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The International Regulation of Small Cetaceans

CYNTHIA E. CARLSON*

Approximately sixty species of small cetaceans, or whales less than thirty feet in length, exist, including porpoises, dolphins, and killer whales. Because the primary focus of the International Whaling Commission (IWC) is the setting of commercial harvest levels and conservation measures for large cetaceans, nations have assumed that the IWC's jurisdiction is limited to the regulation of larger species. Nowhere, though, in the IWC Convention or in any rule or regulation is the term "whale" defined. As the harvest levels of large cetaceans have dropped over the last few years, those of small cetaceans have increased dramatically. This article focuses on the need to establish and implement an international regulatory regime for the conservation and management of these "other" species which are currently without international protection and which, biologically speaking, may be in need of regulation.

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INTRODUCTION

Within the more comprehensive earth-space process of authoritative decision, the international law of the sea is, however, a clearly distinguishable component process, characterized by its own relatively unique features. These distinctive features may be observed in varying phases of the process of interaction by which peoples exploit the oceans and their resources, of the process of claim by which authority is invoked for the regulation of interactions, and of the process of decision by which authority is allocated and exercised in such regulation.¹

As Judge Friendly began in the well-known *Frigaliment* chicken contract case,² the issue to be addressed is what is a "whale"? What is a "small whale"? Are there any differences besides those relating to size? If not, why are large whales the primary focus of international conservation and management schemes, even though both large and small whales are exploited in varying degrees and exploited by coastal State jurisdictional claims?

Whales (cetaceans) are found in all the world's oceans, and inhabit all ocean areas from bays and coastal regions to the high seas. Due to their size, the highly migratory nature of some species, their advanced evolutionary status, and their unique biological characteristics, whales have a distinct significance to man and have been set apart from other animals in several ways. For instance, whales have been identified as a symbol of the ecology movement that began in the late 1960's and have been elevated to "a special status in national and international law."³ Whale protection therefore has become a sensitive international issue, which goes far beyond many of the ethical aspects involved.⁴

The International Whaling Commission (IWC), the recognized regulator of the world's whales, was established in 1946 to protect and manage whale stocks for the whaling industry. With the decline of the world's commercial whaling fleets, the IWC has gradually phased out many of its industry-oriented traditions and has become more conservation-oriented.⁵ Since the primary focus of the whaling industry has been harvesting large whales, the IWC's jurisdiction has been limited to these larger animals. Nowhere, though, in any treaty, regulation, or rule of procedure, is the term "whale" defined. As the harvest levels of large whales have decreased those of other

1. M. McDOUGAL & W. BURKE, *THE PUBLIC ORDER OF THE OCEANS* vii (1962).

2. *Frigaliment Importing Co., Ltd. v. B.N.S. Int'l Sales Corp.*, 190 F. Supp. 116 (S.D.N.Y. 1960).

3. "Legal Aspects of Conservation of Marine Mammals" 5 (Report of Workshop, Quissac, France, Dec. 1979) (Center for Environmental Education Monograph Series, 1981) [hereinafter cited as 1979 Workshop].

4. See Scarff, *Ethical Issues in Whale and Small Cetacean Management*, 2 ENVTL. ETHICS 241 (1980).

5. See, e.g., M'Gonigle, *The "Economizing" of Ecology: Why Big, Rare Whales Still Die*, 9 ECOLOGY L.Q. 119 (1980).

cetacean species, notably small whales, have increased. An effective international regulatory regime is essential to ensure the adequate conservation and management of these "other" exploited species, most of which are currently without protection.

The "whale" issue also is sensitive within the developing customary and conventional international law of the sea, particularly concerning coastal State resource rights and the establishment of 200-mile exclusive economic zones. Even though coastal States have taken greater responsibility for resource protection within the 200-mile zones, "[t]he extended jurisdictions may impede conservation and management . . . by isolating large ocean areas previously subject to international authority."⁶ The question arises whether individual coastal states or an international body should regulate other than large cetaceans, many of which are highly migratory. The problem is compounded when such species inhabit ocean areas under the jurisdiction of two or more states, or inhabit coastal areas and the high seas.

Thus, the issue to be addressed is not what is a whale. Rather, the issues are whether an acceptable and effective international regulatory regime can be developed for these "other" cetacean species, and if so, whether any existing institution can implement the regime. This article examines the current status of small whales, from both biological and legal viewpoints, and suggests that a regulatory regime for these "other" species must be based upon biological needs and threats imposed by fishing procedures. This article also assesses whether the IWC has the authority to include these "other" species in its present regulatory framework (that is, whether it makes any difference that the IWC is not entitled the "International Cetacean Commission") and examines whether the IWC's 1982 decision to impose a moratorium on all commercial whaling after 1986 renders the "other" cetacean species issue moot. This article further examines the legal status of regulating cetaceans by international organizations both within and beyond 200-mile exclusive economic zones. The article concludes by recommending a framework, applicable to all cetaceans taken directly, to determine *when* international regulatory protection is needed. Under this framework, the IWC would be appropriate to exercise this regulatory authority. The framework is based upon biological need and other factors, and is applied on a species-by-species, case-by-case basis for species within or beyond

6. Nafziger, *Global Conservation and Management of Marine Mammals*, 17 SAN DIEGO L. REV. 591, 592-93 (1980).

the exclusive economic zone.

SMALL CETACEANS: BIOLOGICAL STATUS AND NEEDS

Of the 116 species of marine mammals, 75 belong to the Order Cetacea, which includes whales, dolphins, and porpoises. Within the Order are two suborders: the Suborder Mysticeti, the baleen whales, accounting for 10 of the 75 species; and the Suborder Odontoceti, the toothed whales, accounting for the remaining species.⁷ The Or-

7. Within the Suborder Mysticeti are three families: the Family Eschrichtiidae (which includes the gray whale); the Family Balaenopteridae (the minke whale, Bryde's whale, sei whale, fin whale, blue whale, and humpback whale); and the Family Balaenidae (the right whale, bowhead whale, and pygmy right whale). Within the Suborder Odontoceti are five families: the Family Platanistidae (which includes five species of mainly freshwater dolphins); the Family Delphinidae (37 species of mainly dolphins and porpoises, including the bottlenose dolphin, spinner dolphin, false killer whale, longfin and shortfin pilot whale, killer whale, harbor porpoise, and Dall's porpoise); the Family Monodontidae (two species: the beluga or white whale and the narwhal); the Family Physeteridae (three species: the sperm whale, pygmy sperm whale, and dwarf sperm whale); and the Family Ziphiidae (18 species including the bottlenose and beaked whales). See RICE, A LIST OF THE MARINE MAMMALS OF THE WORLD 6-12 (U.S. Dep't of Commerce, NOAA Technical Report NMFS SSRF-711, April 1977). For an excellent biological account of the world's cetaceans, see R. ELLIS, THE BOOK OF WHALES (1980); R. ELLIS, DOLPHINS AND PORPOISES (1982).

The use of the terms "dolphin" and "porpoise" should also be clarified. To quote McNally:

[t]he words *dolphin* and *porpoise* cause considerable confusion. To begin with, *dolphin* sometimes refers not to a cetacean but a fish, *Coryphaena*, called *mahi-mahi* in Hawaii. Dolphins, according to many taxonomists, belong to the cetacean family Delphinidae and porpoises to the Phocoenidae. Unfortunately, the distinctions between these families, however sensible they are to a professional, are less than readily apparent to the lay eye. Dolphins have a prominent beak, a triangular dorsal fin, and peglike teeth. Porpoises lack the beak — as indeed do certain dolphins — have a low dorsal fin — which is entirely absent in the right whale dolphin — and their teeth are flattened and spadelike — except for the Dall's porpoise, whose teeth look like a dolphin's. To thicken this murk further, some dolphins are hardly ever called dolphins — the orca and pilot whale, for example — while fishermen refer to dolphins and porpoises alike as porpoises.

These days scientists, like fishermen, refer to all small cetaceans as *porpoises* and call *dolphins* only those species that belong to the family Delphinidae. This tin-eared practice elevates an undeserving word to generic standing. *Porpoise* derives ultimately from the Latin *porcus-piscis*, meaning pig-fish and referring either to the porpoise's grunting or to the eating quality of its flesh. *Dolphin*, on the other hand, comes from the Greek *delphus*, meaning womb and referring both to the dolphin's womblike shape and to its home in the sea, the origin of all life. *Porpoise* smells of fishmongers; *dolphin* speaks of magic. *Dolphin* is the right and fitting word for the small cetaceans.

R. MCNALLY, SO REMORSELESS A HAVOC OF DOLPHINS, WHALES AND MEN 10-11 (1981).

Levin has noted that dolphins and porpoises "are so similar physiologically, behaviorally, and morphologically, that scientists have come to use the names interchangeably." Levin, *Toward Effective Cetacean Protection*, 12 NAT. RESOURCES LAW. 549, 555 (1979). Taxonomically speaking, dolphins and porpoises both belong to the Family Delphinidae of the Order Odontoceti. Rice has stated that "[t]he true porpoises (*Phocoena*, *Neophocaena*, and *Phocoenoides*) constitute a well-marked group that is sometimes accorded a family rank (Phocoenidae)." RICE, *supra* at 7. However, he has

der Cetacea also can be subdivided into large and small "whales," a classification system based upon a somewhat arbitrary size distinction resulting from the history and tradition of the whaling industry.⁸ According to one commentator,

[s]mall cetaceans are generally defined as those species not traditionally taken by the whaling industry. This list includes some beaked whales over 40 feet in length and one species, the minke whale, which has been taken by pelagic whaling operations since 1970 and is currently under IWC management. Small cetacean fisheries are generally considered to be those operations which do not capture sperm whales or the larger balaenopterids, even if they do catch minke whales.⁹

Biologically speaking, however, more differences may exist between the two suborders of the Order Cetacea than between large and small "whales."¹⁰

Cetaceans, as all other marine mammals, have developed unique biological characteristics to survive in ocean and coastal environments. Generally, cetaceans are worldwide in distribution and many species are highly migratory. They occupy high trophic levels and have comparatively low reproductive rates. Even though cetaceans have relatively long life spans, they have slow maturation rates because of the prolonged dependence of juveniles on parents. Cetaceans produce unique, commercially valuable products and by-products. Their dependence upon the air-ocean interface makes them especially vulnerable to human "depradation,"¹¹ despite their large brains.¹²

All small cetacean species are fusiform or spindle-shaped animals, with a single blowhole and paired pectoral fins. They range from 5 to 30 feet in length, weigh 65 pounds to 10 tons, and have 8 to 250

listed both under the Family Delphinidae, indicating that "[i]t appears that the specific classification of the Odontoceti is a approaching consensus." *Id.* at 1.

For the sake of clarity, this article will refer to members of the Family Delphinidae as porpoises unless reference is made to a particular species of dolphin.

8. According to the latter scheme, all species of the Suborder Mysticeti except the minke whale are considered large cetaceans, while all species of the Suborder Odontoceti except the sperm whale are viewed as small cetaceans. For a list of recognized small cetacean species, see *infra* Appendix I.

9. Scarff, *The International Management of Whales, Dolphins, and Porpoises: An Interdisciplinary Assessment* (pt. I), 6 *ECOLOGY L.Q.* 323, 373 n.279 (1977) [hereinafter cited as Scarff, pt. I].

10. Rice has noted that "the differences between the [Odontoceti and the Mysticeti] are as great as those between some of the universally recognized orders of mammals." RICE, *supra* note 7, at 1.

11. 1979 Workshop, *supra* note 3, at 4-5.

12. See Zihlman & Lowenstein, *Delphinus Sapiens: How Human Are Dolphins?* 14 *OCEANS* 2 (Mar.-Apr. 1981).

teeth.¹³ Small cetaceans differ from large cetaceans by their tendency to inhabit coastal regions rather than the high seas, and "their general dependence on fish and/or squid causes them to have more tropical distributions and to migrate over shorter distances . . ."¹⁴ Because small cetaceans tend to be more social and are found in much larger schools than large cetaceans, "the sociability of these mammals exposes them more to human activity."¹⁵ In addition, small cetaceans have more variable reproductive patterns than large cetaceans, making them "very vulnerable to alterations in the ocean environment."¹⁶ Further, since toothed whales occupy a higher trophic level than baleen whales, "many small cetaceans can be used as indicators of marine pollution due to their position at the top of oceanic food chains."¹⁷

One commentator described a major issue regarding small cetaceans as follows:

During the last few years, conservationists and scientists have become increasingly aware of the widespread and serious problems involving the conservation of small cetaceans. Dolphins, porpoises, and small toothed whales are killed in substantial numbers in fisheries for them and "incidentally" in fisheries for salmon, sharks, and other fish [such as yellowfin tuna].¹⁸

13. R. ELLIS, *DOLPHINS AND PORPOISES* 8 (1982).

14. Scarff, pt. I, *supra* note 9, at 375.

15. Travaglio & Clement, *International Protection of Marine Mammals*, 5 COLUM. J. ENVTL. L. 199, 201 (1979).

16. *Id.*

17. Scarff, pt. I, *supra* note 9, at 377. In fact, it has been noted:

In recent years more data has been gathered on the worldwide distribution and progressive concentration through trophic levels of organochlorinated pesticide residues, polychlorinated biphenyls, and heavy metals in marine ecosystems. Concentrations of these compounds are especially high in some coastal areas, and their evident accumulation in small cetaceans occurring in these areas should be viewed with concern.

International Whaling Commission/Scientific Committee/Subcommittee on Small Cetaceans, *Report of the Meeting on Smaller Cetaceans (1974)*, 32 J. FISH. RESOURCES BOARD CAN. 889, 891 (1975) [hereinafter cited as *1974 Report*].

18. Scarff, pt. I, *supra* note 9, at 372-73. Scarff also states that "[v]irtually every common species of small cetacean is captured directly or incidently in one or more fisheries." *Id.* at 378. The term "direct fisheries" refers to those operations in which small cetaceans are the target species and the taking is intentional; "incidental fisheries" are those in which small cetaceans are taken in addition to the capture of a different target species, which is most often a species of fish. The term "incidental" is a term of art and is somewhat misleading as some incidental takes are in reality *deliberate*, such as the setting of purse seine nets on schools of porpoise during commercial yellowfin tuna fishing operations in the eastern tropical Pacific Ocean (tuna are known to school under the porpoises). Other incidental takes are *accidental*, such as the salmon-Dall's porpoise fishery in the North Pacific (Dall's porpoise are taken as an unintended by-catch). See *infra* notes 22-32 and accompanying text.

According to the regulations promulgated by the Secretary of Commerce under the Marine Mammal Protection Act of 1972, 16 U.S.C. §§ 1361-1407 (1982), "incidental catch" is defined as "the taking of a marine mammal (1) because it is directly interfering with commercial fishing operations, or (2) as a consequence of the steps used to secure the fish in connection with commercial fishing operations . . ." 50 C.F.R. § 216.3 (1982). Such a definition thus includes a direct as well as an indirect component.

Although incidental small cetacean fisheries result in a higher level of small cetacean mortality, direct fisheries, such as drives and net fisheries, nonetheless have a significant negative impact upon many small cetacean populations.¹⁹ Aboriginal whaling, or whaling by indigenous people for subsistence, also comprises a significant portion of direct small cetacean fisheries.²⁰ Aboriginal whaling for small cetaceans occurs most notably by aborigines in Canada's northeastern provinces and Alaskan Eskimos for belugas (or white whales) and narwhals, and by inhabitants of Denmark's Faroe Islands for pilot whales.²¹

In terms of incidental fisheries, it has been stated that "incidental captures, mainly by purse seines, gill nets and the like, appear to account for the greatest number of cetaceans killed at the present time."²² One large-scale incidental fishery occurs in the eastern tropical Pacific during commercial yellowfin tuna fishing operations using purse seine nets, in which three main target species of small cetaceans are taken incidentally, yet deliberately.²³ Before the passage of the Marine Mammal Protection Act (MMPA),²⁴ the United States share of the porpoise mortality level from this fishery was

19. For example, in 1981 members of the IWC reported the taking of approximately 112,006 small cetaceans, of which 35,205 were taken directly, 76,799 were taken indirectly, and two were taken by live capture methods. 32 REP. INT'L WHAL. COMM'N 125 (1982). See also *infra* Appendix II.

Not all small cetaceans taken by members of the IWC are reported, however, and several States that take small cetaceans are not members of the IWC. For example, Turkey, a non-member country, has conducted a large-scale direct fishery for common dolphins and harbor porpoises in the Black Sea. In 1983, in response to international conservation lobbying efforts to end this annual harvest of tens of thousands of animals, the Turkish Government issued a decree banning the hunting of dolphins and porpoises from mid-April, 1983 for at least one year. Report of the Scientific Committee, IWC/35/4 at 50 (1983).

20. According to the Report of the [IWC] *Ad Hoc* Technical Committee Working Group on Development of Management Principles and Guidelines for Subsistence Catches of Whales by Indigenous (Aboriginal) Peoples, "aboriginal subsistence whaling" means "whaling for purposes of local aboriginal consumption carried out by or on behalf of aboriginal, indigenous, or native peoples who share strong community, familial, social and cultural ties related to a continuing traditional dependence on whaling and on uses of whales." "Subsistence catches" are defined as "catches of whales by aboriginal subsistence whaling operations." IWC/33/14 at 3 (1981).

21. Scarff, pt. I, *supra* note 9, at 378-79.

22. E. MITCHELL, PORPOISE, DOLPHIN AND SMALL WHALE FISHERIES OF THE WORLD: STATUS AND PROBLEMS 8 (IUCN Monograph No. 3, 1975).

23. The three species are the spotted porpoises (*Stenella attenuata*), the spinner porpoise (*S. longirostris*), and the white-bellied dolphin (*Lagenodelphis hosei*). This method of purse seine fishing for yellowfin tuna is known as taking tuna "on porpoise."

24. 16 U.S.C. §§ 1361-1407 (1982).

more than 400,000 animals per year.²⁵ The tuna-porpoise issue provided the major impetus for the passage of the MMPA in 1972.²⁶ Since then, due to the act's incidental take requirements and to gradually reduced porpoise quota levels,²⁷ the porpoise mortality and serious injury level caused by United States fishing efforts has been reduced substantially. By 1981, Congress noted:

[S]ince the passage of the [A]ct, the annual loss of porpoise has been reduced from more than 400,000 animals to approximately 20,000, a reduction of more than 95 percent, due to improvements in fish gear and in fishing techniques developed by [the National Oceanic and Atmospheric Administration (NOAA)] in cooperation with the tuna industry. NOAA has recently established a 5-year industry quota of 20,500 porpoises per year, an economically and technologically achievable level which represents a 60 percent reduction in porpoise mortality since 1978.²⁸

At the end of 1982, the total estimated mortality and serious injury rate for the year was 22,736 animals.²⁹ In 1983, the mortality rate was less than half the 1982 rate, with approximately 10,000 animals

25. See 1983 ANN. REP. OF THE MARINE MAMMAL COMM'N 43 (Jan. 1984). At least seven other States contribute significantly to total annual porpoise mortality in the eastern tropical Pacific. These States include Canada, Costa Rica, France, Japan, Mexico, Nicaragua, and Panama. See generally, J. JOSEPH & J. GREENOUGH, INTERNATIONAL MANAGEMENT OF TUNA, PORPOISE, AND BILLFISH: BIOLOGICAL, LEGAL, AND POLITICAL ASPECTS (1979).

26. H.R. REP. NO. 707, 92d Cong., 1st Sess. 15, reprinted in [1972] U.S. CODE CONG. & AD. NEWS 4144. See also Coggins, *Legal Protection for Marine Mammals: An Overview of Innovative Resource Conservation Legislation*, 6 ENVTL. L. 1,14 (1975); Gaines & Schmidt, *Wildlife Population Management Under the Marine Mammal Protection Act of 1972*, 6 ENVTL. L. REP. (ENVTL. L. INST.) 50,096 (1976); M. BEAN, THE EVOLUTION OF NATIONAL WILDLIFE LAW 324-67 (1977).

27. For an analysis of the tuna-porpoise controversy and the corresponding requirements of the MMPA, see Andersen, Anderson, & Searles, *The Tuna-Porpoise Dilemma: Is Conflict Resolution Attainable?* 18 NAT. RESOURCES J. 505 (1978); Erdheim, *The Immediate Goal Test of the Marine Mammal Protection Act and the Tuna/Porpoise Controversy*, 9 ENVTL. L. 283 (1979); Nafziger & Armstrong, *The Porpoise-Tuna Controversy: Management of Marine Resources After Committee for Humane Legislation v. Richardson*, 7 ENVTL. L. 223 (1977); and Comment, *Dolphin Conservation in the Tuna Industry: The United States' Role in an International Problem*, 16 SAN DIEGO L. REV. 665 (1979).

28. S. REP. NO. 63, 97th Cong., 1st Sess. 2 (1981). Section 1371 of the MMPA was amended in 1981 to reflect the significant progress made by the tuna industry in reducing porpoise mortality in the eastern tropical Pacific. 16 U.S.C. § 1361 (1982). For the legislative history of this amendment, see H.R. REP. NO. 228, 97th Cong., 1st Sess. 17 reprinted in 1981 U.S. CODE CONG. & AD. NEWS 1458, 1467. For additional regulations concerning the incidental take of marine mammals during commercial fishing operations, see 50 C.F.R. § 216 (1982).

29. 1982 MARINE MAMMAL COMM'N ANN. REP. 39 (Jan. 1983). The report noted that the progress made in recent years in reducing porpoise mortality levels was slowed in 1982 possibly because of several high mortality sets. *Id.* at 38-40. The report also lists the total United States estimated porpoise mortality and serious injury since 1972 associated with United States commercial yellowfin tuna fishing vessels:

taken.³⁰

In the North Pacific, the Japanese take Dall's porpoise incidentally, yet accidentally during salmon gillnet fishing operations.³¹ In 1981, the Japanese agreed to limit their take to no more than 5,500 Dall's porpoise per year for the next three years.³² In the North Atlantic, porpoises are also taken incidentally during salmon gillnet fishing and in cod traps and mackerel nets.³³

In addition to small cetacean problems resulting from direct and incidental fisheries, other problems are caused by competition between small cetaceans and man for the same resources.³⁴

<u>year</u>	<u>estimated kill and serious injury</u>
1972	368,600
1973	206,697
1974	147,437
1975	166,645
1976	108,740
1977	25,452
1978	19,366
1979	17,938
1980	15,305
1981	18,780
1982	22,736

Id. at 39.

The Marine Mammal Commission, established under Title II of the MMPA, is an independent agency of the Executive Branch charged with developing, reviewing, and recommending federal actions and policies regarding marine mammal protection and conservation. *Id.* at 1.

30. Telephone interview with R. Roe, Director of NOAA's Office of Protected Species and Habitat Conservation, (Nov. 1983).

31. See generally The International Convention for the High Seas Fisheries of the North Pacific Ocean of 1952, 4 U.S.T. 380, T.I.A.S. No. 2786, 205 U.N.T.S. 65 and its 1978 Protocol, 30 U.S.T. 1095, T.I.A.S. No. 9242, which govern this salmon gillnet fishery. The North Pacific Fisheries Act of 1954, 16 U.S.C. §§ 1021-1035 (1982), in connection with the 1952 Convention, permits the Japanese "to fish for salmon both within and outside the United States' 200-mile Fishery Conservation Zone subject . . . to a coordinated United States-Japan research and development program on incidental taking of Dall's porpoise and other marine mammals." MARINE MAMMAL COMM'N ANN. REP., *supra* note 29, at 43. See also U.S. DEP'T OF COMMERCE, 1980-1981 ANN. REP. DALL PORPOISE-SALMON RESEARCH (Jan. 1982); U.S. DEP'T OF COMMERCE, 1981-1982 ANN. REP. DALL PORPOISE-SALMON RESEARCH (Jan. 1983). Such a research program is vital, as the incidental taking of Dall's porpoise and other marine mammals during salmon gillnet fishing operations within the United States fishery conservation zone was exempt from the requirements of the MMPA until June 9, 1981. See 16 U.S.C. § 1034 (1982). See also 1978 U.S. CODE CONG. & AD. NEWS 1080.

32. MARINE MAMMAL COMM'N ANN. REP., *supra* note 29, at 43. During the 1982 season, 4,187 Dall's porpoise were taken incidentally in the course of Japanese gillnet salmon fishing operations within the United States zone. A total of 5,903 were taken both within and beyond the United States zone. *Id.* at 45.

33. Scarff, pt. I, *supra* note 9, at 380.

34. "Small cetaceans are much more likely than whales both to interfere with

For example, small cetaceans eat large amounts of several commercially important fish species. "Common dolphins off the California coast annually consume an estimated 300,000 short tons of anchovies, or three times the quota allowed commercial fishermen. Belugas feed heavily on spawning salmon at the mouths of rivers in the North American Arctic."³⁵ Small cetaceans also interfere with commercial fishery operations by feeding on fish caught in fishermen's nets, which in turn damages fishing gear.³⁶

These small cetacean problems are complicated by the scarcity of data on these species.³⁷ Lack of biological information leads to management uncertainty with possibly far-reaching impacts. For example, knowledge of the approximate past and present status of populations and stocks is essential to estimate how present exploitation rates are affecting the populations and stocks. In addition, "little research or consideration has been given to such factors as the impact of the periodic extermination of individuals or groups of these highly socialized animals upon reproductive rates. . . . Nor has the potential effect of man's competition for those resources used by whales as food been evaluated."³⁸

In 1973, the Scientific Committee of the IWC recommended that a special subcommittee be established to clarify small cetacean taxonomy, to identify small cetacean research needs, and to assess the status of the world's small cetacean populations. The subcommittee met in 1974 and soon after issued a comprehensive report³⁹ which concluded:

with the exception of very few species, [the status of stocks] is not known. Very little data has been collected to date. Stocks of many small cetaceans are considered, however, to be at unexploited levels. There is evidence of depletion of stocks, e.g., in some definite localities such as inshore stocks of

human activities such as fisheries and to compete indirectly for habitat." *Id.* at 389.

35. *Id.* at 414.

36. For example, "fish stealing" problems occur in Iceland, where killer whales interfere with herring fisheries; in Florida, where bottlenose dolphins feed on Spanish mackerel, bluefish, pompano, and king mackerel; in the Mediterranean, where dolphins interfere with several fisheries; and in the Indian and Pacific Oceans, where false killer whales feed on longline tuna and billfish. *Id.* at 414-15.

37. "[T]here are few small cetacean species for which basic data or estimates of important biological parameters are available Only a handful of the small cetaceans are reasonably well-known . . . —less than ten stocks of even fewer species. For the remaining fifty to sixty-odd species, little to virtually nothing is known." E. MITCHELL, *supra* note 22 at 7.

38. Dobra, *Cetaceans: Litany of Cain*, 7 B.C. ENVTL. AFF. L. REV. 165, 173 (1978).

39. See 1974 Report, *supra* note 17. In 1976, the IWC's Scientific Committee and the Subcommittee on Small Cetaceans recommended that the 1974 Report's list of smaller cetaceans of the world "be recognized and accepted, for administrative and reference purposes, as the working list of smaller cetaceans of the world" by the IWC. The recommendation was adopted, and the list continues to be authoritative. 27 REP. INT'L WHAL. COMM'N. 480 (1977). See also *infra* Appendix I.

pilot whales in Newfoundland and narwhals in the northeast sector of Greenland. Other stocks with a long history of exploitation are apparently not depleted, e.g., pilot whales off the Faeros.⁴⁰

Dr. Edward Mitchell, in his 1975 treatise on small cetaceans, agreed with the IWC that "[t]he study of small cetaceans — their biology, exploitation and present management — is now of greater importance than the study of large whales, from the view point of survival of species and of maintenance, at present levels, of stocks being fished at the present time."⁴¹ Mitchell claimed that biological uncertainty apparently was the rule and not the exception in most small cetacean matters, from stock distribution to population assessment to exploitation rates.

As a result of his research, Mitchell has gone one step beyond identifying small cetacean needs. He has established from catch data compiled by the International Bureau of Whaling Statistics⁴² four categories of small cetacean species "based on a combination of assumptions about the vulnerability of the stocks, the lack of precise knowledge of the individual lifehistory of all species, and present mortality in the stocks due to human activities. . . ."⁴³ Mitchell's

40. 1974 Report, *supra* note 17, at 890-91. "Depletion" is defined by the MMPA as a species or population stock (1) that is determined to be below its optimum productivity level, see 16 U.S.C. § 1362(8) (1982), or (2) that is listed as an endangered or threatened species under the Endangered Species Act of 1973, 16 U.S.C. § 1532(b) (1982).

The Report of the subcommittee also contains a systematic overview of all small cetacean species, which includes information, if available, on the systematics of each species and its distribution, the number and distribution of stocks, life history parameters, feeding and nutritional requirements, behavioral features, past and present exploitation rates, possible future exploitation rates, the current status of stocks (including population estimates and trends), and the relation of each species or stock to its habitat (including the potential effects of pollution and other man-induced impacts). See 1974 Report, *supra* note 17, at 891-945.

41. E. MITCHELL, *supra* note 22, at 7.

42. The Bureau of International Whaling Statistics is maintained by the Norwegian government and is recognized as the official body responsible for providing whaling statistics to the IWC. The Bureau's headquarters are in Sandefjord, Norway.

43. E. MITCHELL, *supra* note 22, at 11. Category A includes "[s]pecies that are fished heavily now, or have been in the past, and for which there is urgent need of population assessment." *Id.* at 12. This category includes several species of small to medium size whales and several species of dolphins and porpoises, including the northern bottlenose whale, Dall's porpoises, the spotted porpoise, the minke whale, and the striped dolphin.

Category B includes species "which have been taken locally in only small to moderate numbers, but for which such numbers may represent a significant impact on the level of these stocks." *Id.* at 12-13. Mitchell includes the narwhal, the killer whale, the bottlenose dolphin, Baird's beaked whale, and three species of freshwater dolphins in this category.

"Species which have been directly or incidentally exploited at apparently low levels, but which do not now seem to be of much commercial interest or other use" are included

categorization of small cetaceans and the IWC subcommittee's systematic overview of the included stocks and species are important in the development of necessary protection and management measures for these species. In addition, another author has pointed out that "[a]s the availability of larger whales continues to decline, it is inevitable that the international whaling community will look to the small cetaceans as a source of revenue."⁴⁴ This could promote the further expansion of small cetacean fisheries. Although the taking of small cetaceans results in a lower value per animal taken, the catch per unit effort is significantly lowered because small cetaceans are found in much larger schools than large cetaceans. In addition, small cetacean fisheries are more flexible because no specialized equipment nor large capital investment is involved. If small cetacean stocks or product demands decline, an easy switch can be made to noncetacean fishing.⁴⁵ On this basis, "the opportunity cost of conservation-oriented management of small cetacean fisheries is probably less than that of similar management of whales."⁴⁶ Therefore, the opportunity costs involved in small cetacean fisheries could also promote industry expansion and higher catch levels. To further complicate the economic problems involved, "[t]he small cetacean fisheries have received far less economic study than the whaling industry. The size of the industries, their profits, and their economic goals are generally unknown or poorly estimated."⁴⁷

These and other issues concerning the population status, protection, and utilization of small cetaceans may be more serious than those concerning large cetaceans. Thus, "[t]he small cetacean fisheries present complicated and diverse conservation problems. There is a manifest need for greater data concerning both the biology of the species involved and the scope of the industries. There is also an obvious need for international regulation in some form."⁴⁸

in Category C. The species listed are the false killer whale, the southern bottlenose whale, Risso's dolphin, and several other dolphin species.

Category D contains "[s]pecies not generally known to have been taken, or to presently be captured, except for scientific purposes or uniquely and accidentally." *Id.* at 13-14. The species listed include the pygmy sperm whale, the hour-glass dolphin, and various species of beaked whales.

44. Levin, *supra* note 7, at 561. Levin notes further that "[a]ll of the products heretofore derived from the larger whales may be derived from the smaller cetaceans." *Id.* The meat obtained from small cetaceans is of a somewhat different quality than that from large cetaceans. Dolphin meat, however, is popular in Japan and elsewhere.

45. Scarff, *The International Management of Whales, Dolphins, and Porpoises: An Interdisciplinary Assessment* (pt. II), 6 *ECOLOGY L. Q.* 571, 589 (1977) [hereinafter cited as Scarff, pt. II].

46. *Id.*

47. *Id.* at 588.

48. Scarff, pt. I, *supra* note 9, at 380.

THE ROLE OF THE IWC IN THE REGULATION OF SMALL
CETACEANS

The International Convention for the Regulation of Whaling of 1946,⁴⁹ which superseded earlier international whaling agreements,⁵⁰ established the IWC for the continuing review of the world's whale stocks. From November 10, 1948, when the convention entered into force until now, nations have recognized the IWC as the only legitimate international organization authorized to regulate whales.⁵¹

The failure of earlier international agreements to protect whale stocks adequately and major changes in the whaling industry after World War II caused the 1946 Convention to be negotiated with both whale conservation and the whaling industry in mind. This dual purpose is reflected in the preamble, which recognizes that whales, as international resources, have been subject to overfishing and yet are capable of being harvested in increasing numbers when properly conserved and regulated. The preamble also makes clear the negotiating States' intention to establish an international regime with broad authority to protect *all* depleted whale stocks and effectively regulate exploitable stocks.⁵²

49. International Convention for the Regulation of Whaling, Dec. 2, 1946, ratified by the United States July 18, 1947, entered into force Nov. 10, 1948, 62 Stat. 1716, T.I.A.S. No. 1849, 161 U.N.T.S. 72 (1946) [hereinafter cited as 1946 Convention]. The original 15 signatories to the Convention were Argentina, Australia, Brazil, Canada, Chile, Denmark, France, the Netherlands, New Zealand, Norway, Peru, South Africa, the Soviet Union, the United Kingdom, and the United States.

50. See Convention for the Regulation of Whaling, concluded Sept. 24, 1931, 49 Stat. 3079, T.S. No. 880, 155 L.N.T.S. 349; International Agreement for the Regulation of Whaling, signed June 8, 1937, 52 Stat. 1460, T.S. No. 993, 190 L.N.T.S. 79; Protocol for the Regulation of Whaling, done June 24, 1938, 53 Stat. 1794, T.S. No. 944, 196 L.N.T.S. 131; Protocol to the International Agreement for the Regulation of Whaling, signed Nov. 26, 1945.

51. As of July, 1983, the IWC had 40 members: Japan, the Soviet Union, Norway, Denmark, Spain, Chile, Peru, Iceland, Brazil, the Republic of Korea (all commercial whaling countries); the United States, the United Kingdom, Australia, New Zealand, Mexico, France, the Netherlands, Sweden, Argentina, the Seychelles, South Africa, Uruguay (all non-commercial whaling countries); Jamaica, St. Lucia, St. Vincent, India, the People's Republic of China, Costa Rica, the Philippines, Mauritius, Finland, Oman, Switzerland, Monaco, Egypt, Kenya, Antigua-Barbuda, Belize, the Federal Republic of Germany, and Senegal (all non-commercial whaling countries and new members of the IWC). Canada withdrew from the IWC in 1981. See *infra* notes 119-21 and accompanying text. Dominica withdrew in 1982.

52. 1946 Convention, *supra* note 49, at preamble. Specifically, the preamble provides:

The Governments whose duly authorized representatives have subscribed thereto,

Recognizing the interest of the nations of the world in safeguarding for future generations the great natural resources represented by the whale stocks;

To carry out the purposes and policies of the 1946 Convention, article II formally establishes the IWC, composed of one member from each contracting government and accompanying experts and advisors.⁵³ The drafters of the Convention designed the IWC as an autonomous body,⁵⁴ with the power to “set up, from among its own members and experts or advisors, such committees as it considers desirable to perform such functions as it may authorize.”⁵⁵

Article IV authorizes the IWC, in its assessment of the whale stocks’ status to:

- (a) encourage, recommend, or if necessary, organize studies and investigations relating to whales and whaling; (b) collect and analyze statistical information concerning the current condition and trend of the whale stocks and the effects of whaling activities thereon; [and] (c) study, appraise, and disseminate information concerning methods of maintaining and increasing the populations of whale stocks.⁵⁶

The IWC is also authorized to publish, independently or with other organizations such as the International Bureau for Whaling Statistics, reports, statistics, scientific data, and other whale and whaling-

Considering that the history of whaling has seen over-fishing of one area after another and of one species of whale after another to such a degree that it is essential to protect all species of whales from further over-fishing;

Recognizing that the *whale stocks are susceptible of natural increases* if whaling is properly regulated, and that increases in the size of whale stocks will permit increases in the number of whales which may be captured without endangering these natural resources;

Recognizing that it is in the common interest to *achieve the optimum level of whale stocks as rapidly as possible* without causing widespread economic and nutritional distress;

Recognizing that in the course of achieving these objectives, *whaling operations should be confined to those species best able to sustain exploitation* in order to give an interval for recovery to certain species of whales now depleted in numbers;

Desiring to *establish a system of international regulation* for the whale fisheries to insure proper and effective conservation and development of whale stocks on the basis of the principles embodied in the provisions of [earlier international agreements governing whaling]; and

Having decided to conclude a convention to *provide for the proper conservation of whale stocks and thus make possible the orderly development of the whaling industry*;

Have agreed as follows . . .

Id. (emphasis added).

53. *Id.* art. III, para. 1.

54. “The Commission shall elect from its own members a Chairman and Vice-Chairman and shall determine its own Rules of Procedure.” *Id.* art. III, para. 2. *See also* International Whaling Commission, Rules of Procedure and Financial Regulations (April 1981) [hereinafter cited as 1981 Rules of Procedure].

The IWC meets annually and has a permanent secretary and staff headquartered at the Red House, Station Road, Histon, Cambridge CB4 4NP, England.

55. 1946 Convention, *supra* note 49, art. III, para. 4. The IWC is currently composed of three standing committees: the Scientific Committee, the Technical Committee, and the Finance and Administration Committee. Ad hoc committees are appointed for limited purposes.

56. *Id.* art. IV, para. 1.

related information.⁵⁷

Article I deals with the jurisdiction and scope of the 1946 Convention. As mentioned earlier, nowhere in the Convention is the term "whale" defined. However, in terms of jurisdiction, Article I provides that "[t]his Convention applies to factory ships, land stations, and *whale catchers* under the jurisdiction of the Contracting Governments and to *all waters* in which whaling is prosecuted by such factory ships, land stations, and whale catchers."⁵⁸ Thus, the Convention applies to a broad variety of whaling operations of all agreeing parties and to "all waters," both coastal and high seas, in which such operations occur.

The 1946 Convention includes an attached Schedule⁵⁹ "implementing regulations" designed to reflect changing whale population levels and varying stock protection needs in accordance with the general purposes and policies of the Convention.⁶⁰ The Schedule of the

57. *Id.* art. IV, para. 2.

58. *Id.* art. I, para. 2 (emphasis added). "Whale catcher" is defined as "a ship used for the purpose of hunting, taking, towing, holding on to, or scouting for whales." *Id.* art. II, para. 3. In 1956, the definition of "whale catcher" was changed to include helicopters, other aircraft and ships "used for the purpose of hunting, taking, killing, towing, holding on to, or scouting for whales." Protocol to the International Convention for the Regulation of Whaling of 1946, art. II, para. 3, signed Nov. 19, 1956, ratified by the United States Aug. 30, 1957, entered into force May 4, 1959, 10 U.S.T. 952, T.I.A.S. No. 4228, 338 U.N.T.S. 366.

59. Article I states that the Convention includes "the schedule attached thereto which forms an integral part thereof. All references to 'Convention' shall be understood as including the said Schedule either in its present terms or as amended . . ." 1946 Convention, *supra* note 49, at art. I, para. 1.

60. Article V, which deals with the Schedule, provides:

The Commission may amend from time to time the provisions of the Schedule by adopting regulations with respect to the conservation and utilization of whale resources, fixing (a) protected and unprotected species; (b) open and closed seasons; (c) open and closed waters; (d) size limits for each species; (e) time, methods, and intensity of whaling (including the maximum catch of whales to be taken in any one season); (f) types and specifications of gear and apparatus and appliances which may be used; (g) methods of measurement; and (h) catch returns and other statistical and biological records.

. . . .

These amendments to the Schedule (a) shall be such as are necessary to carry out the objectives and purposes of this Convention and to provide for the conservation, development, and optimum utilization of the whale resources; (b) shall be based on scientific finding; (c) shall not involve restrictions on the number or nationality of factory ships or land stations, nor allocate specific quotas to any factory ship or land station . . . ; and (d) shall take into consideration the interests of consumers of whale products and the whaling industry.

Id. art. V, paras. 1, 2. While a simple majority is needed for most decisions by the IWC a three-fourths majority is necessary to amend the provisions of the Schedule. *Id.* art. III, para. 2.

Several other provisions of the 1946 Convention are worth noting. First, even if an

Convention is republished each year as amended and reorganized by the IWC at its most recent annual meeting. The Schedule consists of six main sections, each establishing rules and regulations for the provisions outlined in article V of the Convention. Part I of the Schedule is labeled as "Interpretation," and lists under the headings "Baleen whales" or "Toothed whales" the corresponding species of all large cetaceans and, of note, selected species of small cetaceans.⁶¹ Part I also includes a "General" heading under the term "small-type whaling" which was added in 1977.⁶²

Paragraph 10 of part II of the Schedule, labeled as "Classification of Stocks," is one of the most important sections of the Schedule, incorporating the "new management procedure" in the assessment of

amendment to the Schedule is approved by the requisite three-fourths majority vote, any contracting government may object to any amendment within 90 days of its approval. Once an objection is filed, the amendment "shall not become effective with respect to any Government which has so objected until such date as the objection is withdrawn." *Id.* art. V, para. 3.

Second, the IWC is given broad authority under Article VI to "make any recommendations to any or all Contracting Governments on any matters which relate to whales or whaling and to the objectives and purposes of this Convention." *Id.* art. VI. Articles VII and VIII require all Contracting Governments to transmit "statistical and other information required by this Convention in such form and manner as may be prescribed by the Commission," *id.* art. VII, the transmission of which shall be "at intervals of not more than one year." *Id.* art. VIII, para. 3. Article IX also provides that since "the continuous collection and analysis of biological data in connection with the operations of factory ships and land stations are indispensable to sound and constructive management of the whale fisheries, the Contracting Governments will take all practical measures to obtain such data." *Id.* art. IX, para. 4.

Finally, article IX addresses the duty of each contracting government to enforce the provisions of the Convention, to punish all infractions committed by persons or by vessels subject to its jurisdiction, and to report to the IWC the "full details of each infraction." *Id.* art. IX, para. 4. Ratification and withdrawal procedures are outlined in articles X and XIII, respectively. United States regulations implementing the Schedule as amended, appear at 50 C.F.R. Part I 351 (1983).

61. As in the Convention, nowhere in the Schedule is the term "whale" defined. However, both the minke whale and the pygmy right whale are listed. In addition, under "toothed whales," the following definitions are given:

"toothed whale" means any whale which has teeth in the jaws.

"beaked whale" means any whale belonging to the genus *Mesoplona*, or any whale known as Cuvier's beaked whale (*Ziphius cavirostris*), or Shepherd's beaked whale (*Tasmacetus shepherdi*).

"bottlenose whale" means any whale known as Baird's beaked whale (*Berardius bairdii*), Arnoux's whale (*B. arnuxii*), southern bottlenose whale (*Hyperoodon planifrons*), or northern bottlenose whale (*H. ampullatus*).

"killer whale" (*Orcinus orca*) means any whale known as killer whale or orca.

"pilot whale" means any whale known as long-finned pilot whale (*Globicephala melaena*) or short-finned pilot whale (*G. macrorhynchus*).

Schedule to the International Convention for the Regulation of Whaling, Feb., 1983, at para. 1 (B) [hereinafter cited as 1983 Schedule]. Even though certain small cetacean species are listed in the Schedule, these species remain either unclassified or classified with no set catch limit.

62. "Small-type whaling" is defined as "catching operations using powered vessels with mounted harpoon guns hunting exclusively for minke, bottlenose, beaked, pilot or killer whales." *Id.* para. 1(C).

whale stock exploitation levels. One commentator has noted that the "[i]ntroduction of the new management procedure has had the effect of increasing substantially the number of stocks which are now protected from exploitation, and of reducing the catch quotas for most of the others."⁶³ Specifically,

the "new management procedure" of the IWC is a set of rules for determining, on the basis of qualitative assessment of the stocks, whether whale stocks should be exploited, and, if so, at what level. It is a deliberate attempt to remove decisions as far as possible from the political arena, and it is probably a greater advance in this direction than has been achieved by any other international fisheries body.⁶⁴

Thus, the new management procedure is "a set of formalized rules to be applied by the Commission, on the basis of the advice from the Scientific Committee, in determining which stocks should be protected, and what the catch limits should be for those whose exploitation is allowed."⁶⁵ The procedure establishes three categories of whale stocks: sustained management stocks, initial management stocks, and protected stocks. The categories are then used to determine quotas.⁶⁶

63. K. ALLEN, CONSERVATION AND MANAGEMENT OF WHALES 29 (1980).

64. *Id.* at 83. Prior to 1974, when the new management procedure was adopted by the IWC, the number of baleen whales allowed to be taken was calculated in terms of blue-whale units. Basically, these units were determined according to the formula that one blue whale equalled two fin whales, or two and one-half humpback whales, or six sei whales. The blue-whale method lacked a sound scientific basis. In fact, the total number of allowable blue-whale units was often set arbitrarily and was subject to much political influence. Needless to say, many baleen whale stocks declined as a result of the blue-whale unit system.

The total commercial whaling quotas allowed by the IWC for the last 11 years are as follows:

<u>year</u>	<u>total commercial quota</u>
1973	37,500
1974	37,300
1975	32,578
1976	28,050
1977	23,520
1978	19,526
1979	15,656
1980	14,523
1981	14,070
1982	12,371
1983	9,390

The new management procedure has been instrumental in the gradual reduction of commercial whaling quotas, as the 1983 quota represents a 24 percent reduction from the 1982 quota and an 80 percent reduction from the 1973 quota.

65. K. ALLEN, *supra* note 63, at 28.

66. "Quotas are set at 90% of [maximum sustainable yield (MSY)] for all stocks at MSY level or above, and graded linearly from this to zero at the boundary with the

As a result of the 1946 Convention's emphasis on scientifically-based whale protection and management, and the broad authority given to the IWC to make scientifically-based recommendations to contracting governments,⁶⁷ the Scientific Committee has become an important part of the IWC. In addition, because amendments to the Schedule must "be based on scientific findings"⁶⁸ and all whale stocks must "be classified in one of three categories according to the

protection stocks." *Id.* at 29. See 1983 Schedule, *supra* note 61, at para. 10(a)-(c).

In a 1978 comment on the new management procedure, the NOAA stated that "[t]he seeming complexity of these classifications provides a safety factor that errs in the direction of protection in those cases for which our knowledge of whale populations is deficient." U.S. Dep't of Commerce/NOAA, *The United States and Whale Conservation 5* (Oct. 1978). The comment also explained the concept of MSY, which is the basis for most fishery management schemes and the new management procedure:

Maximum sustainable yield (MSY) is a concept often employed by managers of living resources to provide a goal towards which exploited populations would be managed. At MSY level, the population is thought to be capable of producing on a continuing basis the largest amount (either in weight or in numbers) of harvestable surplus. In its simplest applications, the MSY concept is limited to a single species or stock and does not consider ecosystem relationships or external factors such as economics or aesthetics.

Id. at 4.

Even though the new management procedure represents a giant step forward from the blue-whale unit regime, the accuracy of the procedure has been questioned. Others believe that the procedure is not reflective of the current status of scientific information that exists for each stock. At the IWC's annual meeting in 1981, proposals by several member countries to revise the current management procedures were reviewed. The proposal by the United States, which appears to be most acceptable, redefines the number of whales, by species in given areas, that are thought to constitute a population capable of withstanding exploitation.

At the IWC's 1982 annual meeting, additional proposals for the revision of management procedures were considered. However, the organization has made no further progress.

The other parts of the Schedule are worth noting. Part II establishes open and closed seasons for factory ship operations and for land station. The next part, labeled "Capture," prohibits certain killing methods, establishes area limits for factory ships, classifies whale stocks by ocean areas and divisions and establishes catch limits and size limits for both baleen and sperm whales. Part IV requires inspectors to oversee the processing of whales on all factory ships and at all land stations, and establishes an international observer program through which member countries exchange observers to oversee the taking of whales and to insure that any infractions once committed, are accurately reported to the IWC. And Part VI governs the information which must be collected during all whaling operations and which then must be conveyed to the IWC. The requirements are quite comprehensive in scope and include: the species taken, its length and sex, the killing method used, the number of whales struck but lost, the ocean area involved, and the tonnage of the various products derived from the whale. Several provisions in this part are directed specifically to "small-type whaling" operations as well as to those of native peoples who take the small whale species listed in the Schedule. 1983 Schedule, *supra* note 61, at pts. II-VI.

67. 1946 Convention, *supra* note 49, art. II, para. 4. These committees are authorized to collect, analyze, and disseminate information on whale stocks, *id.* art. VI, para. 1, make recommendations to "any or/all Contracting Governments on any matters which relate to whales or whaling and to the objectives and purposes of the Convention," *id.* art. VI, and receive biological data relating to whales and whaling from all contracting governments, *id.* art. VIII, paras. 3-4.

68. *Id.* art. V, para. 2(b).

advice of the Scientific Committee",⁶⁹ the committee has developed into a widely recognized international body of scientific experts. The committee has taken advantage of its broad authority and good reputation by initiating crucial research programs, issuing recommendations to contracting governments on a variety of whale and whaling issues, and making recommendations to the IWC on necessary Schedule amendments, such as those relating to the status of stocks and catch limits.⁷⁰

In 1974 the Scientific Committee established the Subcommittee on Small Cetaceans to clarify the taxonomy of small cetaceans and identify conservation and research needs.⁷¹ In the late 1960's, despite

69. 1983 Schedule, *supra* note 61, para. 10.

70. In its recently revised Rules of Procedure and Financial Regulations, the IWC defines the role of the Scientific Committee as follows:

[t]he Scientific Committee shall review the current scientific and statistical information with respect to whales and whaling, shall review current scientific research programmes of Governments, other international organisations or of private organisations . . . , shall consider such additional matters as may be referred to it by the Commission . . . , and shall submit reports and recommendations to the Commission.

1981 Rules of Procedure, *supra* note 54, at sec. J, para. 3. The committee is composed of scientists from each contracting government and representatives from intergovernmental organizations and international organizations (who may be accorded "observer" status as opposed to full "member" status). *Id.* at Rules of Procedure of the Scientific Committee, sec. A, paras. 1-3. The committee is divided into "standing sub-committees by area or species, or other subject, and a standing sub-committee on small cetaceans." *Id.* sec. C, para. 1. Each subcommittee is directed to "prepare the basic documents on the identification and classification of stocks, including biological matters, initial and present stock size and catch limits using catch records supplied by the Secretariat [of the IWC], and related matters as necessary, for the early consideration of the full Committee." *Id.* sec. C, para. 2. The Scientific Committee meets prior to the annual meeting of the IWC and is initially charged with identifying key issues to be discussed at the next annual meeting and assigning specific papers on requested issues. In its report, due to the IWC before the start of the annual meeting, the committee must include progress reports, "on the biology of all cetaceans, cetacean research, [and] the taking of cetaceans," special reports on matters requested by the IWC or the committee, reports of all standing subcommittees and special subcommittees, and scientific papers as appropriate. *Id.* sec. E, paras. 1-3, 5.

Recommendations for Schedule amendments can take a variety of forms and have a variety of effects. For example, the Scientific Committee could recommend that a certain whale stock be reclassified as a sustained management stock instead of an initial management stock on the basis of improved scientific data, thereby increasing the stock's exploitation level. On the other hand, the committee could recommend that a stock be reclassified as a protected stock, which would prohibit exploitation. In addition, the committee could recommend that a stock not currently regulated by the IWC be included in the Schedule. *See infra* notes 84-88 and accompanying text.

71. *See supra* notes 39-40. In 1974, the Scientific Committee noted, more specifically,

that the status of the Commission's responsibilities with respect to the smaller cetacea is unclear. However if the Commission plans to take any action with regard to these species it will need to authorize collection of data along the lines

the lack of specific conventional authority, members of the Scientific Committee "thought the IWC was the logical agency to develop a program of international management for small cetaceans."⁷² Not until 1975 though, after considering Mitchell's comprehensive review of the world's small cetacean fisheries,⁷³ and the report of the Subcommittee on Small Cetaceans,⁷⁴ did the Scientific Committee propose that the IWC consider *managing* those stocks of small cetaceans taken in direct fisheries.⁷⁵

In 1976, the Subcommittee on Small Cetaceans expanded upon the previous year's proposal to include small cetaceans within the jurisdiction of the IWC. The subcommittee noted:

[T]here is an urgent need for an international body to effectively manage stocks of all cetaceans not covered by the present IWC Schedule. This body should concern itself with all types of exploitation of cetaceans, both incidental and deliberate. All nations involved in such exploitation of small as well as large cetaceans, should be included in such a body. . . .

The Sub-Committee therefore recommends that the present Convention for the regulation of whaling should be revised so that the Convention covers all cetaceans and all forms of exploitation. . . .

In the meantime, the Sub-Committee recommends that all cetaceans taken deliberately for their own value should be subject to consideration by the Scientific Committee for future management. . . .⁷⁶

given in the report on Smaller Cetaceans. . . . Presumably such data should go to the Bureau of International Whaling Statistics which is already receiving some data on smaller cetaceans. It was also noted that FAO and some regional fisheries bodies also collect some of the needed data. Some coordination is desirable.

25 REP. INT'L WHAL. COMM'N. 72 (1975).

72. Scarff, pt. I, *supra* note 9, at 373.

73. See Mitchell, *supra* note 22.

74. See 1974 Report, *supra* note 17.

75. See Scarff, pt. I, *supra* note 9, at 374.

76. Report of the Sub-Committee on Small Cetaceans, IWC/SC/28 Rep. 3 Annex L (1976), reprinted in 27 REP. INT'L WHAL. COMM'N. 480 (1977). The subcommittee identified several species in defined areas as in need of "immediate action": the northern bottlenose whale in the North Atlantic, the striped dolphin in the Northwest Pacific, Dall's porpoise in the Northwest Pacific, and the harbor porpoise in the North Atlantic. *Id.*

In terms of small cetacean management regimes, however, the subcommittee stated:

[i]t would be unlikely [for the Sub-Committee] to be in possession (either now or in the immediate future) of sufficient basic data to be able to classify the stocks in the way that large whale stocks are now classified under the New Management Procedure, *i.e.*, in relation to the MSY level. On the other hand, there could be occasions when circumstantial evidence indicated that a population had been severely affected by exploitation and some management action seemed imperative. The Sub-Committee therefore felt that new management categories might be created. It therefore suggested the addition of the following classification to the Schedule:

(a) Vulnerable Stocks - those that circumstantial evidence suggests have been heavily fished in the past or are being heavily fished now and for which there is urgent need of population assessment. Management action that should be taken would be:

Even though the Scientific Committee referred all the subcommittee's recommendations to the full commission, the IWC was willing to consider the proposed regulation of all small cetaceans only within a scientific forum. The IWC did assume, however, provisional responsibility to regulate direct takes by requesting the Scientific Committee to include the direct taking of small cetaceans in its agenda.⁷⁷

The IWC made additional progress on the small cetacean issue in 1977, when the Subcommittee on Small Cetaceans acknowledged its responsibility to consider and review direct takes of small cetaceans. Further, the Scientific Committee proposed an amendment to the Schedule which redefined "small-type whaling."⁷⁸ The IWC adopted the amendment with no objections and a resolution concerning reporting requirements for small-type whaling.⁷⁹

1. Catch may be permitted up to present levels for NOT MORE THAN five years.
2. Within the five year period national bodies fishing the stock should produce appropriate scientific evidence . . . on the basis of which the Commission could take whatever management action it needed.
3. If the national bodies are unable to provide such evidence, there should be no further catch until evidence becomes available.

Id.

77. See 27 REP. INT'L WHAL. COMM'N. 9, 25 (1977); 30 REP. INT'L WHAL. COMM'N. 126 (1980).

78. See *supra* note 62.

79. In connection with the new small cetacean reporting requirements, the IWC divided small cetacean fisheries into three categories: (1) small-type whaling, (2) direct fisheries for small cetaceans, and (3) fisheries involving incidental take of small cetaceans. 28 REP. INT'L WHAL. COMM'N. 22 (1978).

The Chairman of the 1977 meeting, noted the following concerning the new reporting requirements:

The Commission discussed the Scientific Committee's proposal for reporting requirements for direct fisheries for small cetaceans and for fisheries involving incidental take of small cetaceans and the concomitant amendment of the Schedule. The USA expressed strong support for the proposals. Japan pointed out, however, that the present Convention does not cover small cetaceans and Canada suggested that, to avoid the legal difficulties posed by amending the Schedule, a resolution would be more appropriate than amendment of the Schedule.

Id.

The following resolution was adopted:

Whereas the International Whaling Commission has noted that existing international commissions and organisations concerned with marine resources do not, at the present time, provide a central agency for the collection of scientific information on capture of small cetaceans,

Whereas the Commission has had brought to its attention the need for such an agency, and the need to commence the collection of such information on an urgent basis,

Whereas the Commission is at the present time the sole international authority exclusively concerned with the regulation of major species of cetaceans,

Whereas the Commission has under study proposals for the revision of the International Whaling Convention to include all species of Cetacea,

In 1978, the commission took no further action on the small cetacean issue, even though the Subcommittee on Small Cetaceans again stressed the need for international regulation and management of the taking of *all* cetaceans.⁸⁰

During the IWC's debate over its competence and authority to regulate and manage small cetaceans, a similar debate was raging concerning the commission's regulation of aboriginal whaling activities. Specifically, IWC concern focused on the Okhotsk Sea-West Pacific stock of bowhead whales taken by American Eskimos. Until 1977, American Eskimos were exempted from the provisions of the 1946 Convention due to the aboriginal, and noncommercial, nature of their hunt and the belief that the stock was unaffected by the small number of whales taken. However, as scientific evidence began to indicate the stock was in imminent danger of extinction with no positive evidence of rebuilding, the IWC, upon the recommendation of the Scientific Committee, agreed to delete this exemption and amend the Schedule to include the taking of bowhead whales by American Eskimos.⁸¹ Despite the Scientific Committee's warning that "from a biological point of view the only safe course is to reduce

BE IT HEREBY RESOLVED by the International Whaling Commission that members of the Commission be requested to collect and transmit to the Bureau of International Whaling Statistics:

(a) with respect to the deliberate, direct capture of small cetaceans, meaning any toothed whale other than the sperm whale, . . .

(b) with respect to the incidental capture of small cetaceans in fisheries, meaning the catching of small cetaceans in any fisheries where small cetaceans are not the desired catch, such as

(i) inadvertent; in gill-net trawl, purse seine, set net, and longline fisheries and

(ii) deliberate; in purse seines,

records showing the following information:

(a) species name, and local vernacular name where available

(b) numbers caught

(c) location of catch

(d) biological data wherever it is possible to collect

(e) an appropriate indication of the intensity of catching effort and of the primary species caught.

Id. at 30.

80. See 29 REP. INT'L WHAL. COMM'N. 50, 87 (1979).

81. The bowhead whale stock was in danger of extinction because of rising catch levels and increasing struck-but-lost rates. In noting that the size of the Okhotsk Sea-West Pacific bowhead stock was only six to ten percent of its initial (pre-exploitation) population size, despite its protection status, the Scientific Committee stated that "any taking of bowhead whales could possibly affect the stock and contribute to preventing its eventual recovery, if in fact such recovery is still possible. No bowhead whale stocks have shown any discernable increase since protection began 40 years ago." 28 REP. INT'L WHAL. COMM'N. 67 (1978). The IWC accepted the proposal of the Scientific Committee, deleting the exemption for this bowhead stock from the Schedule. *Id.* at 22.

During 1973-1977, the number of bowheads taken, the number known killed but lost, and the number known struck but lost are as follows:

the kill of bowhead whales from the Bering Sea stock to zero,"⁸² a limited hunt was, and continues to be allowed because of the nutritional and cultural necessity of the bowhead hunt for the Eskimos.⁸³ In spite of the severe domestic impacts resulting from this decision, "[t]he United States decided not to exercise its option to object to the Schedule amendment, but instead chose to work within the IWC, both to gain relief for the Eskimo and to achieve protection for the bowhead."⁸⁴ Further, after the deletion of this exemption, no IWC

year	No. landed	killed but lost	struck but lost
1973	37	0	10
1974	20	3	28
1975	15	2	26
1976	48	8	35
1977*	26	2	77

* incomplete

Id. at 67.

82. 29 REP. INT'L WHAL. COMM'N. 48 (1979).

83. In 1978, the following limits were set by the IWC: Bering Sea stock of bowhead whales

- (a) in 1978, hunting shall cease when either 20 have been struck or 14 landed,
- (b) in 1979, hunting shall cease when either 27 have been struck or 18 landed,
- (c) it is forbidden to strike, take or kill calves or any bowhead accompanied by a calf.

Id. at 34.

84. Roberts, Hopson v. Kreps: *Bowhead Whales, Alaskan Eskimos, and the Political Question Doctrine*, 9 HASTINGS CONST. L.Q. 231, 246-47 (1981). See also U.S. Dep't of Commerce/NOAA/NMFS, "Final Environmental Impact Statement: IWC Deletion of Native Exemption for the Subsistence Harvest of Bowhead Whales" (Oct. 1977).

Soon after the deletion, a suit was brought to compel the United States Secretary of State to file an objection to the IWC rule. See 16 U.S.C. § 916b (1982). When the U.S. District Court for the District of Columbia ordered the Secretary to file an objection, the Secretary appealed to the Court of Appeals, which agreed with the Secretary that an objection would undermine the United States efforts to promote international whale protection. *Adams v. Vance*, 570 F.2d 950 (D.C. Cir. 1977).

After *Adams*, the Alaskan Eskimos asked the district court to determine whether the 1946 Convention and its implementing legislation authorize the regulation of subsistence whaling by Native Alaskans. *Hopson v. Kreps* 462 F. Supp. 1374 (D. Alaska 1979).

In this case, the court first stated that

[t]he question here can be reduced to whether the Eskimo's small boats fit within the 1946 Convention's and the 1949 [Whaling Convention] Act's definition of "whale catcher." Article II of the Convention defines whale catcher as "a ship used for the purposes of hunting, taking, towing, holding on to, or scouting for whales." The 1949 Act uses the term "vessel" instead of "ship" in its definition of "whale catcher." "Vessel" under the 1949 Act is defined broadly as "every kind, type, or description of water craft or contrivance subject to the jurisdiction of the United States used, or capable of being used, as a means of transportation."

462 F.Supp. at 1377-78 (citations omitted). In addition to the breadth of the statute in its usage of the term "whale catcher", the court cited the affidavit of Dr. Gerard Ber-

member has contested the IWC authority to regulate aboriginal whaling.⁸⁵

THE CURRENT STATUS OF 200-MILE EXCLUSIVE ECONOMIC ZONES AND THE INTERNATIONAL REGULATION OF MARINE MAMMALS

By 1979, in addition to the issues involving the IWC's authority to regulate and manage these "other" cetaceans, a major dilemma involving the ability of an international organization to regulate the taking of these species both within and beyond 200-mile exclusive economic zones (EEZs) further complicated this cetacean regulatory question. Does this type of international management interfere with the sovereign rights of coastal States? Are international organizations, absent coastal State regulatory consent, limited to regulating such species in high seas? What if such species are found in the waters of two or more coastal States?

An attempt to balance coastal State sovereignty and jurisdiction over ocean areas with various international ocean uses is reflected in the preamble of the recently concluded Convention of the Third United Nations Conference on the Law of the Sea (1982 Convention). The Convention recognizes

the desirability of establishing, through this Convention, and *with due regard for the sovereignty of all States*, a legal order for the seas and oceans which would facilitate international communication and promote their

trand, a member of the IWC's Scientific Committee from 1976-78:

The present understanding among members of the Scientific Committee and scientists involved with whaling is the the term "whale catcher" includes any vessel used as a platform for catching and killing whales. If the term "whale catcher" were held to mean only the upper end of the size range of whaling vessels, the IWC would not be able to regulate effectively whaling by Japan, Norway, Canada, Iceland, Spain, and other countries which use or have used small coastal whaling vessel.

462 F.Supp. at 1380 n.11.

Even though the court noted that "[t]he position of the United States Government at the Commission has clearly been that the Convention applies to aboriginal whaling," *id.* at 1378-79, the court accepted the Government's present contention that the interpretation of the Convention is "so intertwined with foreign policy considerations that [a] court has no jurisdiction to consider the validity of the [Commerce Department's] regulations that implement the Commission's Schedule." *Id.* at 1378. Hopson appealed, claiming that the district court did have jurisdiction and the issue was in fact justiciable. Hopson v. Kreps, 622 F.2d 1375 (9th Cir. 1980). No further action has been taken the case in light of the Cooperative Agreement signed in 1981 by the Alaska Eskimo Whaling Commission and the Department of Commerce's NOAA to implement the limited bowhead quota allowed by the IWC. See 50 C.F.R. §§ 230.70-.77 (1983).

For more information on the various factors involved in the bowhead controversy, see Bliss, *International Whaling Commission Regulations and the Alaskan Eskimo*, 19 NAT. RESOURCES J. 943 (1979); Mason, *The Bowhead Whale Controversy: Background and Aftermath of Adams v. Vance*, 2 HARV. ENVTL. L. REV. 363 (1977); Rosenblatt, *The Federal Trust Responsibility and Eskimo Whaling*, 7 B.C. ENVTL. AFF. L. REV. 505 (1979); Verges & McClendon, *Inupiat Eskimos, Bowhead Whales, and Oil: Competing Federal Interests in the Beaufort Sea*, 10 U.C.L.A. - ALASKA L. REV. 1 (1980).

85. Roberts, *supra* note 84, at 248.

peaceful uses, the equitable and efficient utilization of their resources, the study, protection and preservation of the marine environment and the conservation of the living resources thereof.⁸⁶

This balance also is reflected in the principles embodied in the concept of the EEZ, which has become widely recognized first by customary international law⁸⁷ and now by conventional international law.⁸⁸

Regarding the conservation of the living resources found within the EEZ, the 1982 Convention recognizes a coastal State's right to

86. United Nations Convention on the Law of the Sea, preamble, U.N. Doc. A/CONF.62/122 (1982) (emphasis added) [hereinafter cited as 1982 Convention].

Such "balances" are also reflected in other recent international wildlife conventions. See, e.g., Convention on International Trade in Endangered Species of Wild Fauna and Flora of 1973, 27 U.S.T. 1087, T.I.A.S. No. 8249 (1973); reprinted in 12 ILM 1085 (1973); Bonn Convention on the Conservation of Migratory Species of Wild Animals of 1979, reprinted in 19 ILM 15 (1980).

87. Ann Hollick noted that the first 200-mile claims were designed to protect South America offshore whaling operations from international competition. See Hollick, *The Origins of 200-Mile Offshore Zones*, 71 AM. J. INT'L L. 494 (1977). Through widespread State practice and recognition, 200-mile zones have evolved into the customary international law of the sea. More recently, the International Court of Justice, in the Case Concerning the Continental Shelf (Tunisia/Libyan Arab Jamahiriya), has recognized the EEZ as an accepted trend in international law. See 1982 I.C.J. 268. Additionally, the American Law Institute has noted:

Recent practice of states, supported by the broad consensus achieved at the Third Law of the Sea Conference, has effectively established the concept of the exclusive economic zone, and the general principles governing it, as customary law and they are binding on states generally even before the Convention comes into effect.

RESTATEMENT (REVISED) OF FOREIGN RELATIONS LAW OF THE UNITED STATES § 514 at 107 (Tent. Draft No. 3, 1982).

According to the Office of the Geographer, of the 136 coastal States, at least 54 claim extended economic zones which embody many of the principles of the EEZ. See U.S. Dep't of State, Office of the Geographer, "Limits in the Seas, National Claims to Maritime Jurisdiction" (No. 36 - 4th Rev., May, 1981).

88. According to the 1982 Convention the EEZ "is an area beyond and adjacent to the territorial sea, subject to the specific legal regime established in this Part, under which the rights and jurisdictions of the coastal State and the rights and freedoms of other States are governed. . . ." 1982 Convention, *supra* note 86, at art. 55. The Convention limits the breadth of the EEZ to "200 nautical miles from the baselines from which the breadth of the territorial sea is measured," *id.* art. 57, and provides, for coastal States,

sovereign rights for the purpose of exploring and exploiting, conserving and managing the natural resources, whether living or non-living, of the sea-bed and subsoil and the superjacent waters, and with regard to other activities for the economic exploitation and exploration of the zone, such as the production of energy from the water, currents and winds. . . .

Id. art. 56, para. 1(a). Article 56 also provides for coastal State jurisdiction over "(i) the establishment and use of artificial islands, installations and structures; (ii) marine scientific research; [and] (iii) the protection and preservation of the marine environment. . . ." *Id.* art. 56, para. 1(b).

determine an appropriate allowable catch level.⁸⁹ This level, however, must be based upon "the best scientific evidence available . . . [which] shall ensure through proper conservation and management measures that the maintenance of the living resources in the exclusive economic zone is not endangered by over-exploitation."⁹⁰ The 1982 Convention also requires a coastal State to maintain or restore populations of harvested species at the maximum sustainable yield level⁹¹ and consider "the effects on species associated with or dependent upon harvested species with a view to maintaining or restoring populations of such associated or dependent species above levels at which their reproduction may become seriously threatened."⁹² In addition, the 1982 Convention provides that a coastal State shall promote the optimum utilization of its living resources while allowing other States access to any allowable surplus.⁹³

If living resource stocks occur within the EEZ's of two or more coastal States, the 1982 Convention provides that "these States shall seek either directly or through appropriate subregional or regional organizations to agree upon measures necessary to co-ordinate and ensure the conservation and development of such stocks. . . ."⁹⁴ For stocks occurring in areas both within and beyond an EEZ, "the coastal State and the States fishing for such stocks in the adjacent area shall seek either directly or through appropriate subregional or regional organizations to agree upon the measures necessary for the conservation of these stocks in the adjacent area."⁹⁵ In addition, coastal States and other States whose nationals harvest highly migratory species must "co-operate directly or through appropriate international organizations with a view to *ensuring conservation and promoting the objective of optimum utilization of such species throughout the region, both within and beyond the exclusive economic zone.*"⁹⁶

Article 65 of the Convention focuses on the protection and management of marine mammals within the EEZ. As marine mammals are biologically different from other living marine resources (a term which generally refers to fishery resources), this article indicates a widespread recognition within the international community of the

89. *Id.* art. 61, para. 1.

90. *Id.* para. 2.

91. *Id.* para. 3.

92. *Id.* para. 4.

93. *Id.* art. 62, para. 1.

94. *Id.* art. 63, para. 1.

95. *Id.* art. 63, para. 2.

96. *Id.* art. 64, para. 1 (emphasis added). The highly migratory species included in this article are listed in annex I to the 1982 Convention. Paragraph 16 of the annex is labeled "Cetaceans" and includes the Families Physeteridae, Balaenopteridae, Balaenidae, Eschrichtiidae, Monodontidae, Ziphiidae, and Delphinidae. *Id.* annex I. See also *supra* note 7.

special characteristics of marine mammals.⁹⁷

In a draft of the Convention, prior to 1980, article 65 provided:

Nothing in the present Convention restricts the right of a coastal State or international organization, as appropriate, to prohibit, regulate and limit the exploitation of marine mammals. States shall cooperate either directly or through appropriate international organizations with a view to the protection and management of marine mammals.⁹⁸

Although the addition of article 65 to the draft text indicated marine mammals were "special" and must be protected and managed in a manner different from other living marine resources, the article posed several problems for the regulation of marine mammals by coastal States within the EEZ.

First, the extent of a coastal State's jurisdiction to regulate marine mammals was not clear from the language of the text. By giving coastal States the right to regulate exploitation, the article could have implied a related right *not* to regulate exploitation.⁹⁹ This am-

97. As Thomas Clingan stated:

With respect to certain categories of living resources, the Convention recognizes that their unique character may require special handling. Specifically, separate articles were elaborated to deal with anadromous species, catadromous species, highly migratory species, sedentary species and marine mammals. While these provisions lack precision in many respects, they do recognize that living resources having particular migratory or other biological characteristics need special management tools.

See Proceedings of the 7th International Ocean Symposium, "Exclusive Economic Zone" 21 (The Ocean Association of Japan, Oct. 21-22, 1982).

Also, in terms of any confusion or redundancy caused by the overlap of articles 64 and 65, the conservation standards of article 65 were intended to control for marine mammals, since article 65 was drafted later and directed specifically toward marine mammals.

98. United Nations Convention on the Law of the Sea, Informal Composite Negotiating Text, art. 65, U.N. Doc. A/CONF.62/WP.10/Rev.1 (1979) *reprinted in* 18 ILM 686 (1979). As Patricia Birnie has pointed out:

the draft text does not attempt to create a new status in international law for whales or any other highly migratory species. . . . [M]arine mammals are not declared to be a "common heritage" and there is no proposal instituting a broad new international regime, within or outside the United Nations to manage them. Thus the terms of the existing IWC are not affected, and whales remain a common property resource (at least on the high seas) which can be regulated only with the consent of the participants in whaling.

Birnie, "Extended Coastal State Jurisdiction and the Law of the Sea: Effect on Whales and Other Migratory Species" 21 (June 1977) (available from Sierra Club Office of International Environmental Affairs, 800 Second Avenue, New York, New York 10017).

99. As Nafziger has pointed out:

Article 65 was apparently intended to enable coastal States to transcend the protective authority of international organizations by allowing them even stricter controls over the taking of marine mammals. . . . The actual language, however, reserved to coastal States the right to 'prohibit, regulate and limit the exploitation of marine mammals.' This could have been read, contrary to the legis-

biguity "reflects quite precisely the deep conflict between the desire of some coastal States to exercise unlimited control over their living resources and the insistence by others that they must be conserved for their own sake and [for] the benefit of humanity as a whole."¹⁰⁰

Second, the authority of international bodies to regulate marine mammals in relation to coastal State authority to regulate such species within the EEZ was left unresolved by the terms of article 65. For instance, no provision was made in the initial article for a single management organization to oversee highly migratory species throughout their migratory ranges.¹⁰¹ The text "pose[d] an unresolved question as to how far coastal States in their EEZs . . . [can] reserve the right to regulate whales when passing through their zones, in a manner which contrevenes the IWC regulations."¹⁰²

Third, the original text of article 65 did not provide a comprehensive scheme to allow effective regulation of marine mammals. The article failed to designate a specific standard of protection, the nature of "cooperation" required by participating States, or the "appropriate international organizations" with which States were to cooperate.¹⁰³

As a result of these inadequacies, several States, international bodies, and interest groups recognized that certain textual changes were necessary to clarify the regulatory limits of article 65. In this regard, Elliot Richardson, who was then the United States representative to the Third United Nations Conference on the Law of the Sea (UNCLOS III) commented that "[a]lthough the current [text] affords some general protection for marine mammals, the United States still believes that Articles 65 and 120 should be clarified . . . to indicate a State's obligation to impose regulations at least as stringent as those contemplated by the [text]."¹⁰⁴

In 1979, the U.S. delegation to UNCLOS III formally proposed an amended version of article 65 designed to clarify that the article "was never intended to permit *less* restrictive limitations or regula-

lative intent, to give coastal States full preemptive discretion to regulate *or not regulate* the taking of marine mammals within their extended jurisdiction.

Id. (emphasis in original).

100. *Id.* at 608 n.89.

101. See Birnie, *supra* note 98, at 5.

102. *Id.* at 22.

103. Travaglio & Clement, *supra* note 15, at 226. Other conservation-related criticisms of article 65 included the text's "lackluster attempt to protect marine mammals from incidental catches," *id.* at 227, and "the Convention's concern with the consumer aspects of marine mammal fisheries policy [which] has precluded it from developing an ecologically sound approach." *Id.*

104. Richardson, *Introduction*, 16 SAN DIEGO L. REV. 451 (1979). Article 120 states that "Article 65 also applies to the conservation and management of marine mammals in the high seas." This provision has not been subject to amendment during UNCLOS negotiations. 1982 Convention, *supra* note 86, art. 120.

tion of the exploitation of marine mammals than would be required by the Convention if there were no such article, and to direct particular attention to the need for appropriate organizational agreements for the protection of cetaceans."¹⁰⁵ After several meetings to review the proposal, "[t]he States represented at these meetings unanimously agreed to strengthen [the] provisions for cetacean conservation by international and, where more appropriate, regional organization."¹⁰⁶

In 1980, the Conference approved the amended version of article 65 with only minor revision. Article 65 now provides:

Nothing in this part restricts the right of a coastal State or the competence of an international organization, as appropriate, to prohibit, limit or regulate the exploitation of marine mammals *more strictly* than provided for in this part. In this connection, States shall cooperate with a view to the conservation of marine mammals *and in the case of cetaceans shall in particular work through the appropriate international organizations for their conservation, management, and study.*¹⁰⁷

In providing an overall management framework for marine mammals that is distinct from those regarding other living marine resources, article 65 clearly allows coastal States and international organizations to apply management standards *more* protective than the minimum required by the article. As one commentator explained:

The effect of these amendments is: (1) to underscore that coastal States and international organizations may impose only those conservation measures which further protect marine mammals; (2) to clarify that measures "to protect, limit or regulate" are disjunctive; (3) to narrow the special concern for marine mammals to "this part" of the Convention; (4) to narrow inter-

105. Oxman, *The Third United Nations Conference on the Law of the Sea: The Eighth Session (1979)*, 74 AM. J. INT'L L. 1, 5 n.23 (1980) (emphasis in original).

106. Nafziger, *supra* note 6, at 611. Elliot Richardson also commented on the outcome of the meetings:

[Marine mammals] not being one of the "hardcore" issues designated as such by the Conference, was nonetheless the focus of two unofficial meetings . . . convened by the U.S. The objective of the meetings, attended by all affected interest was to seek improvement in the language of Article 65 . . . to make clear that there is a minimum conservation standard for marine mammals both within and without the economic zone. The meetings showed that there was substantial unanimity for proposed changes reflecting such a conservation objective. Also discussed was the need for textual improvements with respect to cooperation in an appropriate international organization for the conservation of cetaceans. Discussion in this area focused on the need to accommodate regional organizations for the conservation of stocks where those stocks need not be addressed on a global scale.

Id. at 611 n.103 (quoting the United States Delegation Report, Eighth Session of the Third United Nations Conference on the Law of the Sea, Geneva, Mar. 19-Apr. 27, 1979, at 36).

107. 1982 Convention, *supra* note 86, art. 65.

national authority over marine mammals to one of "competence" rather than "right"; (5) to require international cooperation in conserving, rather than more specifically protecting, marine mammals; and, with respect to cetaceans, (6) to work through appropriate international organizations without necessarily establishing new authority to conserve, manage, and study marine mammals.¹⁰⁸

The amended version of article 65 emphasizes as well that, unlike the "optimum utilization" provision which governs the regulation of other living marine resources,¹⁰⁹ no obligation of full utilization exists for the regulation of marine mammals. Further, article 65 excludes marine mammals from the living marine resource requirement of optimum utilization even in the absence of more restrictive standards. Thus, the clarified version of article 65

will definitely overrule arguments made by some whalers and sealers that protective measures for marine mammals can do no more than ensure the maintenance of a maximum sustainable yield, and that international regulation of whales and other cetaceans can be approached in the same way as such regulation is pursued in the case of ordinary commercial fisheries.¹¹⁰

In spite of these clarifications, the amended version of article 65 does not define the term "international organization" nor give criteria for the application of the term "appropriate." Thus, regarding the application of article 65 to a coastal State's EEZ, "it remains unclear to what extent, if any, international obligations extend to the territorial and internal waters of the ratifying States."¹¹¹ On the other hand, when read in connection with article 120,¹¹² it appears as if article 65 authorizes international organizations to set minimum standards for the conservation and protection of marine mammals *throughout* their migratory ranges, both within and beyond the EEZ of a signatory State.¹¹³ Further, neither article 65 nor any other 1982 Conven-

108. Nafziger, *supra* note 6, at 612-13.

109. 1982 Convention, *supra* note 86, art. 62, para. 1.

110. Oxman, *The Third United Nations Conference on the Law of the Sea: The Ninth Session (1980)*, 75 AM. J. INT'L L. 211, 233 (1981).

111. Nafziger, *supra* note 6, at 608. Nafziger mentions though, that: [t]here is, however, a weak inference of intended extension to [territorial and internal] waters: although the provisions for living resources appear principally in sections dealing with the exclusive economic zone, there is no specific reference of limitation to that zone (unlike other provisions within the same section of the text).

Id. at 608-09.

112. Article 120 states that "Article 65 also applies to the conservation and management of marine mammals in the high seas." 1982 Convention, *supra* note 86, art. 120.

113. In distinguishing the direct taking of cetaceans from incidental taking, the IWC is commonly thought to constitute the "appropriate international organization" for the regulation of direct takes, whereas, in terms of the regulation of incidental takes (in particular, of small cetaceans), a regional fisheries organization would be the appropriate regulatory body.

"IWC regulation of the direct taking of small cetaceans is distinguishable from the control of incidental kills associated with other fisheries activity. The latter poses a range of issues (such as fishing technology) which the IWC is not familiar." M'Gonigle, *supra*

tion provision precludes a cooperative management scheme for cetaceans, small and large, by appropriate international and regional organizations, and coastal States.¹¹⁴

TOWARD THE INTERNATIONAL REGULATION OF "OTHER" CETACEANS

At the 1980 annual meeting of the IWC, the "other" cetacean issue was subject to extensive debate. In response to the adoption of the amended version of article 65 at UNCLOS III, this issue became a jurisdictional question regarding the sovereign rights of coastal States to regulate all resources within the EEZ as opposed to the authority of an appropriate international organization to set

note 5, at 180 n.289 (1980). Also, article 311 of the 1982 Convention, concerning the relation of the 1982 Convention to other conventions and international agreements, provides: "[t]his Convention shall not alter the rights and obligations of States Parties which arise from other agreements compatible with this Convention and which do not affect the enjoyment by other States Parties of their rights or the performance of their obligations under this Convention." 1982 Convention, *supra* note 86, art. 311, para. 2. This provision would not "alter the rights and obligations of States Parties" to the 1946 Convention.

114. Prior to March, 1983, the United States claimed a 200-mile fishery conservation zone, which was established in 1977 by the Magnuson Fishery Conservation and Management Act of 1976, 16 U.S.C. §§ 1801 - 1881 (1982). For the legislative history of the Act, see 1976 U.S. CODE CONG. & AD. NEWS 593. However, due to the decision of the United States not to sign the 1982 Convention while recognizing the customary international law status of the EEZ, President Reagan issued Proclamation Number 5030 on the "Exclusive Economic Zone of the United States of America" on March 10, 1983. Proclamation No. 5030, 48 Fed. Reg. 10,605 (1983), *reprinted in* 19 WEEKLY COMP. PRES. DOC. 384-85 (Mar. 14, 1983).

In terms of the policies of the United States toward marine mammals, "[t]his Proclamation does not change existing United States policies concerning the continental shelf, *marine mammals* and fisheries, including highly migratory species of tuna which are not subject to United States jurisdiction and require international agreements for effective management." *Id.* (emphasis added). Thus, the establishment of an EEZ "will not affect our present marine mammal management policies or the present U.S. policy of deferring to the International Whaling Commission with regard to the protection of whales." Dep't of State, Bureau of Public Affairs, Current Policy No. 471, "Oceans Policy and the Exclusive Economic Zone" 3 (Mar. 10, 1983). More specifically, according to the General Counsel of the Marine Mammal Commission:

I would therefore expect that our policy relating to the taking of marine mammals, developed in the IWC and other contexts, would remain as follows: the U.S. will exercise its sovereign rights with respect to the taking of marine mammals within the EEZ consistent with prevailing international law, *i.e.*, so as to be equally or more restrictive than international standards and, with respect to cetaceans in particular, to be no less restrictive than the International Whaling Commission's decision. We consider such implementing and complementary actions to be the appropriate exercise of a coastal state's sovereign rights over marine mammals within its EEZ.

Letter from R. Eisenbud, General Counsel, Marine Mammal Commission (Mar. 31, 1983).

standards applicable both within and beyond the EEZ. Canada led the group favoring coastal State predominance in resource regulation within the EEZ and "successfully linked the question of the IWC's authority to regulate small cetaceans to coastal state jurisdiction over the EEZ."¹¹⁵ In maintaining its long-standing position in favor of IWC management of small cetaceans, the United States acknowledged IWC authority to regulate the direct take of small cetacean species in need of protection. Specifically, the United States urged that such species be listed in the Schedule; that stocks be classified, if scientific data permitted; and that quotas be set on a case-by-case basis, when necessary, upon the advice of the Scientific Committee. The United States also suggested that subsistence needs, as documented by contracting governments, should be considered in the quota-setting process. In addition, the United States indicated that incidental takes of small cetaceans should be regulated by appropriate fisheries organizations, with the IWC maintaining scientific overview.¹¹⁶

115. Bonker, *U.S. Policy and Strategy in the International Whaling Commission: Sinking or Swimming?* 10 OCEAN DEV. & INT'L L. 41, 51 (1980). See also Current Developments, *The Thirty-Second International Whaling Commission*, 75 AM. J. INT'L L. 165 (1981).

116. In 1980, the United States first specifically spelled out its position favoring the IWC's management of small cetaceans, in particular, those taken directly. The United States' position was issued in response to the IWC's request for legal advice regarding its jurisdiction under the 1946 Convention to regulate the taking of small cetaceans. This request resulted from the Scientific Committee's recommendation in 1979 that the beluga and narwhal, for scientific reasons, be listed in the Schedule (with quotas set) and "should be considered by the Commission in the same manner as is the bowhead whale, taken in a similar fashion in the Beaufort Sea." 30 REP. INT'L WHAL. COMM'N. 56 (1980). The General Counsel of NOAA, the agency charged with the responsibility of regulating whales under the Whaling Convention Act of 1949, 16 U.S.C. § 916j (1982), and species of the Order Cetacea under the MMPA, 16 U.S.C. § 1362 (11)(A) (1982), stated that "[m]y analysis of this issue . . . leads me to conclude that the Convention does authorize the regulation of direct takes of all cetaceans." U.S. Dep't of Commerce/NOAA, Information Memorandum on International Whaling Commission Jurisdiction Over Small Cetaceans 1 (May 28, 1980).

As the term "whale" is left undefined by the 1946 Convention and the Schedule, the information memorandum draws upon the principles established by the Vienna Convention on the Law of Treaties, U.N. Doc. A/CONF.38/27 (1969), reprinted in 8 ILM 679 (1969), regarding the general meaning of the term "whale," the general context of the 1946 Convention, and past and current practices under the 1946 Convention. (Even though the United States has not ratified the Vienna Convention, the government has acknowledged that "the Convention is already generally recognized as the authoritative guide to current treaty law and practice." S. EXEC. DOC. L., 92nd Cong., 1st Sess. i (1971).) Also, the proposed revision of the Restatement of the Law of the Foreign Relations Law of the United States is in accord with the Vienna Convention. See RESTATEMENT (SECOND) OF THE FOREIGN RELATIONS LAW OF THE UNITED STATES (Tent. Draft No. 1, 1980).

The information memorandum notes that both scientifically speaking and in popular usage, the term "whale" "blurs any distinction between small and large cetaceans." NOAA, Information Memorandum, *supra*, at 2. See *supra* notes 7, 10. The information memorandum also states that since the 1946 Convention was designed to protect all species of whales from further overfishing, see *supra* note 52, "the only consistent interpre-

Due to the IWC's focus on the jurisdictional aspects of the small cetacean issue rather than any pressing biological reasons for protection or management, the small cetacean debate was unresolved. The United States delegation, in its report to the 1980 annual meeting of the IWC, noted that "the complexity of this issue, involving matters of the IWC's jurisdiction, aboriginal whaling, and coastal states' rights, led to an impasse."¹¹⁷ However, the IWC adopted a resolution concerning the extent of its responsibility for small cetaceans, which was offered by the United States, Canada, and the United Kingdom as a compromise measure. The resolution, taking a middle of the road position, maintained the status quo regarding current scientific practices of the IWC concerning small cetaceans and preserved the varied positions of contracting governments on the scope of the 1946 Convention and the extent of coastal State jurisdiction.¹¹⁸

tation is that it applies to all species of cetaceans subject to overfishing and which constitute a useful resource to mankind." NOAA, Information Memorandum, *supra*, at 3. Concerning past and present practices under the 1946 Convention, the memorandum notes that the initial annex to the Convention listed pygmy right whales, bottlenose whales, and minke whales as included species, *id.* at 5, and that "the Commission has recommended studies of small cetaceans and has implemented amendments to the schedule for the protection of small cetaceans." *Id.* The Information Memorandum concludes: "[t]he pattern of changing the target species and the adoption of Schedule amendments in response to these patterns [is] persuasive evidence that smaller species should be as subject to conservation measures as large species." *Id.* at 7.

117. Report of the U.S. Delegation to the 32nd Annual Meeting of the International Whaling Commission, Brighton, England, July 1980, at 8.

118. *Id.* The resolution provided:

Whereas, the International Convention for the Regulation of Whaling, 1946, specifies a decision by Parties to "conclude a convention to provide for the proper conservation of whale stocks and thus make possible the orderly development of the whaling industry";

Whereas, the Convention itself does not define the species covered by the term whale and Contracting Governments are not of one view on such a definition as regards the Convention;

Whereas, the Final Act of the International Whaling Conference, 1946, recommended that governments accept a chart of nomenclature of whales which included, *in toto*, the baleen, sperm and bottlenose whales;

Whereas, this year the Scientific Committee has examined the condition of various beluga and narwhal stocks and has recommended on biological grounds that one stock be classified as a Protection Stock;

Whereas, the rights and responsibilities of Contracting Governments with respect to the conservation, management and study of cetaceans are matters under the consideration of the U.N. Conference on the Law of the Sea;

Whereas, the Contracting Governments and other interested parties have been and continue to consider the question of possible amendments to or renegotiation of the present Convention reflecting consideration of, *inter alia*, the developments in the Law of the Sea;

In a political decision related in part to the small cetacean issue, Canada withdrew from the IWC. The decision to withdraw followed "an intensive review of Canada's whaling policy . . . [conducted] in light of the changing composition and operations of the IWC."¹¹⁹ In the announcement of its decision, Canada stated that:

[a]s a responsible coastal state with exclusive sovereign rights over all living resources within its 200-mile zone, Canada should continue to seek the advice of the IWC's Scientific Committee, and to exchange scientific data and analyses with that body, relevant to Canadian management of cetacean stocks in its 200-mile zone. This applies particularly to narwhal and beluga stocks in Canada's northern waters, which are hunted on a subsistence basis by aboriginal peoples under Canadian controls designed to ensure the conservation of the stocks. *While the Commission does not regulate these species, Canada has supported international scientific review of all cetaceans.*¹²⁰

Canada also noted that it would continue to support international cooperative efforts for the conservation of whale stocks and would "continue to support the idea of an International Cetacean Commission, which would supercede the 1946 Convention, taking into account recent developments in the law of the sea and the increased emphasis on conservation since the establishment of the IWC in 1946."¹²¹

The Scientific Committee in its 1981 report to the IWC, stated that the direct and incidental catches of small cetaceans by IWC members the previous year was approximately 112,006 dolphins, porpoises, and other small whales.¹²² The committee recommended that, for scientific reasons, Canadian stocks of white whales and nar-

Whereas, the Scientific Committee of the International Whaling Commission has a standing subcommittee on Small Cetaceans and biological expertise in this field;

Now, Therefore, the Commission, without prejudice to positions of Contracting Governments with respect to nature and extent of coastal state jurisdiction;

Recommends that the Scientific Committee, in part through the subcommittee on Small Cetaceans, continue to consider the status of cetaceans and provide such scientific advice as may be warranted to Contracting Governments, coastal states and other interested governments and interested intergovernmental organizations as appropriate;

Requests all Contracting Governments to consider such advice, and to provide appropriate information to the Scientific Committee;

Requests Governments to continue submitting reports to the Scientific Committee concerning the status of, *inter alia*, beluga and narwhal stocks and any management measures taken with respect thereto. .

31 REP. INT'L WHAL. COMM'N. 31 (1981).

119. Canada Dep't of External Affairs, Communiqué No. 62, "Canada Withdraws from the International Whaling Convention and Commission," June 26, 1981, at 1. Canada's withdrawal became effective on June 30, 1982 (Canada participated at the 1981 meeting of the IWC as an observer).

120. *Id.* at 2 (emphasis added).

121. *Id.*

122. 32 REP. INT'L WHAL. COMM'N. 58 (1982). See Appendix II.

whals should be listed in the Schedule, with stock classifications and catch limits set in accordance with the commission's management procedures;¹²³ that all killer whale stocks should have catch limits of zero regardless of their general stock classifications¹²⁴ because of poor biological data and unassessed stock conditions; and that the increased take of pilot whales by Denmark in the Faroe Islands¹²⁵ and the increased take of bottlenose dolphins and striped dolphins by the Japanese¹²⁶ should be viewed with great biological concern.

In response to the report, Mexico, with the aid of Chile and Brazil, assumed Canada's former leadership position in promoting primary coastal State resource regulation within the 200-mile EEZ. The nations contended that small cetaceans within these zones are not within the jurisdiction of the IWC. The United States was in a dilemma, for it desired to avoid further debate on this issue in the absence of any urgent biological needs, yet wanting to remain consistent with its previous position on the "other" cetacean issue. Again, in compromise, the United States offered a resolution calling for the IWC to provide scientific advice to countries that directly take stocks of white whales and narwhals. The United States delegation to the 1981 meeting noted that "[t]he United States experienced, because of the sovereignty issue, considerable difficulty in gaining passage of [the resolution]"¹²⁷ The resolution was of-

123. 32 REP. INT'L WHAL. COMM'N. 60 (1982).

124. *Id.* The Report of the Workshop on Identity, Structure and Vital Rates of Killer Whale Populations found that "[g]iven the extreme stability of local populations and the low reproductive rates evidenced by the available data, any exploitation can be expected to have very long-term impacts on population size and structure." IWC SC/33/Rep. 4 at 17 (1981).

125. The Subcommittee on Small Cetaceans noted that "[t]he take of 2773 in the Faroe Islands represented a considerable increase over the 1979 catch of 1725. The subcommittee is concerned with the absence of a population estimate for the Faroes and a scientific program documenting composition of the catches." IWC/33/4 Annex H at 13 (1981); *see also* 32 REP. INT'L WHAL. COMM'N. 60 (1982).

126. The Subcommittee on Small Cetaceans specifically reported that "[t]he reported Japanese take of 3,493 [bottlenose dolphins] represents a substantial increase over the 1979 take of 666. The subcommittee is concerned over the increased take, particularly since there is no estimate of population size and no data available on composition of the catch." IWC/33/4 Annex H at 14 (1981). Also, in the case of the Japanese drive fishery for the striped dolphin, the subcommittee noted that "[t]he total takes for Japan was 16,344; in 1979 it was only 2183. . . . [T]he take of over 16,000 is nearly 3-4 times the estimated sustained yield." *Id.* The subcommittee noted its concern for "this severe over-exploitation of the striped dolphin population which spends only part of the year in Japanese waters." *Id.* at 15; *see also* 32 REP. INT'L WHAL. COMM'N. 60 (1982).

127. Report of the U.S. Delegation to the 33rd Annual Meeting of the International Whaling Commission, Brighton, England, July 1981, at 7. In this report, the section addressing the small cetacean issue was labeled "juridical zones." *Id.*

ferred mainly in response to Canada's request for scientific advice on these stocks and primarily concerned maintaining the role of the Scientific Committee in its assessment of small cetacean stocks to downplay the jurisdictional controversy.¹²⁸

At the 1982 annual meeting of the IWC, after commercial whaling catch limits were set at 12,371,¹²⁹ the commission adopted an amendment to the Schedule which provided for a moratorium on all commercial whaling activities beginning in 1986. Specifically, the amendment stated;

[C]atch limits for the killing for commercial purposes of whales from all stocks for the 1986 coastal and the 1985/86 pelagic seasons and thereafter shall be zero. The provision will be kept under review, based upon the best scientific advice, and by 1990 at the latest the Commission will undertake a comprehensive assessment of the effects of this decision on whale stocks and consider modifications of this provision and the establishment of other catch limits.¹³⁰

Thus, the long-term goal of the IWC's conservation-oriented members has finally been achieved. The moratorium represents a compromise between the whaling members of the IWC and the non-whaling

128. The resolution provided:

Whereas, the Commission adopted at its 32nd Annual Meeting a Resolution Concerning Extension of the Commission's Responsibility for Small Cetaceans,

Whereas, the Canadian Government has requested advice from the Scientific Committee relating to stocks of white whales and narwhals,

Whereas, the Scientific Committee has reviewed available information on white whale and narwhal stocks [in Canada],

Whereas, the Scientific Committee concluded that the present size of the eastern Hudson Bay, Cumberland Sound, and Ungava Bay stocks of white whales are less than 20 percent of their original size and that continued takes from these stocks at recent levels may well result in extinction of some stocks in a very few years,

The Commission

[U]rges the government of Canada to take account of the advice and recommendations of the Scientific Committee and undertake immediate research and management action to protect those stocks of white whales and narwhals taken by persons under its jurisdiction,

Requests the Government of Canada to continue to advise the Scientific Committee through the Commission of the Canadian research and management program relevant to white whales and narwhals and, in particular, of the measures taken to prevent taking from the severely depleted stocks of white whales,

Requests the Secretary to transmit copies of this Resolution of the Scientific Committee to the Government of Canada for consideration.

32 REP. INT'L WHAL. COMM'N. 36 (1982). For further assessment of the IWC's 1981 annual meeting, see *Review of the 33rd International Whaling Commission Meeting: Hearing before the Subcomm. on Human Rights and International Organizations of the House Comm. on Foreign Affairs*, 97th Cong., 1st Sess. (1981).

129. See Report of the U.S. Delegation to the 35th Annual Meeting of the International Whaling Commission, Brighton, England, July 1983, at 6; see also *supra* note 64.

130. See 1983 Schedule, *supra* note 61, para. 10(e).

members, in that "[t]hese quotas, together with the deferred cessation [and scheduled review by 1990] reflect the decision of the majority of the IWC members to accommodate and attempt to ease the difficulties anticipated by whaling nations in attempting to cease whaling operations and provide for a transition period."¹³¹ The "deferred cessation" was designed to maintain the integrity of the IWC as an internationally-recognized organization as well as to end commercial whaling in an orderly manner.¹³² Of the IWC's 40 members, only three, namely, Japan, Norway and the Soviet Union lodged objections to the moratorium decision and continued to engage in commercial whaling activities.¹³³ After the moratorium decision, Chile announced its intention to cease all domestic whaling activities. Brazil, Iceland, the Republic of Korea, Peru, and Spain, which currently allow commercial whaling activities, stated that they "are committed to the implementation of the moratorium."¹³⁴

Also in 1982, "[t]here was extensive discussion of the Commission's competence to regulate small cetaceans and on the actions of the Scientific Committee relating to research proposals for small cetaceans."¹³⁵ Problems concerning EEZs and issues of coastal State sovereignty became "a major stumbling block to agreement on a cessation proposal."¹³⁶ The small cetacean issue reached a critical point when the Republic of Seychelles proposed to provisionally classify Baird's beaked whale, which is listed in the Schedule under "toothed whales," as a protection stock (thus prohibiting commercial taking) until sufficient scientific information on the species and its stocks was received and assessed.¹³⁷ However, "[t]he matter was deferred-pend-

131. MARINE MAMMAL COMM'N ANN. REP., *supra* note 29, at 25.

132. Report of the U.S. Delegation to the 35th Annual Meeting of the International Whaling Commission, Brighton, England, July 1983, at 10 (1983).

133. *Id.* Peru originally objected to the moratorium decision, but withdrew its objection prior to the expiration of the objection period. *See supra* note 60.

134. *Id.*

135. Report of the Chairman, 34th Annual Meeting of the International Whaling Commission, Jan. 1983, at 23. In fact, Argentina, Mexico, Chile, Spain, Brazil, Japan, the Soviet Union, Peru, and Costa Rica recorded reservations regarding the IWC's authority to regulate small cetaceans and its regulatory authority within coastal waters. *Id.*

136. *Review of the 34th International Whaling Commission Meeting: Hearing Before the Subcomm. on Human Rights and International Organizations of the House Comm. on Foreign Affairs*, 97th Cong., 2d Sess. 10 (1982).

137. *See IWC/34/23* at 3. Baird's beaked whale is found in the North Pacific and is migratory in nature. This whale is larger in size than a minke whale (Baird's beaked whales can be as large as 42 feet in length, while the maximum size of a minke whale is 33 feet in length), and has a long history of exploitation in Japan and elsewhere as a local, small-scale fishery. The species is currently unclassified and no catch limits have been set. *See supra* notes 61, 66 and accompanying text.

ing the work of a steering committee established to review positions which have been requested from all member countries on the question of small cetacean management"¹³⁸

The steering committee met in 1983 before the annual meeting of the IWC to consider the preliminary legal views of member countries concerning the IWC's competence under the 1946 Convention to set catch limits for Baird's beaked whale.¹³⁹ The committee specifically limited discussion to the regulation of this particular species, stating that "[t]he broader question of the Commission's competence with respect to all cetaceans was deemed irrelevant"¹⁴⁰ The committee noted the fact that "the implications of the Law of the Sea and 200-mile zones are of general importance and do not apply only to the question of the Commission's competence to set catch limits for Baird's beaked whales."¹⁴¹

Even though five member states,¹⁴² submitted position papers containing various steering committee views on the Baird's beaked whale matter,¹⁴³ the committee made no recommendation as to ac-

138. IWC/34/23 at 3.

139. In its report, the steering committee noted that these preliminary views "would not prejudice the question whether or not classifying and setting catch limits for the Baird's beaked whale in the North Pacific is justified for management and conservation purposes." Report of the Steering Committee on Regulation of Baird's Beaked Whale, IWC/35/15 at 1 (1983).

140. *Id.*

141. *Id.* at 4.

142. The five states were Australia, Denmark, the Netherlands, the Republic of Seychelles, and the United Kingdom.

143. In brief, Australia contended that "[t]here are strong grounds for asserting that the Commission does in fact have the competence to set catch limits for Baird's beaked whale in the North Pacific." IWC/35/15, App. 4, Submission by the Government of Australia, p. 1, para. 3. In support of its argument, Australia stated, *inter alia*, that article V, para. 1 of the Convention "gives an unlimited power to the Commission to fix 'protected and unprotected species' in the Schedule for the purpose of 'the conservation and utilisation of whale resources,'" *id.* at p. 1, para. 3(d); that "no country lodged an objection when the definition of bottlenose whale with its reference to Baird's beaked whale was inserted in the Schedule at the 29th Annual Meeting of the Commission in 1977," *id.* at p. 1, para. 3(g); and that also in 1977, a definition of "small-type whaling" was introduced without objection, a definition which "includes hunting bottlenose whales." *Id.*

In taking the opposite view, Denmark stated that "the IWC has regulatory competence only with respect to the whale species listed in the annex to the Final Act of the Convention, called 'Nomenclature of Whales.' Baird's beaked whale is not among [them]" IWC/35/14, app. 4, Submission by the Government of Denmark, p. 1, para. 1. Denmark, however, stated that "[a]s basis for management of species not listed in the Annex, the IWC Scientific Committee may provide scientific advice as warranted according to the IWC Resolution Concerning Extension of the Commission's Responsibility for Small Cetaceans." *Id.* at 2, para. 5. See *supra* note 118 and accompanying text.

The Netherlands gave two examples of past IWC practice which would justify management by the IWC of Baird's beaked whale. First, the Netherlands focused on the addition of the killer whale in 1980 to the list of species which are forbidden to be taken by factory ships. IWC/35/15, App. 4, Submission by the Government of the Netherlands, p. 6. Second, the government mentioned that the pygmy blue whale, even though not listed in the original Chart of Nomenclature, has been included in the definition of

tion by the IWC.¹⁴⁴ Thus, when the IWC subsequently considered this "other" cetacean issue at the full commission meeting, nothing was resolved. The IWC agreed however that the Scientific Committee should review the status of Baird's beaked whale stocks at its meeting in 1984.¹⁴⁵

Thus, the role of the IWC in the regulation of "other" cetaceans remains unclear as to the jurisdiction of the IWC and its perceived ability to manage these "other" species effectively. According to one writer the IWC "possesses valuable institutional momentum" for the

blue whale in the Schedule and has been classified as a Protection Stock. *Id.* The Netherlands concluded, "[t]hus, there are already two precedents for subsequent adoption of amendments to the Schedule with regard to capture of animals of species not referred to in the Chart of Nomenclature." *Id.* at 6-7.

The Republic of Seychelles, supporting IWC management of Baird's beaked whale, in its Scientific and General Comment stated:

The practice of "whaling" is defined neither in the Convention nor in the Schedule. However, "small-type whaling", defined in . . . the Schedule is, if carried out for commercial purposes, a form of "commercial whaling". This definition includes the hunting of three species of bottlenose whales, and beaked and pilot whales, for none of which has the Commission yet established catch limits. The catching of Baird's beaked whale in the western North Pacific, "using powered vessels with mounted harpoon guns", . . . is clearly "small-type whaling" and the regulation of this activity is therefore within the competence of the Commission.

IWC/35/15, App. 4, Submission by the Republic of Seychelles, at 4, para. 4 (citations omitted). The Republic of Seychelles also stated that "the Commission has drawn certain distinctions between various whales and 'small' or 'smaller' cetaceans, but the distinctions have never been clear, and the loose 'boundary' has changed over time." *Id.* at 6, para. 10. Specifically mentioned in this "small cetacean" category are minke whales, northern bottlenose whales, and killer whales — small cetaceans which are now specifically regulated. *Id.* The government concluded that the IWC's past practice has been "flexible and changing" in these matters, *id.*, and that "[t]he 'Small Cetaceans' Subcommittee of the Scientific Committee simply deals with the species that are not yet regulated, regardless of their actual size, and those that are regulated but are not important enough to be considered in a special sub-committee." *Id.*

The United Kingdom, in support of the IWC's competence "to take measures for the conservation of all species of whales, including small whales," IWC/35/15 App. 4, Submission by the Government of the United Kingdom, p. 1, stated that "[s]ince . . . the Schedule identifies the Baird's beaked whale as a member of the bottlenose whale family, the Commission appears to have envisaged the possibility of stock classifications and catch limits being established for that species." *Id.*

144. The steering committee summarized the views received by grouping the considerations raised (as well as their alternatives) according to the rules of treaty interpretation codified by the Vienna Convention on the Law of Treaties. IWC/35/15, pp. 1-4. These "categories" of treaty interpretation include: (1) the text of the Convention and the Schedule, (2) the object and purpose of the Convention, (3) the context of the Convention, and (4) the subsequent practice of the Commission. *Id.* See *supra* note 116.

145. See Report of the U.S. Delegation to the 35th Annual Meeting of the International Whaling Commission, Brighton, England, July 1983, at 8.

regulation of all cetaceans,¹⁴⁶ because since 1946 the commission has been recognized as the single legitimate regulator of "whales." Composed of both whaling and non-whaling nations, the IWC can be "responsive to the needs of industry and therefore is more likely to retain the cooperation of whaling nations than a new, more 'protectionist' international body."¹⁴⁷ Further, "more conservation reforms can be accomplished by the IWC than by a new agency unfamiliar to the whaling nations."¹⁴⁸

The debate concerning the IWC's jurisdiction over all cetaceans (in particular, those taken directly) has raised the question whether the 1946 convention should be modernized in light of the many changes within the IWC, the whaling industry, and the developing international law of the sea. The IWC has sponsored several meetings to consider renegotiation of the Convention. These meetings have addressed such issues as large versus small whale protection, negotiation of a new convention rather than revision of the existing document, the nature and extent of coastal State jurisdiction over cetaceans covered by the 1946 Convention, the suitability of explicit conservation standards for cetaceans in the Convention's preamble, and application of the Convention to incidental as well as direct takes of cetaceans.¹⁴⁹

In May 1981, twenty-six member countries attended a preparatory meeting to consider whether formal changes were necessary to conform the 1946 Convention to current UNCLOS III policies or improve the effectiveness of the IWC's management regime.¹⁵⁰ The participating countries first addressed the "practices and procedures available under the Convention as it now stands and . . . the possibilities of adjustments without amending the Convention."¹⁵¹ Several delegates stressed that "current IWC initiatives in the revision of its management procedure and in the review of aboriginal/subs-

146. Scarff, pt. II, *supra* note 45, at 618.

147. *Id.*

148. *Id.* In spite of the IWC's theoretical competence to regulate all cetaceans, its actual competence may be hindered by its membership because there are a large number of nations with populations of one or more species [of marine mammals] living within their territorial or maritime jurisdictions. The IWC has listed 116 states and dependencies within whose national jurisdictions populations of cetaceans are found, although it had itself only 24 member states at its 1980 meeting.

Food and Agricultural Organization, U.N. Environment Programme, "Draft Global Plan of Action for the Conservation, Management, and Utilization of Marine Mammals" 18 (FAO/UNEP Project No. 0502-78/02, Rome, 1981). The IWC currently has 40 members. See *supra* note 51.

149. 1978 MARINE MAMMAL COMM'N ANN. REP. 81 (Jan. 1979).

150. See Report of the Preparatory Meeting to Improve and Update the International Convention for the Regulation of Whaling, 1946 (Reykjavik, May 1981), IWC/33/20 (1981).

151. *Id.* at 3.

tence whaling illustrated how the Convention is adaptable to changing circumstances.¹⁵²

The nations then addressed the need to amend the Convention to give greater emphasis to conservation.¹⁵³ The jurisdictional issue of the IWC's authority to regulate all cetaceans was divided into two categories: species and geographical jurisdiction under the 1946 Convention. In noting the undefined nature of the term "whale" and thus the "differing views as to which species may in fact be subject to IWC management,"¹⁵⁴ the delegates nonetheless acknowledged the Scientific Committee's competence to advise the IWC on the status of all cetacean populations.¹⁵⁵ In terms of geographical jurisdiction, however, no consensus was reached on the extent to which coastal State sovereignty and developing international law was incorporated into the Convention. The delegates recognized, however, that a high degree of cooperation was needed between coastal States and international organizations such as the IWC to ensure proper species protection and utilization.¹⁵⁶

The preparatory meeting failed to produce any formal proposals for revision or modification of the 1946 Convention. Instead, the participating countries reached a consensus that because current IWC mechanisms have resulted in significant conservation and management changes since 1970, the "Convention in its present form is flexible enough to provide for management of all cetacean populations and that the need for management measures could be considered on a case-by-case basis."¹⁵⁷ Further, the delegates distinguished direct and incidental takes by holding that the IWC's jurisdiction could be extended if at all, only to reach the direct takes of small

152. *Id.* See *supra* notes 63-66, 81-85 and accompanying text.

153. In response to the current emphasis on "optimum" utilization, many delegates urged that "non-consumptive exploitation should be recognized as an additional and/or alternative to consumptive use of whale stocks and should be included in the Convention Preamble and management regime of the Commission." Report of the Preparatory Meeting, *supra* note 150, at 3.

The issue of non-consumptive utilization was the focus of a special meeting of the IWC in June 1983. However, even though the IWC maintains a whale sanctuary in the Indian Ocean and has established other types of programs to ensure the conservation of whale stocks, the majority of IWC members has concluded that the regulation of non-consumptive uses of whales is not within the jurisdiction of the IWC. See *Whales Alive: Report of Global Conference on the Non-Consumptive Utilisation of Cetacean Resources*, IWC/35/18 (1983).

154. Report of the Preparatory Meeting, *supra* note 150, at 4.

155. *Id.*

156. *Id.* at 5.

157. *Id.*

cetaceans.¹⁵⁸

The United States actively endorsed the ability of the 1946 Convention to adapt to change in light of scientifically-established needs, on a case by case basis. Other IWC members, however, supported revision of the Convention because of the opportunity to *restrict* the jurisdiction of the Commission, both in terms of the species included and the geographical areas encompassed. As one writer has noted:

[t]he desire by coastal states . . . to limit the IWC's jurisdiction to international waters has been a central reason for conservationists backing down from their demands for a renegotiation. The United States has met this coastal state expansion by urging a limitation on coastal authority, allowing coastal states to adopt only regulations that are stricter than international standards.¹⁵⁹

Further, the question of coastal State regulation of "other" cetaceans as opposed to regulation on an international level addresses the more fundamental question regarding the IWC's jurisdiction to manage *any* cetacean within the EEZ.¹⁶⁰

Thus, regardless of whale size or geographical location, the real issue is whether an effective international regime can be developed, agreed to, and implemented for the regulation of these "other" cetaceans, or cetacean species currently without regulatory protection that might be in need of it. The perceived need for such regulation results from political considerations, international concern for the species involved, dissatisfaction with existing national regulation, and concern that the species involved slip between the cracks of international and national regulatory schemes. For biological and policy reasons, a comprehensive management system is needed for all cetacean species in need of regulation; determined on a case-by-case, species-by-species basis, applying both within and beyond the EEZ. To reach this objective of comprehensive management, a framework must be identified and agreed to concerning when the exercise of regulatory authority is biologically and otherwise appropriate.

Therefore, instead of focusing on a particular species, such as Baird's beaked whale, in determining the appropriateness of a regulatory regime for "other" cetaceans, a workable framework would consist of an agreed-upon set of objective factors to be applied whenever a particular cetacean species taken directly may require biological protection. These factors could include the biological status of

158. *Id.* The possibility that such "flexible" decisions are *ultra vires* should also be considered. See Osieke, *The Legal Validity of Ultra Vires Decisions of International Organizations*, 77 AM. J. INT'L L. 239 (1983), in which Osieke focuses on "the increasing tendency of some of the organizations to take measures that are not expressly provided for in their constitutive instruments but that they consider necessary or essential for the effective discharge of their mandates."

159. M'Gonigle, *supra* note 5, at 214.

160. See *supra* text accompanying notes 101-02.

the stocks in question, the nature and extent of direct fishing pressures, the length of time that the stock or species has been harvested, and the adverse effect or threat of fishing pressures on the stocks at issue. Thus, instead of proceeding on an *ad hoc* basis in the regulation of these species, this framework would provide more definite standards and procedures to be used in the determination of when biological regulation is both appropriate and necessary.

The IWC would be the appropriate institution to implement this comprehensive management regime for "other" cetacean species taken directly.¹⁶¹ In spite of all the changes occurring within the whaling industry since 1946, the IWC has proved to be a flexible and effective international regulatory body. Its institutional momentum and recognized ability to provide scientifically-based management advice further qualify the commission as the appropriate regulator for the direct takes of all cetaceans under such a regime. In fact, the ability of the IWC to develop and apply a similar regime for "other" cetaceans was proved in 1983 when the commission adopted an amendment to the Schedule establishing management principles for aboriginal whaling and providing standards for setting allowable catch limits.¹⁶²

161. In terms of "other" cetacean species taken incidently or indirectly, regional fishery organizations would be the appropriate regulatory bodies. For example, the Inter-American Tropical Tuna Commission (IATTC), the international fishery organization concerned with the taking of tuna and porpoises in the eastern tropical Pacific, is making progress towards reduced porpoise mortality levels. Established in 1949 to regulate an area in which 67% of the world's tuna is caught, "[t]he duties of the IATTC are to study tuna and other fish caught by tuna fishing vessels within its geographical area of responsibility and, . . . to recommend management measures designed to maintain stocks at levels that will produce maximum yields on a sustained basis." J. JOSEPH & J. GREENOUGH, *supra* note 25, at 13-14.

Following the lead of the United States, the IATTC has continued to work towards the resolution of the tuna-porpoise problem:

The first step was to consider the rationale for Commission involvement. . . .

After considerable deliberation, it was concluded that a legitimate rationale did exist for IATTC involvement in the tuna-porpoise problem, and at its annual meeting in 1976 three basic objectives were adopted:

1. To maintain tuna production at a high level
2. To maintain stocks of porpoises at or above levels that would insure their survival in perpetuity
3. To make every reasonable effort to ensure that porpoises are not needlessly or carelessly killed in fishery operations.

Id. at 170. See also Dyke & Heftel, *Tuna Management in the Pacific: An Analysis of the South Pacific Forum Fisheries Agency*, 3 U. HAWAII L. REV. 11 (1981), ("The extent to which coastal nations must share or coordinate conservation and management authority with a regional organization is still open for debate.").

162. Slated to come into effect in 1984, the amendment provides:

[C]atch limits for aboriginal subsistence whaling to satisfy aboriginal subsis-

This "other" cetacean issue may be rendered moot, however, by the IWC's 1982 commercial whaling moratorium decision.¹⁶³ Although not yet considered by the IWC, the moratorium logically will apply to future commercial harvest of "other" cetaceans. A related issue concerns "other" cetacean species that may be added to the Schedule before the moratorium comes into effect in 1986. Such species would not have been listed when the moratorium was approved, and no further objections to the moratorium can be filed since the objection period is over.¹⁶⁴ To avoid both issues, the IWC should wait until the moratorium comes into effect before implementing the "other" cetacean regulatory regime. At that time, the IWC could consider the necessity of adding any "other" cetacean species to the Schedule.

Continuing international cooperative efforts are needed now so that a framework for an "other" cetacean management regime can be agreed upon and implemented by the IWC for species taken directly. Once an agreement is reached, there will be no need to resolve the legal issues presented, for the real issue concerns the successful regulation of cetacean species in need of conservation and management for these cetaceans do not recognize boundaries drawn on the map.

tence need for the 1984 whaling season and each whaling season thereafter shall be established in accordance with the following principles:

(1) For stocks at or above the MSY level, aboriginal subsistence catches shall be permitted so long as total removals do not exceed 90 percent of MSY.

(2) For stocks below the MSY level but above a certain minimum level, aboriginal subsistence catches shall be permitted so long as they are set at levels which will allow whale stocks to move to the MSY level.

(3) The above provisions will be kept under review, based upon the best scientific advice, and by 1990 at the latest the Commission will undertake a comprehensive assessment of the effects of these provisions on whale stocks and consider modification.

1983 Schedule, *supra* note 61, para. 13(a). Also a footnote to paragraph 13(a)(2), stated:

[t]he Commission, on advice of the Scientific Committee, shall establish as far as possible (a) a minimum stock level for each stock below which whales shall not be taken, and (b) a rate of increase towards the MSY level for each stock. The Scientific Committee shall advise on a minimum stock level and on a range of rates of increase towards the MSY level under different catch regimes.

Id.

163. *See supra* notes 130-134 and accompanying text. Aboriginal whaling activities are not included under the moratorium.

164. *See supra* note 60.

APPENDIX I

LIST OF RECOGNIZED SMALL CETACEANS

<i>SCIENTIFIC NAME</i>	<i>RECOMMENDED COMMON NAME</i>
<i>Balaenoptera acutorostrata</i>	Minke whale
<i>Caperea marginata</i>	Pygmy right whale
<i>Tasmacetus shepherdi</i>	Shepherd's beaked whale
<i>Berardius arnuxii Duvernoy</i>	Arnoux's beaked whale
<i>Berardius bairdii Stejneger</i>	Baird's beaked whale
<i>Mesoplodon pacificus</i>	Longman's beaked whale
<i>Mesoplodon bidens</i>	Sowerby's beaked whale
<i>Mesoplodon densirostris</i>	Blainville's beaked whale
<i>Mesoplodon europaeus</i>	Gervais' beaked whale
<i>Mesoplodon layardii</i>	Strap-toothed whale
<i>Mesoplodon hectori</i>	Hector's beaked whale
<i>Mesoplodon grayi</i>	Gray's beaked whale
<i>Mesoplodon stejnegeri</i>	Stejneger's beaked whale
<i>Mesoplodon bowdoini</i>	Andrew's beaked whale
<i>Mesoplodon mirus</i>	True's beaked whale
<i>Mesoplodon ginkgodens</i>	Ginkgo-toothed beaked whale
<i>Mesoplodon carlhubbsi</i>	Hubb's beaked whale
<i>Ziphius cavirostris</i>	Cuvier's beaked whale
<i>Hyperoodon ampullatus</i>	Northern bottlenose whale
<i>Hyperoodon planifrons</i>	Southern bottlenose whale
<i>Kogia breviceps</i>	Pygmy sperm whale
<i>Kogia simus</i>	Dwarf sperm whale
<i>Monodon monoceros</i>	Narwhal
<i>Delphinapterus leucas</i>	White whale (beluga)
<i>Steno bredanensis</i>	Rough-toothed dolphin
<i>Sotalia fluviatilis</i>	Tucuxi
<i>Sousa chinensis</i>	Indo-Pacific hump-backed dolphin
<i>Sousa teuszii</i>	Atlantic hump-backed dolphin
<i>Orcaella brevirostris</i>	Irrawaddy dolphin
<i>Peponoscphala electra</i>	Melon-headed whale
<i>Feresa attenuata</i>	Pygmy killer whale
<i>Pseudorca crassidens</i>	False killer whale
<i>Orcinus orca</i>	Killer whale
<i>Globicephala melaena</i>	Long-finned pilot whale
<i>Globicephala macrorhynchus</i>	Short-finned pilot whale
<i>Lagenorhynchus albirostris</i>	White-beaked dolphin
<i>Lagenorhynchus acutus</i>	Atlantic white-sided dolphin
<i>Lagenorhynchus obscurus</i>	Dusky dolphin
<i>Lagenorhynchus cruciger</i>	Hourglass dolphin

<i>Lagenorhynchus australis</i>	Peale's dolphin
<i>Lagenorhynchus obliquidens</i>	Pacific white-sided dolphin
<i>Lagenorhynchus hosei</i>	Fraser's dolphin
<i>Tursiops truncatus</i>	Bottlenose dolphin
<i>Grampus griseus</i>	Risso's dolphin
<i>Stenella longirostris</i>	Spinner dolphin
<i>Stenella coeruleoalba</i>	Striped dolphin
<i>Stenella attenuata</i>	
<i>Stenella dubia</i>	
<i>Stenella frontalis</i>	Spotted dolphins (2 species)
<i>Stenella plagiodon</i>	
<i>Delphinus delphis</i>	Common dolphin
<i>Lissodelphis peronii</i>	Southern right whale dolphin
<i>Lissodelphis borealis</i>	Northern right whale dolphin
<i>Cephalorhynchus heaviside</i>	Heaviside's dolphin
<i>Cephalorhynchus eutropia</i>	Black dolphin
<i>Cephalorhynchus hectori</i>	Hector's dolphin
<i>Cephalorhynchus commersonii</i>	Commerson's dolphin
<i>Phocoena phocoena</i>	Harbour porpoise
<i>Phocoena sinus</i>	Cochito
<i>Phocoena spinipinnis</i>	Burmeister's dolphin
<i>Phocoena dioptrica</i>	Spectacled porpoise
<i>Phocoenoides dalli</i>	Dall's porpoise
<i>Neophocaena phocaenoides</i>	Finless porpoise
<i>Plantanista gangetica</i>	Ganges susu
<i>Plantanista indi</i>	Indus susu
<i>Inia geoffrensis</i>	Boutu
<i>Lipotes vexillifer</i>	White flag dolphin
<i>Pontoporia blainvillei</i>	Franciscana

source: 32 FISH RES. BOARD CAN. 966-67 (1975).

APPENDIX II
REPORTED ESTIMATED CATCHES OF SMALL CETACEANS IN 1981
(ETP)

Species	Denmark										South Africa	USA	Non-USA	Spain	France	New Zealand	Seychelles	Total
	Canada	Japan	Greenland	Faroes	Norway	USSR												
Baird's beaked whale		31																31
Narwhal	350		350 ^{1,2}															700
White whale	768		550 ^{1,2}			236												1,554
Indo-Pac. hump-backed dolphin											8							8
False killer whale		356 ¹																356
Killer whale		21 ¹																21
Long-finned pilot whale		2			52													54
Short-finned pilot whale			2 ^{1,2}	2,773														2,775
Dusky dolphin		686 ¹																686
Pacific white-sided dolphin		6 ¹																6
Bottlenose dolphin											1							2
Risso's dolphin		69 ¹																69
[Pan-tropical] spotted dolphin		4 ¹																4
Spinner dolphin		3,480 ¹									13							3,493
Striped dolphin		13 ¹																21
Common dolphin		3 ¹																4
Harbour porpoise		1,440 ¹																1,440
Dall's porpoise		20 ¹																22,589
Finless porpoise		16,247 ¹																13,218
Heaviside's dolphin		97 ¹																16,247
Hector's dolphin		75 ¹																518
Unidentified or mixed		30 ¹																49
		10 ¹																880
		6,718 ¹																5,197
		9,158 ¹																11
		153 ¹																6,718
		9 ¹																9,158
		23,399 ¹																153
		24,520	38,677	1,758	2,773	52	236	174	16,055	27,484	5	16	156	<100	<100		24,039	
Total																		112,006

Legend: D = Direct
I = Incidental
1 = Provisional
2 = Estimated total
3 = Non-USA kill in ETP
4 = 1980/81—Catch listed under 'other' composed of dusky, common, and Hector's dolphins, unspecified proportions.
5 = Most of the estimated <100 reported are bottlenose dolphins.
6 = Actual takes of 254 animals, of mixed-species composition with unreported proportions, extrapolated to numbers of nets fishing off Newfoundland coast and because most of the fishermen queried reported is of questionable value, because data from a small sample of fishermen (100) in one area were extrapolated to the entire Newfoundland coast and because most of the fishermen queried reported no take (nearly all of the 254 reported were taken by a few fishermen in one location).
7 = Estimated by US (SC/33 ProgRep USA)

source: 32 REP. INT'L WHAL. COMM'N. 125 (1982).

