S.C. § 1362(20) (2018). “With a PBR of less than one animal, any mortality or serious injury is significant.” HUMANE SOC’Y OF THE U.S., *supra* note 12.

23. Bleich, *supra* note 13.

24. *Id.*

25. HUMANE SOC’Y OF THE U.S., *supra* note 12 (quoting *Tenn. Valley Auth. v. Hill*, 437 U.S. 153, 180, 184 (1978)).

26. 16 U.S.C. § 1531(c)(1) (2018).

27. See CLAPHAM, *supra* note 2, at 61-62; Amanda J. Johnson et al., *The Entangled Lives of Right Whales and Fishermen: Can They Coexist?*, THE URBAN WHALE: NORTH ATLANTIC RIGHT WHALES AT THE CROSSROADS 395 (2007); AMY R. KNOWLTON ET AL., ANALYSIS OF SCARRING ON NORTH ATLANTIC RIGHT WHALES (*EUBALAENA GLACIALIS*): MONITORING RATES OF ENTANGLEMENT INTERACTION: 1980-2002 (FINAL REPORT TO NATIONAL MARINE FISHERIES SERVICE 2005); David Abel, *State Officials Plan to Ban Lobster Fishing for Several Months a Year to Help Endangered Right Whales*, BOS. GLOBE (Dec. 17, 2020) <https://www.bostonglobe.com/2020/12/17/metro/major-effort-protect-endangered-whales-state-officials-plan-lobster-fishing-several-months-year/> [<https://perma.cc/3M3J-4DTL>].

28. See HUMANE SOC’Y OF THE U.S., *supra* note 12.

29. See generally *Right Whale Summary*, ME. LOBSTERMEN’S ASS’N, <https://maine.lobstermen.org/right-whale-summary/> [<https://perma.cc/RHL4-ZQAB>].

fishery, arguing that right whales are in imminent danger.<sup>30</sup> NOAA Fisheries, however, argues that the lobster industry is not significantly contributing to the takings of right whales and that the current plan is effective and sufficient.<sup>31</sup> The ESA requires that NOAA Fisheries, as the agency responsible for the protection of the North Atlantic right whale, take a precautionary approach. Any other approach is insufficient, because the goal should no longer be to simply reduce the number of right whales killed every year; the goal must be to immediately eliminate all takings of right whales. Because fishing gear used by the Gulf of Maine lobster fishery is shown to entangle, severely injure, and kill North Atlantic right whales, the only solution is to do what it takes to prevent any and all interactions between Maine lobstermen and this critically endangered species.<sup>32</sup>

This paper discusses the takings of North Atlantic right whales by Maine lobstermen in the Gulf of Maine. Part II explains the characteristics and history of the species, including the history of its interactions with humans. Part III delves into the legal issues surrounding the conflict, explaining the involvement of the Endangered Species Act (ESA) and other federal legislation and discussing a similar controversy in Massachusetts waters. Finally, Part IV analyzes the negative interactions between Maine lobstermen and the North Atlantic right whale. Part V argues that the licensing and use of vertical buoy lines violates federal law and is contributing to the extinction of the North Atlantic right whale. In Part VI, the paper ultimately concludes that Maine must ban commercial lobster fishing between the months of February and May and require Maine lobstermen to implement ropeless fishing systems.

## I. THE NORTH ATLANTIC RIGHT WHALE

### A. Introduction to Right Whales

Right whales have been on this planet for much longer than modern humans. In fact, the “first animals that look like right whales appear in the fossil record” at least twenty million years ago.<sup>33</sup> However, given that the fossil record is “notoriously incomplete,” these mysterious marine

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30. Patrice McCarron, *Draft Whale Rules Expected by Fall*, ME. LOBSTERMEN’S CMTY. ALLIANCE (July 31, 2020), <https://mlcalliance.org/2020/07/31/draft-whale-rules-expected-by-fall/> [<https://perma.cc/6PVT-3UKF>].

31. *Id.*

32. See CLAPHAM, *supra* note 2, at 61-62; Johnson et al., *supra* note 27; Knowlton et al., *supra* note 27.

33. CLAPHAM, *supra* note 2, at 11.

mammals have may have existed for even longer.<sup>34</sup> Right whales are of the order cetacean, which encompasses all whales, dolphins, and porpoises and can be traced back forty to fifty million years.<sup>35</sup> They are massive, stocky creatures, reaching lengths of sixty feet and weights of more than one hundred tons.<sup>36</sup> They have no dorsal fin and their heads make up almost a third of their body and can be distinguished by the presence of callosities, or patches of hardened skin “that are raised and often sharply ridged.”<sup>37</sup> Interestingly, these callosities are located on the whale’s body in places where humans typically have hair: “on top of the head, on the upper and lower lips, on the chin, behind the nostrils, and above the eyes[,]” and they are unique to each whale and often used for identification.<sup>38</sup> Right whales are usually black with “white patches on the belly and chin” and are often described as looking “upside down” due to their “strongly arched and narrow . . . upper jaw . . . and . . . bowed lower jaw.”<sup>39</sup>

Right Whales are baleen whales, which means they are part of the *balaenids* group, and are divided into three species: the North Atlantic right whale, the North Pacific right whale, and the southern right whale.<sup>40</sup> This paper will discuss the North Atlantic right whale, *Eubalaena glacialis* or “true whale of the ice.”<sup>41</sup> North Atlantic right whales used to be found “in high latitudes in icy waters,” before whaling eliminated their presence in these regions.<sup>42</sup> Now, what is left of the North Atlantic right whales primarily feed in the Gulf of Maine, the Bay of Fundy, and off the coast of Nova Scotia, and they calve off the coasts of Florida and Georgia.<sup>43</sup> With less than four-hundred remaining, the North Atlantic Right Whale is “one of the world’s most endangered large whale species.”<sup>44</sup> Although they have a potential life span of seventy years or more, females are currently living to around forty-five years and males to around sixty-five.<sup>45</sup>

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34. *Id.*

35. *Id.* at 11-12.

36. *Id.* at 17.

37. *Id.* at 18; NOAA FISHERIES, *supra* note 11.

38. *Id.* at 18-19.

39. Scott D. Kaus & Rosalind M. Rolland, *Right Whales in the Urban Ocean*, THE URBAN WHALE: NORTH ATLANTIC RIGHT WHALES AT THE CROSSROADS 13 (2007).

40. *Id.* at 13-14, 22.

41. *Id.* at 22.

42. *Id.*

43. *Id.*

44. Bleich, *supra* note 13; NOAA FISHERIES, *supra* note 11.

45. NOAA FISHERIES, *supra* note 11.

*B. North Atlantic Right Whales and Humans*

They were named right whales because they were known by whalers as the “right whale to kill,” due to “their high yields of oil and baleen and the fact that [they are a] slow-moving species [which] floats after death.”<sup>46</sup> Right whales were first hunted over a thousand years ago off the coasts of northern Spain and western France by the Basques.<sup>47</sup> In New England, colonists began hunting right whales in the early 1600s and continued to do so, to some degree, until the early 1900s.<sup>48</sup> In 1935, the League of Nations gave the species international protection, and the International Whaling Commission (IWC) provided protection shortly thereafter.<sup>49</sup> The number of North Atlantic right whales that remained after their hunting was banned is somewhat of a mystery, but it is commonly thought that less than fifty remained after the peak of New England right whaling in the early-1700s.<sup>50</sup> However, an alternative model suggests that a population of eighty-five breeding individuals represented the depth of the species’ decline during the early 20th century.<sup>51</sup>

Right whales were the first large whale for which scientists developed a method of studying based upon the recognition of individual animals.<sup>52</sup> In 1969, a biologist by the name of Roger Payne started studying right whales and discovered that he could use the callosities on their heads to tell them apart.<sup>53</sup> His method of taking photos of the whales’ callosities patterns, which served as “unique fingerprint[s],” became the “longest continually running study of individual whales” in the world and continues today.<sup>54</sup> Today, the New England Aquarium is the home of the North Atlantic Right Whale Catalogue, which “contains thousands of photographs and associated sighting data gathered over more than two decades by numerous researchers.”<sup>55</sup> Because there are so few North Atlantic right whales left, however, the scientists at the New England

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46. Kaus & Rolland, *supra* note 39, at 4.

47. *Id.*

48. *Id.*

49. *Id.* at 5.

50. *Id.* at 4.

51. *Id.* at 5.

52. *Id.* at 25. The Basques are considered the “oldest culture in the world” and built a large, successful economy based on “whaling and cod fishing.” *Who Are the Basques?*, MTHOLYOKE.EDU, <https://www.mtholyoke.edu/~emcoates/eta/basques.html> [<https://perma.cc/3UHK-FZ9X>].

53. *Id.*

54. *Id.* at 25-26.

55. *Id.* at 26; see generally *North Atlantic Right Whale Catalogue*, NEW ENGL. AQUARIUM, <http://rwcatalog.neaq.org/#/> [<https://perma.cc/8TJV-JUDF>].

Aquarium “have much or all of the . . . catalogue in their heads, and instantly recognize most of the [whales] that they encounter.”<sup>56</sup> Aside from their physical identifying markings, it is clear to the scientists who work with them that, like all animals, right whales display unique personalities: “[s]ome are curious and playful, while others are more businesslike and show no interest in boats or humans. Some have distinctive feeding styles. And some females are reliable mothers, returning every three or four years with a new calf in tow.”<sup>57</sup>

### *C. North Atlantic Right Whales and Fishermen*

Every year, hundreds of thousands of marine mammals are killed by fishing gear entanglements.<sup>58</sup> While smaller cetaceans usually drown in the nets, “large whales are frequently powerful enough to drag the fishing gear away[,]” and studies show that over two thirds of North Atlantic right whales have been a victim of entanglement.<sup>59</sup> Sometimes, the whale is able to “shed[] the gear,” which is apparent by the scars left behind; other times, usually in the case of lobster traps, the gear is “so heavy that it restricts the whale’s ability to move and feed.”<sup>60</sup> In these cases, the whale will slowly starve to death or, if the weight of the gear causes the fishing rope to embed itself deep in the whale’s flesh, it will die from a severe infection.<sup>61</sup> Data regarding scars on right whales, which is gathered by studying the thousands of photographs taken of right whales every year, suggests that “on average, [fifteen] percent of all right whales are newly entangled in fishing gear annually.”<sup>62</sup>

When a team of scientists learns of an entanglement and attempts a rescue, the attempt is often unsuccessful. Right whales do not respond well to disentanglement attempts; they “react very aggressively, thrashing their huge tails and frequently towing any boat at the end of the attachment for miles.”<sup>63</sup> They are especially strong and “difficult to control,” making any rescue without sedation nearly impossible and incredibly dangerous.<sup>64</sup>

The first “structured whale disentanglement program[]” was developed in the 1970s by Jon Lien at Memorial University in

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56. *Id.* at 27.

57. *Id.*

58. CLAPHAM, *supra* note 2, at 61.

59. *Id.* at 61-62.

60. *Id.* at 62.

61. *Id.*

62. Johnson et al., *supra* note 27; *see also* Knowlton et al., *supra* note 27.

63. CLAPHAM, *supra* note 2, at 63.

64. Johnson et al., *supra* note 27, at 390; *see also* Knowlton et al., *supra* note 27.

Newfoundland, Canada. Most of Lien's efforts involved humpback whales, but after an attempt to disentangle a right whale, he described the whale as hard to deal with "because of its determination to prevent the approach of rescuers."<sup>65</sup> Today, any disentanglement effort is performed by "a network of people" up and down the east coast of the United States and Canada who are trained to assist with rescues; they are overseen by either NOAA Fisheries or Fisheries and Oceans Canada.<sup>66</sup> These efforts involve the use of techniques developed by the Provincetown Center for Coastal Studies on Cape Cod.<sup>67</sup>

North Atlantic right whales are particularly vulnerable to fishing gear entanglements because their territory is off the New England Coast, where local economies rely heavily on fishing.<sup>68</sup> Ironically, however, most New England lobstermen will never see a right whale, much less see one entangled in his gear.<sup>69</sup> This is because whales become entangled in lobster traps after the fisherman has already dropped the gear and left. If a whale becomes entangled, they often drag the gear for miles, and when the lobsterman returns to check the gear, it and the injured or deceased whale is long gone. Herein lies the root of the conflict between the North Atlantic right whale and the fisherman: how does a fisherman prevent what he does not witness?<sup>70</sup> Moreover, how can we regulate the entire fishing industry, in hopes of eliminating something that fishermen hardly ever see? But, with the North Atlantic right whale "on the brink of extinction[,]” how can we not?<sup>71</sup>

Fixed fishing gear is "stationary gear that is 'set' or lowered to the ocean floor by fishermen, left unattended for a period of time (ranging from hours to days), and then hauled to retrieve the catch."<sup>72</sup> In the waters off the coast of New England, pots, also known as traps, and gillnets are the most commonly used types of fixed gear.<sup>73</sup> Pots, which target crustaceans, are the gear typically used by lobstermen and consist of a buoy line (or end line), groundline, float line, and other surface lines.<sup>74</sup> A buoy line is the "vertical rope that connects the gear on the ocean floor to

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65. *Id.*

66. *Id.*

67. *Id.* at 391.

68. *Id.* at 382.

69. *Id.* at 391.

70. *Id.*

71. *Id.*

72. *Id.*

73. *Id.*

74. *Id.* at 389.

the buoys and/or high flyers at the surface.”<sup>75</sup> Buoys and high flyers are used by lobstermen “to mark the location of their gear” and to “reduce gear conflicts” by alerting other fishermen to the location of the gear.<sup>76</sup> The traps are connected together by a groundline.<sup>77</sup>

A 2005 study of fishing gear involved in whale entanglements discovered that “all parts of fixed fishing gear create entanglement risk” for right whales.<sup>78</sup> Although some parts of the pot gear system were “recovered and identified” more often than others, “comparing the relative risks associated with each gear part is not possible” because we do not have data showing how many and what kind of gear are currently being fished.<sup>79</sup> An additional barrier is the difficulty of identifying a piece of rope after it is entangled with a whale.<sup>80</sup> In other words, it is nearly impossible to assess an entanglement without knowledge of where the whale initially came into contact with the gear and how the whale reacted to the encounter.<sup>81</sup> That being said, when gear type *was* identifiable during the study, seventy-one percent of right whale entanglements were in pot gear and eighty percent of those were lobster pots.<sup>82</sup>

Another issue contributing to the extinction of the North Atlantic right whale is vessel strikes, which account for nearly half of all right whale deaths.<sup>83</sup> According to Conservation Law Foundation, “[v]essel strikes are avoidable, [and] failing to prevent them is a travesty[:]”

Imagine that it's 2008. You visit the dentist to put a stop to excruciating pain in your mouth. Your dentist finds multiple cavities, sores, and other problems. Yet, you get no treatment plan. Over the years, you continue to visit the dentist, only to get temporary fixes that do nothing to stop the pain. Now, for the last year, you have been writhing in agony. Desperate for a solution, you reach out to your dentist one more time. What do you get? Pages and pages of x-rays, a long report explaining that's wrong with your tooth (which you already knew), and a big fat bill. What don't you get? A plan of action to finally fix your problem. Sadly,

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75. *Id.*

76. *Id.*

77. *Id.*

78. *Id.*; see also A. J. Johnson et al. *Fishing Gear Involved in Entanglements of Right and Humpback Whales*, 21 MARINE MAMMAL SCI. 635, 635-645 (2005).

79. *Id.* at 389.

80. *Id.*

81. *Id.*

82. *Id.*

83. Adilson González Morales, *Enough Analysis. It's Time for Action to Protect Right Whales from Vessel Strikes*, CONSERVATION L. FOUND. (Apr. 1, 2021).

critically endangered North Atlantic right whales face a situation just as frustrating – one that threatens their very existence. Regulators have known for more than 20 years that vessel strikes kill right whales at an alarming rate. But to date, they haven’t put forward a real solution.<sup>84</sup>

Since the beginning of 2020, at least three right whale calves have been hit and killed.<sup>85</sup> Lobster boats necessarily contribute to this growing problem.<sup>86</sup>

#### *D. Entanglement Risk Reduction Efforts*

NOAA Fisheries established the Atlantic Large Whale Take Reduction Team (Take Reduction Team) in 1996, in response to negative interactions between the endangered North Atlantic right whale and the commercial fishing industry.<sup>87</sup> The Take Reduction Team is responsible for providing recommendations to NOAA Fisheries for drafting and developing a take reduction plan and is made up of “fishermen, conservationists, scientists, and federal and state resource managers.”<sup>88</sup> In 1997, the Atlantic Large Whale Take Reduction Plan (Take Reduction Plan) was created as a blueprint for reducing the number of large whale entanglements from fixed fishing gear.<sup>89</sup> The Take Reduction Plan involves “time and area closures, gear modifications, outreach, disentanglement, and research[,]” but the modification of fishing gear “is the most widely supported approach” because “whale safe gear modifications,” if successfully implemented, would be a win for the whales and the fishing industry.<sup>90</sup>

In the 1990s, NOAA Fisheries put together a group of whale researchers and fishermen, forming the Gear Advisory Group, with the goal of brainstorming potential gear modifications.<sup>91</sup> They were able to compile industry information regarding what gear was being used and how

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84. *Id.*

85. *Id.*

86. Francis Campbell, *Cargo Ships to Lobster Boats a Lethal Threat to Right Whales, Study Shows*, SALTWIRE (Nov. 25, 2020), <https://www.saltwire.com/atlantic-canada/news/local/vessels-from-cargo-ships-to-lobster-boats-threat-to-kill-right-whales-study-shows-524397/> [https://perma.cc/NS7E-SYT9].

87. Johnson et al., *supra* note 27, at 395-96.

88. *Id.* at 396.

89. *Id.*

90. *Id.*

91. *Id.* at 396.

it was being used.<sup>92</sup> Further, they were able to “identify potential gear modifications or changes to fishing practices that might benefit the whales” and allow fishermen to fish.<sup>93</sup> Together, the community of whale researchers and the fishing industry were able to identify key modifications, such as the “use of weak links placed at buoys (i.e. a breakable component of gear that will part when subject to a certain tension load),” which can prevent entanglements involving a whale’s mouth.<sup>94</sup> “Bottom-release devices . . . visual and audible deterrents, biodegradable materials, [and] lipid-soluble materials” were also considered by the group.<sup>95</sup>

Today, the Take Reduction Plan is made up of “a suite of management efforts[,]” which includes strategies to reduce or eliminate any and all “interactions between whales and fixed fishing gear.”<sup>96</sup> These strategies include “temporal and spatial measures” and modifications of gear, such as the prohibition of “floating line as groundline.”<sup>97</sup> It is clear, however, that, although it is hard to determine just how successful these measures have been, “they have not been successful at eliminating right whale entanglements.”<sup>98</sup>

## II. RIGHT WHALES AND THE MAINE LOBSTER INDUSTRY

Maine lobstermen are responsible for over eighty percent of American lobster landings in the U.S. every year, making the Maine lobster industry a significant contributor to the economies of Maine and New England.<sup>99</sup> The Gulf of Maine lobster fishery is open for business year-round.<sup>100</sup> However, the majority of landings occur between July and November, when lobsters emerge from their shelters to feed after molting.<sup>101</sup> The lobstermen who remain active through the winter “concentrate their traps” in deeper waters beginning in the fall, as offshore waters are “more consistently warm,” and return to shallower waters in late spring.<sup>102</sup>

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92. *Id.*

93. *Id.*

94. *Id.*

95. *Id.*

96. *Id.*

97. *Id.*

98. *Id.*

99. PATRICE MCCARRON & HEATHER TETREAU, LOBSTER POT GEAR CONFIGURATIONS IN THE GULF OF MAINE 1 (2012), [https://www.bycatch.org/sites/default/files/Lobster\\_Gear\\_Report\\_0.pdf](https://www.bycatch.org/sites/default/files/Lobster_Gear_Report_0.pdf) [<https://perma.cc/EDQ3-TAPX>].

100. *Id.* at 4.

101. *Id.*

102. *Id.*

The Gulf of Maine fleet is “composed mainly of small vessels averaging [thirty-two] feet in length” and typically stay within three miles from shore, though lobstermen with federal permits fish up to twelve miles off the coast.<sup>103</sup> When in waters regulated by the Take Reduction Plan, Maine lobstermen must “fish a 600-pound breakaway on all floatation devices.”<sup>104</sup> This is so that, when encountered by a whale, the gear will “break[] free” and allow the whale to swim away from the pot.<sup>105</sup> When fishing offshore, lobstermen must employ a “1,500-pound breakaway.”<sup>106</sup> They are further required, under the Take Reduction Plan, to mark buoy lines with a “red tracer” in shallower waters and a “black tracer” in offshore waters, “configure the buoy line so that no rope lays at the ocean surface[,]” maintain ropes to keep them “knot-free[,]” and “haul gear” once a month.<sup>107</sup>

Maine lobstermen are genuinely interested in “advancing the environmental sustainability” of their trade and employ fishing techniques “intended to maintain continued availability of their target catch,” including “immediately returning to the sea any short, over-size and egg-bearing lobsters hauled up in their traps.”<sup>108</sup> Their gear, however, is known to entangle large marine species, including the North Atlantic right whale. Although New England lobstermen are restricted from fishing in certain areas under the Take Reduction Plan, “[a]n exemption line exists along the near-shore Maine coast, inside of which some rules under the plan do not apply.”<sup>109</sup>

North Atlantic right whales travel through the Gulf of Maine on their way from Massachusetts to Canada and back.<sup>110</sup> Some of the whales hug the coast, which means they swim through all of the gear set by Maine lobstermen.<sup>111</sup>

Right whale sightings off the coast of Maine are relatively rare, and there are no long-term surveys collecting such data.<sup>112</sup> There have been some sightings, however, and NOAA Fisheries reports that the right whale

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103. *Id.*

104. *Id.* at 5.

105. *Id.*

106. *Id.*

107. *Id.*

108. *Id.* at 4.

109. *Id.*

110. *Right Whales and Entanglements: More on How NOAA Makes Decisions*, NOAA FISHERIES, <https://www.fisheries.noaa.gov/new-england-mid-atlantic/marine-mammal-protection/right-whales-and-entanglements-more-how-noaa> [<https://perma.cc/DSW7-LK7U>] (last visited Nov. 7, 2021).

111. *Id.*

112. *Id.*

activity in the Gulf of Maine “is likely underestimated.”<sup>113</sup> Further, due to the warming of waters from climate change, the distribution of right whale prey is being affected, leading researchers to believe that “the Western Gulf of Maine may become a more important foraging habitat for right whales in the future.”<sup>114</sup>

There are currently efforts underway to collect data on North Atlantic right whales in the Gulf of Maine.<sup>115</sup> One project “will deploy fixed archival-acoustic recorders mounted on the ocean bottom for a specific period of time. The other will use autonomous underwater vehicles called gliders, equipped to record acoustic information and report it back in near real-time.”<sup>116</sup> Because right whales spend most of their time below the surface of the water, they are difficult for researchers to spot from boats and planes.<sup>117</sup> However, strategically-placed underwater microphones can detect whale communications and send that data to researchers in real time.<sup>118</sup> This is known as “passive acoustic monitoring,” and it “offers scientists another tool for learning about whale behavior and migration patterns.”<sup>119</sup> Acoustic recorders were placed at eight different locations along the Maine coast in January of 2020.<sup>120</sup>

### III. RIGHT WHALES UNDER THE LAW

#### A. *The Endangered Species Act*

The ESA is part of the “law of biodiversity,” which is the “law of wild, non-human living things.”<sup>121</sup> It is a “broad statutory scheme designed to protect endangered and threatened species and conserve the habitats upon which they depend.”<sup>122</sup> Considered “the most comprehensive legislation for the preservation of endangered species ever enacted by any nation,”

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113. *Id.*; *North Atlantic Right Whale Sightings*, NOAA FISHERIES, <https://www.fisheries.noaa.gov/resource/map/north-atlantic-right-whale-sightings> [<https://perma.cc/9ZTP-73VC>].

114. NOAA FISHERIES, *supra* note 114.

115. *Listening for Right Whales in the Gulf of Maine*, NOAA FISHERIES (Feb. 13, 2020), <https://www.fisheries.noaa.gov/feature-story/listening-right-whales-gulf-maine> [<https://perma.cc/E9YS-GK7T>].

116. *Id.*

117. *Id.*

118. *Id.*

119. *Id.*

120. *Id.*

121. TODD AAGAARD ET AL., *PRACTICING ENVIRONMENTAL LAW* 729 (Robert C. Clark et al. eds., 1st ed. 2017).

122. HUMANESOCY OF THE U.S., *supra* note 12.

the ESA embodies the “plain intent” of Congress to “halt and reverse the trend toward species extinction, whatever the cost.”<sup>123</sup> Accordingly, the ESA states that “all Federal departments and agencies shall seek to conserve endangered species and threatened species and shall utilize their authorities in furtherance of the purposes [of the ESA].”<sup>124</sup> Further, federal agencies, such as NOAA, should “utilize their authorities in furtherance of the purposes of this chapter by carrying out programs for the conservation of endangered species and threatened species.”<sup>125</sup> To conserve means to “use . . . all [of the] methods and procedures which are necessary to bring any endangered species or threatened species to the point at which the measures provided pursuant to this chapter are no longer necessary.”<sup>126</sup>

For the first one hundred years of United States history, “the federal government did very little to protect wildlife” and, instead, left it up to the states.<sup>127</sup> However, in the late 1800s, the U.S. government “began enacting legislation designed to protect specific kinds of wildlife, like the Migratory Bird Treaty Act, or to restrain trade in wildlife, like the Lacey Act.”<sup>128</sup> Bigger protections for endangered species did not come about until the 1960s, and they “lacked strong regulatory teeth” and mostly “relied on voluntary action.”<sup>129</sup> In the early 1970s, the Nixon Administration “perceived a need for stronger regulatory authority” and the ESA was put before Congress.<sup>130</sup> In *Congress and Charismatic Megafauna: A Legislative History of the Endangered Species Act*, the author explains that, “though members of Congress wanted to strengthen protections, very few members seem to have realized just how strong a law they were enacting[.]”<sup>131</sup>

Congress debated little over the various provisions of these bills. Moreover, the few congressional concerns centered . . . on issues relatively inconsequential to later developments. The most significant topic debated was the potential preemption of traditional state authority to manage wildlife . . . . These concerns,

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123. HUMANE SOCIETY OF THE U.S., *supra* note 12 (quoting *Tenn. Valley Auth. v. Hill*, 437 U.S. 153, 180, 184 (1978)).

124. 16 U.S.C. § 1531(c)(1) (2018).

125. *Id.* § 1536(a)(1).

126. *Id.* § 1532(3).

127. AAGAARD ET AL., *supra* note 122, at 734; see generally Shannon Peterson, *Congress and Charismatic Megafauna: A Legislative History of the Endangered Species Act*, 29 ENV'T. L. 463 (1999).

128. AAGAARD ET AL., *supra* note 121, at 734.

129. *Id.*

130. *Id.*

131. *Id.*

however, were minor, and congressional support for the bills soon became widespread and enthusiastic. In the Senate especially, debate over the ESA was almost nonexistent . . . [N]o significant special interest group came forward to oppose the ESA . . . The only opposition came from a few groups representing state fish and game agencies, which worried about the preemption of state authority, and from the fur industry.<sup>132</sup>

As a result, Congress passed the ESA, which the “Supreme Court would later describe as ‘the most comprehensive legislation for the preservation of endangered species ever enacted by any nation.’”<sup>133</sup> Five years later, in *Tennessee Valley Authority v. Hill*, “a case famously viewed as pitting a two-inch fish against the mighty TVA,” the Supreme Court made “starkly clear” the power of the ESA.<sup>134</sup> Congress subsequently passed amendments to the ESA, which “allow exceptions to some of the act’s primary mandates and allow some harms to species” but do so “only in very limited circumstances.”<sup>135</sup> Finally, in 1982, Congress again amended the statute in a way that “involved trading regulatory flexibility in some areas for heightened conservation in others.”<sup>136</sup> Over the past thirty years, any significant changes to the implementation of the ESA were made through administrative regulation.<sup>137</sup>

Two of the primary purposes of the ESA are “to provide a program for the conservation of . . . endangered species . . . and to take such steps as may be appropriate to achieve the purposes [of a series of treaties that commit the United States to protecting biodiversity].”<sup>138</sup> The ESA gives “primary implementing authority” to the United States Fish and Wildlife Service (FWS) and NOAA Fisheries.<sup>139</sup> However, every federal agency is responsible for contributing to the species conservation.

In order to be protected under the ESA, a species “must be listed as threatened or endangered” by the U.S. Environmental Protection Agency (EPA).<sup>140</sup> Section four “specifies substantive criteria for judging whether species qualify for listing” and “provides public petition rights and creates

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132. Peterson, *supra* note 127.

133. AAGAARD ET AL., *supra* note 121, at 736 (quoting *Tenn. Valley Auth. v. Hill*, 437 U.S. 153 at 180, 184 (1978)).

134. *Id.*

135. *Id.*

136. *Id.*

137. *Id.*

138. *Id.* at 737 (quoting 16 U.S.C. § 1531(b)).

139. *Id.* The National Marine Fisheries Service (NMFS) is referred to earlier in the paper as NOAA Fisheries; NMFS and NOAA are interchangeable for the purposes of this paper.

140. *Id.*

deadlines for agency action.”<sup>141</sup> This “allows non-governmental entities to initiate the listing process and to accelerate its completion.”<sup>142</sup> Section seven of the ESA “requires federal agencies to take affirmative steps to ‘conserve’ listed species [and] limits those agencies’ ability to harm species.”<sup>143</sup> Section nine “forbids ‘takes’” of endangered species, a “prohibition [which] extended to anyone, not just federal agencies.”<sup>144</sup> However, sections seven and ten “provide exceptions to section [nine’s] general prohibition on takes.”<sup>145</sup> Section seven “allows federal agencies that complete a consultation process and implement ‘reasonable and prudent measures’ . . . to obtain ‘incidental take authorization.’”<sup>146</sup> Section ten permits “regulated entities to obtain ‘incidental take permits,’ [if they] prepare and implement, and FWS or NMFS approves . . . a ‘habitat conservation plan.’”<sup>147</sup>

Under Section 7(a)(2) of the ESA, “[e]ach federal agency [must] . . . ensure that any action authorized, funded, or carried out by such agency . . . is not likely to jeopardize the continued existence of any endangered species.”<sup>148</sup> Federal agencies are to “review its actions at the earliest possible time to determine whether any action may affect listed species.”<sup>149</sup> If the agency determines that its actions may indeed affect a listed species, “formal consultation is required, except . . . if . . . the Federal agency determines . . . that the proposed action is not likely to adversely affect any listed species.”<sup>150</sup> In that case, the agency has the option to issue a “written concurrence” explaining its determination and ending the agency’s consultation responsibilities under the ESA for that action.<sup>151</sup> The process of a formal consultation is a “biological opinion” produced by the agency, which relays the agency’s conclusion as to “whether the action is likely to jeopardize the continued existence of a listed species,” commonly known as a “no jeopardy” opinion.<sup>152</sup> If, on the other hand, a “jeopardy” disposition is appropriate, the opinion “must

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141. *Id.*

142. *Id.*

143. *Id.* at 737-38.

144. *Id.*

145. *Id.*

146. *Id.*

147. *Id.*

148. 16 U.S.C. § 1536(a)(2) (2018).

149. 50 C.F.R. § 402.14(a) (2003).

150. *Id.* at § 402.14(a)-(b).

151. 50 C.F.R. § 402.13 (2003).

152. *Id.* at § 402.14(h)(1)(iv)(A)-(B).

either set out ‘reasonable and prudent alternatives’ to the agency action” or “indicate [that] there are no reasonable and prudent alternatives.”<sup>153</sup>

Finally, the ESA “contains a citizen suit provision ‘of remarkable breadth,’” which allows “any person . . . to enjoin any person, including the United States and any other governmental instrumentality or agency[,] . . . who is alleged to be in violation of any provision of [the ESA] or regulation issued under the authority thereof.”<sup>154</sup>

### *B. The Marine Mammal Protection Act*

The MMPA was enacted by Congress in 1972, “in acknowledgement of the ‘great international significance’ of marine mammals and its finding ‘that they should be protected and encouraged to develop to the greatest extent feasible.’”<sup>155</sup> Congress saw a need to protect marine mammals from the actions of humankind and created the MMPA to ensure that the populations of these vulnerable creatures are kept “at or above their ‘optimum sustainable population.’”<sup>156</sup> The MMPA does so by “generally prohibit[ing] any individual from ‘taking’ a marine mammal.”<sup>157</sup> Similar to the ESA, the MMPA defines “take” as harassing, hunting, capturing, or killing, or attempting to harass, hunt, capture, or kill a marine mammal.<sup>158</sup>

However, like with the ESA, there are exceptions.<sup>159</sup> Relevant here is the exception that “allows incidental takings by certain commercial fishing operations should they be approved by NMFS in compliance with the MMPA and its regulations.”<sup>160</sup> Incidental takings by commercial fisheries must be allowed if NMFS concludes that, “after notice and opportunity for public comment, . . . the incidental mortality and serious injury from the commercial fisheries will have a negligible impact on such species or stock.”<sup>161</sup>

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153. *Conservation L. Found. v. Ross*, 422 F.Supp.3d 12, 17 (D.D.C. 2019) (quoting 50 C.F.R. § 402.14(h)(3)).

154. *Ctr. For Biological Diversity v. Ross*, 2020 U.S. Dist. LEXIS 62550, \*3 (quoting *Bennett v. Spear*, 520 U.S. 154, 164 (1997); 16 U.S.C. § 1540(g)(1)(A)) (2018).

155. 2020 U.S. Dist. LEXIS 62550 at \*9 (quoting 16 U.S.C. § 1361(6)).

156. *Id.* (quoting 16 U.S.C. § 1361(2)).

157. *Winter v. NRDC*, 555 U.S. 7, 15, 129 S. Ct. 365, 172 L. Ed. 2d 249 (2008) (quoting 16 U.S.C. § 1372(a)).

158. 16 U.S.C. § 1362(13) (2018); 2020 U.S. Dist. LEXIS 62550 at \*9; *see also* 50 C.F.R. § 216.3 (“[T]he restraint or detention of a marine mammal, no matter how temporary,” and “the doing of any other negligent or intentional act which results in disturbing or molesting a marine mammal” are considered a take under the MMPA.).

159. 2020 U.S. Dist. LEXIS 62550 at \*9.

160. *Id.* at \*9 - \*10.

161. 16 U.S.C. § 1371(a)(5)(E)(i) (2018).

Although the ESA and MMPA are both designed to protect vulnerable species, the MMPA is meant to “maintain the health and stability of the marine ecosystem.”<sup>162</sup> Additionally, the MMPA mandates that marine mammals and “population stocks should not be permitted to diminish beyond the point at which they cease to be a significant functioning element in the ecosystem of which they are part.”<sup>163</sup> Thus, unlike the ESA, Congress’s intentions for the MMPA were to prevent “harms to overall marine mammal populations and harm to the marine ecosystems of which they are a part.”<sup>164</sup>

### C. Current State of the Controversy<sup>165</sup>

On April 9, 2020, in *Center for Biological Diversity v. Ross*, the United States District Court for the District of Columbia ruled that a 2014 biological opinion by NOAA Fisheries is “illegal under the Endangered Species Act.”<sup>166</sup> The biological opinion concluded that “despite its potential to harm the species in unsustainable numbers, the American lobster fishery would not jeopardize the continued existence of the North Atlantic right whale.”<sup>167</sup> However, NOAA Fisheries neglected to include an incidental take statement, which is required by both the ESA and the MMPA, arguing “that because the ESA and MMPA overlap, an [incidental take statement] was not required.”<sup>168</sup> The court decided that the “failure” by NOAA Fisheries to include an incidental take statement, “after finding that the American lobster fishery had the potential to harm the North Atlantic right whale at more than three times the sustainable rate[,] is about as straightforward a violation of the ESA as they come.”<sup>169</sup>

On April 30, 2020, the United States District Court for the District of Massachusetts responded to a motion for preliminary injunction, which sought to enjoin the Massachusetts Executive Office of Energy and Environmental Affairs and the Director of the Massachusetts Division of Marine Fisheries “from licensing the use of vertical buoy ropes . . . in

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162. 16 U.S.C. § 1361(6) (2018).

163. 16 U.S.C. § 1361(2) (2000).

164. Avalyn Taylor, *Rethinking the Irreparable Harm Factor in Wildlife Mortality Cases*, 2 J. ANIMAL L. & POL’Y. 113, 137 (2009).

165. This issue is still being litigated.

166. 2020 U.S. Dist. LEXIS 62550 at \*3.

167. *Id.* at \*9, \*2.

168. *Id.* at \*9, \*2; Jerry Fraser, *Lobstering Laws: Will the Whales Win?*, ME. LOBSTERMEN’S CMTY. ALLIANCE (May 7, 2020), <https://mlcalliance.org/2020/05/07/lobstering-laws-will-the-whales-win/> [<https://perma.cc/MD7F-TDX7>].

169. *Id.*

Massachusetts coastal waters and requiring them to immediately apply for an Incidental Take Permit pursuant to Section 10 of the [ESA].”<sup>170</sup> The court held that conservationist “[p]laintiff is likely to be able to establish that Massachusetts . . . ‘ha[s] harmed and will continue to harm’ the North Atlantic right whale through the use of vertical buoy ropes and ordered the state to ‘promptly seek an Incidental Take Permit.’”<sup>171</sup> The court found, however, that “an immediate injunction would not be equitable under the facts” because it would not be “consistent with the framework of the” ESA.<sup>172</sup> The court ordered that the motion for a preliminary injunction may be renewed if the state “ha[s] not obtained an Incidental Take Permit within ninety . . . days.”<sup>173</sup>

On November 16, 2020, another federal district court ordered a temporary stay in a Maine case about the authorization of the use of vertical lines in state and federal lobster fisheries, pending the outcome of *Center for Biological Diversity v. Ross*.<sup>174</sup> The court wrote that “[a]ny injunctive relief and/or further administrative action that arises as a result of the *Ross* litigation will have implications for the Maine lobster fishery,” concluding that nothing would be “gained through this action in the meantime.”<sup>175</sup> According to Maine lobstermen, lobstering is not “truly a threat to the right whale’s survival[,]” and “there is no evidence of right whale mortality as a result of interactions with lobster gear.”<sup>176</sup> Although they concede that the presence of North Atlantic right whales is increasing in Massachusetts waters, it is the position of the Maine lobster fishery that “Maine whales and lobster gear seldom share the same waters.”<sup>177</sup> However, it is known that the “millions of vertical buoy lines used in the Gulf of Maine have been the leading cause of death” of North Atlantic right whales in the past ten years.<sup>178</sup>

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170. *Strahan v. Mass. Exec. Off. Energy and Env’t Affairs*, 458 F.Supp.3d 76, 78 (D. Mass. 2020).

171. *Id.* at 78-79, 95.

172. *Id.* at 94-95.

173. *Id.*

174. Mary Anne Mason, *Maine Right Whale Court Case on Hold Until May*, ME. LOBSTERMEN’S CMTY. ALLIANCE (Nov. 25, 2020), <https://mlcalliance.org/2020/11/25/main-right-whale-court-case-on-hold-until-may/> [<https://perma.cc/C7RE-EEUW>]; Order Denying 130 Motion to Dismiss re *Man Against Xtinction v. Commissioner of Me. Dept. of Marine Resources*; see also *Man Against Xtinction v. Commissioner of Me. Dept. of Marine Resources*, 478 F.Supp.3d 67, 69 (D. Me. 2020).

175. Order Denying 130 Motion to Dismiss re *Man Against Xtinction v. Commissioner of Me. Dept. of Marine Resources*.

176. Fraser, *supra* note 168.

177. *Id.*

178. Abel, *supra* note 27.

In December 2020, as mandated by the court in *Center for Biological Diversity v. Ross*, the federal government published proposed new regulations for the East Coast lobster fishery, in an attempt to reduce entanglement risk for North Atlantic right whales.<sup>179</sup> NOAA Fisheries proposed the closing of federal waters, including a “967-square-mile swath of ocean about 30 miles off [Maine’s] coast” for four months every winter, under the MMPA.<sup>180</sup> Additionally, the government sought requirements that lobstermen use “breakaway links to rope lines” and it proposed to allow the use of ropeless fishing gear in closed areas, as such gear is not harmful to whales.<sup>181</sup> In a seventy-seven-page document, the federal government predicted that the economic impacts for lobstermen will be about \$15.4 million in the first twelve months and up to \$12.3 million every year after that, “due to the cost of gear changes and reduced catch.”<sup>182</sup>

In September 2021, NMFS issued a final rule,<sup>183</sup> which “amend[s] the Atlantic Large Whale Take Reduction Plan to reduce the risk of serious injury and mortality to North Atlantic right whales caused by entanglement.”<sup>184</sup> The rule essentially bans the use of buoy lines in a 1,000 mile area off the coast of Maine from October to January every year.<sup>185</sup> According to NMFS, “the rule will reduce the whales’ risk of serious injury and death from entanglement in buoy lines by [sixty-nine] percent.”<sup>186</sup> Erica Fuller, a senior attorney at Conservation Law Foundation, criticized, “[w]hile this rule is a step in the right direction, it

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179. Fred Bever, *New Proposed Lobstering Rules Call for Seasonal Closures, Gear Tweaks to Reduce Right Whale Deaths*, ME. PUBLIC RADIO (Dec. 30, 2020), <https://www.mainepublic.org/post/new-proposed-lobstering-rules-call-seasonal-closures-gear-tweaks-reduce-right-whale-deaths> [<https://perma.cc/UU5V-TF34>].

180. *Id.*

181. *Id.*

182. *Id.*

183. *Final Rule to Amend the Atlantic Large Whale Take Reduction Plan to Reduce Risk of Serious Injury and Mortality to North Atlantic Right Whales Caused by Entanglement in Northeast Crab and Lobster Trap/Pot Fisheries*, NOAA FISHERIES, <https://www.fisheries.noaa.gov/action/final-rule-amend-atlantic-large-whale-take-reduction-plan-reduce-risk-serious-injury-and> [<https://perma.cc/F2UC-HDPJ>].

184. Kirsten Williams, *Can Litigation Help Save the North Atlantic Right Whale From Extinction?*, JURIST (Jan. 6, 2022), <https://www.jurist.org/features/2022/01/06/can-litigation-help-save-the-north-atlantic-right-whale-from-extinction/> [<https://perma.cc/Y2GP-DAN9>].

185. *Id.*

186. *Id.*

does not go far enough or fast enough to stop the precipitous decline of this species[.]”<sup>187</sup>

In response, the Maine Lobstermen’s Association “asked [] the US District Court for the District of Maine to postpone the enforcement of the new rule until the court could . . . determine the lawfulness of the new rule.”<sup>188</sup> The court agreed and NMFS complied.<sup>189</sup> After a timely appeal by the government, the First Circuit Court of Appeals pulled the lower court’s injunction, finding that the injunction would “likely cause irreparable harm in the form of preventing a federal agency from undertaking its congressionally assigned task of assuring the right whales are protected from a critical risk of death.”<sup>190</sup>

#### IV. LICENSING AND USE OF VERTICAL BUOY LINES VIOLATES FEDERAL LAW<sup>191</sup>

Under the Endangered Species Act, federal regulators are required to examine how the commercial fishing activities they permit and manage affect right whales, as well as any solutions that could reduce threats to them. This analysis is the first key step in reducing the harm inflicted upon endangered right whales. Federal regulators must act now to ensure that right whales have a chance to recover. This means that they must reevaluate activities that threaten right whales, including commercial fishing, in light of the best available science and information, and identify solutions to prevent this species from going extinct.<sup>192</sup>

A take under Section 9 of the ESA is broadly defined to include the harassment, harm, pursuit, hunting, shooting, wounding, killing, trapping,

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187. *NOAA Issues New Right Whale Protection Rule*, CONSERVATION L. FOUNDATION (Aug. 31, 2021), <https://www.clf.org/newsroom/noaa-issues-new-right-whale-protection-rule/> [<https://perma.cc/9433-HHNT>].

188. Williams, *supra* note 184.

189. *Id.*

190. Dist. 4 Lodge of the Int’l Ass’n of Machinists & Aerospace Workers Local Lodge 207 v. Raimondo, Nos. 21-1873 & 21-1874, 2021 U.S. App. LEXIS 34035, at \*26 (1st Cir. Nov. 16, 2021).

191. Although this section only includes an analysis of a take under the ESA, the same analysis applies to a take under the MMPA.

192. Megan Herzog, *All Hands on Deck to Save the Endangered North Atlantic Right Whale*, CONSERVATION L. FOUND. (Nov. 29, 2017), <https://www.clf.org/blog/all-hands-on-deck-save-endangered-north-atlantic-right-whale/> [<https://perma.cc/K2PT-8N2S>].

capturing, or collecting of a listed species.<sup>193</sup> However, as previously mentioned, the prohibition of takes is not absolute.<sup>194</sup> Section 10 “contains a relief valve in the form of Incidental Take Permits,” which allows takes so long as the take was “incidental to, and not the purpose of, the carrying out of an otherwise lawful activity.”<sup>195</sup> When applying for an Incidental Take Permit, “the applicant must submit a conservation plan that specifies, *inter alia*, the impact from the proposed take and the steps being taken to minimize and mitigate those impacts.”<sup>196</sup> NOAA Fisheries may issue a permit if the applicant has shown that he “will, to the maximum extent practicable, minimize and mitigate the impacts of such taking” and that “the taking will not appreciably reduce the likelihood of survival and recovery of the species in the wild.”<sup>197</sup>

Because the vertical buoy lines used by Maine lobstermen harm and kill the critically endangered North Atlantic right whale, their use constitutes a taking under the ESA and requires an Incidental Take Permit.<sup>198</sup> According to the First Circuit, “governmental actors could be found liable under the [ESA] where ‘the state has licensed commercial fishing operations to use . . . lobster pots in specifically the manner that is likely to result in a violation of federal law.’”<sup>199</sup> The fact that the state of Maine is simply the entity who licenses lobstermen to use the gear “does not preclude liability” under the ESA.<sup>200</sup> Absent an Incidental Take Permit or other exemption, any take of the North Atlantic right whale violates Section 9 of the Endangered Species Act. Because the state of Maine has not obtained an Incidental Take Permit but continues to dole out licenses to Maine lobstermen for the use of lobster gear that has been shown to critically injure and kill a federally endangered species, these actions by the state of Maine are in direct violation of Section 9 of the ESA.

Accordingly, like the District of Massachusetts, the District of Maine should hold that the use of vertical buoy ropes constitutes a take under the ESA. The State of Maine has harmed and will continue to harm the North Atlantic right whale by allowing the use of vertical buoy ropes by lobstermen. Thus, the State of Maine should be required to immediately

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193. 16 U.S.C. §§ 1532(19) (2018); *see also* Strahan v. Coxe, 127 F.3d 155, 162 (1st Cir. 1997) (“‘Take’ is defined . . . in the broadest manner to include any conceivable way in which a person can ‘take’ or attempt to ‘take’ any fish or wildlife.”).

194. Strahan v. Mass. Exec. Off. Energy and Env’t Affs., 458 F.Supp.3d at 80.

195. *Id.*; 16 U.S.C. § 1539(a)(1)(B) (2018).

196. Strahan v. Mass. Exec. Off. Energy and Env’t Affs., 458 F.Supp.3d at 80.

197. 16 U.S.C. § 1539(a)(2)(B) (2018); *see also* 50 C.F.R. § 222.307 (2003).

198. Strahan v. Mass. Exec. Off. Energy and Env’t Affs., 458 F.Supp.3d at 86-87.

199. *Id.* at 79-80 (D. Mass. 2020) (*quoting* Strahan v. Coxe, 127 F.3d at 164).

200. *Id.* at 89.

seek an Incidental Take Permit. Further, in alignment with the District of Massachusetts, the District of Maine should reconsider a motion for preliminary injunction if an Incidental Take Statement is not acquired within ninety days. In the United States, “courts are also often called upon to ‘play God’ in deciding whether to enjoin actions that would cause the mortality of wildlife.”<sup>201</sup> In deciding whether to grant a preliminary injunction, a court weighs four factors:

(1) the likelihood that the moving party will succeed on the merits of the lawsuit; (2) the likelihood that a failure to issue a preliminary injunction will cause irreparable harm to the plaintiff’s interests; (3) the balance of hardships of issuing an injunction on both parties; and (4) the effect that granting the injunction will have on the public interest.<sup>202</sup>

Although “the plaintiff must establish that the failure to issue an injunction would result in the likelihood of irreparable harm to its interests[.]”<sup>203</sup> courts have held that, “by enacting the ESA, Congress has already determined that the balance of hardships and the public interest tips heavily in favor of protected species.”<sup>204</sup> A preliminary injunction is warranted to protect this critically endangered species.

## V. SOLUTION

### A. *Ropeless Lobster Fishing Systems*

According to Conservation Law Foundation, “[r]opeless fishing is the only solution that protects whales and fishermen.”<sup>205</sup> According to The Pew Charitable Trusts, an independent nonprofit working to advance the effort to implement ropeless fishing systems in lobster fisheries, policymakers in the United States and Canada “should close areas where there’s a high risk for right whale entanglement to fixed-line gear—but

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201. Avalyn Taylor, *Rethinking the Irreparable Harm Factor in Wildlife Mortality Cases*, 2 J. ANIMAL L. & POL’Y. 113, 114 (2009).

202. *Id.* at 115; *see, e.g.*, Winter v. Nat. Res. Def. Council, 129 S.Ct. 365, 374 (2008).

203. Taylor, *supra* note 201, at 115; *see, e.g.*, Winter v. Nat. Res. Def. Council, 129 S.Ct. at 374.

204. Water Keeper Alliance v. U.S. Dept. of Def., 271 F.3d 21, 34 (1st Cir. 2001) (*quoting* Strahan v. Coxe, 127 F.3d at 171).

205. NOAA Proposes New Rule to Protect Right Whales, CONSERVATION L. FOUND. (Dec. 30, 2020) <https://www.clf.org/newsroom/noaa-proposes-new-rule-to-protect-right-whales/> [<https://perma.cc/J2TE-CTVZ>].

leave them open to ropeless fishing[.]”<sup>206</sup> In *Strahan v. Massachusetts Executive Office of Energy and Environmental Affairs*, a federal district court stated:

Looking forward . . . entanglements will continue as long as [vertical buoy ropes] are deployed in the whales’ habitat. Indeed . . . rather than decreasing, the overall entanglement risk for right whales continues to increase. This is despite the establishment of the Atlantic Large Whale Take Reduction Team in 1997, expanded weak link requirements and sinking groundline requirements implemented in 2007, and the implementation of additional closure areas in 2014. Despite these efforts, there has been an unprecedented *increase* in fatalities in the past three years, which NOAA has declared to be an unusual mortality event.<sup>207</sup>

When right whales become entangled, they are entangled in the rope portion of the lobster gear, not in the traps or buoys.<sup>208</sup> Thus, the best and only solution is to remove the ropes from the gear altogether.<sup>209</sup> In an article by Peter Baker, the director of The Pew Charitable Trusts’ ocean conservation work in Canada and New England, and Leah Baumwell, a senior associate with Pew’s campaign to protect Atlantic Ocean marine life off the U.S. and Canada, they conclude:

Ropeless fishing systems are an opportunity for lobster and crab fishermen to continue operating in areas where right whales are present without further endangering these marine mammals. Investment in ropeless fishing now could lead to a future in which the lobster and crab industries use a mix of traditional and ropeless gear to sustain their economically and culturally valuable

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206. Peter Baker & Leah Baumwell, *Ropeless Fishing Systems Hold Promise for Fishermen—and Whales*, PEW CHARITABLE TRUSTS (Oct. 2, 2020), <https://www.pewtrusts.org/en/research-and-analysis/articles/2020/10/22/ropeless-fishing-systems-hold-promise-for-fishermen-and-whales> [<https://perma.cc/7SBJ-RXYY>].

207. *Strahan v. Mass. Exec. Off. Energy and Env’t Affs*, 458 F.Supp.3d at 90 (emphasis in original); see *2017–2020 North Atlantic Right Whale Unusual Mortality Event*, NOAA FISHERIES, U.S. DEP’T OF COM., NAT’L OCEANIC AND ATMOSPHERIC ADMIN. (Apr. 16, 2020), <https://www.fisheries.noaa.gov/national/marine-life-distress/2017-2019-north-atl-antic-right-whale-unusual-mortality-event> [<https://perma.cc/VV2S-TWA5>].

208. Mark Baumgartner, et al., *Rope-less Fishing: A Vision for How it Can Work*, WOODS HOLE OCEANOGRAPHIC INST., <https://ropeless.org/background/> [<https://perma.cc/KE5F-CNR4>].

209. *Id.*

industry, leverage technology to collect important data, and protect whales.<sup>210</sup>

For ropeless lobster fishing systems to work, lobstermen must be able to identify the location of the traps, which sit on the floor of the ocean.<sup>211</sup> With traditional vertical rope buoy systems, a rope attaches an identifying buoy to the trap all the way at the bottom of the ocean. Without an easy way to identify the location of ropeless traps, gear conflicts are inevitable.<sup>212</sup> Fortunately, the implementation of acoustic modems solves this problem.<sup>213</sup> This sort of technology works by attaching a battery-powered acoustic modem to both the trap on the sea floor and on any vessel at the surface of the water.<sup>214</sup> The two modems communicate with each other through high-frequency sound waves, which are too high to be heard by whales.<sup>215</sup> When the surface modem sends out a request, the modem attached to the trap relays its location through the Global Positioning System (GPS) inside the trap modem.<sup>216</sup> Ideally, the location data would be “displayed on commercially available chart plotters so that mariners will be able to visualize the location of nearby fixed gear in real time on their navigation displays.”<sup>217</sup>

The ability to locate a ropeless trap, however, does not do a lobster fisherman much good if he cannot then retrieve the trap from the ocean floor. Some methods that are being looked into for possible recovery include “bottom-stowed rope, variable buoyancy traps, and a docking system.”<sup>218</sup> The bottom-stowed rope system is fairly straightforward and cost-effective. It involves a line attached to a “buoyant spool” or buoy which is housed with the trap.<sup>219</sup> Fishermen are able to send a signal via the surface modem to the trap modem, commanding the spool or buoy to be released.<sup>220</sup> Once free, the spool or buoy will float to the surface while still attached to the line, where the fisherman can retrieve it and bring up the trap.<sup>221</sup>

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210. Baker & Baumwell, *supra* note 206.

211. Mark Baumgartner et al., *supra* note 208.

212. *Id.*

213. *Id.*

214. *Id.*

215. *Id.*

216. *Id.*

217. *Id.*

218. *Id.*

219. *Id.*

220. *Id.*

221. *Id.*

Variable buoyancy traps are another potential method of retrieving a ropeless lobster trap from the ocean floor. These traps are “negatively buoyant” (they sink) when they are first dropped from a vessel into the water.<sup>222</sup> However, when signaled by a surface modem, they become “positively buoyant” and float back up to the surface of the water to be retrieved by the lobsterman. The positive buoyance can be achieved through the use of either “a piston pump that changes the volume of a cylinder (similar to buoyancy engines used in autonomous vehicles such as profiling floats or ocean gliders)” or by attaching an inflatable bladder to the trap which fills with compressed air upon acoustic demand from the surface modem.<sup>223</sup>

Lastly, a more expensive option involves a docking system in which traps are outfitted with a docking station, which allows for a “docking vehicle” to “be deployed from the fisherman’s vessel carrying a very strong, but thin, hauling line, such as Spectra line (the line must be thin to reduce drag on the docking vehicle).”<sup>224</sup> The vehicle would locate and connect with the docking station attached to the trap and, once the vehicle has docked, the lobsterman would be able to use the hauling line to pull in the trap.<sup>225</sup>

Aside from the obvious benefits to the whales, ropeless fishing systems would bring numerous benefits to lobstermen.<sup>226</sup> For example, a ropeless lobster fishing system would result in a substantial reduction in lost gear and lost catch.<sup>227</sup> As a potential approach for monitoring the ownership and location of ropeless gear that is outfitted with an acoustic modem system, “an automatic trap reporting system (ATRS) can be developed so that any vessel that carries a surface modem will automatically report collected trap modem data (location and encrypted private data) to enforcement.”<sup>228</sup> The data could automatically be transferred to a “central database[,]” which lobstermen could then use to find out where lost gear is located and then go get it.<sup>229</sup> Another option would be to set up a system in which a lobsterman receives automatic notifications when another vessel’s surface modem has communicated with his missing trap, which contain the trap’s geographic coordinates.<sup>230</sup>

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222. *Id.*

223. *Id.*

224. *Id.*

225. *Id.*

226. *Id.*

227. *Id.*

228. *Id.*

229. *Id.*

230. *Id.*

Fishermen in Massachusetts and New Brunswick, Canada have successfully fished for lobster using these sorts of ropeless lobstering systems.<sup>231</sup> However, there are cultural and operational barriers to the widespread adoption of these technologies.<sup>232</sup> In order for these systems to be fully implemented by the Maine Lobster Fishery, “collaboration among multiple stakeholders—and government and industry investment in the technologies—must be accelerated and expanded.”<sup>233</sup> Affordability is another barrier to widespread adoption.<sup>234</sup> Current prototypes in the United States and Canada are expensive; the U.S. and Canadian governments must step up and facilitate the development of these ropeless technologies.<sup>235</sup>

### *B. Shorter Lobster Season*

Alternatively, a shorter lobster season would serve to protect the North Atlantic right whale in Maine’s waters. Currently, during peak lobster season, more than 900,000 endlines are present in waters along the northeastern coast of Maine.<sup>236</sup> This means that the critically endangered right whale, which feeds in and migrates through those waters, must navigate through all of that fishing gear.<sup>237</sup> By implementing a fishing closure in the Gulf of Maine during the months when the North Atlantic right whale comes to Maine’s waters to feed, entanglement risk would significantly decrease. It is clear that the United States lobster fishery—and the Maine lobster fishery in particular—is “currently operating with significant overcapacity.”<sup>238</sup> It is also clear that it is in the best interest of both the North Atlantic right whales and the Maine lobstermen to cut the season short.<sup>239</sup>

The closures would require a total removal of all fishing gear from an area of water for the period of the closure. A recent study by the Woods

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231. Baker & Baumwell, *supra* note 206.

232. *Id.*

233. *Id.*

234. *Id.*

235. *Id.*

236. *Fishing Less Could be a Win for Both Lobstermen and Endangered Whales*, SCIENCE DAILY (May 27, 2020), <https://www.sciencedaily.com/releases/2020/05/200-527123337.htm> [<https://perma.cc/46LR-Q8H7>].

237. *Id.*

238. Hannah J. Myers & Michael J. Moore, *Reducing Effort in the U.S. American Lobster (Homarus americanus) Fishery to Prevent North Atlantic Right Whale (Eubalaena glacialis) Entanglements May Support Higher Profits and Long-term Sustainability*, 118 MARINE POL’Y § 4 (2020).

239. *Id.*

Hole Oceanographic Institution (WHOI) compared the Canadian Lobster Fishery, which is on the other side of the Hague Line (North Atlantic boundary between U.S. and Canadian fishing waters) from the Gulf of Maine, and the Maine lobster fishery.<sup>240</sup> It found that a shorter lobstering season is correlated with higher profits for the fishery.<sup>241</sup> The Maine lobster fishery has a much higher limit for lobster traps and is open for fishing year-round.<sup>242</sup> The Canadian fishery, on the other hand, has half the trap limit of Maine and its season runs from the last Monday in November to May 31.<sup>243</sup> However, in regard to landings per trap (total annual landings divided by number of traps), lobstermen in the Canadian fishery “brought in about 3.7 times as much lobster per trap” than Maine lobstermen in 2016 and 2017.<sup>244</sup> Maine fishermen “use nearly eight times as many traps to catch about twice as many lobster.”<sup>245</sup> The Canadian lobster fishery, which borders the Gulf of Maine and has similar biological characteristics, is much more efficient.<sup>246</sup> The study attributes that efficiency to their shorter season.

In 2015, the seasonal closures off the coast of Massachusetts (“Massachusetts Restricted Area”), which were implemented in an effort to protect North Atlantic right whales, were expanded.<sup>247</sup> NOAA Fisheries closed the Massachusetts Restricted Area to lobster fishing for the months of February, March, and April.<sup>248</sup> Further, in 2017, 2018, and 2019, the seasonal closures were extended in Cape Cod Bay by an additional two weeks, because the feeding schedule of endangered right whales continued to overlap with Cape Cod’s lobster season.<sup>249</sup> Massachusetts fishermen have made public statements claiming “that they lose at least one quarter of their income each year due to the closures” and that the three-month closure actually turns into a five-month closure, due to the time it takes them to remove and reset their traps.<sup>250</sup> However, in 2015, 2016, and 2017, lobster landings in the Massachusetts Restricted Area “have continued to

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240. *Id.*

241. *Id.*

242. *Id.* at § 3.1.

243. *Id.*

244. *Id.*

245. *Id.*

246. *Id.*

247. *Id.* at § 3.3

248. *Id.*

249. *Id.*

250. *Id.*; see D. Abel, *New Regulations are a Matter of Life and Extinction for Right Whales*, BOS. GLOBE (Apr. 20, 2019), <https://www.bostonglobe.com/metro/2019/04/20/how-federal-officials-hope-protect-endangered-right-whales-cape-cod-bay/157nFp eibxyuslQDeevYYO/story.html> [<https://perma.cc/Q3L3-ADS5>].

grow to record highs.”<sup>251</sup> Further, when the landings weight—and thus, profits—dropped in the rest of Massachusetts and most of the Northeast lobster fisheries, they did not decrease in the Restricted Area.<sup>252</sup> In fact, the Massachusetts Restricted Area showed “stronger and more consistent growth.”<sup>253</sup>

Canada’s and Massachusetts’ experiences with seasonal closures suggest that a seasonal closure in Maine will not necessarily lead to a loss of profit. In fact, it may increase profits in the Maine lobster fishery. The study showed that these closures “may allow for a buildup in lobster biomass that is brought in later in the season.”<sup>254</sup> In other words, the lobsters that would have normally been caught during that time are instead left in the ocean and allowed to continue to grow and reproduce, leading to a higher landing weight and bigger profit when they are eventually caught.<sup>255</sup> Even though the period during which fishermen were permitted to set lobster traps was shortened, the fisheries were more profitable overall. Therefore, “a negative economic impact should not be presumed” when efforts to eliminate right whale bycatch include a shorter fishing season.<sup>256</sup>

Closures would also reduce vessel strikes: “The problem with killing whales by running ships into them is not going to be solved by slowing ships down. We need to find ways to separate ships from whales.”<sup>257</sup> A lot of the opportunities for lobster boats to kill endangered right whales can be mitigated “by closing the fishery when it is known that the whales are nearby.”<sup>258</sup>

## CONCLUSION

In February 2020, Maine Governor Janet Mills responded to the federal government’s ten-year goal to reduce encounters between right whales and fishing gear in Maine’s waters.<sup>259</sup> She claimed that that there

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251. Myers, *supra* note 238 § 3.3, at 12.

252. *Id.* § 3.3, at 13.

253. *Id.* § 3.3, at 17.

254. *Id.*

255. *Id.*

256. *Id.*

257. Campbell, *supra* note 86.

258. *Id.*

259. Fred Bever, *Janet Mills Says Federal Right Whale Plan Would Be ‘Devastating’ To Maine’s Lobster Industry*, ME. PUB. RADIO (Feb. 24, 2021), <https://www.maine-public.org/post/janet-mills-says-federal-right-whale-plan-would-be-devastating-maines-lobster-industry> [<https://perma.cc/7L9Q-XX62>].

is a “lack of data, lack of science, [and] lack of evidence that any of the deaths of right whales or reduced calving of right whales is attributable to anything that the lobstermen in the Gulf of Maine have done or not done.”<sup>260</sup> But there is data, science, and evidence. It is uncontested that North Atlantic right whales spend their winters in warm waters, off the coast of the southeastern U.S. and then make their way north to spend their summers off the coast of New England and the Bay of Fundy.<sup>261</sup> Although it is challenging to attribute the death of individual right whales to Maine lobstermen, logic and common sense fill in the gaps. It is indisputable that North Atlantic right whales are being severely injured and killed by lobster gear.<sup>262</sup> It is also indisputable that North Atlantic right whales spend at least part of the year in the Gulf of Maine.<sup>263</sup> There are many cases of right whale entanglements in neighboring Bay of Fundy and Cape Cod Bay, which were caused by the very same lobster gear currently used by Maine lobstermen. The likelihood that the same lobster gear that is killing North Atlantic right whales in neighboring waters is sparing the whales in the Gulf of Maine is slim.

Eighty-two percent of North Atlantic right whale mortalities are due to fishing gear entanglement, the majority of which involve the vertical buoy lines most commonly used by lobstermen.<sup>264</sup> According to the Woods Hole Oceanographic Institution, “the longer we wait, the more difficult it will be to solve this problem, since every lost female removes both that female from the population as well as all of the calves that she would have had in the future.”<sup>265</sup> Many different approaches have been taken along the fishing areas of the east coast of the United States, but none have made a dent in the ever-dwindling number of remaining North Atlantic right whales.<sup>266</sup> Ropeless lobster gear technology in combination with a much shorter fishing season is likely to significantly decrease right whale bycatch in the Gulf of Maine.

Massachusetts has argued in court that “the additional regulations it has promulgated—most notably the seasonal closure of Cape Cod Bay to lobsterpot fishing—makes it so that further entanglements with

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260. *Id.*

261. *North Atlantic Right Whale*, SMITHSONIAN, <https://ocean.si.edu/ocean-life/marine-mammals/north-atlantic-right-whale> [<https://perma.cc/3WVT-E2EV>] (last visited Nov. 6, 2021).

262. See CLAPHAM, *supra* note 2, at 61-62; Johnson et al., *supra* note 27; Knowlton et al., *supra* note 28; Abel, *supra* note 27.

263. See NOAA FISHERIES, *supra* note 110.

264. Baumgartner, et al., *supra* note 208.

265. *Id.*

266. *Id.*

Massachusetts-licensed vertical buoy ropes are unlikely to occur.”<sup>267</sup> However, even though the seasonal closure began in 2015, there was a known entanglement of a right whale in 2016 off the coast of Cape Cod. This suggests that, although seasonal closures have reduced the frequency of right whale entanglements, the risk of entanglement by vertical rope buoy systems remains.<sup>268</sup> However, when ropeless lobster fishing technology is required in addition to new and extended seasonal closures, the risk of right whale entanglement in the Gulf of Maine should be at or near zero percent.

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267. *Strahan v. Mass. Exec. Off. Energy and Env't Affs*, 458 F.Supp.3d at 90.

268. *Id.*