

An Environmental Assessment of Emerging International Fisheries Doctrine

I. INTRODUCTION

Recently worldwide interest has grown in the doctrines of international law governing control over the living resources of the sea. The Cod War of 1972 between Britain and Iceland,¹ and the Third United Nations Conference on the Law of the Sea which convened in 1973² have helped draw attention to the subject. In the United States, due to the rise of environmental consciousness, a decidedly conservationist view of the issue has developed. This view is embodied in the Fisheries Conservation and Management Act of 1976 (FCMA).³

Unfortunately, the emergence of new doctrine has more often been guided by short-term economic factors and nationalistic ideology. Consequently, the international regime—the conglomerate of doctrine developed by the action of individual nations, agreements between nations, and various international agreements—is likely to offer a less than satisfactory solution to international fishing problems from a conservation viewpoint. It is not so surprising that

1. In 1971 Iceland adopted a resolution extending its 12-mile fisheries jurisdiction to 50 miles from the coast, effective September 1972. Great Britain and West Germany sought relief in the International Court of Justice (I.C.J.), claiming the action of Iceland was illegal. Iceland began enforcing the limit, despite an interim order by the court. Some shooting occurred. The diplomatic events and resolution are summarized in the decision of the I.C.J. Fisheries Jurisdiction Case (merits), [1974] I.C.J. 3, 175; *also reported in* NEW DIRECTIONS IN THE LAW OF THE SEA, 41-79 (Churchill and Nordquist ed. 1973).

2. The Third United Nations Conference on the Law of the Sea was first convened in December 1973 after several years of preparation. Six sessions have been held: the first in New York, the second in Caracas in 1974, the third in Geneva in 1975, and three in New York in 1976 and 1977.

3. 16 U.S.C.A. §§ 1801-1882 (West Supp. 1977). Of course on the eastern coast of the United States, where the inroads of foreign fishing have devastated the fishing industry, more immediate economic motivation exists. But the talk has been "conservation" even though "bread and butter" needs are also at stake.

these factors dominate. Ecological survival is of course a vital economic factor, but it requires immediate self-denial for the future benefit of others. Rarely does such a long-term economic understanding prevail over short-term economic demands in national or international politics.

The dominance of short-term economic demands and the minimal influence of the conservation factor in ocean-use planning, as elsewhere, has been explained by the "commons effect,"⁴ which takes its name from the common grazing grounds in seventeenth century England:

[E]ach farmer bordering on the commons found it to be in his own rational interest to add to his stock of cattle. If there were already fifty cows grazing on the commons, for example, a farmer who owned five cows and added a sixth to his own herd would increase his own capital by 20% while the additional cow would reduce the amount of food on the commons by about 2%. This additional reduction of food would, of course, be a detriment to the farmer in our example by about 2%, but when compared to the increase of 20% in adding a new cow it was eminently worth it to him. But the trouble is that each farmer bordering on the commons makes the same rational calculation, and continues to make it. The result is that the commons is overgrazed and is destroyed, causing the economic ruin of all the farmers. The point of this illustration is that the individual rational farmer—even if he knows that the commons is headed toward destruction—will nevertheless continue to add to his own herd. For he will "get while the getting is good," [sic] impelled by the knowledge that if he exercises restraint his neighboring farmers will not. Since his neighbors will ruin the commons anyway, he might as well expand his own herd and increase his own short-run benefits.

The ocean is a "commons" in [this] sense. Crudely stated, instead of individual farmers bordering on it, similarly acquisitive, self-interested, and one fears myopic, nations control the land masses bordered by the oceans. Any one of these nations may well understand, for example, that continued introduction of sewage, agricultural chemicals, and radioactive and industrial waste into the oceans may eventually wreak havoc on the oceanic ecosystem with conceivably disastrous consequences. And yet if that nation pays the price of stopping its own practices, the ocean may nevertheless continue to be subject to the same threat from its use as a sink by other nations. Thus why should an individual nation bear the very heavy expense of reconstit-

4. Hardin, *The Tragedy of the Commons*, 162 *SCIENCE* 1243-48 (Dec. 1968).

ing and recycling its wastes and suffer the resulting competitive disadvantage? The result: individual rationalities when added together produce aggregate insanity.⁵

Unilateral and bilateral approaches to fishery management tend to continue the "aggregate insanity" of the commons effect. Even multilateral agreements have not overcome the effects of the short-term economic interests of nations which enter into these agreements. Although an international convention *should* provide an opportunity to reach a broad perspective which would prevent continuation of the commons effect, in fact the United Nations Conference is unlikely to achieve this end.

[C]oncern for managing the impact of human activity on the environment (marine or otherwise) was not an important factor in bringing about these negotiations, and is only a secondary influence upon them now. Ocean law has been put in its present state of flux largely by the national pursuit of other interests—navigation, mineral exploitation, fishing, strategic advantage, and even simple territorial aggrandizement.⁶

Since it was convened to resolve the state of flux created by nationalistic pursuits, the Conference not surprisingly has turned into what is essentially negotiation over national boundaries. The proposed 200-mile Exclusive Economic Zone really continues the freedom of the seas approach, "allocating freedoms to individual national states or their citizens, which will be limited only by the necessity to accommodate the similar freedoms of others."⁷ The result will still be that of individual nations making rational choices within their rights, choices which can still lead to the irrational depletion of the ocean commons.

Thus, although international management is a better approach to fishery conservation, the motivations leading to the conference and the nationalist structure of international politics have probably precluded international management on a large scale. This note assumes, then, that the ideal regime—one based on international management—will not be achieved. Instead, it tries to assess the conservation potential of the three approaches to fishery manage-

5. A. D'AMATO & J. HARGROVE, ENVIRONMENT AND THE LAW OF THE SEA: A REPORT OF THE WORKING GROUP ON OCEAN ENVIRONMENT 3-5 (American Society of International Law, Studies in Transnational Legal Policy No. 5, 1974) [hereinafter cited as D'AMATO & HARGROVE].

6. *Id.* at 24.

7. *Id.* at 44.

ment currently available: unilateral action, bilateral or multilateral agreements between nations, and an international treaty based upon the product of the Law of the Sea Conference. Essential to that assessment is a determination of what is a successful conservation scheme.

II. GOALS OF AN ENVIRONMENTALLY SOUND FISHERIES MANAGEMENT REGIME

A. *Maximum Sustainable Yield*

The primary goal of a new fishery regime is to restrain forces which threaten depletion or extinction of the living resources of the sea to a level where such resources are no longer threatened. Any restraint less than this threatens eventual economic as well as ecological disaster. Each coastal state's interest in the preservation of local fish resources might suffice to accomplish this goal, but for the opposition of distant-water fishing nations like Japan and Russia, whose fleets range far and wide in search of a resource essential to their economies. They seek the least possible restraint on their right to fish.

The goal of restraint usually settled upon is that of Maximum Sustainable Yield (MSY),⁸ which has been defined as "the safe upper limit of harvest which can be taken consistently year after year without diminishing the stock so that the stock is truly inexhaustible and perpetually renewable."⁹ Regulating fishing to the extent that harvest is at MSY has the appeal of the full use of a renewable resource, preventing depletion, and preserving a stabilized environment. Even the distant-water fishing interests should recognize that their needs are better served if such a continuous yield is guaranteed, and that at least MSY restraint is necessary—though they are unlikely to acknowledge any greater restraint.

B. *Maximum Economic Yield*

The intelligent use of one resource—fisheries—is not necessarily the intelligent use of all resources. Economists have argued that Maximum Economic Yield (MEY) is the appropriate goal for a

8. See notes 59 & 77 and accompanying text *infra*.

9. H.R. REP. NO. 445, 94th Cong., 2d Sess. 47 (1975), reprinted in [1976] U.S. CODE CONG. & AD. NEWS 977.

fisheries management scheme.¹⁰ They begin with the premise that the total cost of fishing will continue to rise as fishing effort increases, but beyond a certain point the number of fish caught will not rise as quickly. Therefore, costs will start to overtake the revenue derived from the catch. At the point economists refer to as MEY, the cost to harvest the last increment of fish equals the revenue to be derived from those fish and the fishery is producing maximum profits. Economists show that this point will always be below MSY. Although it will increase the revenue of the individual fisherman, any harvest beyond MEY will only reduce the overall profitability of the fishing industry. The extra effort to harvest more than MEY is wasted effort: energy and resources invested in that extra effort, if diverted to another part of the economy where the effort is not at MEY, would produce a greater benefit to the economy in goods or services.

Imagine, for instance, the individual fisherman in search of catch who will use more and more fuel to find less and less fish up to the point where he breaks even.¹¹ The fuel used to harvest fish over MEY, if used by a farmer for his agricultural machinery, might have produced a larger yield in terms of nutritive value. From an environmental perspective, the fisherman has depleted a non-renewable resource and released pollutants into the air. Since the same detriment to the environment could have produced more nutritive value, or a lesser detriment as much value, the interest in maximizing production and minimizing harm to the environment requires that energies which would be used to harvest above MEY be diverted to other areas.¹²

C. *Optimum Sustainable Yield*

A third possible standard is that used in the FCMA—the standard of Optimum Sustainable Yield (OSY).¹³ As indicated in the

10. F. CHRISTY & A. SCOTT, *THE COMMON WEALTH IN OCEAN FISHERIES* 6-16 (1965) [hereinafter cited as CHRISTY & SCOTT]. The argument there is more sophisticated than could have been encompassed within this article. See also Anderson, *Criteria For Maximum Economic Yield of an International Fishery*, in *THE FUTURE OF INTERNATIONAL FISHERIES MANAGEMENT* 167 (H. Knight ed. 1975).

11. Or to the point where he catches his quota in an MSY regulated fishery.

12. The example is merely illustrative. For a particular economy farming might not be the best area to reinvest fuel, labor, and capital; but for any economy there would be some area where it would be better invested.

13. 16 U.S.C.A. § 1851 (a)(1) (West Supp. 1977); see note 26 and accompanying text *infra*.

legislative history of the FCMA, the OSY standard is derived from the MSY standard.

[W]hile biologists in the past have tended to regard any unused surplus of a fishery as waste, the resource manager may well determine that a surplus harvest below MSY will ultimately enhance not only the specific stock under management, but also the entire biomass.

. . . . An example of such a situation has occurred in the Northwest Atlantic where mindless overfishing for haddock has virtually wiped out the species. A zero quota for haddock will not permit that species to restore itself since other fisheries in the Northwest Atlantic cannot be conducted without taking haddock. Accordingly, the harvest of these other species must be reduced below their MSY to reduce the incidental catch of haddock.

. . . . The concept of optimum sustainable yield is, however, broader than the consideration of the fish stocks and takes into account the economic well-being of the commercial fishermen, the interests of recreational fishermen, and the welfare of the nation and its consumers.¹⁴

OSY is more flexible than MSY, which is biologically determined, and MEY, which is economically oriented. OSY, as contemplated in the FCMA, will generally be below MSY, and thus is committed to fishery conservation goals; it can also encompass the broader economic and conservation goals suggested in MEY. However, by taking into consideration even broader policy areas, such as "the economic well-being of the commercial fisherman," OSY also may allow a harvest quota above both MEY and MSY.

D. *Comparison of the Three Standards*

From an environmental standpoint MSY has the most immediate appeal. It solves the depletion problem while minimizing restraint. MEY is based on the consideration of a broader area of impact than just fisheries: if any lesson has been learned in gaining environmental awareness, it is that no portion of man's effects on the environment operates in isolation. The flexible OSY standard is really

14. H.R. REP. NO. 445, 94th Cong., 2d Sess. 47-48 (1975), [1976] U.S. CODE CONG. & AD. NEWS 977-78.

the MSY standard with adjustments allowed for factors other than the strict biological calculation of MSY. Its contribution to determining the goals of a management scheme is the recognition that there will always be factors mitigating adherence to strict formulae. It is equally possible to conceive of an Optimum Economic Yield based on MEY. But the fundamental issue as to the harvest goal is whether it should be based on MSY or MEY.

While a standard based on MEY, with enough flexibility to recognize important noneconomic factors, would permit a more intelligent use of resources, a standard based on MSY is more likely to be acceptable to the majority of nations. MSY is more readily ascertainable than MEY. It is also the standard for harvest quotas under present regulatory schemes.¹⁵ MSY is determined on biological principles with some claim to objectivity: nations are less likely to feel threatened by this sort of regulation than by regulation of their internal economy under the MEY standard; they are likely to feel that decisions about how their energies and resources are to be allocated in their own economy ought not be made by others on the flimsy jurisdictional basis of allocation of fish catch.

Since the MSY standard is more readily ascertainable, more obviously necessary, and less constraining, than MEY, it is likely to be the standard accepted. This threatens to petrify the international law around a MSY concept either by the force of customary law or by embodiment in a treaty, making it more difficult to change should environmental pressures make the need for a MEY standard apparent.¹⁶ Therefore, two important criteria for measuring the long-term conservation potential of the various approaches to fisheries management are: 1) the amenability of the regime to de facto use of the MEY standard despite acceptance of another standard as its express standard; and 2) the amenability of the regime to an amendment which would incorporate the MEY standard.

15. See note 59 and accompanying text *infra*.

16. [T]he basic law created by a new law of the sea treaty will be designed for permanence. A specific regulatory regime aimed at environmental protection . . . may be fairly readily revised if time proves it to have been ill-conceived or overly timid. But a new regime of fundamental ocean law can very probably be revised only at a very great cost in political capital and diplomatic effort—and properly so, for such is the nature and purpose of constitutional regimes of fundamental law.

D'AMATO & HARGROVE, *supra* note 5, at 25-26.

III. THREE APPROACHES TO CREATING THE FISHERIES MANAGEMENT REGIME

There are three major approaches to fishery regulation. One approach is through unilateral action. This may occur in the form of almost belligerent declarations of claims to broad control as was done in Chile, Ecuador, and Peru, which have claimed exclusive territorial control over a 200-mile zone for twenty-five years;¹⁷ Iceland has in the past claimed exclusive control over fisheries in a 50-mile zone.¹⁸ Or unilateral action may occur in less belligerent form, as in the assertion of preferential fishery control by the United States.¹⁹ A second approach is the use of bilateral treaties or multilateral conventions with regulatory commissions, a method which has the advantage of generating fewer conflicts but so far has been less than perfect in bringing fishing quotas down below levels which threaten depletion. A third approach is an international treaty drafted by the Law of the Sea Conference, which would have the broadest acceptability and worldwide applicability. But it would also probably offer the least concrete management scheme—a skeleton to be fleshed out by the contracting nations.

A. *Unilateral Action—The Fishery Conservation and Management Act of 1976*

The unilateral approach to fisheries management gained notoriety during the Cod War and some legitimacy from the passage of the FCMA in the United States.²⁰ The FCMA has been described as “the most complex and well thought out of all the fishery management systems included in the 200-mile jurisdictional claims . . . [and] the most detailed view of a very possible future”²¹ An analysis of the FCMA, then, provides a useful framework for analysis of the unilateral approach to fishery management.

17. See Knight, *International Fisheries Management: A Background Paper*, in *THE FUTURE OF INTERNATIONAL FISHERIES MANAGEMENT* 9-10 (H. Knight ed. 1975).

18. See note 1 *supra*.

19. See notes 20-51 and accompanying text *infra*.

20. The unilateral approach is nonetheless disapproved of by international law experts, depending as it does on Teddy Roosevelt's “speak softly and carry a big stick” diplomacy. For expressions of disapproval with regard to the FCMA, see *Hearings on S. 961 Before the Subcommittee on Oceans and International Environment of the Senate Committee on Foreign Relations*, 94th Cong., 1st Sess. 127-29 (1975) [hereinafter cited as *Hearings*].

21. H. KNIGHT, *MANAGING THE SEA'S LIVING RESOURCES* xi (1977).

The FCMA consists of four titles: Title I declares the extent of United States jurisdiction; Title II mandates implementation of the plan through diplomatic agreements; Title III describes the internal administration of the plan; Title IV contains miscellaneous provisions, including alteration of the Act to conform to any treaty that may arise from the Law of the Sea Conference.

The international regime established by the Act is contained in Titles I and II. Section 101 describes the zone—200 miles in width.²² Section 102 claims “exclusive fishery management” over all fish in the zone, over anadromous species²³ as far as they range, except in other countries’ fishery zones recognized by the United States, and over all United States continental shelf fishery resources (coral, crustaceans, mollusks and sponges) though beyond the zone.²⁴

Although Section 102 claims “exclusive . . . authority” over fish within the 200-mile limit, the actual extent of that authority, that is, the actual extent of the unilateral claim of the United States against other countries is set forth in Title II. Section 201 prohibits fishing by foreign nations except under either existing international fishery agreements or under new agreements negotiated by the Secretary of State in accordance with the Act and approved by the Congress.²⁵

Title III defines the management regime within the 200-mile zone over which the United States has exclusive control. Section 301 declares seven national standards for the management plan: 1) prevention of overfishing while maintaining Optimum Sustainable Yield; 2) measures taken to be based on scientific data; 3) management of a stock or interrelated stocks as a unit, i.e., across regional lines if necessary; 4) nondiscriminatory application of management measures as between residents of various states; 5) promotion of efficient utilization of fishery resources; 6) allowance for variations

22. 16 U.S.C.A. § 1811 (West Supp. 1977).

23. Anadromous species ascend rivers from the sea to breed.

24. 16 U.S.C.A. § 1812 (West Supp. 1977); section 103, 16 U.S.C.A. § 1813 (West Supp. 1977), excludes highly migratory species, such as tuna, from coverage under the Act.

25. 16 U.S.C.A. § 1821 (West Supp. 1977). The procedure for negotiating new agreements is outlined in section 203, 16 U.S.C.A. § 1823 (West Supp. 1977). These latter agreements are called Governing International Fishery Agreements. Section 202, 16 U.S.C.A. § 1822 (West Supp. 1977), requires the Secretary to renegotiate all existing International Fishery Agreements to conform them with the Act, and it prohibits renewal without such renegotiation.

and contingencies of fisheries, resources, and catches; and 7) minimization of cost and elimination of duplication.²⁶

Section 302 creates regional management councils.²⁷ These regional councils prepare the regional fishery management plan and amend it as necessary, prepare comments on applications for foreign fishing permits which may affect the regional plan, and prepare reports, hold hearings, and review yield determinations pertaining to the regional management plan.²⁸

Section 303 defines the contents of the management plans, which are the primary work of the councils.²⁹ The major elements of each plan are a description of the fisheries,³⁰ the determination of

Since passage of the FCMA the State Department has reported the signing of Governing International Fisheries Agreements with fourteen nations and the European Economic Community.

Country	Signed	Effective Date	State Dept. Bull. #
Poland	8/2/76	2/28/77	1971
Mexico	8/26/76		1995
Rep. of China	9/15/76	2/28/77	1971
German Dem. Rep.	10/5/76	3/4/77	1972
Romania	11/23/76		1958
U.S.S.R.	11/26/76	2/28/77	1971
Bulgaria	12/17/76	2/28/77	1971
Rep. of Korea	1/4/77	3/3/77	1971
Eur. Economic Community	2/15/77		1967
Spain	2/16/77	3/10/77	1973
Canada	2/24/77	7/26/77	1995
Japan	3/18/77		1972
Cuba	4/27/77		1977
Brazil (shrimp)	5/1/77	5/1/77	1982
United Kingdom	6/24/77		1986

Except for the agreements with Brazil, the United Kingdom, Mexico and Cuba, all have been approved by the Congress in Public Laws 95-6, 95-8, or 95-73; 91 Stat. 14, 91 Stat. 18, 91 Stat. 283. For an analysis of the first of these, the Polish agreement, see H. KNIGHT, *MANAGING THE SEA'S LIVING RESOURCES* 90-92 (1977).

26. 16 U.S.C.A. § 1851 (West Supp. 1977).

27. 16 U.S.C.A. § 1852(a) (West Supp. 1977). These councils range in size from seven to nineteen members and are composed of the chief state official concerned with marine fisheries from each state in the region, the regional National Marine Fisheries Service head, and a group of experts appointed by the Secretary of Commerce from lists prepared by the governors of the states. The Secretary of Commerce is generally responsible for administration of the Act. See § 3, Definitions, 16 U.S.C.A. § 1802(20) (West Supp. 1977).

28. § 302(h), 16 U.S.C.A. § 1852(h) (West Supp. 1977).

29. 16 U.S.C.A. § 1853 (West Supp. 1977).

30. The term "fishery" includes not just the species of fish involved but also the structure of the catch effort: investment, employment, technology, present catch levels. See § 303(a), 16 U.S.C.A. § 1853(a) (West Supp. 1977).

maximum and optimum sustainable yields, the conservation and management measures necessary to achieve the goals of the standards in the Act, and the portions of the yield allocated to American and to foreign fishing. Other permissible contents of the plan are permit requirements for American vessels,³¹ limitations on fishing by zone, season, gear or catch, and incorporation of the fishery management measures of the individual states. In limiting access to fisheries the council is to take into account present and historical participation in and dependence on the fishery, economics of the fishery, convertibility of vessels used in a particular fishery to use in different fisheries, cultural and social factors,³² and "any other relevant considerations."³³

Section 304 provides for review at a national level of all regional management plans and for preparation of plans by the Secretary of Commerce if the plan prepared by the regional council is unacceptable or if the council fails to develop a plan.³⁴ This national review should help prevent the dominance of special interests in regional fishery decisions, since the federal review must take into account the effect of regional decisions on other factors, for instance, the diplomatic effects of decisions to reduce foreign fishing, or the effect of local decisions on American fishing in foreign waters. The Secretary will also make decisions as to responsibility for the development of management plans for fisheries that are not contained within one region. The above sections define the major thrust of the management plan.³⁵

In assessing the FCMA there are two issues involved. The first is the substantive evaluation of the plan. The second is essentially a procedural issue: whether the unilateral implementation of this plan legitimates implementation of a diversity of 200-mile limit

31. The FCMA also requires foreign vessels to obtain permits. § 204, 16 U.S.C.A. § 1824 (West Supp. 1977).

32. § 303(b)(6), 16 U.S.C.A. § 1853(b)(6) (West Supp. 1977).

33. § 303(b)(6)(F), 16 U.S.C.A. § 1853(b)(6)(F) (West Supp. 1977).

34. 16 U.S.C.A. § 1854 (West Supp. 1977).

35. Section 305, 16 U.S.C.A. § 1855 (West Supp. 1977), provides for implementation of the plans, including publication of plans, hearings, judicial review, and implementation of emergency measures. Section 306, 16 U.S.C.A. § 1856 (West Supp. 1977), describes state jurisdiction. Sections 307 to 311, 16 U.S.C.A. §§ 1857-61 (West Supp. 1977), provide for enforcement, including civil penalties, forfeitures, and criminal sanctions, for violation of the Act or regulations issued pursuant to it, fishing without a license, violation of international agreements made in accordance with the Act, refusal to permit inspection, forcible assault or resistance to inspection, resisting arrest under the Act, shipping, carrying, selling or buying fish caught in violation of the Act, and interference with the arrest of a violator.

plans by other nations, where political and short-term economic elements may overshadow any environmental considerations.

In assessing the substantive environmental potential of the FCMA, standards 1, 5, and 7 of section 301 are of special importance.³⁶ Standard 1 establishes OSY as the basis for exploitation of the resources. OSY is closely related to MSY,³⁷ and the stated goal to prevent overfishing increases the connection to a MSY standard.³⁸ Standard 5 introduces "efficiency in the utilization of fishery resources" as a qualifier of OSY.³⁹ Coupled with Standard 7's minimization of costs and avoidance of duplication requirement, it implies that the fishery should not be utilized beyond maximum economic yield. This inference could allow the OSY standard to function as a MEY standard, should such a standard become more acceptable in the future. An unresolved question in this and other management regimes is whether and to what extent any of the factors listed in section 303(b)(6)⁴⁰ can take precedence over the mandate against overfishing. These factors until now have prevented negotiated control of fishing to levels below MSY since traditional fishing nations with large investments in fishing have resisted reductions in catch to even MSY levels.

From a substantive view, the Act establishes a rational management plan with regional assessment of control measures and management by species where species cross the regional boundaries.⁴¹ A wide range of civil and criminal sanctions, with Coast Guard enforcement, insure a potentially effective mechanism for carrying out the management plans.

The major remaining questions are those which can be directed against almost any regulatory scheme. It remains to be seen whether the regional management plans will reflect sound conser-

36. See note 26 and accompanying text *supra*.

37. See note 14 and accompanying text *supra*.

38. "Conservation and management measures shall prevent overfishing while achieving, on a continuing basis, the optimum yield from each fishery." 16 U.S.C.A. § 1851(a)(1) (West Supp. 1977).

39. 16 U.S.C.A. § 1851(a)(5) (West Supp. 1977). There is no definition of "efficiency."

40. See note 32 and accompanying text *supra*.

41. It is interesting to speculate whether § 301(a)(3), 16 U.S.C.A. § 1861(a)(3) (West Supp. 1977), establishing "to the extent practicable, an individual stock of fish shall be managed as a unit throughout its range" as a national standard for management, will be considered a mandate for cooperation with other nations in the plans of the management councils.

vation principles, including goals beyond the mere prevention of overfishing, as in MEY. The FCMA may give the regional management councils such broad latitude that goals counter to conservation may compromise their conservation effectiveness. Whether or not Coast Guard enforcement efforts, which cannot be comprehensive over the vast United States 200-mile zone, will effect compliance by both foreign and domestic fishermen is the other major question.⁴² Neither of these problems is susceptible to remedy by better drafting, though, and the Act cannot be faulted for its failure to resolve them.

The procedural question the Act raises is its effect on customary international law. Unilateral assertion of jurisdiction over ocean areas is not entirely new, but it is a portion of international law still in flux. Is the American unilateral action declaring the management regime described above a precedent for *any* unilateral declaration, a unilateral declaration of fishery jurisdiction, or only a declaration of jurisdiction with the various limits of application found in the American Act?

The United States has acted unilaterally on the subject of ocean resources three times previous to the Act. In two proclamations in 1945, President Truman claimed sovereign rights over exploitation of natural resources of the seabed and subsoil on the continental shelf, and claimed the right to establish conservation zones in the high seas contiguous to the territorial waters of the United States as to fishery resources.⁴³ The second of these, though, recognized the necessity of negotiation as to any regulation of fishing by foreign vessels. The third action, the Exclusive Fisheries Zone Act of 1966, established exclusive fishing rights within the twelve-mile limit.⁴⁴

42. On April 9, 1977, after the Coast Guard had asked permission to arrest three other Soviet vessels for FCMA violations, the State Department assented to the arrest of the *Taras Shevchenko*. The vessel was brought to Boston and various civil and criminal penalties were sought, including forfeiture. A settlement was reached and the vessel was not forfeited. The U.S.S.R. later instructed its ship masters to cooperate with the Coast Guard and obey the law. See *N.Y. Times*, Apr. 10, 1977, at 1, col. 2; *id.*, Apr. 11, 1977, at 30, col. 1; *id.*, Apr. 12, 1977, at 1, col. 6; *id.*, Apr. 14, 1977, § A, at 18, col. 1; *id.*, Apr. 15, 1977, § A, at 1, col. 2; *id.*, Apr. 16, 1977, at 1, col. 2; *id.*, May 3, 1977, at 20, col. 4; *id.*, May 6, 1977, § A, at 14, col. 4.

43. Presidential Proc. No. 2667, 3 C.F.R. 67 (1943-1948 Comp.); Presidential Proc. No. 2668, 3 C.F.R. 68 (1943-1948 Comp.). See also Exec. Order No. 9633, 3 C.F.R. 68 (1943-1948 Comp.); Exec. Order No. 9634, 10 Fed. Reg. 12305 (1945).

44. Pub. L. No. 89-658, § 1, 80 Stat. 908 (1966) (repealed by the FCMA).

The continental shelf declaration was imitated by many countries and the customary law which arose was later codified in the Convention on the Continental Shelf of 1958.⁴⁵ The fishery declaration was generally accepted too, since the only unilateral actions the United States took by the proclamation were in regulating American fishing; foreign fishing was to be regulated by diplomatic agreement. The countries on the west coast of South America, Chile, Peru, and Ecuador, combining the action and rationale of the continental shelf proclamation with the subject matter of the fishery proclamation, asserted a 200-mile exclusive jurisdiction over fisheries. While they do not possess a broad continental shelf like the United States, they claimed that their interests in the fishery were comparable to America's national interests in oil and other resources which were the basis for the continental shelf proclamation.⁴⁶

From a procedural view, then, not only the unilateral action of the United States but also the unilateral *reactions* of other countries are important in assessing the conservation potential of the Act. If the action of the United States permits countries to exert exclusive territorial jurisdiction within the 200-mile limit, many developing countries may assert such sovereignty for various political, ideological, social, and economic reasons. These countries may disregard environmental goals in achieving economic development.⁴⁷

Even if the American action legitimates extension of fishery jurisdiction *only*, some countries may then claim exclusive fishing rights, which can be exercised as a license on their part either to overfish to depletion or to underharvest, which also wastes resources.⁴⁸ Since the ocean is a commons, and since many fish

45. April 29, 1958, 15 U.S.T. 471, T.I.A.S. No. 5578, 499 U.N.T.S. 311.

46. See Knight, *International Fisheries Management: A Background Paper*, in *THE FUTURE OF INTERNATIONAL FISHERIES MANAGEMENT* 9-10 (H. Knight ed. 1975).

47. They may well argue that the developed countries, having had their chance to pollute, are using the environmental issue to stunt rival economies for colonialistic purposes.

48. In an unexploited fishery, natural mortality tends to balance additions to the population so that the population remains fairly stable over the long run, although short-term natural fluctuations do occur and sometimes can be very severe.

Fishermen are simply another kind of predator. To a certain extent, they replace natural mortality by taking fish that otherwise would have died from "natural" causes.

CHRISTY AND SCOTT, *supra* note 10, at 7.

stocks migrate across "national" boundaries in the sea,⁴⁹ the effect of overfishing would be to deplete not only the national waters but also the entire fish stock harvested. Underfishing might allow an upward adjustment of quotas in neighboring countries, but this would not entirely eliminate the waste of the resource from under-harvesting.

The jurisdiction claimed by the FCMA is exclusive, but it is obliged to recognize existing agreements; the exclusivity can be curtailed by new agreements; and it *must* be curtailed as to some fisheries in order to assure a harvest of OSY where American harvests are below that level. Although it unilaterally denies total freedom of the seas within the 200-mile limit, it essentially only alters the negotiating position of the United States as to fishing rights by calling for renegotiation of existing agreements before their normal expiration and by limiting the negotiability of certain issues.⁵⁰ Countries which do not have existing fishery agreements are denied access to the waters within the limit for purposes of fishing. But realistically, all countries with major fishing interests off the United States have fishery agreements. A new entrant in an American fishery now has to negotiate an agreement *before* entering; but even under the previous jurisdiction it probably would have negotiated an agreement anyway if it were serious about fishing. As a practical matter, unless a country has a considerable number of vessels fishing in American waters, 1) its vessels are not likely to get caught fishing illegally, and 2) if any are caught, that country would probably prefer to settle any dispute than rise to the defense of what is probably a less than vital economic interest.

The general trend of international customary law is now toward the assertion of a 200-mile fishery jurisdiction.⁵¹ An international

When harvest is below MEY the increased portion of fish mortality which is due to "natural causes" is a wasted resource. Further fishing effort would increase the overall profitability of resource allocation.

49. Moiseev, *Some Biological Background for International Legal Acts on Rational Utilization of the Living Resources of the World Ocean*, 6 GA. J. INT'L & COMP. L. 143 (1976) [hereinafter cited as Moiseev].

50. For example, issues such as adherence to OSY will not be subject to compromise. Any mandate of the Act or regulations or regional management plans promulgated thereunder will foreclose negotiation on the point. Note, however, that the Secretary of Commerce has power to review management plans as to their effect on negotiations. See note 34 and accompanying text *supra*.

51. Fifteen countries claim 200-mile zones of fishery jurisdiction: Argentina, Bangladesh, Brazil, Chile, Ecuador, El Salvador, Iceland, Mexico, Nicaragua,

treaty, if one is ratified, will probably contain such a limit.⁵² As argued above, the potential for conflict over the American unilateral action is minimized by the limiting structure of the jurisdictional claim. Therefore, the United States' unilateral action will probably closely resemble the outlines of the future international law and will not be a precedent for the unilateral assertion of broad claims of ocean jurisdiction.

B. *Bilateral and Multilateral Agreements*

The most common method now used for the international management of fishing is agreements between nations to regulate their fishing. These take two forms: either as agreements among a group of nations concerning a particular region or species treated as a unit of fishery management, or as agreements between two nations concerning a particular species or fishing area or concerning all fishery matters between the two. Prior to the effective date of the FCMA, the United States was a party to four multilateral agreements⁵³ and twelve bilateral agreements with six countries.⁵⁴

Panama, Peru, Sierra Leone, Somalia, the United States, and Uruguay. H. KNIGHT, *MANAGING THE SEA'S LIVING RESOURCES* 99 (1977).

52. See notes 72-74 and accompanying text *infra*.

53. International Convention on the Northwest Atlantic Fishery, *done* Feb. 8, 1949, 1 U.S.T. 477, T.I.A.S. 2089, 157 U.N.T.S. 157 [hereinafter cited as Convention on the Northwest Atlantic Fishery]; International Convention for the Conservation of Atlantic Tunas, *done* May 14, 1966, 20 U.S.T. 2887, T.I.A.S. 6767, 673 U.N.T.S. 63 [hereinafter cited as Convention for the Conservation of Atlantic Tunas]; Convention for the Establishment of an Inter-American Tropical Tuna Commission, *signed* May 31, 1949, 1 U.S.T. 230, T.I.A.S. 2044, 80 U.N.T.S. 3 [hereinafter cited as Inter-American Tropical Tuna Commission]; International Convention for the High Seas Fisheries of the North Pacific Ocean, *signed* May 9, 1952, 4 U.S.T. 380, T.I.A.S. 2786, 205 U.N.T.S. 65 [hereinafter cited as Convention on the North Pacific Ocean].

54. U.S. DEP'T OF STATE, *TREATIES IN FORCE* 29 (1976) (interim arrangement concerning shrimp between the United States and Brazil); Convention for the Protection of the Sockeye Salmon of the Fraser River System, *signed* May 26, 1930, United States-Canada, 50 Stat. 1355, T.S. 918; Convention for the Preservation of the Halibut Fishery of the Northern Pacific Ocean and Bering Sea, Mar. 2, 1953, United States-Canada, 5 U.S.T. 5, T.I.A.S. 2900; Convention on Great Lakes Fisheries, *signed* Sept. 10, 1954, United States-Canada, 6 U.S.T. 2836, T.I.A.S. 3326; Agreement on reciprocal fishing privileges, June 15, 1973, United States-Canada, 24 U.S.T. 1729, T.I.A.S. 7676; Agreement regarding the king and tanner crab fisheries in the Eastern Bering Sea; Agreement concerning the fisheries off the coast of the United States; Agreement relating to the salmon fishing in waters contiguous to the United States, United States-Japan, *exchange of notes* Dec. 24, 1974, 25 U.S.T. 3185, T.I.A.S. 7986; Agreement concerning cooperation in fisheries, Nov. 24, 1972, United States-Korea, 23 U.S.T. 3702, T.I.A.S. 7517; Agreement regarding fisheries in the western region of the Middle Atlantic Ocean, May 29, 1975, United States-Poland, 26 U.S.T.

Although agreements between nations remove some of the friction in fishery management, the practicalities and compromises of diplomacy sometimes render the agreements less than satisfactory. From an environmental viewpoint this is particularly true since until recently conservation goals have had a limited influence on negotiations as compared with economic and political factors. Witness the pre-FCMA renegotiation of certain international agreements which substantially reduced fishing quotas, but still allowed considerable overfishing:

[T]he Japanese have agreed to a 27% reduction in their quota for Alaska pollock, down from 1.5 million metric tons (MT) to 1.1 MT. . . . [But] the estimated sustainable yield for that fishery is 1.0 million metric tons, . . . [and] the Russians are also allowed to fish for an additional 210,000 metric tons of Alaska pollock, bringing the total agreed-to quota to 300,000 metric tons *over* the sustainable yield.⁵⁵

Although fishing quotas were imposed by the multilateral International Convention on the Northwest Atlantic Fishery for all species, by country, in an attempt to limit fishing to levels which would allow rebuilding of fishing stocks to the MSY level,⁵⁶ certain highly overfished species required further restrictions. Nor was it certain that quotas were being obeyed since enforcement mechanisms were still being debated.⁵⁷ Dissatisfaction with the ability of these agreements to reduce overfishing was a substantial issue during the passage of the FCMA.⁵⁸

While at present the emphasis is on the use of the MSY standard to determine catch quotas in international agreements,⁵⁹ it may

1117, T.I.A.S. 8099; Agreement regarding fisheries in the Northeastern Pacific Ocean off the coast of the United States, Dec. 16, 1975, United States-Poland, 26 U.S.T. 1179, T.I.A.S. 8100; Agreement on certain fishing problems on the high seas in the western areas of the Middle Atlantic Ocean, Feb. 26, 1975, United States-Soviet Union, 26 U.S.T. 138, T.I.A.S. 8021; Agreement relating to fishing for king and tanner crab, July 18, 1975, United States-Soviet Union, 26 U.S.T. 2348, T.I.A.S. 8160; Agreement regarding fisheries in the Northeastern Pacific Ocean off the coast of the United States, July 18, 1975, United States-Soviet Union, 26 U.S.T. 2979, T.I.A.S. 8207.

55. *Hearings, supra* note 20, at 182 (Appendix: Memorandum of rebuttal to statements by Senator Gravel) (emphasis in original).

56. *Id.* at 196.

57. *Id.* at 269.

58. *Id.* at 181-83.

59. *See, e.g.*, Convention on the Northwest Atlantic Fishery, *supra* note 53, preamble and article VIII(1) ("maximum sustained catch"); Convention for the Con-

prove easier to introduce the MEY standard into bilateral and multilateral agreements between states than to introduce it into a multitude of unilateral claims or into a worldwide international agreement after it has been ratified.⁶⁰ Although most of the multilateral agreements to which the United States is a party contain textual references to MSY standards,⁶¹ they could be amended to a MEY standard more easily than could the Law of the Sea Treaty.⁶²

Despite their slow response to changed conditions, as reflected in these examples, multilateral agreements are an important management system. They are likely to continue to play a part in fishery management. They provide organized institutions to regulate fisheries. Both the FCMA and the emerging consensus at the Law of the Sea Conference recognize the necessity of regional international management,⁶³ particularly as to the highly migratory species like tuna, but also as to less migratory species which nonetheless cross national boundaries. As more expertise is gained in fishery management perhaps multilateral management conventions will be more successful. In this regard it is unfortunate that the United States has withdrawn from two of its multilateral treaty commitments.⁶⁴

The continued importance of bilateral agreements is indicated by the significance of such agreements in the scheme of the FCMA. Bilateral agreements embodying its terms have been signed with fourteen nations and the European Economic Community.⁶⁵ The

conservation of Atlantic Tunas, *supra* note 53, preamble and article IV(2)(b) ("maximum sustainable catch for food and other purposes"); Inter-American Tropical Tuna Commission, *supra* note 53, preamble and article II(5) ("maximum sustained catch"); Convention on the North Pacific Ocean, *supra* note 53, preamble and article IV(1)(b)ii, iii ("maximum sustained productivity").

60. A treaty would be a *fait accompli*, negotiated at considerable expense of diplomatic time and energy, and would not be readily modified. *See* note 16 *supra*.

61. *See* note 59 *supra*.

62. The International Convention for the Conservation of Atlantic Tuna even contains an express provision for amendment. Convention for the Conservation of Atlantic Tunas, *supra* note 53, article XIII.

63. *See* note 25 and accompanying text *supra*; text accompanying notes 78-79 *infra*.

64. The State Department announced United States withdrawal from the International Convention on the Northwest Atlantic Fishery on January 1, 1977. 76 DEP'T STATE BULL. No. 1962, at 95 (Jan. 31, 1977). The State Department has also announced withdrawal from the Convention on the North Pacific Ocean, effective February 10, 1978, consistent with the terms of that agreement in article XI, section 2. 77 DEP'T STATE BULL. No. 1990, at 218 (Aug. 15, 1977).

65. *See* note 25 *supra*.

forcefulness of the unilateral action is thus combined with the legitimacy of the bilateral agreement. In the future, bilateral agreements may be used in this way to incorporate a MEY standard. Bilateral agreements are short-termed; they are regularly renegotiated.⁶⁶ Bargaining on fisheries may be related to bargaining on other economic factors. The idea of bilateral agreement on an economic basis may be more acceptable to the particular bargaining nations so that the MEY standard may more easily be introduced.

C. *An International Treaty—The Single Negotiating Text*

The method which has the greatest potential for achieving fishery conservation goals is a broad-based international agreement. Fish species range over vast territories and interact with other species in as yet unpredictable ways.⁶⁷ The best fishery management scheme would consist of an international authority, with subdivisions of regional expertise, which could act with a worldwide perspective on the effect of man's fishing.⁶⁸ However, such a worldwide management scheme will not come out of the United Nations Conference, so that such a scheme is not likely to be established in the near future.

A regime based on an international agreement which is likely to be attained is whatever comes out of the Law of the Sea Conference. After six sessions in four years the Conference seems close to deadlock on portions of the treaty. But, aside from a few relatively small problems,⁶⁹ the portion dealing with fishery management

66. *Hearings, supra* note 20, at 174 (Appendix: State Department response to additional questions of Senator Pell).

67. Moiseev, *supra* note 49.

68. Working Group on Living Marine Resources, American Society of International Law, *Principles for a Global Fisheries Management Regime* (1974), reprinted in *THE FUTURE OF INTERNATIONAL FISHERIES MANAGEMENT* 213-36 (H. Knight ed. 1975).

69. The report of the Second Committee (responsible for drafting Part II of the Single Negotiating Text which includes the fisheries articles) cited three questions for resolution at the fifth session:

the juridical status of the exclusive economic zone and the rights and duties of the coastal State in the exclusive economic zone; the definition of the outer edge of the continental shelf and payments and contributions with respect to the exploitation of the continental shelf beyond 200 miles; and the delimitation of the territorial sea, the exclusive economic zone and the continental shelf between States with opposite or adjacent coasts.

General Committee: Provisional Summary Record of the 31st Meeting, at 3, U.N. Doc. A/CONF. 62/BUR/SR. 31 (prov. ed. 1977).

has taken shape. It is embodied in the Single Negotiating Text (SNT).⁷⁰ Even if no treaty is agreed upon by the Conference or if the treaty it agrees upon is never ratified, this text or one substantially like it will serve to indicate the general outlines of accepted customary law on the subjects it treats, including fishery management.⁷¹

The central feature of the fisheries plan in the SNT is the Exclusive Economic Zone (EEZ). The EEZ is a 200-mile wide zone⁷² of coastal state sovereignty over 1) the exploitation of living and non-living resources in the waters, bed, and subsoil of the zone; 2) the establishment and use of artificial islands; 3) the exploitation of water, currents, and wind; 4) scientific research; and, 5) environmental conservation and pollution control.⁷³ As to fisheries, the zone is fairly comparable to the United States unilateral scheme.⁷⁴

Article 50 describes the responsibility of the coastal state to conserve the living resources of the zone.⁷⁵ The coastal state determines allowable catches of living resources in its EEZ. It is obligated to ensure conservation, prevent over-exploitation,⁷⁶ and maintain or restore fish stocks to levels which produce MSY.⁷⁷ MSY, though, can be qualified by "relevant environmental and economic factors, including the economic needs of coastal fishing communities, and the special requirements of developing countries, and taking into account fishing patterns, the interdependence of stocks and any generally recommended subregional, regional or global minimum standards."⁷⁸

70. Revised Single Negotiating Text of the Second Committee, Third Annual United Nations Conference on the Law of the Sea, May 6, 1976, U.N. Doc. A/CONF. 62/WP. 8/Rev. 1, Part II, ch. III (1976) [hereinafter cited as Single Negotiating Text]. See also Informal Single Negotiating Text, Third Annual United Nations Conference on the Law of the Sea, May 7, 1975, U.N. Doc. A/CONF. 62/WP. 8 (1975).

71. Subcommittee on International Law and Relations, Advisory Committee on the Law of the Sea, *The Third United Nations Law of the Sea Conference: The Current Status and the "Informal Single Negotiating Text,"* 8 CASE W. RES. J. OF INT'L LAW 33, 38-40 (1976).

72. Single Negotiating Text, *supra* note 70, article 45.

73. *Id.* article 44.

74. *Id.* articles 50-61. The similarity of the Act to the SNT was a major point used to support its passage. See *Hearings, supra* note 20, at 81 (statement of Senator Ted Stevens).

75. The coastal state is the state to which the EEZ belongs.

76. Single Negotiating Text, *supra* note 70, article 50(1).

77. *Id.* article 50(2).

78. *Id.* article 50(3).

Article 51 describes the responsibility of coastal states to utilize these resources. The coastal state is to promote "optimum utilization of the living resources" in its EEZ "without prejudice to Article 50." Paragraph 2 requires the coastal state to allow foreign fishing up to allowable catch where the local catch is below that level. Paragraph 3 lists factors upon which allocation of foreign catch should be based. It lists, not exclusively, coastal state interests, interests protected under articles 58 and 59 (discussed below), and requirements of neighboring countries and countries traditionally fishing in the zone. Paragraph 4 of article 51 provides a basis for enforcement of the management regime.

Article 52 is the first of several articles recognizing the continuing role of bilateral and multilateral agreements in fishery management. It commands cooperation between or among states in the managing of stocks which occur within the EEZs of two or more states. And it commands cooperation in management between a coastal state and the nations fishing a stock which occurs both within and without the EEZ of the coastal state. Article 53 mandates international cooperation as to highly migratory species. Article 54 excludes marine mammals from coverage but urges cooperation.

Article 55 outlines control over anadromous species.⁷⁹ The coastal state of origin of anadromous species has primary control over them. Fishing for such species is to be done only within the EEZ of that country, except where minimization of economic dislocation requires otherwise. Article 56 applies a similar rule to catadromous species.⁸⁰ Article 57 exempts from the requirements of the chapter on the EEZ, sedentary species of the continental shelf.⁸¹ The coastal state is given exclusive control over the exploitation of sedentary species by article 65 in the chapter on the continental shelf.

Article 58 provides one of the major differences between the regime of the proposed treaty and that of the unilateral declarations. It provides that landlocked states shall have access to fishery rights in the EEZs of adjoining states. Establishment of the 200-mile zone

79. See note 23 *supra*.

80. Catadromous species are born and spawn in salt water but live in fresh water.

81. The article exempts "organisms which, at the harvestable stage, either are immobile on or under the sea-bed or are unable to move except in constant physical contact with the sea-bed or subsoil." Single Negotiating Text, *supra* note 70, article 65(4).

will give to the coastal states control of 38% of the water area of the world and probably 70 to 80% of the potential world catch.⁸² Foreclosing landlocked states from these vast resources would put them at a severe disadvantage. To underdeveloped nations, for which fishery access could provide a much needed source of food, these rights would prove vital. Landlocked states which are neither heavily industrialized nor well suited to agriculture would be precluded from diverting labor and capital to fishing efforts in order to achieve a greater economic yield.

Paragraph 2 of article 58 states that articles 50 and 51 apply to article 58. Thus, landlocked state participation in the EEZ will not provide an additional excuse for overriding conservation goals. Where, due to geographical peculiarities, a "developing coastal state" either can claim no EEZ or must rely on fishing in a zone larger than its EEZ, article 59 provides rights in the EEZs of neighboring states comparable to those given in article 58. Article 60 precludes transfer of rights acquired by articles 58 or 59 to another country without approval of the coastal state.⁸³

The question remains whether the SNT can effectively conserve and manage fish stocks to the general environmental benefit of the globe. International agreement along the lines of the SNT would have advantages over the customary regime in that the potentially explosive claims recognized in articles 58 and 59 are somewhat defused. In addition, the albeit mild exhortations in the treaty to negotiate regional agreements may provide some incentive for supra-national management, which is probably the only way some stocks can be managed effectively.

The SNT's flexible MSY standard is reminiscent of the FCMA's OSY standard. This suggests some adaptability to a MEY standard. Determination of allowable catch is entirely in the hands of the coastal state under article 50(1). The "optimum" use wording in article 51 could be interpreted by a coastal state to establish a MEY standard through the claim that a MEY quota is "optimum."

82. Moiseev, *supra* note 49, at 144.

83. Article 61 authorizes the coastal state to board, inspect, and institute judicial proceedings against vessels within its EEZ to enforce its management laws and regulations. It requires freeing of vessels and crew if adequate bond is posted, forbids imprisonment unless agreed to between states, and requires notification to the flag country of enforcement action taken against one of its vessels.

Article 62 provides for delimitation of EEZ boundaries between adjacent or opposite states. Article 63 requires coastal states to publicize charts delineating their EEZs.

But, once catches have been set lower than MSY, countries like Chile, Ecuador, or Peru might be expected to set allowable catches at extremely low figures designed to prevent foreign fishing altogether.

In contrast, consideration of the "special requirements of developing nations" in article 50(3) also suggests some license for overfishing. Arguably, to the extent that a state can set allowable catches lower than strict MSY standards under the qualifiers in article 50(3), another could set catches higher.

The ability to correct any of the above abuses depends upon the success of the dispute settlement procedures of the SNT, an area of deadlock at the Conference. It appears, then, that use of the MEY standard within the SNT context is fraught with dangers until there is wider acceptance of the standard.

IV. CONCLUSION

Since the ocean is a commons, no one nation can count on its own conservation efforts to guarantee its continuing interests. As long as no international agency operates as a check, the international regime may be as conservative as its greediest member.

The FCMA and the SNT depend upon management along boundary lines and not upon an international agency. To the extent that their 200-mile zone regimes cause a retreat to boundary lines and discourage multinational cooperation, they thwart their larger purpose. Nationalization of the oceans cannot provide a proper conservation scheme. Professor Moiseev, after citing numerous species whose behavior defies national management, closes with this example:

A hypothesis suggests itself that the decline in the stocks of sperm whales capable of transoceanic migrations can be accompanied (and, in fact, is accompanied) by an increase in the abundance of squid in many areas of the World Ocean, and by a decline in such commercial pelagic fish as saury, sardine, anchovy, etc. This means that the intensity of Antarctic whaling can affect the efficiency of fisheries in many countries located many thousand miles away from this area.

One can find many more similar examples of how greatly the living resources of the World Ocean are interdependent, but what has already been said indicates that it is impossible to regulate sea fisheries more or less objectively on the basis of isolated efforts by separate countries, which have "in their possession" small areas of the World Ocean adjacent to their shores.⁸⁴

84. Moiseev, *supra* note 49, at 148.

In addition to the major flaw that fish are not constrained by national management, the example points out other problems with a 200-mile zone regime. First, the coast of Antarctica is not subject to any national jurisdiction; with the arrival of the 200-mile zone it may become either the object of conflict resulting from territorial claims made to establish a coastal basis for fishery zones, or else the ocean area first plundered. Second, provision must be made for marine mammals, expressly excluded from the SNT but not thereby excluded from the food chains and ecologies of the ocean.

In addition, the 200-mile zone regime, whether established by treaty or by unilateral action, is only a temporarily workable solution to fisheries problems, a solution born of the perceived failure of bilateral and multilateral agreements to protect the fisheries adequately. In the short-term the approach is satisfactory, but resolution of disputes on the basis of national boundaries removes an incentive for bilateral and multilateral agreements. The FCMA and the SNT exhort continued cooperation among states, but it remains to be seen how effective such exhortations will be.

Given the short-term necessity of the 200-mile zone regime, the unilateral approach may be a better way to establish the regime than the treaty approach. The treaty purports to be an authoritative resolution of Law of the Sea problems. It may freeze the MSY standard into international law to the exclusion of the MEY standard, which, as has been suggested here, might be more useful. This failure to treat fishery problems as part of the entire economy may hamper later attempts to control other environmental problems. For instance, attempts to limit fishing effort in order to conserve fuel or prevent air pollution might be frustrated because a full MSY harvest is required.

The unilateral approach taken by the United States may well be the best approach to the fishery problem. The FCMA and comparable actions by other countries may have dissipated some of the urgency of the Law of the Sea Conference. Development of a treaty would stultify as well as stabilize the international fisheries regime; more may be accomplished in the absence of a treaty if the customary law settles around the concepts established in the Act and in other unilateral actions.

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