

1994

United States Practice And The Bearing Sea: Is It Consistent With A Norm Of Ecosystem Management?

Timothy D. Smith

University of Maine School of Law

Follow this and additional works at: <http://digitalcommons.maine.law.maine.edu/oclj>

Recommended Citation

Timothy D. Smith, *United States Practice And The Bearing Sea: Is It Consistent With A Norm Of Ecosystem Management?*, 1 *Ocean & Coastal L.J.* (1994).

Available at: <http://digitalcommons.maine.law.maine.edu/oclj/vol1/iss2/2>

This Comment is brought to you for free and open access by the Journals at University of Maine School of Law Digital Commons. It has been accepted for inclusion in *Ocean and Coastal Law Journal* by an authorized administrator of University of Maine School of Law Digital Commons. For more information, please contact mdecrow@maine.edu.

UNITED STATES PRACTICE AND THE BERING SEA: IS IT CONSISTENT WITH A NORM OF ECOSYSTEM MANAGEMENT?

*Timothy D. Smith**

I. INTRODUCTION

The need for management of our planet's oceanic environment on an ecosystem level has been an important and much discussed topic in marine science and policy circles.¹ At least one scholar has argued that customary international law requires states to manage the earth's oceans on an ecosystem level rather than by using an "ad hoc" or species-by-species system.² Ecosystem management provides for a more comprehensive approach toward the utilization and protection of resources in a given geographic area than does species specific management. Not only does ecosystem management consider complex interrelationships among

* J.D. 1995, University of Maine School of Law.

1. See generally, *Magnuson Fishery Conservation and Management Act Reauthorization: Hearings on H.R. 780 Before the Subcomm. on Fisheries Management of the House Comm. on Merchant Marine and Fisheries*, 103d Cong., 1st Sess. (1993) [hereinafter *House Hearing*]; *Implementation of the Fishery Conservation Amendments of 1990: Hearing Before the Senate Comm. on Commerce, Science, and Transportation*, 102d Cong., 2d Sess. (1992) [hereinafter *Senate Hearing*]; NATIONAL MARINE FISHERIES SERVICE, U.S. DEP'T OF COMMERCE, *OUR LIVING OCEANS: THE FIRST ANNUAL REPORT ON THE STATUS OF U.S. LIVING MARINE RESOURCES*, NOAA TECH. MEM. NMFS-F/SPO-1 (Nov. 1991) [hereinafter *OUR LIVING OCEANS*]; Martin H. Belsky, *The Ecosystem Model Mandate for a Comprehensive United States Ocean Policy and Law of the Sea*, 26 SAN DIEGO L. REV. 417 (1989); Natalia S. Mirovitskaya & J. Christopher Haney, *Fisheries Exploitation as a Threat to Environmental Security*, 4 MARINE POL'Y, 243-258 (1992); See also *Greenpeace v. Franklin*, 982 F.2d 1342 (9th Cir. 1992) for environmental organization's arguments relating to effect on ecosystem and other species regarding pollock catch.

2. See Martin H. Belsky, *Management of Large Marine Ecosystems: Developing a New Rule of Customary International Law*, 22 SAN DIEGO L. REV. 733 (1985).

species, but it also takes into account considerations such as habitat, human needs, and air and water quality. Such an analysis does not merely boil down to, for example, jobs versus spotted owls, or the commercial Alaskan pollock harvest versus the Steller sea lion,³ but requires managers to take a broader view of the consequences of their actions for the benefit of all.

Marine ecosystems like the Bering ecosystem are not made up of thousands of separate species of plants and animals each acting autonomously. Rather, they are made up of species which interact with each other and with their environment and are affected directly and indirectly by human activities such as commercial fishing and oil drilling.⁴ This web of interrelationships between human activities, natural biological occurrences, marine habitats and the environment is one example of what is meant by the term "ecosystem."⁵

"Ecosystem management" requires that a comprehensive planning method be undertaken to regulate the "whole ecologic mosaic in a region."⁶ As Professor Belsky notes: "In other words, the premise of the [ecosystem] model is simply a plea by scientists for holistic or comprehensive research and management [of a given geographic area]."⁷ The ecosystem model theorizes that if an integral species like the Alaska pollock in the Bering Sea ecosystem is depleted by overfishing, not only may this significantly affect the human economic interests in the region,⁸ but it will also affect the habitat and species that are dependent on those species.⁹ Thus, the current management system, which sets annual quotas on individual fish species like pollock, may not be the most effective way to preserve other important economic and ecological interests in the ecosystem. A more effective means of ensuring the health of the Bering Sea and other ecosystems may be to consider a commercially significant species like pollock as just one, albeit critical,

3. See *infra* part IV.

4. Belsky, *supra* note 1, at 448.

5. *Id.*

6. *Id.*

7. *Id.* See also EUGENE H. BUCK, CONGRESSIONAL RESEARCH SERVICE REPORT: MARINE ECOSYSTEM MANAGEMENT, (updated July 29, 1993).

8. For example, factory trawler crews, on-shore plants, marketers and administrators in the groundfish industry employ 10,000 people nation-wide. Approximately one-third of these individuals work primarily with pollock. David Holthouse, *The Mystery of the Disappearing Species*, NATIONAL WILDLIFE, Dec./Jan. 1995, 34, 39.

9. See *infra* part IV.

component of a functioning system, characterized by complex interrelationships, and which must be managed as a whole.¹⁰

Actions taken by the United States with respect to the Bering Sea ecosystem are important because of their global significance both economically and ecologically. The behavior of the United States is important particularly because much of the Bering Sea ecosystem lies within its Exclusive Economic Zone (EEZ). In addition, the United States is seen as the final remaining superpower, and its actions are often looked to by other nations as an indication of the current standards of conduct under international law.¹¹

The purpose of this Comment is to explore whether actual U.S. government practice supports the emergence of a customary international law norm requiring nations to engage in marine ecosystem management. Part II describes the theory that there exists such an emerging international law norm. As will be explained, this norm is illustrated by recent developments in international law, including provisions of the United Nations Draft Agreement on Straddling Fish Stocks and Highly Migratory Fish Stocks¹² and the United Nations Convention on the Law of the Sea (LOS).¹³

The domestic legal tools that the United States can employ to manage the marine environment on an ecosystem level are the National Environmental Policy Act (NEPA),¹⁴ the Magnuson Fishery Conservation and Management Act (Magnuson Act),¹⁵ the Marine Mammal Protection

10. See generally Belsky, *supra* note 1, at 417; Martin H. Belsky, *A Strategy to Avoid Conflicts*, 27 OCEANUS 19 (Winter 1984-85). In addition, other legal scholars and philosophers have written about the interconnectedness of species and the environment, outlining the importance of maintaining intact ecosystems. See e.g. NILES ELDRIDGE, *THE MINER'S CANARY* 220-229 (1991); RACHEL CARSON, *SILENT SPRING* 53-61 (1962).

11. For example, when the United States did not sign the United Nations Convention on the Law of the Sea (LOS), most other industrialized nations followed suit.

12. Draft Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 Dec. 1982, Relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks, U.N. Doc. A/CONF.164/22 (Aug. 23, 1994) [hereinafter Draft Agreement].

13. United Nations Convention on the Law of the Sea, U.N. Doc. A/CONF 62/121 (1982), reprinted in 21 I.L.M. 1245 (1982) [hereinafter LOS]. For a description of the development of LOS, see DAVID J. ATTARD, *THE EXCLUSIVE ECONOMIC ZONE IN INTERNATIONAL LAW*, 1-31 (1987); MARTIN I. GLASSNER, *NEPTUNE'S DOMAIN* 73 (1990).

14. 42 U.S.C. §§ 4321-4347 (1988 & Supp. V 1993).

15. 16 U.S.C. §§ 1801-1882 (1988 & Supp. V 1993).

Act (MMPA),¹⁶ and the Endangered Species Act (ESA).¹⁷ These are explored in Part III.

In order to ascertain whether the United States is using these domestic tools in accordance with the emerging international duty to manage on an ecosystem level, Part IV analyzes the actions of the U.S. government with respect to a specific marine ecosystem, the Bering Sea, and a specific species, the Walleye pollock (pollock).¹⁸ The Bering Sea is "one of the most biologically productive waters of the world."¹⁹ Unlike many of the United States' erstwhile fishery-rich ecosystems, it supports a fishery which as recently as 1990 was described as "healthy."²⁰ The pollock is a key species both commercially and ecologically in the Bering Sea.²¹ As such, the pollock illustrates the necessity of management on an ecosystem level and presents an opportunity for the United States to engage in such management.

This Comment will demonstrate that the United States is moving away from a species-by-species approach and toward a more comprehensive, ecosystem-oriented approach of management in the Bering Sea. However, this movement is in its embryonic stages and it remains to be seen whether the United States will use its domestic tools and engage in international efforts to successfully support an emerging international norm requiring ecosystem management.

16. 16 U.S.C. §§ 1361-1407 (1988 & Supp. V 1993).

17. 16 U.S.C. §§ 1531-1544 (1988 & Supp. V 1993).

18. *Theragra Chalcogramma*, also known as the Alaska pollock.

19. Conference on Shared Living Resources of the Bering Sea Region, held under the auspices of the U.S.-U.S.S.R. Agreement on Cooperation in the Field of Environmental Protection, Area XI, Legal and Administrative Measures at 5 (Richard Townsend ed., 1990), held June 5-7, 1990, at the University of Alaska at Fairbanks (statement by Vera Alexander, Institute of Marine Science/School of Fisheries and Ocean Science, University of Alaska, Fairbanks) (Gov. Doc., Prex 14.2:R 31/3) [hereinafter Bering Sea Conference].

20. *Id.* at 50 (statement of Dr. Clarence G. Pautzke, Executive Director, North Pacific Fishery Management Council, June 5, 1990).

21. The pollock is an integral part of the Bering ecosystem because it is the most heavily commercially harvested species of fish in the Bering Sea, and in fact, it provides the largest single-species catch of any fishery in the entire United States. OUR LIVING OCEANS, *supra* note 1, at 84. In addition, it is ecologically important because seabirds and mammals, like the Steller sea lion, depend on it as their major food source (*see* discussion *infra* Part IV). NORTH PACIFIC FISHERY MANAGEMENT COUNCIL, FISHERY MANAGEMENT PLAN AND SUMMARY FOR THE BERING SEA/ALEUTIAN ISLANDS GROUND FISH, revised May 1993, App. IV, p. 2 [hereinafter NPFMC PLAN & NPFMC SUMMARY].

II. THE EMERGING NORM OF ECOSYSTEM MANAGEMENT AS CUSTOMARY INTERNATIONAL LAW

A. *Development of the Norm*

The arguments supporting the emergence of a customary international law obligation to manage resources at an ecosystem level are strong.²² State practice reflects acceptance of this emerging norm²³ and the concept of ecosystem management appears in the text of international treaties and agreements.²⁴

In addition to representing the formal adoption of law, treaties can also often be evidence of custom, because they often represent the explicit ratification or codification of the practices of states.²⁵ The quintessential example of the marriage between customary international law and treaty law in the marine context may be the codification in spirit²⁶ and form²⁷ of commonly accepted principles of state practice in one document—the United Nations Convention on the Law of the Sea. Upon the completion of the third U.N. Conference on the Law of the Sea

22. This section of the Comment relies in large part on the writings of Martin H. Belsky (Dean and Professor of Law, Albany Law School of Union University) who is the principal proponent of this argument. In addition to Professor Belsky's writings, *supra* notes 1 and 2, other scholars have discussed this idea. See generally notes 1 and 2.

23. See, e.g., Belsky, *supra* note 1, at 454-461.

24. Belsky, *supra* notes 1 and 2. See, e.g., Draft Agreement, *supra* note 12, at arts. 5, 6(3)(c), 7(d)(2); LOS, *supra* note 13, pts. V, VII, XII, at 1279-1284, 1286-1291, 1308-1315.

25. RESTATEMENT (THIRD) OF THE FOREIGN RELATIONS OF LAWS OF THE UNITED STATES § 102, cmt. f (1987).

26. LOS, *supra* note 13, pmbl. at para. 3&4:

Conscious that the problems of ocean space are *closely interrelated* and need to be considered *as a whole*,

Recognizing the desirability of establishing through this Convention, with due regard for the sovereignty of all States, a legal order for the seas and oceans which will facilitate international communication, and will promote the peaceful uses of the seas and oceans, the equitable and efficient utilization of their resources, the *conservation* of their living resources, and the study, *protection* and *preservation* of the *marine environment*.

Id. at 1271 (emphasis added).

27. The obligation to manage the world's fisheries and living resources is specifically derived from LOS, pt. V, concerned with EEZs, and pt. VII which concerns the high seas. See discussion below.

in 1982, then President Reagan issued a proclamation stating that the United States considered all the provisions of LOS, except those regarding sea-bed mining, as binding codifications of customary international law.²⁸ LOS, having been ratified by the requisite number of nations, entered into force on November 16, 1994.²⁹ While the United States has not yet ratified this treaty, it has signed it and, as mentioned above, has stated that it accepts virtually all its provisions as binding international law.³⁰

Although LOS is the principal treaty addressing international ocean resources, numerous other formal agreements exist among nations which address issues concerning identifiable regions or specific economic problems in a wide variety of forms. Treaties affecting the resources of the Bering Sea include: The Convention on the Conservation and Management of Pollock Resources in the Central Bering Sea (Bering Sea Pollock Convention);³¹ the International Convention for the High Seas Fisheries of the North Pacific Ocean of 1952, which created the North Pacific Fisheries Commission;³² the Convention between the U.S. and Canada regulating halibut fishing, which created the International Pacific Halibut Commission;³³ and the Convention for the Conservation of Anadromous Stocks in the North Pacific Ocean.³⁴ In addition to these

28. Proclamation No. 5030, 48 Fed. Reg. 10,605 (1983) *reprinted in* 16 U.S.C. § 1453 note (1988). The Statement of the President of the United States on Ocean Policy, preceding his proclamation establishing the Exclusive Economic Zone can be found at 19 WEEKLY COMP. PRES. DOC. 383 (Mar. 10, 1983), *reprinted in* 22 I.L.M. 461, 464-465 (1983).

29. *U.N. Convention on the Law of the Sea*, Department of State Dispatch, May 30, 1994, *available in* LEXIS, Exec Library, DSTATE File. *See also* Steven Greenhouse, *U.S., Having Won Changes, Is Set to Sign Law of the Sea*, N.Y. TIMES, July 1, 1994, at A-1.

30. Belsky, *supra* note 1, at 470. *See also* Proclamation No. 5030, *supra* note 28.

31. Convention on the Conservation and Management of Pollock Resources in the Central Bering Sea, June 16, 1994, S. TREATY DOC. NO. 27, 103d Cong., 2d Sess. (1994) *reprinted in* 34 I.L.M. 67 (1995) (references to Letter of Transmittal and Submittal not available in I.L.M., refer to TREATY DOC. No. 27, available from U.S. GPO) [hereinafter Bering Sea Pollock Convention].

32. International Convention for the High Seas Fisheries of the North Pacific Ocean, May 9, 1952, U.S.-Can.-Japan, 4 U.S.T. 382.

33. Convention Between the U.S. & Can. for the Preservation of the Halibut Fishery of the Northern Pacific Ocean and Bering Sea, Mar. 2, 1953, U.S.-Can., 5 U.S.T. 7.

34. North Pacific Anadromous Stocks Convention Act of 1992, Nov. 4, 1992, 106 Stat. 5098.

treaties, there are roughly 35 separate agreements between the United States and the former Soviet Union which deal with issues involving the Bering Sea Region.³⁵

A very important recent development in international ocean management should also be considered. Widespread recognition that the world's oceans must be managed on an ecosystem level is evidenced by the inclusion of the concept of ecosystem management in recent sessions of the United Nation's Conference on Straddling Fish Stocks and Highly Migratory Fish Stocks.³⁶ These negotiations, which were sponsored by the General Assembly, are intended to "stave off the destruction of the world's fisheries."³⁷ While focusing on the specific issues of straddling and highly migratory fish stocks, these sessions reflect the growing trend toward adopting precautionary and co-operative approaches to global fishery management. The "precautionary approach" embodied in the agreement emerging from the negotiations explicitly takes ecosystems into account.³⁸ The following outline of LOS and of the recent developments concerning high seas fish stocks will demonstrate that such concern about ecosystems is rooted in the emergence of an international norm of marine ecosystem management.

B. Convention on the Law of the Sea

The basic objectives of LOS with regard to protection of the earth's living marine resources and the marine environment are found in Parts V, VII and XII of the Convention. Part XII sets forth a general obligation applicable to both fisheries and the protection of the marine environment. It contains, in part, a provision which obligates states "to

35. Bering Sea Conference, *supra* note 19, at 28.

36. David E. Pitt, *Pact Eluding Fishing Nations In Talks on Imperiled Species*, N.Y. TIMES, Apr. 6, 1994, at A13, discussing the Draft Agreement for the Implementation of the Provisions of LOS Relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks, *supra* note 12. *See also*, Michael D. Lemonick, *Too Few Fish in the Sea*, TIME, Apr. 4, 1994, at 70. *See also*, *A Summary Report on the U.N. Conference on Straddling Fish Stocks and Highly Migratory Fish Stocks*, EARTH NEGOTIATIONS BULL., Int'l Inst. for Sustainable Development, Vol 7, No. 39, Aug. 29, 1994 [hereinafter *Conference on Straddling Stocks*].

37. Pitt, *supra* note 36, at A13.

38. Draft Agreement, *supra* note 12, art. 5, at 3-6.

protect and preserve the marine environment."³⁹ As Professor Belsky notes, nations "are individually and collectively responsible for their ocean space, and with other nations, responsible for all the world's seas."⁴⁰ Thus, the duty to protect the marine environment appears to be directly incorporated in the text of LOS.

The obligation to manage the world's fisheries and living marine resources is codified in Part V, which addresses states' EEZs, and Part VII which pertains to the high seas. In Part V, articles 61-67 address the conservation of living marine resources, the utilization of these resources, and issues regarding straddling stocks, highly migratory species, marine mammals, and anadromous and catadromous species. Article 61, entitled "Conservation of living resources," states that the fishing state must provide proper "conservation and management," ensuring that the "maintenance of living resources ... is not endangered by over exploitation."⁴¹ In addition, "the effects on a species associated with or dependent upon harvested species [should be taken into account] with a view to maintaining or restoring populations of such associated or dependent species above levels at which their reproduction may become seriously threatened."⁴² These provisions evince a sensitivity toward the inter-connectedness of living marine resources and create a clear obligation not to manage on a single species basis.

Part VII addresses the living marine resources on the high seas.⁴³ This includes the right to fish, the duty of states to adopt measures for the conservation of living resources of the high seas, and the duty of states to cooperate with regard to the conservation and management of those resources. It also includes provisions concerning marine mammal conservation and management.

With regard to the commercial harvest of fish, Part VII of LOS applies the concept of maximum sustainable yield (MSY).⁴⁴ However, in harvesting according to the maximum sustainable yield, nations must take into consideration "relevant environmental ... factors," "fishing patterns," and "the interdependence of stocks."⁴⁵ In addition, like Article 61 which deals with EEZs, Article 119 requires that nations consider the

39. LOS, *supra* note 13, art. 192, at 1308.

40. Belsky, *supra* note 1, at 461.

41. LOS, *supra* note 13, art. 61(2), at 1281.

42. LOS, *supra* note 13, art. 61(4), at 1281.

43. LOS, *supra* note 13, arts. 116-120, at 1290-1291.

44. *See infra* notes 78-79 and accompanying text.

45. LOS, *supra* note 13, art. 119, at 1291.

"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."⁴⁶ Thus, the high seas provisions of Part VII specifically indicate that other species in the ecosystem are to be taken into consideration by all fishing nations.

When read together, these Parts of LOS are evidence of an international law mandate requiring nation states to cooperate in protecting and preserving the marine ecosystem. Furthermore, they reflect an emerging consensus that ecosystem management should be regarded as customary international law.⁴⁷ Thus, the LOS text provides ample evidence supporting Professor Belsky's thesis that the system of ecosystem management is an emerging international law norm. This thesis is further supported by the fact that the international community is developing a new convention, the Draft Agreement on Straddling Stocks, to elaborate on the basic description of rights and duties found in LOS. For example, the "precautionary approach," outlined in the Draft Agreement on Straddling Stocks and discussed below, fleshes out the basic ecosystem management goal of LOS. It may be seen as another step toward the solidification of the norm of ecosystem management as part of international law.

C. Draft Agreement on Straddling Stocks and Highly Migratory Fish Stocks

The Draft Agreement on Straddling Fish Stocks and Highly Migratory Fish Stocks (Draft Agreement) was the result of the third round of discussions held by the U.N. Conference on Straddling Fish Stocks and Highly Migratory Fish Stocks concluded in New York on

46. LOS, *supra* note 13, arts. 62(4), at 1281-1282, and 119(1)(b), at 1291. LOS requires that nations exchange "available scientific information, catch and fishing effort statistics, and other data relevant to the conservation of fish stocks." LOS, *supra* note 13, arts. 61(5), at 1281 and 119(2), at 1291.

47. See Belsky, *supra* note 1; Lourene Miovsky, *Solutions in the Convention on the Law of the Sea to the Problem of Overfishing in the Central Bering Sea: Analysis of the Convention, Highlighting the Provisions Concerning Fisheries and Enclosed and Semi-Enclosed Seas*, 26 SAN DIEGO L. REV. 525, 574 (1989) ("The Convention provisions also should be treated as customary international law...."); Jeffrey L. Canfield, *Recent Developments in Bering Sea Fisheries Conservation and Management*, 24 OCEAN DEV. & INT'L L. 257 (1993).

August 26, 1994.⁴⁸ The Conference was formed to resolve the issues of how to deal with fish stocks which occur in the exclusive economic zone (EEZ) of one state and the high seas, or within the EEZs of two or more states.⁴⁹ These issues were not resolved by LOS, and the Conference came about primarily as a result of calls for straddling and highly migratory fish stock management at the U.N. Conference on the Environment and the Earth Summit in Rio de Janeiro.⁵⁰

The Conference was initiated to try to resolve the contentious issue of fishing for highly migratory and straddling fish stocks. At the United Nations Conference on Economic Development (UNCED) the participating states "admitted to the failure of the international community to manage global fish resources."⁵¹ The U.N. Conference on Straddling Fish Stocks and Highly Migratory Fish Stocks brought together many of the delegates who had negotiated LOS with those that had participated in UNCED. Its purpose was to take measures to establish binding international standards so that high seas fish stocks would not be further decimated.⁵² Thus, the goal of the Conference was to "ensure that there is an effective mechanism for compliance and enforcement of ... measures [to stop overfishing], provide for a globally-agreed framework for regional co-operation, and establish a compulsory, binding dispute settlement mechanism consistent with UNCLOS."⁵³

The sections relevant to the emerging norm of ecosystem management can be found primarily in the articles of the Draft Agreement concerning its scope, the duties of states, the "precautionary approach" and the compatibility of conservation and management measures.⁵⁴ The scope of the Draft Agreement is important because it applies to areas

48. *Conference on Straddling Stocks*, *supra* note 36, at 1. At the time of this writing the two remaining sessions scheduled to be held in March and April of 1995 had not yet been convened.

49. *Id.*

50. *Id.* The resolution establishing the Conference stipulated that existing problems regarding straddling stocks and highly migratory fish stocks should be identified and assessed; mechanisms for improving co-operation between states should be taken into account; and, the Conference should make recommendations in regard to the problem. *Id.*

51. *Id.*

52. *Id.*

53. *Id.*

54. *See* Draft Agreement, *supra* note 12, arts. 3-7, at 2-6.

both within and beyond national jurisdiction.⁵⁵ Thus the Draft Agreement is important because it requires states to cooperate on straddling fish stocks which occur within their EEZs and on the high seas. This development, the requirement of cooperation in the EEZs, is significant because states have traditionally been reluctant to cede any of their authority within this exclusive zone.

The Draft Agreement states that it "shall be interpreted and applied in the context of and in a manner consistent with the provisions of the Convention."⁵⁶ The Draft Agreement formally recognizes LOS as the controlling document, and requires that it be interpreted in a manner consistent with LOS.⁵⁷ Thus, all the provisions of LOS requiring, for example, cooperation, protection of the marine environment, and a duty to resolve disputes in a peaceful manner would also presumably apply to the Draft Agreement on Straddling Stocks.

The Draft Agreement goes one step further toward the preservation and conservation of the marine environment than does LOS. The "general principles" section outlines a new and core provision of the Draft Agreement under which states apply the "precautionary approach" to the harvest of straddling fish stocks.⁵⁸ When harvesting straddling stocks, states would be required to "adopt ... conservation and management measures for other species belonging to the same *ecosystem* or dependent on or associated with the target species."⁵⁹ Thus, the Agreement specifically requires that the effects of fishing on the *ecosystem* be recognized and that action be taken to prevent harmful

55. Article 3(1) states:

Except as otherwise provided herein, this Agreement applies to the conservation and management of straddling fish stocks and highly migratory fish stocks beyond areas under national jurisdiction. Provided that the provisions of articles 6 and 7 also apply to the conservation and management of straddling fish stocks and highly migratory fish stocks within areas under national jurisdiction.

And article 3(2) states, in part:

In accordance with Part V of the Convention [LOS] the coastal State has the obligation to conserve and manage straddling fish stocks and highly migratory fish stocks in areas under its national jurisdiction.

Draft Agreement, *supra* note 12, arts 3(1) and (2), at 2.

56. The "Convention" refers to the United Nations Convention on the Law of the Sea (LOS), *Id.* art. 4, at 3.

57. "Nothing in this Agreement prejudices the provisions of the Convention." *Id.*

58. *Id.* art. 5(c), at 3.

59. *Id.* art. 5(d), at 3 (emphasis added).

effects. Finally, the "general principles" section requires that "biodiversity" be protected, that environmentally safe gear be utilized, and that pollution, waste, and discards be minimized to protect both the target species and "ecologically related species."⁶⁰

The section outlining "the application of the precautionary approach"⁶¹ further clarifies this key concept in the Draft Agreement by defining the term "precautionary approach." The "precautionary approach" emphasizes the acquisition and utilization of the best scientific data available,⁶² and stipulates that "[s]tates shall be more cautious when information is poor."⁶³

Even more critical for purposes of this Comment, the precautionary approach requires states to consider the "impact of fishing on ... ecosystems."⁶⁴ The mention of ecosystem protection is extremely important because it is an integral part of the Draft Agreement. It demonstrates a consensus that the yield of the catch should no longer be the sole focus of commercial fishing operations, and that ecosystem protection should also be an important consideration in the management of commercial fishing on straddling stocks. The Draft Agreement also recognizes that ecosystem protection, and the protection of dependent and

60. *Id.* art. 5(e)-(f), at 3.

61. *Id.* art. 6, at 4-5.

62. *Id.* art. 6(3)(a), at 4.

63. *Id.* art. 6(2), at 4.

64. *Id.* art. 6(3), at 4. Subsec. 3 of art. 6 states:

3. States shall apply the precautionary approach in accordance with the following:

a. in order to improve decision-making for fishery conservation and management, States shall obtain and share the best scientific information available and develop improved techniques for dealing with risk and uncertainty;

b. in determining conservation and management measures, States shall take into account, *inter alia*, uncertainties relating to the size and productivity of the stock(s), precautionary reference points, stock condition in relation to such reference points, levels and distributions of fishing mortality and the impact of fishing activities on *non-target and ecologically related species, as well as oceanic, environmental and socio-economic conditions*;

c. *in managing fish stocks, States shall consider the impacts of fishing on associated ecosystems.* They should develop data collection and research programmes to assess the impact of fishing on *non-target and ecologically related species and their environment*, adopt plans as necessary to ensure the conservation of such species and consider the *protection of habitats* of special concern.

Id. (emphasis added).

related species, is just as important as the size of the harvest of the target species. Thus, the major fishing countries of the world, through the Draft Agreement, have recognized that in order to adequately protect the target species, a "precautionary approach" toward commercial fishing must be taken, and that ecosystemic considerations must be at the forefront when deciding the volume of a commercial harvest.

The Draft Agreement would also require that coastal states and states fishing the adjacent high seas "cooperate" to ensure that the measures they are taking regarding the fish stock are compatible, and that these measures "do not result in undue harmful impact on living marine resources as a whole, including associated and dependant species."⁶⁵ Here again, it is clear that the Draft Agreement focuses on a holistic approach to fishing, giving clear instruction that the ecosystem and the other species therein be given due regard.

The United States actively participated in the working group discussions of Draft Agreement on Straddling Stocks,⁶⁶ and currently supports the conclusion of a legally binding agreement.⁶⁷ This support can be seen as more than mere compliance with the duties set forth in LOS, requiring cooperation in the management of straddling fish stocks. It also reflects a stronger move by the United States toward the explicit recognition of the customary international law norms evinced by LOS. In addition, U.S. participation and its support for a legally binding document also signifies that the United States has adopted, at least rhetorically, the idea of a "precautionary approach" toward fishing. This approach includes a consideration and analysis of fishing on the *ecosystem* at issue. By participating in the Draft Agreement, the actions of the United States strengthen the international law norm, also espoused in LOS, of cooperation regarding fishery issues.

In fact, the duty to cooperate as set forth in the Draft Agreement, may envision international agreements specifically like the Convention on the Conservation of Pollock Resources in the Central Bering Sea (Bering Sea Pollock Convention).⁶⁸ The fact this Convention was signed by all the nations that participated may even indicate that the customary norm to cooperate regarding straddling stocks already exists and is being observed.

65. *Id.* art. 7(2), at 5-6.

66. *See generally*, Bering Sea Conference, *supra* note 19.

67. Pitt, *supra* note 36, at A13.

68. *Supra* note 31.

D. Toward an Emerging Duty of Ecosystem Management

Treaties and agreements such as LOS and the Draft Agreement on Straddling Stocks represent a trend toward managing the earth's vast ocean regions under ecosystem conservation and management schemes.⁶⁹ This trend of state practice, i.e. the formation of agreements that consider ecosystems, represents the evolution of a new customary international law norm. However, it still remains to be seen to what degree the United States will follow the mandates outlined in LOS and the Draft Agreement. The fact that the United States has signed and actively participated in drafting these treaties and agreements not only

69. In addition to LOS and the Draft Agreement on Straddling Stocks, other evidence of international action reflecting the emerging norm exists. For example, the United Nations has enacted several resolutions regarding high seas driftnet fishing. The most recent of which, Resolution On Large-Scale Driftnet Fishing And Its Impact On The Living Marine Resources of The World's Oceans And Seas, U.N. Doc. A/RES/46/215, 31 I.L.M. 241 (1991) was passed in 1991. In it the General Assembly expressed "deep concern" about the impact of driftnet usage, and established a global moratorium on large-scale driftnet fishing as of December 31, 1992. In this resolution, the General Assembly cited its other resolutions regarding driftnet fishing, specifically Resolution 44/225 (29 I.L.M. 1555 (1990)). Resolution 44/225 outlined in detail concerns the effects of driftnet fishing, including that:

in addition to targeted species of fish, non-targeted fish, marine mammals, seabirds and other living marine resources of the world's oceans and seas can become entangled in large-scale pelagic driftnets, either in those in active use or in those that are lost or discarded, and as a result of such entanglement are often either injured or killed.

Id. at 1556.

Thus, in addition to the treaties cited above and the domestic legislation cited below, international legal documents and domestic legislation express concern for ecosystems and reflect the evolving norm toward addressing problems on an ecosystemic level. These international concerns are also reflected in domestic law. The issue of large-scale driftnet fishing is addressed in 16 U.S.C. § 1826 (1988 & Supp. V 1993). In the "findings" section, the law states that Congress finds that;

(7) increasing population pressures and new knowledge of the importance of living marine resources to the health of the *global ecosystem* demand that greater responsibility be exercised by persons fishing or developing new fisheries beyond the exclusive economic zone of any nation.

16 U.S.C. § 1826(b)(7) (1988 & Supp. II 1990) (emphasis added). The Act goes on to list sanctions that may be levied against foreign countries for violating it.

means the treaties themselves should be binding on the United States,⁷⁰ but also demonstrates that U.S. practice has been to support this recent trend of addressing marine problems on a regional and ecosystemic level. Therefore, the above-mentioned treaties may be considered as evidence of emerging U.S. acceptance of the understanding that our planet's oceans must be managed on a cooperative basis to avoid the patchwork approach that would result from each state trying to manage ocean resources on its own.

Thus, based on the practice of nations forming treaties and agreements, and the actions of states which deal with specific regions and ocean management, culminating in LOS and the Draft Agreement on High Seas Fish Stocks, a strong case can be made to support Professor Belsky's thesis that there exists a binding rule of customary international law regarding ecosystem management, even on nations that have not signed or ratified LOS. The fact that LOS itself has been accepted and "confirmed by state practice,"⁷¹ further strengthens this reasoning. The question that remains, however, is whether U.S. actions under its domestic legal authority are consistent with the customary norm. To answer this, one may look to recent U.S. practice with respect to the resources of the Bering Sea. Before doing so, however, it is useful to consider the framework of U.S. marine resource laws.

III. DOMESTIC LAW, U.S. PRACTICE, AND THE THEORY OF A CUSTOMARY INTERNATIONAL NORM OF ECOSYSTEM MANAGEMENT

In addition to the customary international law and treaties mentioned above, both of which are part of our domestic law,⁷² the United States has enacted a patchwork of interlocking domestic legislation which addresses protection of living marine resources. The most important of these laws are the National Environmental Policy Act (NEPA), the Magnuson Fishery Conservation and Management Act (Magnuson Act), the Marine Mammal Protection Act (MMPA) and the Endangered Species Act (ESA). Accepting the premise that the United States has an international law duty to manage on an ecosystem level, it must be

70. Treaty law carries the same weight as domestic law in the United States, U.S. CONST. art. VI, cl. 2, except when it is specifically overridden by domestic legislation. See *Whitney v. Robertson*, 124 U.S. 190, 194 (1888).

71. Belsky, *supra* note 1, at 463.

72. *The Paquete Habana*, 175 U.S. 677, 700 (1900); U.S. CONST. art. VI, cl. 2.

ascertained whether or not U.S. regulations, legislation and legal system observe this norm.

The Magnuson Fishery Conservation and Management Act of 1976 (Magnuson Act) is the single most important piece of domestic legislation in regard to our nation's fisheries.⁷³ The Magnuson Act contains provisions enabling management of domestic fisheries on an ecosystem level. However, like much current domestic legislation affecting living marine resources, it also can be used to manage in an "ad hoc" manner.⁷⁴

The tools that would enable the United States to manage its fisheries on an ecosystem level begin with the Regional Fishery Management Councils⁷⁵ which are responsible for developing fishery management plans (FMPs)⁷⁶ for the species within their geographic areas in accordance with "optimum yield"⁷⁷ and "maximum sustainable yield"⁷⁸ principles.⁷⁹ The regional councils operate in cooperation with the National Marine Fisheries Service (NMFS) of the National Oceanic and

73. Magnuson Fishery Conservation and Management Act of 1976, Pub. L. No. 94-265, 90 Stat. 331 (codified in 16 U.S.C. §§ 1801-1882 *as amended* (1988 & Supp. V 1993) [hereinafter Magnuson Act]. Section 1801(a)(6) describes one purpose for enacting the legislation as "[a] national program for the conservation and management of the fishery resources of the United States is necessary to prevent overfishing, to rebuild overfished stocks, to insure conservation, and to realize the full potential of the Nation's fishery resources." 16 U.S.C. § 1801 (1988). Section 1851 sets forth the fishery conservation and management standards which must be followed in every domestic fishery. 16 U.S.C. § 1851 (1988 & Supp. V 1993).

74. For a discussion of the benefits of "ad hocism" in the Bering ecosystem *see* Bering Sea Conference, *supra* note 19 at 52-54, (statement of Dr. Clarence G. Pautzke, Executive Director of the North Pacific Fishery Management Council).

75. 16 U.S.C. § 1852(a)(1)-(8) (1988). The Magnuson Act established eight Regional Fishery Management Councils each covering a different geographic region of the United States. *Id.*

76. 16 U.S.C. § 1852(h)(1) (1988 & Supp. V 1990).

77. 16 U.S.C. § 1853(a)(4) (1988). "The term *optimum* with respect to the yield from a fishery, means the amount of fish which will provide the greatest overall benefit to the Nation, with particular reference to food production and recreational opportunities; and which is prescribed as such on the basis of the maximum sustainable yield from each fishery, as modified by any relevant economic, social, or ecological factors." 50 C.F.R. § 602.11(f)(1) (1994).

78. 16 U.S.C. § 1853(a)(3) (1988). The term "maximum sustainable yield" is further defined in 50 C.F.R. § 602.11(d) (1994).

79. 16 U.S.C. § 1801(b)(4); 16 U.S.C. § 1852(h) (1988).

Atmospheric Administration (NOAA), and their fishery management plans are subject to approval by the Secretary of Commerce.⁸⁰

The fishery management plans must be drafted in accordance with the "[n]ational standards for fishery conservation and management" set forth in the Magnuson Act.⁸¹ The standards require that "[c]onservation and management measures shall prevent overfishing and insure, on a continuing basis the optimum yield from each fishery."⁸² In addition, the standards state that "[t]o the extent practicable, an individual stock of fish shall be managed as a unit throughout its range, and interrelated stocks of fish shall be managed as a unit or in close coordination."⁸³ This language indicates Congressional recognition of the necessity, when dealing with a fish stock, of taking into consideration other species of fish and the entire area the species inhabits. In addition, through the establishment of the regional councils, Congress has acknowledged the need for sensitivity toward regional ecosystems. Because the regional councils have expertise in a particular geographic area, this ostensibly allows for closer supervision of the ecosystems within each jurisdiction.

It is noteworthy that the term "conservation and management," as used in the Magnuson Act, specifically requires the protection and preservation of the "marine environment."⁸⁴ In addition, the fishery

80. 16 U.S.C. §§ 1852(h), 1854(a) (1988). *See also* C&W Fish Co. v. Fox, 931 F.2d 1556, 1557-8 (D.C. Cir. 1991) (describing the FMP approval process under the Magnuson Act).

81. 16 U.S.C. § 1851(a) (1988 & Supp. V 1993).

82. 16 U.S.C. § 1851(a)(1) (1988 & Supp. V 1993). The meaning of this statement is made even more clear, "[t]here should be no uncertainty that the basic goal of management is to protect the productivity of fish stocks." A LEGISLATIVE HISTORY OF THE FISHERY CONSERVATION AND MANAGEMENT ACT OF 1976, 94th Cong., 2d Sess. 1, 685 (Comm. Print 1976).

83. 16 U.S.C. § 1851(a)(3) (1988).

84. 16 U.S.C. § 1802(2) (1988). This section of the Magnuson Act states in relevant part:

The term 'conservation and management' refers to all of the rules, regulations, conditions, methods, and other measures (A) which are required to rebuild, restore, or maintain, and which are useful in rebuilding, restoring, or maintaining, any fishery resource and the *marine environment*; and (B) which are designed to assure that—

- (i) a supply of food and other products may be taken, and that recreational benefits may be obtained, on a continuing basis;
- (ii) irreversible or long-term adverse effects on fishery resources and the *marine environment* are avoided; and
- (iii) there will be a multiplicity of options available with respect to the

management councils are required to consider measures which are "necessary and appropriate for the *conservation and management* of the fishery to prevent overfishing, and to protect, restore, and promote the long term health and stability of the fishery."⁸⁵ The councils must also take into account marine habitats and changes in those marine habitats when developing FMPs.⁸⁶ Therefore, the provisions of the Magnuson Act mandate the protection and preservation of the marine environment to promote healthy and stable fisheries. In addition, they specifically require that marine habitats be taken into consideration.

Finally, the fishery management plan must be "consistent with national standards, the other provisions of this [Act], regulations implementing recommendations by international organizations in which the United States participates ... and any other applicable law."⁸⁷ Thus, this provision requires the FMPs to be both consistent with formal international law and *any other* applicable law which would presumably include both customary international law and "any other" domestic legislation.

The Marine Mammal Protection Act (MMPA) falls within the ambit of "other" domestic legislation.⁸⁸ The goal of the MMPA is to ensure that mammalian species do not diminish "beyond the point at which they cease to be a significant functioning element in the ecosystem of which they are part."⁸⁹ The Act imposes a moratorium on the "taking"⁹⁰ of marine mammals as its primary means of their protection.⁹¹ However, this moratorium contains many statutory exceptions which allow takings

future uses of these resources.

Id. (emphasis added).

85. 16 U.S.C. § 1853(a)(1)(A) (Supp. II 1990) (emphasis added). In addition, section 1853(a)(7) requires the councils to include in their fishery management plans "information regarding the significance of *habitat* to the fishery and assessment as to the *effects which changes to that habitat* may have on the fishery." 16 U.S.C. § 1853(a)(7) (Supp. II 1990) (emphasis added).

86. 16 U.S.C. § 1853(a)(7) (1988).

87. 16 U.S.C. § 1853(a)(1)(C) (Supp. II 1990).

88. 16 U.S.C. §§ 1361-1407 (1988 & Supp. V 1993).

89. 16 U.S.C. § 1361(2) (1988).

90. "Take" is defined in 16 U.S.C. § 1362 as follows, "The term 'take' means to harass, hunt, capture, or kill, or attempt to harass, hunt, capture, or kill any marine mammal." 16 U.S.C. § 1362 (1988).

91. 16 U.S.C. § 1371 (1988).

of marine mammals, including the incidental take in commercial fishing operations.⁹²

The "primary objective" of the Marine Mammal Protection Act is to ensure that any actions affecting marine mammals are consistent with the maintenance of the "health and stability of the ecosystem"⁹³ which they inhabit.⁹⁴ Thus, the MMPA explicitly requires consideration of ecosystems when marine mammals are involved. One of the problems with the "ecosystem" protection requirement of the MMPA, however, is that the Act does not clearly set forth an enforcement mechanism or guidelines as to how the ecosystem should be protected.⁹⁵ In addition, the MMPA does not define certain critical terms such as what is meant by "health" or "ecosystem."⁹⁶ Thus, the MMPA can be viewed as a piece of U.S. domestic legislation affecting the marine environment which reflects the customary international law norm that ecosystems be

92. The "taking" issues which arise under the MMPA are beyond the scope of this Comment. However, it should be noted that the "incidental take" provisions of the MMPA, recognize that marine mammals are, in a sense, "associated species"; and the regulation of fish stocks can affect marine mammal populations. See *infra* IV text, for a discussion of the possible effect of the Alaska pollock harvest on the Steller sea lion and other marine mammals. See also the 1994 amendments to the Marine Mammal Protection Act which establish a comprehensive approach to setting incidental take quotas. H.R. REP. No. 439, 103d Cong., 1st Sess. (1994).

93. 16 U.S.C. § 1361(6) (1988).

94. *Id.* For a detailed discussion of the specific interaction between provisions of the MMPA and the Magnuson Act see James A.R. Nafziger, *The Management of Marine Mammals After the Fisheries Conservation and Management Act*, 14 WILLAMETTE L.J. 153 (1977).

95. Bering Sea Conference, *supra* note 19, at 100 (paper by Donald Baur, attorney with Perkins Cole, a Washington D.C. law firm).

96. Nafziger, *supra* note 94 at 170. Prof. Nafziger, in his article, raises the question regarding what is meant by the term "health of the ecosystem." He says, in part:

The "health of the ecosystem" is not defined, nor is it susceptible to effective definition. Both terms, "health" and "ecosystem" are unclear. For example, is this particular reference intended to include the "stability" of the ecosystem, as the primary objective of the Act declares, or is the absence of this additional word in the definition of OSP significant? If so, what is the significance? Is the term "stability" redundant? Is the "health" of the ecosystem improved even if it means depletions of fish stocks? Is man, with all his baggage of additional values, to be considered a part of the marine ecosystem? Is the "health" of the ecosystem furthered by selective lowering of marine mammal stocks for their own good or that of the habitat?

Id.

taken into consideration. However, it falls short of being entirely satisfactory in that it fails to define key terms and contains no mechanism to effectuate its underlying policy.⁹⁷

Protection for species also exists in the Endangered Species Act (ESA).⁹⁸ The ESA protects species in three primary ways. First, it closes the U.S. market to trafficking in endangered wildlife, or parts thereof, in an effort to stem the destruction of endangered species. Second, it prohibits "taking"⁹⁹ species and imposes criminal sanctions on anyone who does.¹⁰⁰ Finally, and most significantly for the purposes of this Comment, Section 7 of the ESA prohibits any federal action which has a destructive effect on a species or its habitat.¹⁰¹

97. See discussion at *infra* notes 106-110. However, the possibility that the MMPA may be enforced through other pieces of domestic legislation may exist. For example, certain provisions of the MMPA, such as the concept of a "depleted" stock or species, may be enforced through the Endangered Species Act.

98. 16 U.S.C. §§ 1531-1544 (1988 & Supp. V 1993). The protection of species which fall within the ESA's definitions of threatened or endangered have been given the "highest" protection by the Supreme Court. In *TVA v. Hill*, 437 U.S. 153 (1977), the Court stated that "examination of the language, history and structure of the legislation under review here [i.e. Section 7 of the ESA] indicates beyond doubt that Congress intended endangered species to be afforded the highest of priorities" and that the species be saved "whatever the cost." *Id.* at 174, 184.

99. The ESA defines "take" as "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in such conduct." 16 U.S.C. § 1532(10) (1988). However, there appears to be a split between Circuit courts as to what exactly the term "harm" means. *Palila v. Hawaii Dep't of Land & Natural Resources*, 852 F.2d 1106 (9th Cir. 1988); *contra Sweet Home Chapter of Communities for a Greater Oregon v Babbitt*, 17 F.3d 1463 (D.C. Cir. 1994).

100. 16 U.S.C. § 1538 (1988).

101. See 16 U.S.C. § 1536(a)(1)-(a)(2) (1988) which states:

(1) The Secretary shall review other programs administered by him and utilize such programs in furtherance of the purpose of this chapter. All other Federal agencies shall, in consultation with and with the assistance of the Secretary, utilize their authorities in furtherance of the purposes of this chapter by carrying out programs for the conservation of endangered species and threatened species listed pursuant to section 1533 of this title.

(2) Each Federal agency shall, in consultation with and the assistance of the Secretary, insure that any action authorized, funded, or carried out by such agency (hereinafter referred to as 'agency action') is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of habitat of such species....

Id.

The Act mandates that before any government action can occur, the agency involved must take affirmative steps to protect the affected species and to insure that its "action"¹⁰² is not likely to "jeopardize" the "existence" or "habitat" of the species.¹⁰³ The concept of agency "action" under the ESA is important. Once a federal agency undertakes an "action" which may jeopardize a listed species, a formal interagency consultation process is triggered.¹⁰⁴ The acting agency must consult with the Fish and Wildlife Service (FWS) or the National Marine and Fisheries Service (NMFS) and obtain a biological opinion outlining the FWS or NMFS view on whether the action in question is permissible. The required determination is made by the agency at issue in consultation with the National Marine and Fisheries Service or the Fish and Wildlife Service.¹⁰⁵

Therefore, the ESA has a formal interagency consultation process, which the MMPA lacks. A listed species would theoretically be protected from adverse agency action by these provisions. It should be noted that agency "action" under the Endangered Species Act may also rise to the level of a major federal action which would require an Environmental Impact Statement (EIS) under NEPA. Even if no EIS is ultimately required, the ESA still requires a biological opinion if a listed species is affected. Therefore, the ESA mandates a review and consultation by the Secretary where a listed species is involved, which would not be required if no listed species were present. In addition, in a biological opinion, it may be determined that a full EIS is necessary. However, as discussed below in the context of *Greenpeace v. Franklin*,¹⁰⁶ the threshold for this determination may be quite high.

When the two laws are seemingly in conflict, the more restrictive provision of the ESA or MMPA applies to any species listed under the

102. *Id.* Within the parameters of the ESA, there is a question as to what exactly constitutes "action." See *North Slope Borough v. Andrus*, 642 F.2d 859 (D.C. Cir. 1980), in which the court held that the sale of oil leases in the Beaufort Sea, home to the endangered Bowhead whale, did not constitute agency action because it was only one step in a process over which the agency had control, not a distinct action in and of itself. *Id.*

103. 16 U.S.C. § 1536 (1988). An "action" would "jeopardize" a species if it "reasonably would be expected ... to reduce appreciably the likelihood of both the survival and recovery" of the affected species by being detrimental to its population, reproduction or the area which it inhabits. 50 C.F.R. § 402.2 (1991).

104. 16 U.S.C. § 1536(b) (1988).

105. 16 U.S.C. § 1536 (1988).

106. 983 F.2d 1342 (9th Cir. 1992).

ESA.¹⁰⁷ For example, if a species is considered "depleted" under the MMPA,¹⁰⁸ the moratorium on taking under the ESA would be put into effect. Thus, "taking" a "depleted" species would not be allowed, even if the species was not "listed" under the ESA.¹⁰⁹ If a species is listed pursuant to the ESA, it is automatically considered "depleted" for purposes of the MMPA.¹¹⁰ A "depleted" species may therefore receive protection under the MMPA, even though it may not be listed under the ESA.

Like the MMPA, the ESA includes a policy to protect "the ecosystems upon which endangered species and threatened species depend."¹¹¹ The ESA also has a mechanism by which habitat conservation plans considering "ecosystems" may be provided.¹¹²

The National Environmental Policy Act could provide a mechanism with which to integrate all of the provisions in the various pieces of domestic legislation relevant to marine ecosystems.¹¹³ NEPA "requires federal agencies [to] adopt an 'integrated' approach to planning and decision making and include in every recommendation and report for 'major federal actions'¹¹⁴ a detailed environmental impact statement that describes adverse environmental effects."¹¹⁵

Professor Belsky has argued that any major federal action taken pursuant to NEPA, and any actions which are taken pursuant to the ESA

107. 16 U.S.C. § 1543 (1988).

108. 16 U.S.C. § 1362(1) (1988).

109. 16 U.S.C. § 1372(b)(3) (1988).

110. 16 U.S.C. § 1362(1) (1988).

111. 16 U.S.C. § 1531(b) (1988) states:

Purposes. The purposes of this chapter are to provide a means whereby the ecosystems upon which endangered species and threatened species depend may be conserved, to provide a program for the conservation of such endangered species and threatened species, and to take such steps as may be appropriate to achieve the purposes of the treaties and conventions set forth in subsection (a) of this section.

Id.

112. 16 U.S.C. § 1536 (1988).

113. Belsky, *supra* note 1, at 489.

114. For a discussion of what constitutes a "major federal action" under NEPA, see *Natural Resources Defense Council v. Grant*, 341 F. Supp 356 (E.D.N.C. 1972). Essentially, however, the question of what constitutes a "major federal action" has been addressed by the Council on Environmental Quality which defined the term at 40 C.F.R. § 1508.18 (1990).

115. Belsky, *supra* note 1, at 490, (quoting 42 U.S.C § 4332 (1986)).

are required to be consistent with the ecosystem model.¹¹⁶ NEPA requires an Environmental Impact Statement for major federal action which involves an analysis of the impact on the whole environment in question. The ESA requires a consultation with the NMFS or FWS and generally the issuance of a biological opinion if the action affects a listed species. Therefore governmental action, like a fishery management plan for the Bering Sea,¹¹⁷ must consider the health and stability of the ecosystem and not jeopardize any endangered or threatened species or marine mammal in that ecosystem. Professor Belsky argues persuasively that current domestic legislation, in conjunction with NEPA, can provide a means of managing marine resources and environments on an ecosystem level.¹¹⁸

While the preceding review supports the argument that the tools currently exist to manage the marine environment on an ecosystem level, what remains at issue is whether the United States is actually using these tools to that end. Despite all of the provisions of international and domestic law cited above, a practical problem still exists. The United States has no one piece of legislation, much less one agency, responsible for managing marine resources on an ecosystem level. Although there exists no single authority governing ecosystem management, it is clear that the tools outlined in the different pieces of legislation above allow for the possibility of ecosystem management. Assuming that ecosystem management is an emerging international law norm, is the United States using its tools and abiding by the concepts espoused in international agreements such as LOS?

With the background of the international law and U.S. domestic law concerning living marine resource management in mind, an analysis of management efforts for a major ecosystem and its key species is useful. It can help to answer the question of whether the United States is using the tools available to it to manage the competing ecological and commercial interests involved on an ecosystem level. As stated, the pollock fishery is important because, not only is it an integral part of the

116. Belsky, *supra* notes 1 and 2.

117. Even setting the Total Allowable Catch (TAC) for pollock (a much less significant action than establishing an FMP) by the NPFMC constitutes an action subject to ESA Section 7(A)(2) and NEPA review. *See* Greenpeace v. Franklin, 982 F.2d 1342, 1346 (9th Cir. 1992).

118. Belsky, *supra* note 1, at 489-91.

Bering ecosystem,¹¹⁹ but it also represents the largest single species catch of all the fisheries in the United States¹²⁰ and its ecosystem is imperiled by overfishing.¹²¹

IV. THE BERING ECOSYSTEM—AN ECOLOGICALLY COMPLEX WEB

The Bering Sea¹²² gets its name from a Russian admiral who Czar Peter ordered to explore the region in 1725.¹²³ It is one of the earth's most diverse and resource rich ecosystems.¹²⁴ More than 90 percent of the Bering Sea is located within the EEZs of the United States and Russia,¹²⁵ with the exception of an enclave of high seas between the two

119. EUGENE H. BUCK, MARINE MAMMAL ISSUES, 92126 CONGRESSIONAL RESEARCH SERVICE ISSUE BRIEF (updated Feb. 18, 1994) 12; Mirovitskaya & Haney, *supra* note 1, at 247; A.M. Springer et al., *Seabird Responses to Fluctuating Prey Availability in the Eastern Bering Sea*, MARINE ECOLOGY PROGRESS SERIES, Vol. 32, 1986, pp. 1-12.

120. OUR LIVING OCEANS, *supra* note 1, at 84.

121. Mirovitskaya & Haney, *supra* note 1, at 246-7.

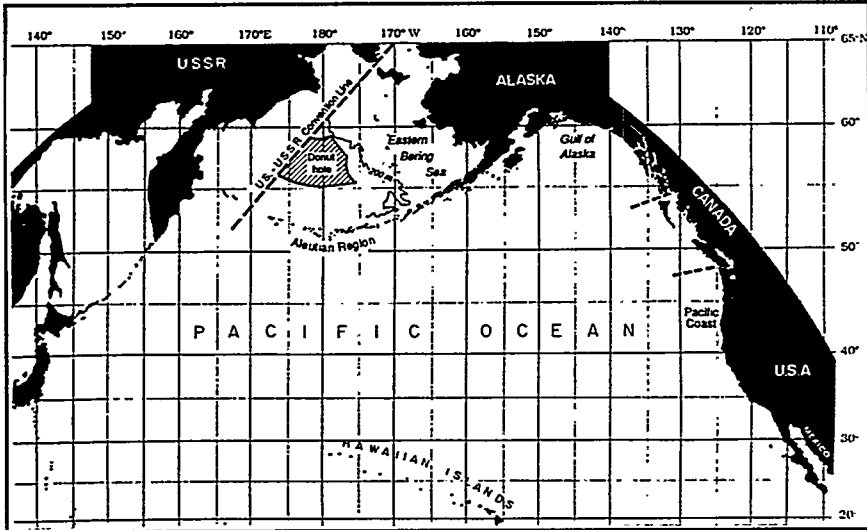
122. The surface area of the Bering Sea is approximately 2,275,000 square kilometers. It has a mean depth of 1,636 meters. Its floor consists of approximately 44 percent continental shelf, 43 percent abyssal plain, and 13 percent continental slope. See Canfield, *supra* note 47, at 258 (citing D.W. Hood & E.J. Kelly, *Oceanography of the Bering Sea, with Emphasis on Renewable Resources*, Occasional Publication no. 2 (Fairbanks Alaska: Institute of Marine Science, University of Alaska, 1974)). "[F]or information on the interrelationships between biological, chemical, meteorological, and geological factors affecting the Bering Sea Ecosystem," *see id.*

123. Bering Sea Conference, *supra* note 19, at 22 (paper given by Nicholas Robinson of the Center for Environmental Legal Studies at Pace University School of Law).

124. U.S. DEPARTMENT OF COMMERCE, NOAA TECH. MEM., NMFS F/AKR-2, AN ASSESSMENT OF THE LIVING MARINE RESOURCES OF THE CENTRAL BERING SEA AND POTENTIAL RESOURCE USE CONFLICTS BETWEEN COMMERCIAL FISHERIES AND PETROLEUM DEVELOPMENT IN THE NAVARIN BASIN, PROPOSED SALE NO. 83. (prepared by Byron F. Morris, January 1981) [hereinafter NOAA TECH. MEM.]; Canfield, *supra* note 47, at 258; Bering Sea Conference, *supra* note 19, at 5-11 (remarks by Vera Alexander of the Institute of Marine Science/School of Fisheries and Ocean Science, University of Alaska, Fairbanks); Colin Nickerson, *Stripping the Sea's Life*, BOSTON GLOBE, Apr. 17, 1994, at 1.

125. See Figure 1, p. 165. *Convention on the Conservation and Management of Pollock Resources in the Central Bering Sea: Hearing Before the Senate Comm. on Foreign Relations*, 103rd Cong., 2nd Sess. (1994) (statement of David A. Colson, Deputy Assistant Secretary of State for Oceans Affairs), available in LEXIS, Legis Library, CNGTST File [hereinafter *Hearing on Central Bering Sea Convention*].

Figure 1. The North Pacific Ocean



Source: NATIONAL MARINE FISHERIES SERVICE, U.S. DEPARTMENT OF COMMERCE, OUR LIVING OCEANS: ANNUAL REPORT ON THE STATUS OF U.S. LIVING MARINE RESOURCES, 1993, NOAA Tech. Mem. NMFS-F/SPO (Dec. 1993).

EEZs called the "Donut Hole."¹²⁶ Its living marine resource richness and biodiversity are primarily the results of hydrological conditions governing the area.¹²⁷ These conditions produce the ideal habitat for the complex food web that exists in the Bering Sea.¹²⁸

Prior to the establishment by Russia and the United States of their EEZs, a virtual fishing "free-for-all" existed in the Bering Sea groundfish fishery.¹²⁹ Since the United States established its EEZ, it has gradually increased its domestic fishing presence, pursuant to the underlying policy

126. See Figure 1, p. 165 of this Comment for a diagram. The Donut Hole has a surface area of about 48,000 square miles and is located in a pocket of high seas between U.S. and Russian EEZs. Canfield, *supra* note 47, at 259.

127. Bering Sea Conference, *supra* note 19, at 5-11 (remarks by Vera Alexander of the Institute of Marine Science/School of Fisheries and Ocean Science, University of Alaska, Fairbanks).

128. *Id.*

129. *Id.* at 36-7 (statement by James Brooks, Deputy Director, Alaska Office, NMFS, NOAA); Canfield, *supra* note 47, at 266.

of the Magnuson Act.¹³⁰ Foreign presence has decreased to the point where it is no longer extant in the U.S. EEZ and these ships must fish elsewhere.¹³¹ The fact that 90 percent of fish stocks now exist within different nations' EEZs,¹³² coupled with the general decline in the world's fish stocks,¹³³ have caused resource-rich areas which lie outside the EEZs, like the Donut Hole, to be over-exploited.¹³⁴ Nations have threatened, and actually resorted to, military deployments to ensure that this overfishing does not encroach on their fish stocks.¹³⁵ As the world's fish stocks continue to plummet, military action may become more and more of a reality.

The question of whether the United States is using its domestic legislation, regulations, and its regional councils effectively to preserve pollock stocks, an important element of the Bering ecosystem, remains unanswered. The major impediment to preventing overfishing and any concomitant alteration to the ecosystem in pollock and other species, is the existence of conflicting government objectives inherent in the

130. See generally, 16 U.S.C. § 1801(a)(4), (6), (7); (b)(1), (3), (6) (1988) "to encourage the development by the United States fishing industry of fisheries which are currently underutilized or not utilized by United States fishermen, *including bottom fish off Alaska*, and to that end, to ensure that optimum yield determinations promote such development" (emphasis added). 16 U.S.C. § 1801(b)(6) (1988). See also Bering Sea Conference, *supra* note 19, at 50 (statement of Dr. Clarence G. Pautzke, Executive Director, NPFMC).

131. Foreign fishing predominated when the Magnuson Act first became effective in 1977. However, during the 1980's joint venture fishing superseded foreign fishing which precipitously dropped off and ended entirely in 1988. By 1989, joint venture fishing was also rapidly declining and was being displaced by a solely domestic fishery. MINERALS MANAGEMENT SERVICE, U.S. DEPARTMENT OF THE INTERIOR, OSC STUDY, MMS 90-0026, COMMERCIAL FISHING INDUSTRY OF THE BERING SEA, (June 1990). See also Canfield, *supra* note 47, at 259.

132. R. CHURCHILL & A. LOWE, THE LAW OF THE SEA 126 (1983).

133. For an overview of overfishing and the economics of fishing see TONY J. PITCHER & PAUL J.B. HART, FISHERIES ECOLOGY 77-109 (1982).

134. Canfield, *supra* note 47, at 259. Nickerson, *supra* note 124, at 1, 24-25.

135. In fact, the United States Coast Guard seized roughly a dozen foreign vessels illegally fishing in the U.S. EEZ between May, 1989 and July, 1992. Canfield, *supra* note 47, at 261. Russia has not only deployed warships within its EEZ, but within international waters to "dissuade" Polish, South Korean, Japanese, and Chinese fishing in international waters it claims to have "management" rights over. Nickerson, *supra* note 123, at 24. Canada has also recently seized one Spanish groundfishing vessels and cut the nets off another in waters just beyond its EEZ. Clyde H. Farnsworth, *When They Talk About Fish, the Mellow Canadians Bellow*, N.Y. TIMES, March 31, 1995, at A11.

Magnuson Act itself.¹³⁶ "Conservation" measures are often in direct conflict with the incentives the government has created to actively promote investment in the domestic fishing industry.¹³⁷ These incentives, however, appear to have caused a severe over-capitalization of our domestic fishing fleet in the Bering Sea.¹³⁸ For example, the size of the U.S. trawler fleet in the Bering region has increased from 12 vessels in 1986 to 65 today.¹³⁹ Thus, the U.S. governmental interest in promoting investment conflicts with the "conservation and management" objectives of the Magnuson Act. The regional fishery management councils seem to be having difficulty in finding a balance which would allow them to carry out their "conservation and management" tasks.¹⁴⁰

136. See generally, *Senate Hearing, supra*, note 1.

137. E.g., Tax incentives for vessel construction are included in the Capital Construction Fund program and Title XI Loan Guarantee Program. 46 U.S.C. §§ 1271-1279 (1988). The United States has created such incentives primarily through favorable loan programs and subsidies to domestic fishing interests. *Id.* The result has been a fishing fleet that is largely overcapitalized. However, the United States is by no means alone in pursuing subsidies to its nationals. Colin Nickerson, *supra* note 124, at 25.

138. See, e.g., Steve Wilhelm, *Bottom Fish Fleet in Dire Straits*, PUGET SOUND BUS. J., Aug. 13, 1993, at 1.

139. Holthouse, *supra* note 8, at 37. These vessels, which process the pollock catch on board cost between \$40-75 million each and can reach lengths of more than 100 yards. *Id.* If a ban on pollock fishing were imposed, a 65 percent decrease in the harvest in the Bering Sea would result. *Id.* at 38. It is noteworthy that this trend toward over-capitalization of the Bering fleet is reflected internationally in the fact that the fishing nations of the world spend \$92 billion every year to land \$70 billion worth of fish. Colin Nickerson, *supra* note 124, at 25.

140. E.g., GENERAL ACCOUNTING OFFICE REPORT, FISHERIES: COMMERCE NEEDS TO IMPROVE FISHERIES MANAGEMENT IN THE NORTH PACIFIC (GAO/RCED 91-96) (Mar. 1991); See also Editorial, *Reform Fishery Council—Create Stability in System of Resource Allocation*, THE SEATTLE TIMES, Mar. 6, 1992, at A6, in which the Department of Commerce Inspector General's Office and the Justice Department are said to have criticized the NPFMC's recommendation regarding processing of pollock and cod as "flawed." The NPFMC, which has jurisdiction over the Bering ecosystem, is made up of 11 members. Seven represent commercial fishing interests, and four are government employees. Holthouse, *supra* note 8, at 38.

See also ALASKA DAILY NEWS, editorial of Dec. 12, 1991: ("The council system is ethically bankrupt. We don't let Exxon, Arco and BP run the Alaska States Department of Environmental Conservation. We don't put people from the phone and electric companies in charge of the Public Utilities Commission. We shouldn't turn federal fisheries over to fishermen whose decisions directly affect their personal futures."); *Senate Hearing, supra* note 1, at 54 (remarks by Bert Larkins, consultant, American Factory Trawler Association) (citing ALASKA DAILY NEWS, editorial, Dec. 12,

In fact, one third of the stocks managed by the regional councils are at lower levels than before the councils came into existence.¹⁴¹ While U.S. landings increased by about 3 billion pounds between 1984 and 1991,¹⁴² "virtually all of that increase is attributable to the Americanization of the pollock resource in the North Pacific."¹⁴³ Moreover, although the U.S. Department of Commerce hails the Magnuson Act's effect on this fishery as, "one of the great success stories for development of a U.S. groundfish industry,"¹⁴⁴ the increased tonnage of the catch may be only half of the story. The disastrous ecological ramifications of the increase in fishing for groundfish such as pollock are currently being felt.¹⁴⁵

In 1977, when the Magnuson Act's 200 mile limit went into effect, the domestic fishing industry had no pollock harvest in the North Pacific Ocean.¹⁴⁶ Yet, from 1975-1979, international landings totaled approximately 4.5 million metric tons in the entire North Pacific Ocean.¹⁴⁷ By 1987, the total international harvest of pollock had reached almost 7 million tons, causing worries that the "regional ecosystem [wa]s likely to suffer from further changes in pollock abundance."¹⁴⁸ By 1990, the domestic harvest alone was 1.4 million metric tons.¹⁴⁹ In 1992, in all U.S. EEZ waters, fishing by the U.S. fleet surpassed previous foreign fishing totals.¹⁵⁰ Thus, 15 years after the enactment of the Magnuson Act, the United States was exceeding the high harvests, in pollock and all other fishing totals, that brought about the passage of the Act in the first place. This, too, calls into question the effectiveness of the priority placed on the "conservation" requirements in the Magnuson Act.

1991).

141. *Senate Hearing, supra* note 1, at 55 (statement of H.A. Larkins, Consultant, American Factory Trawler Association).

142. *Id.* From 6.44 billion to 9.4 billion pounds. *Id.* at 55.

143. *Id.*

144. OUR LIVING OCEANS, *supra* note 1, at 84-85.

145. *See generally* NOAA TECH. MEM., *supra* note 124, at 94, outlining the fact that there was worry that the pollock fishery was in danger as early as 1981. This memorandum cites evidence which "indicates a deteriorating stock and a worsening condition of the resource in the Bering Sea." *See also*, Holthouse, *supra* note 8.

146. OUR LIVING OCEANS, *supra* note 1, at 85.

147. Mirovitskaya & Haney, *supra* note 1, at 246.

148. *Id.* at 247.

149. Bering Sea Conference, *supra* note 19, at 49.

150. *Senate Hearing, supra* note 1 (statement of Greenpeace at 111).

The effectiveness of U.S. "conservation and management" measures regarding marine ecosystems under the Magnuson Act have been cause for concern as well.¹⁵¹ Evidence of this can be seen by looking at the destruction of the New England groundfish fisheries and the one-third decrease of the stocks managed by the regional councils since the Magnuson Act went into effect.¹⁵² Specifically in regard to the Bering Sea, the NMFS and NOAA openly admit that they have not used many of the available tools to "manage and conserve" the Bering Sea's resources on an ecosystem level. For example, one NMFS/NOAA official stated, "[w]e are managing the Bering Sea fisheries pretty much on a species basis, without really knowing what effects the exploitation of one species may have on other species or other species conflicts."¹⁵³

Some assert that managing species using an "ad hoc" approach is beneficial and successful.¹⁵⁴ The costs of this approach, however, are that it undermines customary international law, it is ineffective,¹⁵⁵ it leads to economic inefficiencies,¹⁵⁶ and it has detrimental effects on the ecosystem as a whole. In the pollock fishery, vessels fishing for pollock and cod discarded approximately 20 million pounds of halibut and more than half a billion pounds of other species of groundfish.¹⁵⁷ Thus, the pollock fishery has adversely affected other major groundfish species in the Bering ecosystem. With regard to the pollock by-catch in the Bering

151. Despite the fact that some recently held the belief that, "our groundfish resource is healthy," Bering Sea Conference, *supra* note 19, at 50, the general consensus is that a "situation of serious environmental concern" exists regarding the pollock fishery in the Bering Sea. *Id.* at 35. See also Canfield, *supra* note 47; Mirovitskaya & Haney, *supra* note 1, at 246-7.

152. *Senate Hearing*, *supra* note 1, at 55.

153. Bering Sea Conference, *supra* note 19, at 36 (opening remarks by Dr. James Brooks, Deputy Director, NMFS/NOAA Alaska Office). He also stated, however, "We're doing some ecosystem modeling ... but the results of this modeling have not yet been translated into fishery management decisions...." *Id.*

154. *Id.* at 54 (statement by Dr. Clarence Pautzke, Executive Director NPFMC). See also *id.* at 77 (statement by David Benton, Office of the Commissioner, Alaska Department of Fish and Game).

155. See, e.g., Belsky, *supra* note 1, at 451 (stating that the impact of the "ad hoc" approach has been "unimpressive.")

156. Ad hoc management, which has been the practice thus far, has led to "derby fishing" which "reduces crew and vessel safety, reduces the quality of fish delivered to the market, ... [and leads to] over capitalization ... and tremendous by-catch waste." Canfield, *supra* note 47, at 258. For example, in the halibut fishery about 200 schooners worked the grounds in the 1970s, by 1989 it was 7,000, and by 1992, over 11,000. *Id.*

157. *Id.*

Sea, roughly 245 million pounds of undersize fish were discarded dead in 1992.¹⁵⁸ In January 1994, the North Pacific Fishery Management Council voted to require more observers on pollock vessels to combat this problem.¹⁵⁹

The question, with regard to customary international law, remains: Do the actions of the United States, not its foreign policy or treaty statements, support or undermine the notion that a customary international law norm is actually emerging, and what effect will U.S. action or non-action have on the Bering ecosystem and international law in general? An answer may lie in progress that has been made in an area called the Donut Hole.

The Donut Hole is a pocket of international high seas, comprising roughly 50,000 square miles or less than 10 per cent of the Bering Sea, between the U.S. and Russian EEZs.¹⁶⁰ Because all of the pollock in the Bering Sea are generally accepted to "constitute a single complex within the Bering Sea ecosystem,"¹⁶¹ unregulated fishing in this area is of great

158. Most of these were undersized fish and were dead by the time they were thrown back. *Senate Hearing, supra* note 1, at 43 (testimony of David Benton, Director of External Affairs, Alaska Department of Fish and Game).

159. The requirement was passed specifically to reduce the chum salmon bycatch, EUGENE H. BUCK, MARINE FISHERIES ISSUES, 93004, CONGRESSIONAL RESEARCH SERVICE ISSUE BRIEF (updated February 10, 1994).

160. See Figure 1, p. 165 of this Comment. *Convention on the Conservation and Management of Pollock Resources in the Central Bering Sea Before the Sen. Comm. on Foreign Relations*, (testimony of David A. Colson, Deputy Assistant Secretary of State for Oceans Affairs) 103d Cong., 2d Sess. (1994) available in LEXIS, Legis Library, CONGTST File. See also Bering Sea Pollock Convention, *supra* note 31, at 26, which states, "The Specific Area is the area south of a straight line between a point at 55 degrees 46 minutes N. and 170 degrees W. and a point at 54 degrees 30 minutes N. and 167 degrees W., and between the meridian 167 degrees W. and the meridian 170 degrees W., and north of the Aleutian Islands and straight lines between the islands connecting the following coordinates in the order listed: 52 degrees 49.2 minutes N. 169 degrees 40.4 minutes W., 52 degrees 49.8 minutes N. 169 degrees 06.3 minutes W., 53 degrees 23.8 minutes N. 167 degrees 50.1 minutes W., 53 degrees 18.7 minutes N. 167 degrees 51.4 minutes W." *Id.* For a discussion of the Donut Hole problems, this author also relies in large part on James Canfield, *supra* note 47.

161. Mirovitskaya & Haney, *supra* note 1, at 244. This premise, however, is not unchallenged in the scientific community. *E.g.*, Alexander Golovkin, head of the Soviet Union's endangered species program in 1991 maintained, "the Bering Sea holds four distinct stocks, each requiring different harvest times and limits." Yereth Rosen, *Alaska Fisheries Depleted by Foreign Fleets*, CHRISTIAN SCI. MONITOR, Nov. 5, 1991, at 7. In any event, even if the stocks are not connected, unregulated fishing of separate stocks is still a problem and concern.

importance. This is because overfishing in the Donut Hole could damage or destroy all pollock fishing in the entire North Pacific, including the U.S. EEZ.

In the Donut Hole, pollock catches increased from about 100,000 metric tons in 1984 to almost 1.4 million in 1988.¹⁶² This increase reflects the larger trend in pollock fishing as discussed above. However, the disturbing fact about the increase in pollock landings in the Donut Hole are the drastic decreases which followed immediately on the heels of the increases. For example, in 1990, the harvest dropped to 917,371 metric tons, in 1991, to 293,399 metric tons,¹⁶³ and in 1992, less than 11,000 tons were harvested.¹⁶⁴

This precipitous decline led to a series of negotiations between interested fishing nations. These talks in turn led to an agreement to suspend pollock fishing in the Bering Sea Donut Hole entirely during 1993 and 1994.¹⁶⁵ As a result of these conferences, a treaty, "The Convention on the Conservation and Management of Pollock Resources in the Central Bering Sea" (Bering Sea Pollock Convention) was concluded and opened for signature on June 16, 1994.¹⁶⁶ It was signed by all negotiating parties by August 25, 1994.¹⁶⁷ As one scholar has noted, agreements like this are evidence that norms, such as the duty of high seas fishing states to co-operate espoused in LOS and the Draft Agreement on Straddling Stocks, also exist as customary international law.¹⁶⁸

The Bering Sea negotiations and the ultimate agreement the states reached can be said to exemplify the development of customary international law regarding marine ecosystems. The problem remains, however of whether internal practices in the United States will reflect the

162. Canfield, *supra* note 47, at 261.

163. *Id.* at 270.

164. Bering Sea Pollock Convention, *supra* note 31, at 3 (Letter of Submittal).

165. For a detailed discussion of the conferences and background on The Convention for the Conservation and Management of Pollock Resources in the Central Bering Sea, see *Hearing on Central Bering Sea Convention, supra* note 125. See also Canfield, *supra* note 47, at 257-289.

166. *Hearing on Central Bering Sea Convention, supra* note 125. The Convention was signed by the United States, the Russian Federation, the People's Republic of China, and the Republic of Korea on June 16, 1994, by Japan on Aug. 4, 1994, and by Poland on Aug. 25, 1994. *Id.*

167. *Id.*

168. Canfield, *supra* note 47, at 271.

ideas agreed upon in treaties such as the Bering Sea Pollock Convention.¹⁶⁹ The United States provided leadership in the Pollock Convention negotiations by trying to regulate pollock fishing in the Donut Hole¹⁷⁰ and by restricting the pollock catch in its own Bering EEZ.¹⁷¹ These actions, however, while evidence of international co-operation seem to be species-specific at this point in time. With regard to the Bering Sea Pollock Convention, no other living marine resource is mentioned in the text of the treaty other than pollock. In the federal regulations limiting the domestic pollock harvest, no mention is made of the interdependence of species or the effect pollock fishing has on the environment. The U.S. practice seems to reflect actions that are being taken to protect the pollock resource, the single largest U.S. fishery, but no actions being taken to protect the marine environment or ecosystem.¹⁷²

169. As stated earlier this Comment focuses on the United States' policy in regard to the Bering Sea ecosystem. The Russian EEZ contains the other geographically significant territory besides the U.S. EEZ and the Donut Hole. A discussion of Russian domestic policy is beyond the scope of this Comment. However, Russia is also carrying out a policy with regard to Bering Sea fisheries and faces many of the same problems as the United States, including a large number of bureaucratic organizations with jurisdiction over various aspects of Bering Sea resources. *See generally* Bering Sea Conference, *supra* note 19.

170. *Hearing on Central Bering Sea Convention, supra* note 125.

171. *See* Groundfish of the Bering Sea and Aleutian Islands, 50 C.F.R. § 675 (1994); 59 Fed. Reg. 35,476 (1994) (to be codified at 50 C.F.R. § 675.25); 59 Fed. Reg. 25,346 (1994) (to be codified at 50 C.F.R. § 675); 59 Fed. Reg. 13,662 (1994) (to be codified at 50 C.F.R. § 675.20); 59 Fed. Reg. 10,082 (1994) (to be codified at 50 C.F.R. § 675.20); 59 Fed. Reg. 8869 (1994) (to be codified at 50 C.F.R. § 675.20); and 59 Fed. Reg. 7656 (1994) (to be codified at 50 C.F.R. § 675.20).

172. At the time of this writing hearings on the reauthorization of the Magnuson Act are underway. Prof. John J. Magnuson, Jr., gave testimony on H.R. 39, a bill to amend the Magnuson Fishery Conservation and Management Act (MFCMA). In his testimony he addresses the failure and inadequacies of the Magnuson Act at length. He stated, "Overall, ... fisheries management in the United States has not achieved the conservation of fish stocks that was anticipated when the Act was passed originally in 1976." *Magnuson Fishery Conservation and Management Act Amendments: Hearings on H.R. 39 Before the Subcomm. on Fisheries, Wildlife and Oceans of the House Comm. on Resources*, 94th Cong., 1st Sess. (Feb. 23, 1995) available in LEXIS, Legis Library, CNGTST File.

Professor Magnuson went on to make recommendations for the improvement of the Magnuson Act. He talked at length about the necessity to move toward "an ecosystem approach to fishery management." *Id.* Some of his recommendations for improving H.R. 39 were to "prevent overfishing, including controlling entry and capitalization and further specifying the definition of optimum yield; improve institutional structure;

The United States, when calling for a Bering Sea pollock convention, issued statements which showed that it was aware of the effect pollock overfishing could have on the marine environment. In fact, in 1992, two full years before the Bering Sea Pollock Convention was concluded, the White House stated that "the pollock resource in that region has suffered a precipitous decline, which could upset the balance of the Bering Sea Ecosystem as a whole."¹⁷³ Despite these strong words, the Bering Sea Pollock Convention does not mention the word ecosystem once in the entire text. As will be demonstrated, only two provisions can be read to consider anything besides pollock.

The Convention's objectives include "the optimum utilization of pollock in the Convention Area," the restoration and maintenance of pollock resources in the Bering Sea, cooperation in gathering and examining information, and "if the Parties agree," the creation of a forum to "consider the establishment of necessary conservation and management measures for living marine resources other than pollock in the Convention Area as may be required in the future."¹⁷⁴ Thus, the last

improve the quality of fishery science and data; and *move toward and ecosystem approach to fishery management, including reducing bycatch, and protecting fish habitats.*" *Id.* (emphasis added). While he praised some of the provisions in H.R. 39, specifically those regarding by-catch and protecting fish habitats, he emphasized that Congress needed to take further steps toward an ecosystem approach to fisheries management:

including promoting multi-species approaches to fishery management—factoring in nontarget species and ecosystem interactions among target fish and other species, such as marine mammals and birds; developing a major national program to define the environmental components essential for fish reproduction, survival, and production and to identify and understand current causes of habitat degradation; and promoting various agencies with shared responsibility under different federal and state laws to coordinate their efforts and programs for habitat protection and management of habitat resources.

Id.

173. *Joint Statement on the Bering Sea Released by the White House*, Office of the Press Secretary, (June 22, 1992) available in LEXIS, News Library, DSTATE File.

174. The objectives of this Convention shall be:

1. to establish an international regime for conservation, management and the optimum utilization of pollock resources in the Convention Area;
2. to restore and maintain the pollock resources in the Bering Sea at levels which will permit their maximum sustainable yield;
3. to cooperate in the gathering and examining of factual information concerning pollock and other living marine resources in the Bering Sea; and
4. to provide, if the Parties agree, a forum in which to consider the estab-

two objectives provide for data gathering on other living marine resources and, if the parties agree, they may provide a forum to consider conserving living marine resources in the future.

The Convention requires that an "Annual Conference" be held at which "other appropriate conservation and management measures for the pollock resources in the Conservation Area" are to be considered.¹⁷⁵ While "other measures" may include consideration of the effects of the pollock harvest on the ecosystem, "other measures" may simply include measures such as gear restrictions and fishing moratoriums on pollock. The Annual Conference must also discuss "fishery support operations in the Convention Area, including the environmental impact of such operations."¹⁷⁶ This is the only mention of the environment in the treaty. Strikingly absent is any mention of the word "ecosystem."

In sum, no mention is made of ecosystems or ecosystem management in the text of the treaty,¹⁷⁷ in the Secretary of State's letter of submittal to President Clinton,¹⁷⁸ or in the President's letter of transmittal to the U.S. Senate.¹⁷⁹ Thus, despite the President's earlier words regarding potential danger to the Bering ecosystem of the pollock harvest, these words were subordinated to the idea of providing for the maximum sustainable yield of a single species—the Walleye Pollock.

Massive pollock harvests have not had a detrimental effect only on the pollock. Strong evidence exists that other species in the ecosystem have also suffered.¹⁸⁰ In fact, so great is the concern about the effects of overfishing on the groundfish in the Bering ecosystem that in 1992 the Governor of Alaska, Walter J. Hickel, stated, "The mismanagement of the North Pacific pushes the fishermen to this destructive kind of fishing.

ishment of necessary conservation and management measures for living marine resources other than pollock in the Convention Area as may be required in the future.

Bering Sea Pollock Convention, *supra* note 31, art. IV(a)(c), at 69-70.

175. Bering Sea Pollock Convention, *supra* note 31, art. II, at 69.

176. *Id.* art. IV(1)(k), at 70.

177. Bering Sea Pollock Convention, *supra* note 31.

178. *Id.* at 3-6 (Letter of Submittal).

179. *Id.* at 1 (Letter of Transmittal).

180. *See, e.g.* Bering Sea Conference, *supra* note 19, at 109-112 (statement by Richard Townsend); Springer, *supra* note 119; John Balzar, *Industry's Feeding Frenzy Perils Richest U.S. Fishery; Resources: A Showdown Looms Over Practices Some Fear Could Turn North Pacific into a Barren Region*, L.A. TIMES, June 29, 1992, at A1; Rosen, *supra* note 161.

If it's allowed to go unchecked, pretty soon we'll have a barren ocean floor ... a lifeless desert."¹⁸¹

At a recent international conference on issues affecting the Bering Sea, a Russian scientist's remarks mirrored the Governor's statement about the U.S. management of its fishing industry. She criticized the NMFS for its "anti-ecological approach" and asserted that it "assessed and evaluated only from the human perspective, but not from the perspective of the natural food chains that exist in nature."¹⁸²

Perhaps the most dramatic effect of the massive pollock harvest in the Bering Sea has been the precipitous decline in the population of the Steller sea lion.¹⁸³ In 1960, there were approximately 140,000 Steller sea lions in the Bering Sea.¹⁸⁴ By 1992, the population had declined to only about 20,000.¹⁸⁵ While several theories exist as to why the Steller's population has declined,¹⁸⁶ the answer may simply be that pollock is the sea lions' major food source.¹⁸⁷ The North Pacific Fishery Management

181. Balzar, *supra* note 180.

182. Bering Sea Conference, *supra* note 19, at 117 (paper by Lyudimilla Bogolovskaya, USSR Severtsov Institute of Evolutionary Animal Morphology and Ecology).

183. The Steller sea lion (*Eumetopias jubatus*), also referred to as the northern sea lion, was named after a German scientist, George Wilhelm Steller, who first documented the species in 1742. Males can exceed 10 feet in length and a ton in weight. Holthouse, *supra* note 8, at 34.

184. BUCK, *supra* note 119, at 11.

185. *Id.*

186. Natural changes in the ecosystem such as changes in the prey species, (i.e., herring), may have contributed to the decline. *Id.* However, it has also been argued that the Steller has had to switch to feeding on pollock because herring and capelin, its proper food sources, were overfished by the Japanese in the 1950's and 1960's. Rosen, *supra*, note 160. A theory has also been advanced that increased predation by killer whales has led to the decline. BUCK, *supra* note 119, at 11. Finally, the NPFMC suggests that other factors besides the groundfish harvest which have caused a decline in the Steller's population include: (1) a westward shift of their distribution out of the Bering ecosystem into a different area, (2) disease such as leptospirosis, and (3) "other unknown population control factors." NPFMC PLAN, *supra* note 21, at 10-2.

187. NPFMC Plan, *supra* note 21, at 10-2. Another disturbing trend is that the Steller is disappearing at the core of its habitat (coincidentally where the heavy pollock fishing occurs), rather than at the fringes, which would be more normal for a marine mammal fluctuation. Holthouse, *supra* note 8, at 36 (statement of Lloyd Lowry, Marine Mammal coordinator for the Alaska Department of Fish and Game's Division of Wildlife Conservation). In 1986, a study by the Alaska department of Fish and Game also revealed that Steller sea lions weighed less and showed signs of malnutrition during periods of heavy pollock harvest. *Id.*

Council has even recognized that because groundfish, principally pollock, make up the majority of the Steller's diet, the reduction in pollock will have a significant impact on the sea lion's population.¹⁸⁸ In addition to causing the destruction of their primary food source, pollock fishing has had many other side effects on the sea lions. More than 20,000 sea lions were killed incidentally in trawl fisheries between 1966 and 1988.¹⁸⁹ Also, disturbance and harassment by fishing vessels may have affected the reproduction of many of the remaining sea lions.¹⁹⁰

The North Pacific Fishery Management Council has acknowledged in its fishery management plan the effect the pollock fishery has had on the Steller Sea lion by creating protective no-trawl buffer zones around sea lion rookeries.¹⁹¹ In these buffer zones, trawling is totally banned within 10 nautical miles of the rookeries during the entire year, and within 20 nautical miles during the winter pollock fishing season.¹⁹² However, it is too early to tell whether these measures will have a significant effect on their food source.¹⁹³

188. NPFMC PLAN, *supra* note 21, Annex IV, at AIV 2-3. The feeding habits of the Steller sea lion are reflected in this NPFMC plan as follows: In one study fish comprised 97.6 percent of the diet of individual sea lions, with cephalopods and decapod crustaceans following at 2 percent and 0.6 percent respectively. In another study, fish comprised 74.2 percent of the diet with cephalopods and decapod crustaceans following at 17.2 percent and 8.6 percent respectively. In both studies pollock was the dominant groundfish. *Id.*

189. BUCK, *supra* note 119, at 11.

190. NOAA TECH. MEM., *supra*, note 124, at 174.

191. NPFMC PLAN, *supra* note 21, at 26.

192. *Id.*

193. There is a great deal of uncertainty regarding the ecological ramifications of the pollock harvest on the Steller sea lion and on commercial fishing activities. The NMFS, NPFMC, and independent scientists are aware of this and stress the need for further data regarding the effect of the pollock harvest. In addition, the NMFS itself continuously revises its rules because of the uncertainty of the ecological effect of the pollock harvest on other species of fish and marine mammals. *See e.g.*, NPFMC SUMMARY, *supra* note 21, at § 9; 50 C.F.R. pts. 611, 675, 676 (1994) (when specifying the allowance for pollock the Secretary and NPFMC must consider the current estimates and changes in marine mammal stocks, the impacts of pollock fishing on marine mammals, and the "need to obtain fishery data...."); 50 C.F.R. pt. 675 (1994) (NMFS implementation of a regulatory amendment to require increased data gathering in Bering Sea pollock fisheries); 50 C.F.R. pt. 675 (1994) (emergency regulation regarding the need for additional data and the effect of the pollock harvest on chum salmon because six times the expected by-catch was discovered); *See generally* Bering Sea Conference, *supra* note 19.

In addition, the NMFS listed the Steller sea lion as "threatened" under the Endangered Species Act on November 26, 1990.¹⁹⁴ Recently, NMFS begun an investigation into whether the sea lion should be reclassified as "endangered."¹⁹⁵ Ultimately, however, managing the Steller sea lion as a species, without taking into account the effect of the pollock fishery and other ecosystemic factors (i.e. pollution, other parts of its diet, etc.) is a management system that is doomed to fail. As theorized, it is contrary to the emerging customary international law norm of ecosystem management, and, like management of the pollock fishery, this approach of the NMFS appears not to recognize that all species in the ecosystem are interconnected. Simply listing a species as "endangered" or "threatened" does not get at the root of the problem which is the destruction of its food source. The environmental organization Greenpeace recognized this underlying problem and challenged the limits on pollock fishing "out of concern over the fate of the Steller sea lion."¹⁹⁶

In *Greenpeace Action v. Franklin*,¹⁹⁷ Greenpeace argued that the federal government should reduce the pollock harvest in the Bering ecosystem because of its detrimental effect on the Steller sea lion.¹⁹⁸ Greenpeace contended that the NMFS's own data demonstrated that pollock fishing was the "leading factor" in the continuous decrease in the number of Steller sea lions in the Bering ecosystem.¹⁹⁹

Pursuant to the Magnuson Act, the North Pacific Fishery Management Council publicizes an annual total allowable catch (TAC) of pollock and recommends that amount to the Secretary. The preliminary TAC becomes final when it is approved by the Secretary. In 1991, the pollock season opened under the preliminary TAC because the Secretary had not

194. 55 Fed. Reg. 49,204 (1990).

195. 58 Fed. Reg. 3,008 (1993).

196. *Greenpeace Action v. Franklin*, 982 F.2d 1342, 1345 (9th Cir. 1992). "Greenpeace sought an order directing the Secretary to comply with the Act [ESA] by ensuring that the continued harvest of pollock 'is not likely to jeopardize the continued existence ... of the threatened Steller sea lion' and by preparing 'a legally and scientifically adequate biological opinion ... concerning risks posed by pollock fishing' to the Steller sea lion." *Id.* at 1347.

197. *Id.*

198. *Id.* Greenpeace may have had an unstated broader goal, i.e. perhaps the organization sought protection for the entire ecosystem, but the only "hook" they had was the "threatened" status of the Steller under the ESA. *Id.*

199. *Id.* at 1345.

yet approved it. Greenpeace challenged the recommended 1991 TAC because it represented an increase of 66 percent, or approximately 55,600 metric tons of pollock, over the 1990 TAC.²⁰⁰ Greenpeace theorized that the increase in the pollock TAC was a federal action that jeopardized the "threatened" Steller sea lion.²⁰¹ In March, 1991, the Secretary entered into consultation with the NMFS, as required by the ESA, in order to evaluate the impact that the North Pacific Fishery Management Council's recommended 66 percent increase in the pollock catch on the Steller sea lion. Ultimately, in June 1991, the Secretary adopted a TAC for 1991 which represented an increase of 41 percent over the 1990 TAC.²⁰² Greenpeace filed suit a week later.²⁰³

Greenpeace presented two principal legal arguments which reflected the idea of ecosystem management.²⁰⁴ In both of these arguments, Greenpeace used some of the domestic tools mentioned above, for the purpose of protecting the Steller sea lion and reducing the pollock harvest.

First, Greenpeace alleged that the determination of the total allowable pollock catch for 1991 violated the ESA "because it was done without preparation of an adequate biological opinion and without consideration of the best available scientific ... data concerning the status of the fishery and its potential impact on the Stellar sea lion."²⁰⁵ Greenpeace, in essence, argued that the duty the ESA imposes on an agency is "a duty to 'insure' that any action it takes is 'not likely to jeopardize the continued existence' of a threatened species."²⁰⁶ This argument reflects the idea of ecosystem management because it is evident that Greenpeace is primarily concerned with the pollock harvest and is

200. *Id.* at 1346; Holthouse, *supra* note 8, at 38.

201. *Greenpeace Action v. Franklin*, 982 F.2d at 1346-7.

202. *Id.*; Holthouse, *supra* note 8, at 38.

203. *Greenpeace Action v. Franklin*, 982 F.2d at 1347. Holthouse, *supra* note 8, at 38.

204. Greenpeace has long been a supporter of an ecosystemic approach to fishery management. *See e.g.*, *Senate Hearing*, *supra* note 1 at 110-114. In addition to Greenpeace, other environmental organizations often seek to protect an ecosystem, through the ESA, as it is one of the few domestic legal tools available to them. *See e.g.*, *Northern Spotted Owl v. Donald Hodel*, 716 F. Supp. 479 (W.D. Wash. 1988); *Northern Spotted Owl v. Lujan*, 758 F. Supp. 621 (W.D. Wash. 1991). The environmental organizations' ultimate goal was larger than protecting the spotted owl, it was preservation of the old growth forest ecosystem in the pacific northwest. *Id.*

205. *Greenpeace Action v. Franklin*, 982 F.2d at 1347.

206. *Id.* at 1354.

using the Steller sea lion as a means of attacking pollock fishing to preserve the ecosystem.

Second, Greenpeace challenged the National Marine Fisheries Service's conclusion that an environmental impact statement considering the effects of the proposed pollock harvests on the Steller sea lion was not needed. Greenpeace argued an EIS was necessary because pollock fishing was the "leading factor" in the sea lion's decline.²⁰⁷ Greenpeace reasoned that the "implementation of the TAC without preparation of an EIS ... violated NEPA" because it was a major federal action and thus required an EIS.²⁰⁸

The Ninth Circuit Court of Appeals held that "the Service has undeniably fulfilled its duties under the ESA,"²⁰⁹ that its conclusions were "supported ... with ample data and analysis," and that the NMFS actions were not arbitrary and capricious.²¹⁰ The court held that the total allowable catch which the North Pacific Fishery Management Council had set for pollock²¹¹ did not violate the ESA because it was based on the best scientific data available.²¹²

The court further held that the setting of the TAC did not require an environmental impact statement because the NMFS based its "Finding of No Significant Impact" on a "careful look at the effects of the 1991 fishery on the Steller sea lion."²¹³ The court recognized that "some scientists dispute the Service's analysis and conclusions," nevertheless held that Greenpeace did not make a sufficient showing that the NMFS's determination that the pollock harvest had "no significant impact" on the Steller was "arbitrary and capricious."²¹⁴ Therefore, using this highly

207. *Id.* at 1345.

208. *Id.* at 1347.

209. *Id.* at 1356.

210. *Id.* at 1355.

211. Every September the Council makes public a preliminary Stock Assessment and Fishery Evaluation report, as well as preliminary specifications for the acceptable biological catch (ABC) and the total allowable catch (TAC). The ABC is the measure of the size of the catch that the ecosystem can sustain. The TAC is the total tonnage of fish that fishermen may retain in a particular year.

Id.

212. *Id.* at 1356.

213. *Id.* at 1354.

214. *Id.* at 1355.

deferential standard of review, the court granted the defendant's motion for summary judgment.²¹⁵

As a result of the Ninth Circuit's ruling in *Greenpeace Action v. Franklin*, NEPA litigation in that jurisdiction seems unavailable as a means of requiring an agency to consider the ecosystemic effects of its management decisions. If the agency has used its expertise to support its findings, then courts will defer to its findings. Thus, as long as the agency acts in a manner that is not "arbitrary and capricious" its actions will be upheld. With some courts unwilling to interfere in agency decision making, it appears clear that the agency itself must act to manage on an ecosystem level. While much of the domestic legislation cited above gives federal agencies these tools, agency actions like those taken in *Greenpeace v. Franklin* can be looked to for an indication of how the federal government is actually functioning. In its ruling, the Ninth Circuit effectively narrowed the scope of the domestic legal authority requiring the government to consider the effect that managing a species may have on interdependent, and even threatened, species in the same ecosystem. So far, Congress has not acted to change this ruling.

Perhaps litigation such as that instigated by Greenpeace has had some positive effect. It may have forced the NMFS to take a closer look at the North Pacific Fishery Management Council's recommended TAC²¹⁶ and may have expedited agency action establishing "no trawl" zones around sea lion rookeries in the Bering Sea. The final TAC the Secretary adopted in fact called for a 10 nautical mile no-trawl zone around Steller sea lion rookeries, because the "effects of pollock harvesting on the Steller sea lion's ability to obtain food [a]re

215. *Id.* at 1366. The highly deferential standard of review the court used may be contrary to ESA case law such as *TVA v. Hill* which, as stated above, was meant to "halt and reverse the trend toward species extinction, whatever the cost." 437 U.S. at 184. See e.g., *Fishermen's Dock Corp. v. Brown*, 867 F. Supp. 385 (D.Va. 1994). However, a critique of the court's reasoning regarding the standard of review or an analysis of different court's interpretations of NEPA of ESA case law is beyond the scope of this Comment.

216. The year the TAC was challenged was the only time the NMFS modified a recommended TAC by the NPFMC. Until that point in time, it had approved every recommendation without modification. Holthouse, *supra* note 8, at 38.

uncertain."²¹⁷ Thus, it can be argued that the lawsuit by Greenpeace forced the Secretary to take a closer look at the impact of the pollock harvest on the Steller sea lion than if Greenpeace had not objected to the Council's proposed recommendation. The Secretary reduced the TAC below the NPFMC's recommendation and instituted no-trawl zones for pollock fishing vessels. However, while the protection of specific sea lion rookeries on an ad hoc basis is indicative of agency concern for a threatened species, it does not evince a standard of ecosystem management, nor do these actions seem to indicate that the United States is abiding by the evolving customary international law norm of ecosystem management.

Greenpeace tried to require the agency to take the Bering ecosystem into consideration and to complete an EIS. The agency, through its actions, concentrated solely on the allowable harvest of pollock and found that an EIS was not even necessary. This clearly shows that the NMFS was concerned almost exclusively with the pollock harvest, and not its effects on the Bering ecosystem because the NMFS expressly refused to consider the environmental alternatives by doing an EIS. In addition, the Court found that the Secretary's biological opinion regarding the effect of the pollock harvest on the Steller sea lion was backed up by the data. The result was an increase in the total allowable catch of pollock relative to the previous year. The agency's inaction and unwillingness to prepare an EIS and its approval of an increase in the pollock harvest takes a concrete step away from abiding by the international law norm of ecosystem management.

In addition to the Steller sea lion, other species in the Bering ecosystem have suffered drastic declines in recent years. Harbor seals²¹⁸ off the coast of Alaska have declined markedly.²¹⁹ Near Kodiak Island, in the Gulf of Alaska, there were an estimated 22,800 Harbor seals in 1978. By 1992, that number had decreased by roughly 90 percent to 2,899.²²⁰ In addition, the northern fur seal²²¹ in the Bering region is

217. *Greenpeace Action v. Franklin*, 982 F.2d at 1346. This does not, however, exemplify the "precautionary approach" to straddling stock fishing as outlined in the Draft Agreement, *see supra* Sec. II of this Comment.

218. *Phoca vitulina*.

219. David Hulen, *Alaska: Harbor Seal Populations Plunging in Gulf of Alaska*, ANCHORAGE DAILY NEWS, Jan. 16, 1994.

220. BUCK, *supra* note 119, at 11.

221. *Callorhinus ursinus*.

currently at less than 40 per cent of its population in the mid-1950s.²²² These species both feed on pollock.²²³

Even more disturbing is the precipitous decline in the number of seabirds in the Bering Sea ecosystem. Pollock are an important source of food to seabirds in the Bering Sea,²²⁴ and seabirds are an integral component of the marine ecosystem.²²⁵ For example, seabird excrement stimulates the development of phytoplankton in the waters near their nests.²²⁶ While it has been estimated that 750,000 seabirds are caught every year in drift nets,²²⁷ and that pollution kills significant numbers,²²⁸ these figures alone cannot account for the estimated declines of seabirds in the Bering Sea. For example, the population of the red-legged kittiwake, a species unique to the Bering Sea ecosystem, declined by about 50 per cent between 1976 and 1989.²²⁹ The populations of thick billed and common murrens have similarly declined.²³⁰ In addition, a complete reproductive failure of red and black legged kittiwakes on St. George Island was recorded in an April, 1989, FWS study.²³¹ While the decline in these bird species has not been specifically linked to the decline in pollock, some would argue that just as the Steller's link to the decline in the number of pollock cannot be easily proved, a similar inference can be drawn. In fact, one expert explicitly stated that the reason that some bird species have declined by 80 percent since the 1970s "is lack of fish."²³²

It is clear, however, that factors other than overfishing contribute to the decline of mammal and sea bird populations in the Bering Sea. As

222. OUR LIVING OCEANS, *supra* note 1, at 102.

223. NPFMC SUMMARY, *supra* note 21, Annex IV, at AIV 4, 7.

224. NPFMC PLAN, *supra* note 21, at 9-1.

225. See e.g., Bering Sea Conference, *supra* note 19, at 152-55 (paper by Alexander Golovkin, Priroda Scientific Research Institute Goskompriroda, describing disastrous effects on ecosystems as a result of a decline in seabird populations).

226. *Id.* at 154.

227. Mirovitskaya & Haney, *supra* note 1, at 248 n.20.

228. For example, it is estimated that up to 300,000 seabirds died as a result of the Valdez oil spill. Bering Sea Conference, *supra* note 19, at 171.

229. Yereth Rosen, *Commercial Fishing Harvests Lead to Bering Sea Area Wildlife Decline*, L.A. TIMES, Dec. 29, 1991, at B6.

230. Holthouse, *supra* note 8, at 34.

231. Rosen, *supra* note 229, at B6. The red-legged Kittiwake is located almost entirely on St. George Island in the Pribilofs. *Id.*

232. Rosen, *supra* note 161, at 7.

stated above, oil spills and drift nets,²³³ as well as other forms of marine pollution such as plastic cast-off from vessels,²³⁴ sewage²³⁵ and heavy metals²³⁶ contribute to the damage being done to the habitat²³⁷ and ecosystem in general. In addition, off-shore mining and oil exploration take their toll on the marine environment.²³⁸ In fact, of the more than 6,000 oil exploration permits filed nationwide, the Mineral Management Service has never turned one down,²³⁹ leading some to call the Outer Continental Shelf Lands Act²⁴⁰ "a mandate to drill."²⁴¹ The Bering Sea is not immune from any of these problems.²⁴²

All of these risks to the environment, however, do not mean that the United States is excused from managing pollock fishing in the Bering Sea in accordance with international law. On the contrary, because all commercial and ecological issues are so interconnected, the United States should be even more sensitive to managing the Bering Sea on an ecosystem level. A possible solution may be to bring all of these competing policies and bureaucracies under a common umbrella, with a common policy to protect all of the region's resources.

This may require designating a new organization with specific authority over all "actions" in ecosystems. This organization could give a particular marine ecosystem, such as the Bering Sea, the same degree

233. Of special concern is "ghost fishing," lost or abandoned drift nets. It has been estimated that 12 miles are lost per day, which amounts to approximately 4100 miles per year in the North Pacific. Bering Sea Conference, *supra* note 19, at 164.

234. "Tons" of plastic cast off from fishing vessels has washed up on the shores of some Alaska beaches. Bering Sea Conference, *supra* note 19, at 159.

235. *Id.* at 173 (statement of Victor Naumov, Magadan Oblast Committee on Nature Protection).

236. These metals, primarily mercury, result from off-shore gold mining and effect the ecosystem by accumulating in marine animals and humans which eat these resources. Bering Sea Conference, *supra* note 19, at 168-72 (statement of Dennis Kelso, Commissioner of the Alaska Department of Environmental Conservation).

237. The effects of changes in the habitat are important under domestic law because 16 U.S.C. § 1543 states that the more restrictive provision of the ESA or MMPA applies. 16 U.S.C. § 1543 (1988). *See also supra* notes 107-110 and accompanying text.

238. Bering Sea Conference, *supra* note 19, at 168-72.

239. Bering Sea Conference, *supra* note 19, at 230 (statement by Eric Smith, attorney, representing environmental and native interests).

240. 43 U.S.C. §§ 1331-1356 (1988).

241. Bering Sea Conference, *supra* note 19, at 231 (statement by Eric Smith, attorney, representing environmental and native interests).

242. *See generally*, Bering Sea Conference, *supra* note 19.

of protection that a species has under the ESA.²⁴³ This organization could be international, like the Deep Seabed Mining Authority in Jamaica, or, it could be a domestic entity. If it were a domestic agency, it would have jurisdiction over all U.S. waters.²⁴⁴ The NMFS might be the logical choice because it is the governmental agency responsible for the oversight of the Magnuson Act, the MMPA and the ESA in the marine context.²⁴⁵ Therefore, it would be the agency best suited to comply with the NEPA mandate of an integrated approach to ocean planning and decision making.

V. CONCLUSION

Can we say that an international legal duty to manage and conserve marine resources on an ecosystem level is emerging? In theory, perhaps. This duty appears to be clear if we look to U.S. policy statements, its signing of treaties such as LOS and its participation in other international conferences and agreements which focus on environmental or ecosystemic conservation and co-operation. All these actions and agreements may be seen as state practice supporting an emerging duty to solve marine resource issues in a co-operative way and in a global manner. Can we say that this duty exists? Not yet.²⁴⁶

While international and domestic tools to "conserve and manage" the Bering ecosystem do currently exist and U.S. policy seems to reflect support for this idea, it appears that the United States is not yet aggressively pursuing this course of action in practice.²⁴⁷ However, it is simply too early to tell whether or not the U.S. will abide by the emerging customary international law norm of ecosystem management.

243. For the degree of protection a species has under the ESA see *TVA v. Hill*, 437 U.S. 153 (1977).

244. Professor Belsky suggests that it could also be helpful to form an entirely new National Ocean Policy Commission with the power to set the agenda over all our nations oceans. See Belsky, *supra* note 1, at 447.

245. OUR LIVING OCEANS, *supra* note 1, at 3.

246. The increase in the factory trawler fleet in the Bering Sea from 12 ships to 65 since 1986 and the \$90 billion the world's countries spend to land \$72 billion worth of fish are a stark reminder of how far the U.S. and the earth's other nations still must travel before the conservation language of documents such as LOS, the Draft Agreement on Straddling Stocks, and the Bering Sea Pollock Convention become a reality.

247. *E.g.*, Bering Sea Conference, *supra* note 19, at 113 (paper by Richard Townsend, consultant for the Center for Marine Conservation stating that the U.S. has been reluctant to use the tools available to it).

The United Nations Convention on the Law of the Sea has just entered into force. It will take time to see whether its entire text, including its so-called codified customary law provisions are being followed as binding international law. In addition, the Draft Agreement on Straddling Stocks and Highly Migratory Fish Stocks still must undergo at least two more substantive working sessions and be implemented.²⁴⁸

Domestic practice and the international agreements in which the United States has participated seem to be consistent with regard to fishing at this point in time.²⁴⁹ When a fishery is on the verge of collapse, the United States, in its individual capacity and in its treaties with other states, simply bans or limits fishing for the particular species that is at risk of being overexploited.²⁵⁰ While no solid evidence of U.S. action to manage the Bering Sea on an ecosystem level currently exists, its conduct through participation in international agreements may indicate a slow evolution towards acceptance of the emerging customary norm requiring states to consider the entire ecosystem when managing marine resources. For example, the Draft Agreement on Straddling Stocks and LOS show that the United States and other nations realize that they must solve the world's marine problems globally, through cooperation, taking into account the environment. Current international agreements like these can be looked to for support of this idea.

Today, commercial fishing is still of primary importance and drives the economic engine in the Bering Sea. Yet this does not mean that the Bering ecosystem should be allowed to go the way of the Grand Banks. It is important that the United States lead by example and "manage and conserve" fisheries on an ecosystem level, rather than the ad hoc management system which has prevailed thus far. If the current

248. *Conference on Straddling Stocks*, *supra* note 36, at 12. These sessions occurred after this Comment had gone to press.

249. *E.g.*, Canada's actions regarding fishing in the area of the Georges Banks; U.S. limitations on salmon fishing and agreements with Japan regarding that salmon; U.S. negotiations to close areas such as the Donut Hole in 1993 and 1994; and the Bering Sea Pollock Convention.

250. *See generally*, Bering Sea Pollock Convention, *supra* note 31. Examples of this method of problem "solution" also include the ban on pollock fishing in the Donut Hole during 1993 and 1994, and domestic reduction of the pollock TAC in the U.S. EEZ. *See also*, note 171, for a listing of *Federal Register* citations to groundfish regulations in the Bering Sea.

conservation and management system continues,²⁵¹ not only will America's last rich fishing grounds continue to be troubled waters, but the principles outlined in this Comment will never be considered binding international law, and all of the fisheries on the planet will continue to be in danger.

251. Of the 232 domestic fish stocks, the NMFS can determine the status of only two-thirds, and of those two-thirds 42 per cent are overutilized. *Senate Hearing, supra* note 1, at 12. Worldwide it is estimated that 13 the planet's 17 major fisheries are "commercially depleted" or in "serious decline." Nickerson, *supra* note 124, at 1.