

# EXPLOITATION ON PORPOISE: THE USE OF PURSE SEINE NETS BY COMMERCIAL TUNA FISHERMEN IN THE EASTERN TROPICAL PACIFIC OCEAN

## I. INTRODUCTION

In recent years, the issue of "protection versus exploitation" of marine mammals has sparked much heated debate.<sup>1</sup> Although both sides of the controversy agree that the extinction of any species should be prevented, there is disagreement on the question of whether some species are actually under a threat of serious depletion.<sup>2</sup> This issue is precisely the current contention between the tuna industry and marine conservationists. On one side, commercial fishermen claim that the killing of dolphins through employment of advanced technological equipment is incidental.<sup>3</sup> On the other side, environmentalists assert that the impact of modern equipment is substantial enough to threaten the very existence of certain species of dolphins.<sup>4</sup>

This note will focus on the killing of dolphins in the Eastern Tropical Pacific Ocean (ETP) where the majority of fishing-related dolphin deaths occur.<sup>5</sup> Part II will explain past and present fishing methods and discuss how the development of fishing technology has caused a serious depletion of dolphin stock at an alarming rate. Part III will address the United States' response to the situation through the promulgation of legislation designed to limit the total number of dolphins killed. Part IV will focus on initial steps taken by the international community that serve to supplement and extend laws already existing on the national level. Part V will offer possible solutions by

---

1. See Kindt and Wintheiser, *The Conservation and Protection of Marine Mammals*, 7 U. HAW. L. REV. 301, 304 (1985) [hereinafter Kindt and Wintheiser]. Both Professors Kindt and Wintheiser have written extensively on the dolphin exploitation issue and are, therefore, familiar with the arguments on each side of the controversy. *Id.*

2. See *id.* at 304.

3. See *Animal Rights: Heinz, Purina, and All Canned Tuna*, NAT'L BOYCOTT NEWS, Spring/Summer 1989, at 104, 106 [hereinafter *Animal Rights*].

4. See *id.* According to the United States' agency responsible for protecting dolphins, the National Marine Fisheries Service (NMFS), the current mortality rate of dolphins in the Eastern Tropic Pacific (ETP) is approximately 100,000 per year. *Id.* at 104-05. It has also been estimated that, since 1960, 6,000,000 dolphins have been killed by tuna fishermen in the ETP. *Id.* at 104. The real figure exceeds 6,000,000 because the NMFS does not include dolphins that die from injuries or exhaustion from the use of purse seine nets. *Id.*

5. Anderson, *Millions of Dolphins Butchered in Tuna Nets*, NEW SCIENTIST, Mar. 17, 1988, at 28 [hereinafter *Millions*]. This coastal region extends from Southern California to Chile and includes the waters west of Mexico, Central America, Columbia, Ecuador and Peru. *Id.* See also *supra* note 4 and accompanying text.

which to reduce the dolphin mortality rate in the ETP. Finally, Part VI will conclude by discussing the need for increased international cooperation to halt the current slaughter of dolphins.

## II. PAST/PRESENT FISHING METHODS

### A. Line and Pole Fishing

For reasons not yet clear, dolphins, sometimes referred to as porpoise,<sup>6</sup> have been observed to travel in the company of yellowfin tuna.<sup>7</sup> Where a herd of dolphins is observed at the surface of the water, a school of tuna generally can be found below.<sup>8</sup> This scientifically unexplained relationship occurs only within a 6,000,000 square-mile triangle of ocean in the ETP.<sup>9</sup> Capitalizing on this "tuna-porpoise association" phenomenon,<sup>10</sup> fishermen have used dolphins as a means by which to locate yellowfin tuna for decades.<sup>11</sup>

During the 1950s, baitfishing or the "line and pole" method was the principal manner of commercial tuna fishing.<sup>12</sup> Once a school of tuna was located, usually by means of spotting dolphins swimming on the surface, fishermen would lure the tuna by chumming the water.<sup>13</sup> As the tuna slowly worked themselves into a feeding frenzy, fishing lines with unbaited hooks were tossed into the water.<sup>14</sup> In turn, the tuna would bite and hook themselves while the porpoise, using their

---

6. Kindt, *A Summary of Issues Involving Marine Mammals and Highly Migratory Species*, 18 AKRON L. REV. 1, 5-6 (1984) [hereinafter Kindt, *A Summary*]. The words "dolphin" and "porpoise" are often used interchangeably. In general, taxonomists consider dolphins (of the family delphinidae) and porpoise (phocoenidae) to constitute two separate families. A minority of taxonomists consider phocoenidae to be a subfamily of delphinidae. *Id.* at 5. This note will use the term dolphin to include both dolphins and porpoise.

7. *Porpoise Mortality Numbers Skewed*, AUDUBON, Sept. 1988, at 16 [hereinafter AUDUBON].

8. See Anderson, *Government Observers 'Forced to Lie' About Dolphin Deaths*, NEW SCIENTIST, June 16, 1988, at 34.

9. Davis, *Caught in the Tuna Nets: The Slaughter of Dolphins*, THE NATION, Nov. 14, 1988, at 486 [hereinafter Davis].

10. Comment, *International Aspects of the Tuna-Porpoise Association Phenomenon: How Much Protection For Poseidon's Sacred Messengers?*, 7 CAL. W. INT'L L.J. 639, 643 (1977) [hereinafter Comment, *International Aspects*]. Scientists have speculated that either food location or predator detection is the primary reason for the association. *Id.*

11. Steiner, *The Senseless Slaughter of Marine Mammals*, BUS. & SOC. REV., Spring 1987, at 18 [hereinafter Steiner]. The process by which tuna fishermen use porpoise to locate tuna is known as "porpoise fishing" or "fishing on porpoise." Erdheim, *The Immediate Goal Test of the Marine Mammal Protection Act and The Tuna/Porpoise Controversy*, 9 ENVTL. L. 283 n.2 (1979) [hereinafter Erdheim].

12. Kindt and Wintheiser, *supra* note 1, at 344.

13. See Steiner, *supra* note 11. Chumming is the process of attracting fish by dumping ground bait into the water.

14. *Id.*

sophisticated sonar system, would avoid the hook and bite only the baitfish.<sup>15</sup>

### B. Purse Seine Fishing

In the early 1960s, a new method of tuna fishing was introduced.<sup>16</sup> Commercial fishermen in the United States abandoned traditional pole-and-line fishing for the enhanced efficiency of purse seine fishing.<sup>17</sup> Widespread employment of this technique has led to a significant increase in the ETP tuna catch.<sup>18</sup>

The technique is relatively simple. After dolphins are spotted by a lookout, they are chased with helicopters and speedboats in an effort to herd them into an area where a net has been set.<sup>19</sup> Seal bombs<sup>20</sup> are often used as a means to disorient the dolphins, thereby allowing them to be easily corralled into a tight pack.<sup>21</sup> Once herded, the tuna boats encircle the dolphins with a purse-like net.<sup>22</sup> These nets, which are composed of a deep wall of nylon webbing as long as 500 fathoms,<sup>23</sup> are then drawn together at the bottom with a wire cable in a manner analogous to a drawstring purse.<sup>24</sup> As a result, the escape route to deeper waters is cut off and dolphins, as well as tuna, are trapped in the net.<sup>25</sup>

Because they are mammals, the trapped porpoise struggle to reach the surface of the water in an effort to breathe.<sup>26</sup> Unfortunately, many have their fins or snouts entangled in the nets and drown.<sup>27</sup>

15. *Id.*

16. Brower, *The Destruction of Dolphins*, ATLANTIC MONTHLY, July 1989, at 35, 37 [hereinafter Brower].

17. Tennesen, *No Chicken of the Sea*, NAT'L WILDLIFE, Apr.-May 1989, at 10, 12 [hereinafter Tennesen]. This new fishing method attracted new investors to the tuna industry. By the early 1970s, the United States' purse seine fleet numbered over 110 vessels. Each ship cost between \$6,000,000 and \$10,000,000 to build and could hold more than 1,000 tons of tuna. Steiner, *supra* note 11.

18. See Steiner, *supra* note 11. In a single net, a seiner can bring in 250 tons of tuna. Tennesen, *supra* note 17, at 12.

19. Murphy, *A Deadly Roundup at Sea*, TIME, Aug. 4, 1986, at 46 [hereinafter Murphy].

20. Brower, *supra* note 16, at 37. Seal bombs are underwater explosives which originated several years ago in California when sardine fishermen used them to discourage seals from raiding their nets. *Id.*

21. *Animal Rights*, *supra* note 3, at 104.

22. See Erdheim, *supra* note 11.

23. Comment, *International Aspects*, *supra* note 10, at 642. A 500 fathom net is approximately 3,000 feet in length. *Id.* at 642 n.23.

24. *Id.* at 642

25. See Erdheim, *supra* note 11.

26. *Id.*

27. Tennesen, *supra* note 17, at 12.

Others are crushed in the giant power blocks used to haul in the nets.<sup>28</sup> Still others which are wounded may be tossed back into the ocean only to be victims of a shark attack moments later.<sup>29</sup> By the end of the first decade of purse seining, between a quarter and a half million dolphins were being killed annually in the ETP.<sup>30</sup> This past decade alone has claimed some 1,650,000 dolphins.<sup>31</sup> While purse seine fishing accounts for only five percent of all tuna caught, the annual slaughter resulting from this practice amounts to approximately twenty-three dolphins killed per hour.<sup>32</sup>

### III. DOMESTIC LEGISLATION

#### A. *Marine Mammal Protection Act*

In 1972, Congress responded to public outcry over the magnitude of dolphin killing by enacting the Marine Mammal Protection Act (MMPA).<sup>33</sup> This landmark law states, "[I]t shall be the immediate goal that the incidental kill or incidental serious injury of marine mammals permitted in the course of commercial fishing operations be reduced to insignificant levels approaching a zero mortality and serious injury rate."<sup>34</sup> Thus, the emphasis of the MMPA is the protection and development of aquatic mammals in danger of extinction.<sup>35</sup>

---

28. See *Millions*, *supra* note 5.

29. Brower, *supra* note 16, at 44.

30. *Id.* at 37. The spotted, eastern spinner and common dolphin are the species with the highest mortality rates. The eastern spinner population has declined at an estimated 80% since 1960 when purse seining was first implemented. The primary reason for this decline is that 80% of the drowned females are pregnant or nursing. *Animal Rights*, *supra* note 3, at 106.

31. Frenner, *Porpoise-ful Fish Boycott*, CONSUMERS DIG., Jan.-Feb. 1985, at 5. This increase in dolphin deaths is consistent with the increased use of purse seine nets. In 1981, 50% of all net sets were made on dolphins. Steiner, *supra* note 11, at 18. This number escalated to 94% in 1985 and 1986. *Id.*

32. *Animal Rights*, *supra* note 3, at 104. This figure is supported by the steady average increase of the dolphin mortality rate from 63 per day in 1983 to more than 350 per day in 1986. D. PHILLIPS & T. STEINER, *THE TRAGEDY CONTINUES: THE KILLING OF DOLPHINS BY THE TUNA INDUSTRY* 17 (1986) [hereinafter PHILLIPS & STEINER].

33. See Marine Mammal Protection Act of 1972, Pub L. No. 95-552, 86 Stat. 1027, 16 U.S.C. §§ 1361-1362, 1371-1384, 1401-1407 (1988). In 1971, the year before the MMPA was passed, an estimated 300,000 porpoise were killed by the United States' tuna purse seine fleet. Erdheim, *supra* note 11, at 284.

34. 16 U.S.C. § 1371(a)(2) (1988). In a 1981 amendment to the MMPA, Congress stated that the best way to satisfy this goal was to have purse seiners use "the best marine mammal safety techniques and equipment that are economically and technologically practicable." *Id.*

35. See Note, *Recent Developments: Congress Amends the MMPA*, 62 OR. L. REV. 257 (1983) [hereinafter Note, *Recent Developments*]. "[I]t is the sense of Congress that [marine mammals] should be protected and encouraged to develop to the greatest extent feasible commensurate with sound policies of resource management and that the primary objective of their

The main provision of the MMPA is a general moratorium on the "taking"<sup>36</sup> of marine mammals.<sup>37</sup> Recognizing that a complete ban on purse seine fishing would drastically reduce the United States' competitive edge over the foreign tuna industry as well as cause the loss of employment, Congress included an exception to this moratorium for "commercial fishing operations."<sup>38</sup> Under this exception, commercial tuna fishermen could only take porpoise under strict guidelines.<sup>39</sup> First, the taking of porpoise could be prohibited if the Secretary of Commerce determined that the species was under threat of "depletion."<sup>40</sup> Second, the taking could be prohibited if the Secretary found that the catch caused a "disadvantage"<sup>41</sup> to affected species and population stocks.<sup>42</sup>

Therefore, the fishing industry was granted a two-year grace period to develop new techniques and equipment which would reduce mortality levels.<sup>43</sup> In order to expedite these goals, Congress funded a

management should be to maintain the health and stability of the marine ecosystem." 16 U.S.C. § 1361(6) (1988).

36. Smith, *The Endangered Species Act and Biological Conservation*, 57 S. CAL. L. REV. 361, 384 (1984) [hereinafter Smith]. According to the statute, the term "take" refers to "harassing, harming, pursuing, hunting, shooting, wounding, killing, trapping, capturing, or collecting any endangered species, or attempting to engage in any of those acts." 16 U.S.C. § 1362(12) (1988).

37. See 16 U.S.C. § 1371(a) (1988). "There shall be a moratorium on the taking . . . of marine mammals . . . commencing on the effective date of this chapter. . . ." *Id.*

38. Marine Mammal Protection Act of 1972, Pub. L. No. 95-522, 86 Stat. 1027, 1030 (codified as amended at 16 U.S.C. § 1371(a)(2) (1988)). "During the twenty-four calendar months initially following the date of the enactment of this Act, the taking of marine mammals incidental to the course of commercial fishing operations shall be permitted. . . ." *Id.*

39. See *id.*; see also Slade, *Back to the Drawing Board: Fourth Amendment Rights and the MMPA*, 16 OCEAN DEV. & INT'L L. 91-92 (1986) [hereinafter Slade].

40. 16 U.S.C. § 1371(a)(3)(B) (1988). The term depletion refers to any case in which:

- (A) the Secretary . . . determines that a species or population stock is below its optimum sustainable population;
- (B) a State to which authority for the conservation and management of a species or population stock is transferred under section 1379 of this title, determines that such species or stock is below its optimum sustainable population; or
- (C) a species or population stock is listed as an endangered species or a threatened species under the Endangered Species Act of 1973 [16 U.S.C. 1531 et seq.].

16 U.S.C. § 1362(2) (1988).

41. 16 U.S.C. § 1373(a) (1988).

The Secretary, on the basis of the best scientific evidence available and in consultation with the Marine Mammal Commission, shall prescribe such regulations with respect to the taking and importing of animals from each species of marine mammal . . . as he deems necessary and appropriate to insure that such taking will not be to the disadvantage of those species and population stocks. . . .

*Id.*

42. See Smith, *supra* note 36, at 384.

43. Steiner, *supra* note 11, at 20.

research program to study dolphin population and behavior.<sup>44</sup> Additionally, the National Marine Fisheries Service (NMFS) organized an observer program to monitor dolphin mortality levels and enforce regulations.<sup>45</sup> This program placed scientific observers aboard fishing vessels whose main function was to monitor the loss of dolphins to purse seine nets.<sup>46</sup> Without these observers, Congress believed it would be impossible for the government to collect the requisite data necessary to devise fishing methods which would neither deplete nor disadvantage the dolphin population.<sup>47</sup>

In 1974, when the commercial fishing exemption expired, no new techniques were forthcoming by the tuna industry.<sup>48</sup> Consequently, 500,000 more dolphins had been killed.<sup>49</sup> The environmental community took legal action to limit the dolphin take,<sup>50</sup> prompting Congress to adopt a quota initially set at 78,000.<sup>51</sup> Over the next few years the research observation program was extended and dolphin mortality steadily declined.<sup>52</sup> The decline, however, ended with the advent of the Reagan Administration.<sup>53</sup> In 1980, the NMFS issued a five-year permit which set an annual quota take of 20,500.<sup>54</sup> In 1984, the MMPA was amended to extend this quota indefinitely.<sup>55</sup>

---

44. *Id.*

45. *Id.*

46. Davis, *supra* note 9, at 486. Often porpoise mortality figures were minimized by federal observers since many were intimidated by threats of serious injury from tuna fishermen. *Id.*

47. *See id.*

48. *Id.*

49. *Id.* The mortality rate was escalating so rapidly that, during parts of 1976 and 1977, the purse seine tuna fleet was shut down because the take of porpoise exceeded allowable levels. Note, *Recent Developments*, *supra* note 35, at 272; *see generally infra* note 50.

50. *See generally* Committee for Humane Legislation Inc., v. Richardson, 414 F. Supp. 297 (D.D.C. 1976), *aff'd in part, rev'd in part, revised in part*, 540 F.2d 1141 (D.C. Cir. 1976). Plaintiff argued that the MMPA required the Secretary of Commerce to specify how many porpoise could be killed incidental to commercial fishing operations. The District Court ordered the American Tuna Boat Association to halt further taking of porpoise and to refrain from instituting new litigation seeking to continue porpoise-taking. Due to possible detrimental effects to the fishing industry, however, the District Court issued a 20 day stay of the order. The D.C. Circuit Court continued the stay until January 1, 1977. 540 F.2d at 1151.

51. Brower, *supra* note 16, at 38. Tuna fishermen were then allowed to take porpoise only by permits issued under the Secretary of Commerce's regulations. Slade, *supra* note 39, at 92.

52. *See* Kindt and Wintheiser, *supra* note 1, at 346. After passage of the MMPA, the porpoise take decreased from 368,600 in 1972 to 22,736 in 1982. *Id.*

53. Brower, *supra* note 16, at 38.

54. Kindt and Wintheiser, *supra* note 1, at 346.

55. Brower, *supra* note 16, at 38. Thus, instead of abolishing the intentional netting of dolphins, the MMPA's quota system has served to institutionalize the practice. *Id.* Additionally, there have been no efforts to proportionally decrease the quota to the size of the United

During the past ten years, funds for dolphin research have been greatly reduced while regulations and their enforcement have been relaxed.<sup>56</sup> The tuna industry, in turn, has claimed economic hardship from these regulations and has been exempt from both developing dolphin-saving gear and from prohibitions on "sundown sets."<sup>57</sup> Recently, however, tuna canning companies have made a decided effort to reduce dolphin deaths.<sup>58</sup> In April of 1990, H.J. Heinz, Van Camp and Bumble Bee<sup>59</sup> canners announced that they would refuse to sell tuna which had been harvested by means of purse seine fishing.<sup>60</sup>

Notwithstanding the effect of this current effort, dolphin mortality has continued at a staggering rate.<sup>61</sup> Since the passage of the MMPA almost fifteen years ago, more than 800,000 dolphins have been killed by the use of United States' purse seine nets.<sup>62</sup> This has led one observer to note that "the dolphin kill by [commercial] tuna fishermen in the Eastern Tropical Pacific continues to be the greatest slaughter of marine mammals on Earth."<sup>63</sup>

States' tuna fleet. See PHILLIPS & STEINER, *supra* note 32 at 7. Despite the fact that the number of United States' tuna boats have decreased from 100 in 1981 to 34 in 1988, the aggregate number of dolphins killed annually remains essentially the same. *Animal Rights, supra* note 3, at 106. The kill per United States' vessel increased from less than 200 in 1981 to more than 600 in 1986. *Id.*

56. See Brower, *supra* note 16, at 38. On May 8, 1990, a bill regarding the protection of dolphins was introduced by Congressman Bates. See H.R. 4740, 101st Cong., 2d Sess. (1990). The bill has three goals: it authorizes the Secretary of Commerce to make loans for research into the development of dolphin-saving equipment, it bans the importation of tuna caught with equipment unsafe to dolphins and it calls for the formation of an international convention to further the protection of dolphins. Unfortunately, the estimated odds of passage of the bill are low. *Id.*

57. Steiner, *supra* note 11, at 20. Sundown sets involve the setting of purse seine nets at night when dolphins are more likely to be trapped. This practice accounts for more than four times as many dolphins being killed than from nets set during the day. *Id.*

58. See N.Y. Times, Apr. 3, 1990, at A1, col. 1.

59. *Id.* These companies represent approximately 75% of the total amount of canned tuna supplied to the United States. *Id.*

60. *Id.* Ironically, the withdrawal of American fishing vessels from the ETP has environmentalists concerned that there will be an influx in foreign fishing vessels in the region which could likely result in an increase in the total dolphin take in this area. See N.Y. Times, May 10, 1990, at A20, col. 4.

61. See Brower, *supra* note 16, at 38. Recently, the Earth Island Institute took out a full page advertisement urging consumers to boycott tuna products from Bumble Bee Seafood Inc. The Institute claims that the corporation's parent company in Thailand, Unicord Inc., continues to purchase tuna trapped by nets which kill dolphins. This alleged action was contrary to a promise the corporation made in April of 1990 when it refused to buy tuna caught by methods harmful to dolphins. The president of Bumble Bee has denied the charges and states that the corporation may file a libel suit against the Institute to recover possible damages to its reputation and company name. N.Y. Times, Dec. 6, 1990, at D4, col. 4 (city ed.).

62. Brower, *supra*, note 16, at 38.

63. See *id.*

#### IV. INTERNATIONAL EFFORTS

The tuna-dolphin problem is essentially an international issue.<sup>64</sup> Both tuna and dolphin migrate between the jurisdictional zones of different states and into international waters.<sup>65</sup> Dolphins also serve as important marine resources requiring the protection of the international community at large.<sup>66</sup> In addition, the killing of dolphins is a multinational affair. While the average United States' dolphin take is a reported 18,000 per year, the *total* death toll in the ETP, as reported by the NMFS, was 124,597 in 1986 and 78,497 in 1987.<sup>67</sup> Most states currently involved in purse seining in the ETP, however, do not have any legislation regarding the protection of these marine mammals.<sup>68</sup>

##### A. *The Inter-America Tropical Tuna Commission*

In 1950, negotiations between the United States and Costa Rica over fishing zones resulted in the establishment of the Inter-America Tropical Tuna Commission (IATTC).<sup>69</sup> The IATTC was designed to protect marine resources and regulate fishing.<sup>70</sup> The IATTC had its own scientific staff with membership open to all nations fishing in the ETP.<sup>71</sup> By 1977, seven other countries had joined the IATTC,<sup>72</sup> and,

---

64. See Comment, *International Aspects*, *supra* note 10, at 652-53. The international tuna fleet is currently estimated to be twice the size of the United States' fleet. PHILLIPS & STEINER, *supra* note 32, at 15.

65. See Comment, *International Aspects*, *supra* note 10, at 652-53.

66. See *id.* at 652. Under the MMPA, Congress recognized marine mammals as an international resource requiring protection by those nations outside of the United States. It stated in pertinent part: "[M]arine mammals have proven themselves to be resources of great international significance, esthetic and recreational as well as economic. . . ." 16 U.S.C. § 1361(6) (1988).

67. *Animal Rights*, *supra* note 3, at 105.

68. See Comment, *Dolphin Conservation in the Tuna Industry: The United States' Role in an International Problem*, 16 SAN DIEGO L. REV. 665, 690 (1979) [hereinafter Comment, *Dolphin Conservation*]. These States include Bermuda, Canada, Chile, Colombia, Ecuador, El Salvador, Honduras, Japan, Nicaragua, Panama, Peru, Senegal, Spain and Venezuela. Costa Rica, France, Guatemala, Mexico and the Netherlands Antilles, however, have legislation recognizing the problem and advocating conservation measures. *Id.* See also Convention for the Establishment of an Inter-American Tropical Tuna Commission, May 31, 1949, 1950, United States-Costa Rica, 1 U.S.T. 230, T.I.A.S. No. 2044, 80 U.N.T.S. 3 (entered into force Mar. 3, 1950).

69. Kindt, *A Summary*, *supra* note 6, at 7. The Inter-America Tropical Tuna Commission (IATTC) is unique in that it was the first management of an international fishery to be created before a critical need arose to prompt its establishment. Comment, *International Aspects*, *supra* note 10, at 655.

70. Among its specific tasks were the study of tuna and the responsibility to maintain stocks at levels that would produce maximum yields on a sustained basis. Wade, *A Proposal to Include Tunas in the United States Fisheries Jurisdiction*, 16 OCEAN DEV. & INT'L L. 255, 258 (1986) [hereinafter Wade].

71. *Id.* at 258. Unlike other commissions, such as the International Whaling Commis-

for reasons undisclosed by the IATTC, two countries subsequently withdrew.<sup>73</sup>

The IATTC recognized that an international conservation program was essential to reduce the exploitation of yellowfin tuna.<sup>74</sup> The goals of maximizing the tuna harvest and minimizing dolphin mortality, however, are potentially conflicting.<sup>75</sup> For example, in the late 1960s, the IATTC's regulations allowed increased fishing in areas where dolphin-associated tuna were prevalent.<sup>76</sup> In this manner, the IATTC's actions impeded the reduction of dolphin mortality in the ETP.<sup>77</sup>

In 1975, the IATTC began to take an interest in the tuna-dolphin problem and passed a resolution supporting joint agreements between it and any other State wishing to conduct research in this area.<sup>78</sup> At the IATTC's annual meeting in 1976, a call was issued for a comprehensive review of information regarding this problem. Additionally, detailed proposals for IATTC research on dolphins were requested.<sup>79</sup> Furthermore, the Commission agreed on three goals: 1) to strive to maintain a high level of tuna production; 2) to maintain dolphin stocks at or above levels that assure their survival in perpetuity; and 3) to make every reasonable effort to avoid the needless killing of dolphins.<sup>80</sup>

In 1977, a report was prepared for the annual meeting suggesting that the IATTC, as an international organization, should be responsible for dolphin management in the ETP.<sup>81</sup> The report also illustrated four factors necessary to achieve a reduction in dolphin mortality: 1) efforts should be international in scope and purpose; 2) all fishing ves-

---

sion, which has a part-time scientific staff, the IATTC has a full-time staff with experience and knowledge of tuna biology and behavior. Comment, *International Aspects*, *supra* note 10, at 655.

72. Comment, *International Aspects*, *supra* note 10, at 654. The states which joined the IATTC and their dates of entry are as follows: Panama, 1953; Ecuador, 1961; Mexico, 1964; Canada, 1968; Japan, 1970; France, 1973 and Nicaragua, 1973. *Id.* at 654 n.110.

73. Wade, *supra* note 70, at 258. Mexico withdrew in 1978 and Costa Rica withdrew in 1979. *Id.*

74. See Comment, *Dolphin Conservation*, *supra* note 68, at 696. This program included recommendations by the IATTC of sustainable quotas of yellowfin tuna. Steiner, *supra* note 11, at 20.

75. Comment, *Dolphin Conservation*, *supra* note 68, at 696.

76. See *id.*

77. *Id.*

78. See Comment, *International Aspects*, *supra* note 10, at 656.

79. Comment, *Dolphin Conservation*, *supra* note 68, at 697.

80. *Id.* The IATTC chose these objectives as realistic measures by which to address the dolphin depletion problem. See *id.* at 697 n.231.

81. *Id.*

sels should be equipped with the best and most advanced dolphin-saving equipment; 3) fishermen should be familiar with, and well-practiced in, dolphin-saving techniques; and 4) a system ensuring the correct usage of the proper equipment should be implemented.<sup>82</sup>

In a special meeting in June of 1977, the IATTC responded to this report and adopted a resolution calling for the funding of an international dolphin research program.<sup>83</sup> This program provided evaluations of various dolphin-saving techniques and advanced fishing technology.<sup>84</sup> Furthermore, members of the IATTC had the option of volunteering their vessels for monitoring conducted by international observers recording dolphin mortality, much like the system existing under the MMPA.<sup>85</sup>

### B. United States' MMPA Influence

Since the formation of the IATTC over forty years ago, there has been very little done on an international level to reduce dolphin deaths in the ETP.<sup>86</sup> In an attempt to impact the international fleet, Congress added an amendment to the MMPA in 1984.<sup>87</sup> This amendment strengthened tuna import restrictions against nations unable to demonstrate a regulatory program with kill rates comparable to that of the United States.<sup>88</sup> Since the United States buys approximately half of the total tuna catch in the world, this measure could have a significant impact on the use of purse seine nets in the ETP.<sup>89</sup>

The strengthening of the MMPA illustrates a rare instance whereby unilateral action has prompted individual countries to follow

---

82. Comment, *Dolphin Conservation*, *supra* note 68, at 697. Additionally, the report suggested that observers aboard foreign vessels would also acquire biological data about dolphins and more accurate dolphin mortality rates. *Id.*

83. *Id.* The IATTC resolved to study the tuna-porpoise association and how it affects the maximum sustainable yield of yellowfin tuna in the ETP. Comment, *International Aspects*, *supra* note 10, at 656.

84. Comment, *Dolphin Conservation*, *supra* note 68, at 698. The information aided the IATTC in determining whether the increase in the aggregate number of dolphins killed was in direct proportion to increased tuna catches. *Id.*

85. See Steiner, *supra* note 11, at 20 and accompanying text. Most States have only recently placed observers on fishing vessels to assist the scientific staff in collecting information on porpoise. For example, Mexico, whose fleet comprises over 75% of the total foreign fleet, only began allowing IATTC observers on board in 1986. *Id.*

86. See Brower, *supra* note 16, at 58.

87. See 16 U.S.C. § 1371(a)(2) (1988).

88. See *id.* at § 1371(a)(2)(B). The amendment states that in 1989 countries must reduce their kill rates to twice the United States' rate and in 1990 to 1.25 that of the United States' rate or face embargo. *Id.*

89. Godges, *Dolphins Hit Rough Seas Again*, SIERRA, May-June 1988, at 26.

suit.<sup>90</sup> For example, the governments of the Congo, New Zealand, Senegal and Spain informed their fleets that they must abide by MMPA guidelines and follow the dolphin rescue procedures required of United States' fishing crews.<sup>91</sup> It is doubtful that an international effort to reduce dolphin mortality in the ETP would have yielded similar results.<sup>92</sup>

## V. POSSIBLE SOLUTIONS

It is evident that the problem of killing dolphins is one which has extended beyond the reach of the United States.<sup>93</sup> Thus, reliance on unilateral action may prove fruitless.<sup>94</sup> In order to remedy the situation, an effort on the part of the international community is essential.<sup>95</sup> An international organization, such as the IATTC, should be utilized to regulate commercial tuna fishing and protect marine mammals.<sup>96</sup> This organization could extend membership to all countries fishing in the ETP region.<sup>97</sup> To be most effective, the organization should establish minimum standards to manage marine mammal populations while each country would be permitted to impose more stringent regulations within its respective economic zone.<sup>98</sup> Additionally, the United States could provide necessary leadership in the development of this organization based on its past experience with the MMPA.<sup>99</sup>

Resolution of this problem should be vested in an international commission to help avoid the inadequacies of widespread unilateral

90. See Kindt, *A Summary*, *supra* note 6, at 8.

91. *Id.* The NMFS subsequently exempted New Zealand, Congo, Senegal and Spain from import restrictions. Comment, *Dolphin Conservation*, *supra* note 68, at 692.

92. See Kindt, *A Summary*, *supra* note 6, at 8. Even article 65 of the 1982 Convention on the Law of the Sea defers power to individual coastal states in prohibiting or regulating the exploitation of marine mammals within each economic zone. See United Nations Convention on the Law of the Sea, *opened for signature* on Dec. 10, 1982, U.N. Doc. 62/122, 21 I.L.M. 1261, 1282 (1982).

93. See Kindt, *A Summary*, *supra* note 6, at 8. The 1986 data indicated that the foreign kill rate of dolphins in the ETP was 400% higher than the United States rate. PHILLIPS & STEINER, *supra* note 32, at 21.

94. See Kindt, *A Summary*, *supra* note 6, at 8.

95. See Comment, *Dolphin Conservation*, *supra* note 68, at 686. Similar international efforts have led to the formation of the International Whaling Commission, which has a long-term commitment to eliminate international commercial whaling. See *Animal Rights*, *supra* note 3, at 104.

96. See Comment, *International Aspects*, *supra* note 10, at 657.

97. See *id.*

98. Kindt, *A Summary*, *supra* note 6, at 8.

99. See Comment, *International Aspects*, *supra* note 10, at 657.

action.<sup>100</sup> A multinational approach would reduce the potential of tuna fleets circumventing national laws. For example, the United States' registered tuna fleets are currently re-flagging under foreign registries because they find the domestic provisions of the MMPA too restrictive.<sup>101</sup> Not only does this defeat the intent of the MMPA, but it also places the majority of the industry under the control of foreign fishing regulations.<sup>102</sup> In order to decrease dolphin mortality, the following six-point plan of action<sup>103</sup> should be implemented:

1. One hundred percent observer coverage is necessary on every foreign vessel to prevent skewed reporting of dolphin deaths.<sup>104</sup> This data should be fully accessible to the appropriate authorities.<sup>105</sup>
2. International cooperation between environmental groups based in purse seine fishing nations should be established in order to promote consistent legislation ensuring dolphin protection.<sup>106</sup>
3. The international tuna market should be inaccessible to, and embargoes should be imposed on, those States refusing to comply with regulations to reduce dolphin mortality.<sup>107</sup>
4. Efforts to encourage international conventions, such as the International Whaling Commission and the International Trade in Endangered Species Convention should be made in order to regulate dolphin mortality.<sup>108</sup>
5. The use of dolphin-saving techniques and gear, such as the "Medina panel"<sup>109</sup> and "backing down,"<sup>110</sup> should be encouraged

---

100. Kindt, *A Summary*, *supra* note 6, at 8.

101. See *Animal Rights*, *supra* note 3, at 105. When the MMPA was first enacted in 1972, foreign tuna fleets were responsible for less than 15% of dolphins killed in the ETP; today they exceed the size of the United States fleets and account for 80% of the deaths. *Id.*

102. See Comment, *International Aspects*, *supra* note 10, at 660. Article 5 of the 1958 Convention on the High Seas prohibits these types of flags of convenience. The Convention states in pertinent part: "[T]here must exist a genuine link between the State and the ship." 13 U.S.T. 2312, 2315, T.I.A.S. No. 5200, at 2, 450 U.N.T.S. 82, 84. Legislative history, however, has shown that this provision is customarily unenforced. See Nafziger and Armstrong, *The Porpoise-Tuna Controversy: Management of Marine Resources after Committee for Humane Legislation, Inc. v. Richardson*, 7 ENVTL. L. 223, 266-67 (1977).

103. See Steiner, *supra* note 11, at 21.

104. See *id.* Currently, only one third of the foreign fleet carry observers on their vessels. N.Y. Times, May 10, 1990, at A20, col. 4. Consequently, previous data regarding foreign caused dolphin deaths are considered "grossly underestimated." See PHILLIPS & STEINER, *supra* note 32, at 21.

105. See PHILLIPS & STEINER, *supra* note 32, at 21.

106. See *id.* at 11.

107. *Id.*

108. *Id.*

109. See Kindt, *A Summary*, *supra* note 6, at 8. A Medina panel is an escape hatch which is built into the rear of the net preventing the porpoise from becoming permanently entangled. Note, *Recent Developments*, *supra* note 35, at 273 n.92.

and increased.<sup>111</sup>

6. Finally, the tuna industry should be required to specifically label its cans. Consumers should be alerted as to whether tuna has been caught from purse seine nets.<sup>112</sup> Only then can consumers make informed decisions regarding the purchase of such tuna.<sup>113</sup>

Without progress in these areas, the number of dolphins killed in international waters will inevitably continue to escalate.<sup>114</sup>

## VI. CONCLUSION

It is apparent that the MMPA has not achieved its goal of reducing dolphin mortality to insignificant levels.<sup>115</sup> Nevertheless, the aggregate number of dolphins killed annually by the United States' purse seine fleet has decreased considerably over the last fifteen years.<sup>116</sup> Essentially, this reduction indicates that the problem has shifted from a domestic dilemma to one of international importance.<sup>117</sup> Currently, the foreign fleet is responsible for killing five times as many dolphins as the United States' tuna fleet.<sup>118</sup> While the IATTC is dedicated to dolphin research and preservation, greater efforts on an international level are needed in order to truly protect dolphins.<sup>119</sup> It is only through international consensus and cooperation that effective conservation programs and legislation can be implemented.<sup>120</sup> Consequently, the foreign tuna fleet can be successfully

---

110. Murphy, *supra* note 19, at 46. In backing down, a fisherman will back up his ship, dragging the net into an elongated shape. As a result, the net is submerged one meter below the water surface so as to slide under the porpoise, thereby releasing them. Note, *Recent Developments*, *supra* note 35, at 273 n.92.

111. Steiner, *supra* note 11, at 21.

112. *Id.* H.J. Heinz, the corporation which owns the StarKist Seafood Co., plans to label its tuna cans as "dolphin safe" in response to consumer concern regarding harm to dolphins. "Tuna Without Guilt," *TIME*, Apr. 23, 1990, at 63. This plan has subsequently been implemented.

113. Steiner, *supra* note 11, at 21.

114. *See id.*

115. Comment, *Dolphin Conservation*, *supra* note 68, at 703.

116. *Id.*

117. *Id.*

118. *See Animal Rights*, *supra* note 3, at 105.

119. *See Comment, International Aspects*, *supra* note 10, at 656-57.

120. *See id.*

challenged to reduce dolphin deaths.<sup>121</sup> Steps must be taken immediately as more than 300 dolphins will die today, tomorrow and every day until the international community takes action.<sup>122</sup>

*Kerry L. Holland\**

---

121. *Id.*

122. PHILLIPS & STEINER, *supra* note 32, at 45.

\* This Note is dedicated to my parents, Edward and Marilyn Holland. Their love and understanding have guided me throughout my years in law school. I am truly grateful for their support.