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PREFACE

In this issue of *Water Log* we digress from our usual format of interpreting and analyzing specific laws for a meander into the philosophy of law. The articles that follow, written by three nationally recognized legal scholars, present innovative ways of viewing the development of natural resource law. Professor Rodgers discusses the use of game theory to develop a strategy of cooperation in resource allocation. Dean Belesky proposes the development of a new rule of international law based upon an ecosystem rather than a geopolitical model. And Ms. Wecker applies "new federalism" principles to the international marine policy arena.

We are pleased to invite you to pull up a chair, stoke the fire, brew a pot of tea, and enjoy the pages that follow.

THE EVOLUTION OF COOPERATION IN NATURAL RESOURCES LAW: THE DRIFTER/HABITUE DISTINCTION

William H. Rodgers, Jr.

Introduction: Two Laws

Academics with an interest in natural resources often are called upon to probe the differences between the laws of nature and the laws of humans. I choose as my reference points Law One, 186,000 miles per second — the speed of light; and Law Two, 55 miles per hour — the speed of autos.

The juxtaposition of these two laws immediately inspires an intuitive sense of a mismatch, a feeling of a poor fit in need of further explanation and qualification. Those human particles, after all, don't behave quite the same way as the photons (or is it the waves?) of traveling light. The predictability enjoyed by many of the natural sciences does not extend to the sciences of human affairs. And let's admit right away that normative values enter the picture when one begins to compare "laws" across disciplines. Without pausing to dispute the particulars, sciences have little difficulty substantiating claims of "superiority" (in reliability, methods, accomplishments) over those who pursue the social sciences.

Within the social sciences, too, the same sorts of pecking orders emerge, with law near the bottom of virtually any scheme of hierarchical ordering. The science of law has a dissonant ring to it, not unlike the discipline of dance, the science of carpentry, or the art of changing tires. Certainly within the legal academy there is not a great deal of whatever it is (accepted methodology, well established research programs, agreement on central issues) that makes a subject a science.
Between the Laws

Historically, much of the great (and not-so-great) theory-building has been parasitic to a degree. Darwin drew upon Malthus, Spencer upon Darwin. The social sciences have profited enormously from a borrowing of methods, models, techniques, and patterns of thought from the natural sciences. The second law of thermodynamics is a law of ultimate decline familiar to physicists. Looking closely at the suggestion, a political scientist can observe Murphy's Law.

Law people, too, are learning about the business of borrowing, a looking to other disciplines for guidance, or more grandly, models that can be used to assemble the questions about a given phenomenon. Models of collapse and decline are but one example. It was Alfred North Whitehead who observed that information keeps no better than fish, and this idea of loss of content over time has emerged as a central feature of information theory. Extended to law, the metaphor is of a statute with resolving power that declines over time, a rotting away of the legislative product.

The legal phenomenon under scrutiny may be covered more comfortably not by a model of directional change, featuring decline or improvement in the law product over time, but of cyclical change. This sort of in and froing around a norm might apply to the degree of deference extended by courts to administrative decisions. The competing considerations are delicately balanced; once a critical mass representing a trend is established, it is subject to rapid reinforcement and acceleration by the sheer volume of judicial review case law. The result is an oscillation around the norm and could be depicted by a type of curve familiar to population biologists — rapid growth, followed by collapse, build-up, and another period of rapid growth. Witness, in this regard, the phenomenal rise of the hard lock in the wake of the 1971 Overton Park decision and the striking retreatment after Vermont Yankee came down in 1978.

Model-building within law schools in recent times has profited greatly from a poaching of ideas from the disciplines of history, economics, and philosophy. In this continuing search for a deeper understanding of the legal relations among human beings, it is not impertinent to ask whether the persons presumed by a given theory bear any resemblance to the people we know. One way to explore this question is to look to the laws of biology and psychology that are concerned centrally with how people behave, in both their selfish and altruistic moments. Evolutionary biology, in particular, addresses changes in populations over time, and is strongly suggestive of lines of inquiry for those studying changes in legal rules or statutes as they live out their lives or are introduced into new social environments.

Any serious back-to-biology movement in law can be expected to draw heavily on game theory that deals with strategies of choice in a wide variety of human interactions. Game theory must be distinguished sharply from benefit-cost analysis, a version of decision theory that presupposes some summing-up of the goods and bads by the decisionmaker and the deliberate selection of a "best" outcome. In game theory, the choice of the "best" is not formal and definitive but is uniquely dependent upon what the other players do. The game theory "best" is context-specific, provisional, and fluid. The theory lends itself comfortably to the small-numbers interactions of legal practice — litigation, negotiation, conflict-management, and conflict-perpetuation.

The centerpiece of game theory is the famous Prisoners' Dilemma, an illustration with choices, either to cooperate or defect. Each player must make the choice "without knowing what the other will do. No matter what the other does, defection yields a higher payoff than cooperation. The dilemma is that if both defect, both do worse than if both had cooperated." R. Axelrod, The Evolution of Cooperation 8 (1984). The inability to organize for the common benefit is the source of anguish for the participants. The Prisoners' Dilemma serves as an astonishingly fertile source of inspiration for research across the political sciences. In the environmental field, to mention but one recent example, the analysis has been extended in an innovative way to describe the "Politicians' Dilemma" thought to be behind the rapid expansion of federal environmental law in the late 1960s and the early 1970s.

Breaking Away From The Prisoners' Dilemma

Another recent imaginative effort, from which I draw my title, illustrates conditions under which escape from the Prisoners' Dilemma becomes possible. The key is to posit a playing of the game over time, where the players can learn and respond, and capture mutual benefits from their choices. This version of an iterated Prisoners' Dilemma underscores the nonzero-sum features of the game where A's gain is not necessarily at B's expense.

It is comfortable to start with an assumption of striking differences between isolated and frequent interactions among human beings. The entire theoretical structure of altruism in biology rests upon notions either of kinship, where closeness is built into the relationship, or reciprocal dealings where the benefits of the helping hand are acquired and extended over time. Exchange theory and practice presuppose conditions where knowledge is built up over time, and expectations informed by the web of understandings about needs, timing, and quality. Thoroughly understood are the differences between your brother and the other fellow, your friend and a stranger, your home town and the other place, the corner store and the conglomerate. It does not appear rash to suggest that relationships with people you know or deal with over time tend to be less strident and formal, less exploitative, more sympathetic and tolerant, and more attentive to future relationships.

A. Examples from the Law

Let's use this distinction between infrequent and habitual contact as a hypothesis for a moment, and look to see whether it makes a difference if one goes through life (or confronts the law) as drifter or colleague. Consider, initially, the simple matter of vocabulary. Any roster of short-termers must include the hit-and-run driver, the one-night stand, the fly-by-night operator.
Let's not forget the carpet-bagger, the itinerant lawyer, and the out-of-town architect (who specializes, it seems, in designing law schools nationwide). These are not terms of endearment, and they do not bespeak admiration, praise, respect, and reliability. Mention should be made of the classical arms-length transaction, a sure tip-off that one of the principals is about to be skewed in this ever-so-brief contact. Academics are consistently bewildered when they discover that "visiting professor" is an odious classification or at best an academic subspecies not entitled to the full measure of collegial reciprocity.

Confirmation of the frequent/one-time-only distinction can be found across the spectrum of contemporary culture. A not-so-popular tune of recent vintage is entitled "Get Your Haircut Close to Home." A trivial sentiment, to be sure, but offering advice widely acted upon. Even so inconsequential a matter as the shape of one's sideburns is not lightly placed at risk in the isolated transaction. You may recall Chevy Chase, in the film Vacation, being trapped by circumstance when the family car broke down in the remote wilds of New Mexico. He asked the service station attendant, "How much to fix the car?" The Answer: "How much do you got?" Exploitation is the name of this game.

Some students may have missed the autobiography of Ron Luciano, former big-league umpire, who explained that sometimes on the "bad days" (the ones that followed the "good nights") he would instruct the catchers to call the balls and strikes. There was no cheating here, and for reasons entirely predictable. The relationship (between catcher and umpire) is strongly reciprocal, and the game is played over time with all sorts of opportunities for paybacks, retaliation, or reward.

From the law come repeated expressions of this drifter/habitué distinction. Observe a series of oral arguments before the Supreme Court. The Solicitor General is speaking now, and the questions are deferential, occasionally even uncertain, tolerance is high, skepticism allayed, and respect mutual. Back-scratching goes both ways. Now enter the rookie from the hinterlands, putting in an accidental, once-in-a-career Supreme Court appearance. The mood changes, the questions become a tad sharper; the interruptions more unrestrained. The issues have nothing to do with it. Nor is it that the one advocate is a friend, and the other an enemy; the shift is more subtle, rather a change from acquaintance to stranger. Whisperings within tell the Court that this game with the drifter comes to an end at 12:00 noon, and strategies are suddenly on a short leash.

B. Further Examples from Environmental Law
Illustrations from environmental law reinforce this pervasive distinction between short-termers and the regular patrons. Start, once again, at the level of description and vocabulary. Here we find the pirate tankers, typified by the rusty vessel operated under a Panamanian flag of convenience with a Turkish captain and Cambodian crew. Take pity on the victim coastlines, drawn unwittingly into a game that is played at night and without leverage to apply to the passing vessels.

Consider next the gypsy waste-haulers whose exploitative tendencies are summarized nicely by the antics of the fellow who dumped the unwanted PCBs by the simple expedient of allowing them to drain from the barrels while driving over hundreds of miles of back roads in North Carolina. Expect the gypsy to go for the large payoff because there is no tomorrow, at least insofar as this relationship is concerned. The reports of tankers taking on hazardous wastes as a part of the ballast (to be released somewhere else) will no doubt create a new term of art --- pirate-gypsies. These are fellows you definitely should avoid.

Substantive laws in many ways reach out in attempts to constrain the hit-and-runners. There are the bonds required from the coal miners, the responsibility laws that extend to oil transporters and hazardous waste site operators. The 1981 Amendments to the Clean Water Act require the builders of sewage treatment plants to remain on the scene for a year after completion of the construction work. All these examples could be called legislated attempts to combat the Prisoners' Dilemma by extending the game over time. Mutual gains are recoverable because society can secure adequate reclamation or a facility that works while the builder can avoid the liability.

In another variation, the Supreme Court has sustained against a variety of constitutional objections a gross disparity in Montana elk-hunting license fees favoring local residents over out-of-state. The differential is justified in part by empirical or intuitive notions that non-residents are more likely to fit the slob-hunter stereotype (a characterization of the exploiter is heard once more), would consume the resource in excess, and would demand greater attention under the police powers. The extravagant license fee is a charge for policing a game with strong risks of defection.

Strategies and Risks in Resources Allocation Games
Two questions immediately arise if it is accepted that breakaways from the Prisoners' Dilemma are being pursued across the legal and political landscape. First, how does one succeed in these games? Second, what is the consequence of cooperative success by the players on the rules of law otherwise applicable? In addressing these questions, it is important to remember that the game theory "best" is provisional, fluid, and dependent on the other person's moves.

A. Strategies
The tentative aspect of game theory strategy brings it close to the world of legal practice where every case is a winner, and every case a loser. A brief sample of the strategic variations will be presented.

1. Disguise
A number of years ago a reporter for the Washington Post told me he was the first person he had interviewed ever to address him as "Mr." We speculated why news people, even at first and formal meetings, should be treated with an overweening familiarity; there are only "Bobs," "Toms," and "Sallys" in the news business.
The secret is out: if you were a politician, or a public figure of any sort, would you prefer to be presented to the public in a story by "Bob", or one by "Mr Smith"? The rush to make friends with newspaper reporters is an attempt to string out the Prisoners' Dilemma, to extend the game over time. The public official, and the reporter with an established beat, are playing an iterated game, and one wonders whether the gains available to the players through cooperation yield an overall benefit in the currency of the dissemination of news to the advantage of the public.

2. Tit-for-Tat

The Axelrod book, The Evolution of Cooperation, is filled with insights on appropriate strategies, developed through the use of computer contests representing the methodology of the research. In particular, a tit-for-tat strategy proved unusually robust and successful. As Axelrod explains, the strategy has certain features assuring success in iterated games against all sorts of opposition: it doesn't emphasize the need to defeat opponents in head-to-head competition. The point is to do well, capture those nonzero-sum gains, and not necessarily vanquish the other fellow. Tit-for-tat is a strategy that does not encourage a first defector, and is a quick forgiver, both useful in avoiding mutual recriminations and helpful in getting back on the track of mutual gain without extended exercises in revenge-taking.

3. Other Strategies

A host of other strategies are identifiable, and one can perceive them dimly in the game-playing of environmental law. There is the strategy of two-tits-for-a-tat, or a kind of benign indifference absent extreme provocation. The government often goes this charitable route in, say, enforcing the drinking water standards.

There is the strategy of two-tats-for-a-tat. This is a kind of mild escalation policy where each effrontery is paid back with interest. This is the strategy of litigators in the adjudicatory hearing (pesticide cancellation proceedings serve as a nice example), which leads inexorably to a slide in decorum. After four or five weeks in a trial-type case, this strategy brings the principals close to the open brawl or the fist-fight.

There is the tester strategy, which recommends defections occasionally to detect whether the opposition has any spice. There is a tranquilizer strategem, where cooperation is feigned or weakness advertised to set up a sucker punch later in the day. The obvious legal doctrines under this heading would be laches ("they laid in wait until we were trapped") or estoppel ("they said the permit was a sure thing if . . ."). And let's not forget the NEPA cases where objections are disclosed with enough detail to avoid preclusion but not too much so that objections can be answered prior to reversal on appeal.

Many of us harbor fantasy strategies of massive retaliation — a threat to cease all cooperative behavior — if the other person refuses to cooperate on your terms. Clint Eastwood has some success with this sort of approach. But obviously bringing the game to a sudden end is an improvident way to reap gains from cooperation over time. Game theorists fully understand that exploitation is likely to rise sharply when the game is about to be concluded. In debate, there is the parting shot; in politics, the lame duck and the last-minute smear; in law, the reply brief.

B. The Game Theory "Best" vs. The Social "Best"

The proposition that "cooperative" strategies have a tendency to evolve under the most unlikely of circumstances is not to be greeted with universal acclaim in the legal arena. Enforcement of environmental law often is perceived, in theory and in practice, as involving negotiation, bargaining, and compromise. In this world, cooperation may be understood as collusion, and two-party "best" outcomes as trading away of solemn statutory obligation.

In this context, one can imagine any number of statutory responses designed to interdict "too much" cooperative exchange. The introduction of the citizen suit (typically authorizing the enforcement of historical cleanup commitments) is a popular legislative mechanism for bringing into the picture entities with preferred outcomes likely to depart from the preferences of polluter (developer) and the agency. In most cases, the citizens group will be the short-term, interested in maximum payoffs in the case at hand, not game 2, 3, 4, and beyond. This a recipe for literal and unforgiving enforcement, letter-of-the-law rectitude from a stern keeper of the public conscience. The fanatic always has been a figure of respect and apprehension in game theory and decision analysis.

The citizen as cooperation-buster is by no means the only possibility. Citizen groups of different stripes may have distinctly contrasting short and long term goals, prompting a variety of strategies when undertaking the compliance game.

Similarly, different players may be drawn into the game with serious strategic consequences. The recent revival of the Environmental Crimes Unit within the Department of Justice means, at a minimum, that agency negotiators have a "bear-in-the-closet" alternative, call it massive retaliation, in the form of a referral for criminal prosecution. This move can change the players and modify the stakes, but there is reason to believe that another game begins. A perusal of the dispositions of the cases of the Environmental Crimes Unit discloses remedies beyond fines and jail sentences (restitution, the establishment of trust funds, paybacks of various sorts) that bespeak bargaining of a serious kind.

Conclusion

Looking at legal questions through the lens of game theory reinforces a number of healthy trends that are catching on (or enjoying a revival) in the law schools. The first is the recognition that conflict, and legal responses to it, must be viewed over time. Dispute resolution, if it has a meaning in some corners of the legal world, is increasingly irrelevant on the subjects of environmental and natural resources law; the better descriptive terms are management, containment, evolution, and change.
The tools and techniques of game theory underscore that it is not enough to educate future lawyers in the details of the doctrine and the rich skills of litigation. There is a world out there of bargaining and compromise, and some of these skills can be taught. Knowledge, too, is needed of institutional systems and their interactions. Information on these topics can be found across the disciplines of the social and natural sciences. The law schools should continue to mine these fields, searching for the ore and avoiding the spoils.

Game theory reminds us again of the ever-present “gap” between the law as it is ordained and that which is applied. This “gap” has many dimensions, of course, and it has brought upon the law schools the disgruntlement of students, the disdain of practitioners, and the contempt of more than a few members of academia. One mild but insistent lesson to draw is the pervasive importance of empirical understandings of how the legal systems work in fact. The games people play are forever tugging at the lawmakers’ design.

There are differences between the law of the speed of light and the law of the speed of autos. Exploring these differences may lead us yet to a science of law.

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MANAGEMENT OF LARGE MARINE ECOSYSTEMS: DEVELOPING A NEW RULE OF CUSTOMARY INTERNATIONAL LAW
Martin H. Belsky

Introduction
The international scientific community has long recognized that actions which affect any part of a marine ecosystem necessarily affect the entire system. Marine ecosystems are natural units that take no account of political boundaries. This fact has led to calls for “total ecosystem management.” Effective total ecosystem management requires procedures and standards appropriate to the size of the task.

The international law of the sea, however, does not recognize total ecosystems. Instead, it focuses on activities of citizens of particular nations. Until recently international law established few requirements for the protection and management of the marine ecosystems. Few rules governed activities not within the explicit competence of a nation; existing rules—mostly dealing with pollution control or resource exploitation—were the result of voluntary agreements among nations. Ocean management rules, whether established by statute or treaty, ignored the interrelationships between species and their environment.

Jurisdictional Obstacles
International law is established and enforced by nations, either individually or collectively. Unlike domestic law, which is enacted by legislatures or political executives, international rules are established through actual customs and practices of nations, or in compacts voluntarily concluded. Enforcement of international law is problematic. Nations may attempt enforcement unilaterally or collectively, but a violation often goes unpunished. Because of this reliance on cooperative action, most international prescriptions are limited in scope.

The management of large marine ecosystems depends almost entirely on the voluntary agreement of individual countries. Marine ecosystems exist in four different jurisdictional situations. Controls over a total ecosystem may: (1) exist solely within the territory of a single nation; (2) cross the territories of two or more states; (3) exist solely within international waters; or (4) exist both in the territory of one or more nations and international waters. While there are few legal impediments to the comprehensive management of ecosystems, neither are there many legal incentives.

Nations are of course free to make rules for any ecosystem totally within their territory. Subject to minimal constraints found in customary international law or in voluntary compacts and enforced mostly through political means, nations are also free not to establish ecosystem management rules.

When an ecosystem encompasses the territory of more than one nation, management of the total ecosystem can occur only with the explicit consent of each nation involved. Each may decide whether or not to set management
rules within its own territory, and may disregard completely standards established by neighboring nations. Nations are also free to establish a joint management regime applicable to the total ecosystem.

Jurisdictional constraints like these impede attempts to establish rules for total ecosystem management in the territorial waters of one or more nations. Yet they are even more troublesome in dealing with ecosystems solely or partially within international waters. Until recently, international law held that international waters were *res nullius*, i.e., totally "free" and not belonging to any nation. Except for controls placed by a country on its own citizens, no nation could prohibit or even regulate activities in international waters.

Where ecosystems extended beyond a nation's territory into international waters, jurisdictional responsibilities and limitations clashed. When nations agreed to establish common standards, these restrictions applied only to the territory held in common, and in international waters, only to the citizens of the agreeing nations. Unless all nations followed a treaty or customary rule, no nation was obliged to comply with rules that applied to international waters. Many nations, moreover, opposed establishment of international standards that restricted freedom to regulate activities within either their own territories or in international waters.

In general, national governments have been slow to respond to demands for ecosystem management. No rules of international law force nations to take a broad look at the many problems that face marine ecosystems. Instead, nations typically prefer a narrow view of ocean management, both individually and cooperatively. Limits on pollution and management of living resources historically have been addressed separately.

As a result of increased environmental sensitivity during recent years, more nations are adopting stringent laws and regulations to control marine pollution. These include limits on dumping of wastes and land-based discharges into the oceans, design standards for vessels operating under a nation's flag and limits on oil or chemical discharges from those vessels. Some nations have also established rules governing vessels entering their ports. These rules are intended to assure vessel safety and reduce pollution potential.

As early as the 1950s, nations joined together to set minimum standards for transnational pollution control. These agreements, however, were designed to address specific problems. Separate treaties, for example, provided for tanker oil spill cleanup and liability, for limitations on the dumping of wastes and for pollution resulting from exploitation of seabed resources. Treaties like these were the result of political compromises, and were often too slight in effect or too general in scope. Even environmentally sensitive nations were concerned about national sovereignty, fearing legal and political implications of applying international standards to their territory and their citizens.

More recently, nations have joined together to control pollution in geographic regions where jurisdictions overlap, such as in the Baltic, the Mediterranean, or the North Sea. "Regional seas" programs like these are more comprehensive in scope. They deal with all types of pollution, and are more stringent in setting and enforcing standards.

Nations are also acting to control overexploitation of living marine resources. Many have established management procedures for fishing in their waters, and have joined together with adjacent nations where fish stocks cross jurisdictional boundaries. Generally, however, agreements like these are restricted in scope, protecting only sensitive regions or endangered species. Such agreements typically take no regard of whole ecosystems, or of relationships among species. When they address geographic areas they usually focus on economic and political issues, such as allocation of resources, rather than ecological issues, such as conservation.

**The Evolving Law of the Sea**

Although political leaders have paid little attention to total ecosystem management, two recent developments in international law appear promising for its future.

First, the establishment of fishery zones that extend territorial responsibility as far out as 200 miles from shore provides an opportunity for nations to manage larger ecosystems unilaterally. This authority encourages nations to re-evaluate their fishery management policies. Second, nations are beginning to accept responsibility for preserving the resources and ecosystems of both territorial and international waters. This acceptance may be creating customary international law that promotes consideration of total ecosystems.

Historically, the extent of a nation's power over ecosystems and resources in coastal waters has depended upon the balance between two international law doctrines described earlier—freedom of the seas and adjacent national sovereignty. Until the middle of the twentieth century, most nations favored broad application of the former and narrow application of the latter. Under this doctrine, a nation had the right to include within its territorial dominion only a very narrow band of coastal waters—generally a three-mile zone. In that limited area, the coastal nation had the authority (but not the responsibility) to regulate activities.

The application of these rules meant few jurisdictional conflicts; it also meant few standards of conduct. Even with narrow three-mile zones and generally accepted procedures to define them, disputes arose regarding the power of states to decide what could be done in territorial waters. Moreover, because of the limited breadth of sovereign rights, most countries established no rules for management or protection of coastal resources. Other activities that could pollute or otherwise affect the habitat of living marine resources were similarly unrestricted.

The narrow scope of sovereign claims also resulted in a large ocean area with almost no controls or restrictions. The freedom to fish (or overfish) was considered an essential element of the traditional legal doctrine of freedom of the seas, and was not to be limited. Furthermore, few nations considered the adverse effect on resources caused by conflicting uses of the oceans. Few considered marine pollution a significant problem. The technology that now allows exploitation of other ocean resources did not yet exist. Pollution
controls gave way to another traditional freedom—the right of ships to navigate in international waters without interference. Finally, the adverse effect of coastal activities on the ocean ecosystem was not well recognized.

Not until 1945 did nations begin to acknowledge the economic potential of the oceans. In that year scientists and bureaucrats convinced President Truman that vast quantities of oil, gas and other minerals were available in the submerged lands of the continental shelf. The result was the Truman Proclamation, which marked the first step toward limiting the scope of the freedom of the seas doctrine and increasing the breadth of sovereign claims over adjacent ocean territory. It asserted jurisdiction over all the mineral resources in the lands beneath the oceans, out to the end of America's continental shelf. Although this Proclamation became the prime focus of international legal attention, the President simultaneously issued a second Proclamation. In it, he expressed the possibility that the United States could limit and manage fishing off its coast by creating extended fishery conservation zones.

The intent of the second Proclamation is still unclear forty years later. One possible explanation of its intent is concern about the depletion of United States fishery resources (especially salmon) that foreign fishing was causing. Perhaps some believed that a mere warning of possible future limitations on the right to fish might lead to foreign restraint.

The intent of the second Proclamation was not to create such a zone immediately. At that time the United States fishing fleet was among the best in existence, and its productivity depended on freedom to fish all over the globe. Even so, the Proclamation set a precedent. During the 1950s and 1960s several Latin American countries claimed fishery jurisdiction over the vigorous protests of the United States and other maritime nations, which objected to such zones as contrary to customary international law. Affected nations argued that only treaty agreements could provide for such radical change.

Despite these protests, nations increasingly adopted or accepted such zones. Finally, in the mid-1970s, the United States set a definitive precedent by establishing its own 200-mile fishery conservation zone. The 1976 Magnuson Act did not explicitly provide for ecosystem management, but rather of single species. The Act does, however, allow ecosystem management. Under it, regional councils and federal officials are free to develop rules for the conservation of ecosystems.

By the late 1980s the concept of 200-mile fishing zones has become customary international law. The 1982 Law of the Sea Convention explicitly grants each nation legal authority to manage fisheries in a 200-mile zone adjacent to its coast. Even nations that do not accept the 1982 Convention, such as the United States, now accept the existence of 200-mile zones for all coastal nations.

This fact presents both constraints on and opportunities for total ecosystem management. With extended jurisdiction, it is more likely that an ecosystem—
or at least large parts of an ecosystem—lie within one country's territorial waters. Thus, an enlightened nation can design a comprehensive management regime that recognizes a whole ecological mosaic and the interrelationships among species.

The primary constraint resulting from extended zones is the increased possibility of jurisdictional conflicts. Two hundred-mile claims inevitably prompt greater claims of exclusive authority in contested areas. Similarly, the likelihood of an ecosystem crossing over territorial boundaries is increased. Few ecosystems lie exclusively in international waters. Yet even these constraints can lead to opportunities for total ecosystem management. Countries will have to resolve disputes over territorial claims that did not previously exist. The need for resolution of those disputes might lead enlightened leaders to realize the value of considering the needs of a whole ecosystem. Any agreement among coastal nations would affect not just the contested area, but all of the fisheries zones of each affected nation.

While the opportunity for ecosystem management exists, it must be noted that it is no more than an opportunity. The expansion of national sovereignty over fisheries, habitats and ecosystems does not assure total ecosystem management regimes.

The decision is still a political one. And even if adjacent nations agree to cooperate in ecosystem management, that agreement will not be binding on the vast oceanic areas beyond each country's exclusive economic zone. Only the international community as a whole can set and enforce rules and standards governing resources, habitats and ecosystems that lie partially or totally within international waters. Fortunately, another legal trend is encouraging international cooperation for ecosystems within shared waters, and those which are partially or totally within international waters.

The Oceans as Global Commons

In the late 1950s an increasing number of nations and the organized international community both became sensitive to the unique nature of the oceans. Nations adopted more stringent domestic rules, and the United Nations passed resolutions indicating an international legal obligation to protect the environment. A series of bilateral and multilateral agreements provided for the study of ocean ecology, set minimum pollution control standards, established a common legal framework for resolving jurisdictional disputes and imposed limited responsibility for fisheries protection and exploitation.

Most scholars and many political leaders believe that customary international law now provides that oceans are the unique responsibility of the entire world community, and that all nations share the obligation to assure their continued survival. If this is so, all coastal nations must agree to appropriate steps to protect marine areas under their sovereignty and must cooperate to protect those under multiple jurisdictions. Furthermore, nations now have a duty, individually and collectively, to protect those ocean areas beyond national sovereignty. The high seas now belong to everyone rather than to no one.
A state can be held internationally responsible for violations of this new rule of international law by its citizens. The 1982 United Nations Convention on the Law of the Sea codifies this doctrine. Provisions that deal with pollution control, living marine resource management and protection of the ocean environment are generally accepted by all nations.

In the 1982 Convention, primary responsibility for control of pollution remains with coastal nations for activities within their exclusive economic zones (EEZs), with flag nations for their vessels wherever they may be, and with port nations for vessels docking on their shores. This responsibility brings obligations: flag nations must adopt and enforce pollution control laws for their vessels which “at least have the same effects as that of generally accepted international pollution control standards.” Port nations must enforce international pollution control standards for when a vessel responsible for pollution on the high seas enters their harbors. Similarly, coastal nations must adopt laws “to prevent, reduce and control pollution of the marine environment from any source,” including land-based sources, activities occurring in their EEZs, seabed activities, and ocean dumping. The 1982 Convention expects controls to be implemented through domestic laws, bilateral and multilateral treaties, and other cooperative arrangements. Policies are to be harmonized at the regional level, and the goal is to establish appropriate global rules that take into account unique regional features.

Similar management rules regarding living marine resources are evolving. Recently, especially as a result of expanded fisheries zones, many bilateral and multilateral fishing agreements have been ratified. Most of these focus on the protection of a threatened or endangered species or on limits on the capture of fish. On occasion, more comprehensive agreements have been concluded, but these have applied only to narrowly defined areas. As with pollution standards, however, the international community has been moving toward recognition of a customary rule of law governing fisheries conservation and management. This is based on national practice and new acceptance of the oceans as a commons, and is codified in the 1982 Convention.

The 1982 Convention confirms the new national jurisdiction over a 200-mile EEZ adjacent to a nation's coast. Within this zone, coastal states have both sovereignty over exploitation of resources and responsibility for the protection of the marine environment. The Convention makes the coastal state responsible for managing and conserving living resources of its EEZ. Coastal nations must take steps to ensure that living resources in their EEZs are not endangered by overexploitation, and that the population of harvested species is maintained or restored at sustainable yields. The provisions, therefore, mandate national laws adequate to enforce these international responsibilities, and require that adequate scientific and statistical data be kept, in order to determine sustainable yield and warn of overexploitation. To support such national laws, coastal nations and nations that have citizens fishing in any EEZ must submit statistical data on fishing efforts to international organizations. The world community will thus be warned, in advance, of overexploitation.

A second feature of the 1982 Convention is that it obligates nations to cooperate, through formal or informal agreements, in managing stocks that migrate between them. Similarly, the Convention establishes international responsibility for management of species whose range extends to the high seas. Nations must, through international organizations, formulate common rules for highly migratory species, and for anadromous and catadromous species that spend at least part of their lives in fresh water. The management of ninety percent of the world's fishing could potentially be governed by the provisions of the Law of the Sea Treaty.

The 1982 Convention also provides general standards for high seas fishery management. All nations have a duty to enact rules for their citizens that conserve living resources in the high seas. They also have a duty to work with other nations to develop appropriate management measures. As with rules for EEZ management, high seas exploitation rules must include provisions to maintain or restore harvested species at sustainable yields.

The new legal framework provides an opportunity for comprehensive management. It does not mandate it, and unfortunately few nations have expressed any interest in total ecosystem management. They continue above all else to protect economic interests of their citizens and to guard their sovereignty zealously. The lack of comprehensive and enforceable controls is an inevitable result of these political realities. Controls will be enacted only when mutual benefits become apparent or when a specific problem demands them.

Options for the Future

In an ideal world international law might mandate total ecosystem management and provide for institutions to enforce it. Because of political realities, however, such expectations are unrealistic. Although international law is evolving towards recognition of the oceans as a global commons, it has not yet reached the point where anything more than moral support can be found for the concept of total ecosystem management.

Certain provisions of the 1982 Convention can be used to convert moral support into customary rules of international law. Those provisions universally accepted as either binding treaty or customary law impose responsibilities on nations to protect the environment and manage fisheries. The next step is implicit in evolving international law: effective protection of all species and their habitats, and of the marine environment in general, can be accomplished only by total ecosystem management. Heightened environmental sensitivity provides a valuable opportunity to generate means to carry this out. While some efforts can be made to move all fisheries and pollution protection regimes toward comprehensive management, there may be a more effective strategy. If the scientific community concentrates on a few areas of greatest potential success, international acceptance of the concept of total ecosystem management will be more likely to follow. Those seeking comprehensive regimes should focus their efforts at two ends of the spectrum—large systems primarily within one or more EEZs, and large systems, like the Antarctic ice
shelf, with unique jurisdictional and scientific histories.

Total ecosystem management within an EEZ would be a real testing ground. It could work only if government leaders, scientists and fishery managers successfully apply a comprehensive approach in a few illustrative cases. In this way, it may be possible to change the way we think and act about the oceans—from a species protection approach to an ecosystem approach, and from management of separate fisheries and pollution control regimes to a comprehensive regional seas perspective.

Conclusion

With increased sensitivity to the need for total ecosystem management, potential now exists for a comprehensive approach to marine resource management. Ecosystem approaches will not result from legislated worldwide rules. The nature of international law precludes such international mandates. Instead, nations will continue to protect their sovereign interests, and international law supports this concept of national power. Nations will therefore agree to cooperate only when they are convinced that such efforts benefit them.

The nature of international law, however, does provide opportunity for the emergence of new customary rules. The more total ecosystem approaches are employed by individual nations, the more they will become the preferred, and therefore customary, rule of law. This trend can be accelerated by international efforts to apply a total ecosystem approach in unique situations, such as in marine waters of Antarctica.

Existing constraints on total ecosystem management are political, not legal. The legal bases for such an approach are virtually limitless, and opportunities for application and acceptance of a comprehensive view of ocean resources must be nurtured carefully. Only thus can a new rule of law emerge favoring total ecosystem management of large marine ecosystems.

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NEW FEDERALISM SHIPS OUT TO SEA: CONTROLLING POLLUTION FROM VESSELS

Miranda Wecker

In 1983, President Reagan proclaimed authority over the exploitation of resources within an "exclusive economic zone," extending 200 nautical miles beyond the baseline from which the territorial sea is measured. Also included in the newly proclaimed authority was what President Reagan described as the power to take "limited additional steps to protect the marine environment." Many within the oceans community excitedly called this assertion of expanded jurisdiction to both exploit and protect offshore areas an excellent opportunity to overhaul what was seen as a fragmented, disjointed, and ad hoc marine policy. It was time to test cutting-edge, state-of-the-art approaches to the management and protection of large ecosystems.

Coinciding with the call for a more comprehensive approach to ocean management was the call for reform in the prevailing balance of powers between state and federal levels of government. The "new federalism" drive for enhanced state power and responsibility was receiving nourishment from elements in the executive branch. The new federalism movement drew support as an expression of populist sentiments that government must be sensitive and responsive to local needs; state-level governance, being far more capable of reflecting local conditions, should be preferable unless a truly national issue was at stake.

Critics of the new federalism remain wary; they perceive that motivations other than good government are at the root of the movement. Some warn that a shift of regulatory responsibilities to the state level without granting sufficient time and money for the states to adjust to their increased burdens would be tantamount to deregulation. They worry that the social and environmental interests of the public will not be properly protected if the private sector is allowed to pursue unimpeded its economic interests.

The Reagan Administration has announced its intention to right the improperly skewed balance of powers between federal and state governments which has characterized the recent past. The desirable end they describe in general terms as the establishment of equal and complementary roles for each. In fact, the ambiguity and the debate over the proper balance of federal and state powers is not at all new. Woodrow Wilson expressed this point when he wrote, "The question of the relation of the states to the federal government is the cardinal question of our constitutional system ... It cannot, indeed, be settled by the opinion of any one generation, because it is a question of growth, and every successive stage of our political and economic development gives it a new aspect, makes it a new question."

This cardinal question of our political system has tantalized political, legal, and philosophical thinkers throughout our history. American citizens continue to hold deeply felt opinions on this question. The opinions have reflected
historical conditions and dominant social issues. They also chronicle the inherent flexibility and vigor of our fundamentally contentious American union.

Before campaigning for new allocation of governmental duties, a realistic view of modern intergovernmental relations must be achieved. It has been pointed out that in the real world, an appraisal of federal vs. state roles must be rooted in specific policy arenas. That is, within each policy arena a complex set of interactions takes place among state, local, federal, and private sector participants. The lineup of interest group and governmental participants in the formation of policy depends upon the issue involved. The distribution of clout among participants is very often peculiar to that policy arena, depending upon a variety of factors. Generalizations regarding the sensitivity of a particular level of government to the local conditions frequently break down upon analysis. Several factors are at work.

One noteworthy factor has been labeled “opportunism” — the tendency for the actors involved in the policy process at any level to seek out and use the avenues of influence most accommodating to their particular agenda. For example, environmentalists are likely to enlist the aid of whatever level or agency of government is most receptive to their cause. Similarly, an agency may look for private sector support in its conflicts with competing agencies. Federal level agencies do not always line up together on one side of a particular issue. A federal agency may find an ally in a state agency with a similar mission when in conflict with another federal agency. Thus, according to this understanding of modern “real-world” federalism, the de facto predominance of the federal or state level of government in a particular policy arena emerges from the complex dynamics of interest group politics much more than the vague principles of federalism established in the Constitution.

In addition, now more than ever before in human history, international forums are influencing the behavior of nations. These international meeting places are enunciating rules of conduct designed to achieve global objectives impossible to accomplish for nations acting individually. The agreements which are concluded often carry implications for the distribution of powers between national governments and their political subdivisions. The impact of international obligations on the allocation of governmental powers and duties is particularly profound in the arena of maritime policy.

With this general theory of “opportunistic” and arena-specific federalism in mind, it is important to consider contemporary suggestions that federalism should take a new form in the new maritime zone under U.S. jurisdiction—the exclusive economic zone (EEZ). Given the hopes and fears generated by the new federalism among different public interest groups, it is also important to attempt to analyze the wisdom of establishing, as the Administration proposes, a balance of powers more favorable to the states.

This article does not suggest that, contrary to Woodrow Wilson’s statement, the cardinal question can be resolved; rather it suggests that before one advocates a shift of responsibilities, the objectives and strengths of government at each level be considered in relation to the specific policy arena at hand. To lay the groundwork for deeper inquiry into the overarching question of federalism in the EEZ, this article will focus on one marine policy arena—the regulation of pollution from vessels plying U.S. coastal and offshore waters.

Contrary to popular perception, collisions and shipwrecks resulting in oil spills do not contribute the largest quantity of oil entering the oceans. Rather, it is the routine and intentional discharge of oily ballast water, cargo tank wastes, and contaminated bilge water associated with the operation of both oil tankers and nontankers which accounts for most of the oil introduced into the sea from vessels. According to a study done by the National Academy of Sciences, the marine transportation industry is the source of 35 percent of the oil entering the oceans. Ship casualties are thought to contribute about 5 percent of all oil reaching the sea.

The vast majority of vessels engaged in international shipping operate under the authority of countries other than the United States. Nevertheless, the United States exerts tremendous influence on the conduct of international shipping in that it may set conditions on access to its ports and American citizens exercise financial control over a significant proportion of the world’s ocean-going fleet. As a major economic power, the United States has the opportunity to influence the direction of international law relating to the conduct of vessels. We also must weigh the political and legal consequences of our actions on the free flow of trade which is essential for economic health.

In order to predict the international ramifications of U.S. policy regarding vessel-related pollution control, it is important to understand the international law and policy contexts for exercising control over foreign flag vessels. First, there is a strong and universal interest in preserving the traditional rights of all vessels to navigate freely the waters of the world’s oceans. Navigational freedoms continue to be tremendously valuable not only for commercial vessels which deliver most of the raw materials and finished products to markets all over the world, but also for military vessels upon which national defense and security alliances depend. Without question, the protection of international commerce is of overriding strategic importance to all nations.

Second, the principles of reciprocity and custom in international law apply to the exercise of jurisdiction over foreign flag vessels. Under the principle of reciprocity, a country, in taking particular actions, acknowledges the rights of other nations to act in a similar manner. Therefore, interference with the navigational freedoms of foreign vessels in coastal waters by U.S. officials may be interpreted to justify, in return, foreign interference with U.S. vessels under similar circumstances. Under the principle of custom, a nation contributes to the formulation of international rules regarding appropriate conduct through its actions. Because a nation’s actions are so important for the generation of customary international law, countries must be mindful that the appropriate precedents are set and clear national policies are established.

It has been observed that the history of international regulations to control pollution from vessels has been written by the captains of a handful of oil
tankers—the ships that went aground and spilled thousands of gallons of crude oil onto American and European shores during the 1960s. These catastrophic oil spills forced both shipping nations and coastal nations to achieve a workable allocation of regulatory powers.

As coastal nations began to realize the environmental and related economic interests at stake, they became more interested in protecting against pollution from intentional as well as accidental discharges. But maritime countries had good reason to resist allowing other nations to board, inspect, and initiate legal actions against their vessels, except under well-defined and acceptable conditions: it was feared that relatively undefined environmental interests could be put forth as grounds to delay or otherwise interfere with vessels. Developing maritime nations also warned that they would face extreme economic hardships if vessel construction standards were set too high. It was clear that the power to set standards for construction and operation, and the power to take measures such as inspection, arrest, or detention of vessels to compel compliance would need to be addressed separately.

Widespread agreement was sought regarding the manner in which international and national standards for vessel design, construction, operation, and manning were negotiated in order to avoid a crazy-quilt of inconsistent national rules and regulations which could seriously hinder the flow of commerce. Enforcement was left to the state under whose laws the vessel operated in order to avoid the costly delay caused by frequent coastal nation inspection and enforcement actions.

Pollution control standards produced through international negotiations, it was often argued, were the lowest common denominator and therefore too weak to protect adequately environmental interests. Furthermore, it was pointed out, international law does not provide adequate enforcement capabilities: flag nations do not have a good record for imposing penalties on their own vessels. Finally, to make the system absurd and unworkable, the monitoring program was based on self-reporting and what has been called “voluntary and conscientious self-incrimination.”

At the center of international efforts to satisfy the needs of coastal and flag nations has been the International Maritime Organization (IMO). Formerly called the intergovernmental Maritime Consultative Organization, the IMO was founded in 1958. Under its aegis, multilateral conventions and their allied protocols, and a range of highly technical recommendations, guidelines, and manuals have been developed to control pollution from ships. The most important of the conventions regulating discharges incidental to the normal operation of vessels is the Convention on the Prevention of Pollution from Ships (MARPOL 73), as amended in the 1978 protocol to the 1973 Convention. Pollution control measures related to vessel accidents are governed by the 1969 Convention on the Intervention on the High Seas in Cases of Oil Pollution Casualties (Intervention Convention). Other valuable agreements reached by IMO members concern liability and compensation for pollution damage, preventing collisions, and standards for training of seafarers.

Prior to the agreement reached in the 1982 Third United Nations Convention on the Law of the Sea (UNCLOS III), a country whose offshore and coastal waters were fouled was not authorized to take measures to enforce regulations except under limited conditions: where the offending vessel voluntarily entered one of its ports; or where the vessel discharges occurred within the territorial sea and did not comport with innocent passage; or where the vessel was involved in a collision, grounding, or other marine casualty which presented a grave and imminent danger to coastal interests. Enforcement of the construction and operation standards established in the IMO conventions was left primarily to the flag nation. Nations were expressly granted the power to inspect vessels once they reached port, but even those inspections were routinely limited to reviewing the written records and the vessel’s certificate.

Under UNCLOS III, enforcement powers available to coastal nations were clarified and expanded. Coastal countries may undertake enforcement actions in certain circumstances: 1) where there are clear grounds to believe that a vessel violated a coastal nation’s law while in the territorial sea, the coastal nation may inspect the vessel, and if warranted initiate proceedings [Article 220 (2)]; 2) where there are clear grounds to believe a vessel violated international standards while in the EEZ or territorial sea of the coastal nation, the coastal nation may request information regarding the vessel’s identity, destination, and other relevant information [Article 220 (3)]; 3) where there are clear grounds to believe the vessel committed a violation in the EEZ, resulting in a substantial discharge causing or threatening significant pollution, the coastal nation may inspect the vessel if the vessel refuses a request for information or gives inadequate information [Article 220 (5)]; 4) where there is clear objective evidence that a vessel has committed a violation in the EEZ resulting in, or threatening, major pollution damage, the coastal nation may institute proceedings, including detention of the vessel in accordance with coastal nation laws [Article 220 (6)].

Equally important, UNCLOS III establishes safeguards which are designed to do the following: protect vessels from unreasonable delay [Article 226(1)]; require appropriate enforcement measures (Articles 224, 225, 227, and 232); assure that enforcement proceedings transferred to the flag nation are pursued diligently [Article 228]; and mandate observance of the rights of the accused (Article 230).

Under U.S. domestic law, the federal government is the primary guardian of the “navigable waters” with the Coast Guard and the Environmental Protection Agency bearing the responsibilities for implementation of the international treaties and national laws to control vessel-source pollution. The United States has ratified and implemented the major IMO conventions, with the exception of the treaties which were negotiated to limit the civil liability of shipowners and establish a compensation fund for pollution damage. Bills to implement the liability and compensation treaties were passed by the House of Representatives and the Senate during the recent session, but
differences in the two versions could not be resolved before Congress adjourned. Implementing legislation will be taken up again during the next session.

On the domestic level, the Federal Water Pollution Prevention and Control Act, (commonly referred to as the Clean Water Act) establishes the primary framework for regulating discharges into waters subject to U.S. jurisdiction. The Clean Water Act prohibits harmful discharges in the contiguous zone and beyond that affect resources under the exclusive management authority of the United States, except those discharges which are in compliance with the 1978 protocol to MARPOL 73 (33 U.S.C. §1321). Under the Clean Water Act, the right to intervene in cases of marine disaster creating a substantial threat to the coastal interests of the United States is reaffirmed.

With respect to remedial measures, the Clean Water Act establishes authorities for federal and state level responses. It requires polluters to reimburse the government for the expenditures by either state or federal agencies in cleaning up and removing oil and hazardous substances discharged in violation of the law. It directs that a National Contingency Plan be developed by the federal government in coordination with the states. The states play a role in developing the plan which assigns emergency response duties among federal and state agencies. State and federal cooperation is called for in the creation of a strike force having trained personnel, equipment, and a detailed plan for prevention and removal of spills. The states are directed to help develop a surveillance system to insure notice to federal and state agencies in cases of violation. The plan also must provide a schedule of dispersants which may be used to mitigate a spill and a system for immediate response by the relevant state agencies.

The Clean Water Act explicitly states that state laws concerning pollution damage to public or private property are not preempted. At present, state laws govern the extent of a shipowner's civil liability for damages caused by pollution. Other state and local laws not in conflict with the Clean Water Act provisions on oil spill liability are also not affected.

As of March 9, 1986, local port authorities are required to fulfill the MARPOL 73/78 provision which mandates that all ports must provide adequate waste reception facilities. Under this mandate, the ports must comply in order to assure that oily wastes can be properly discharged in port, rather than at sea in violation of the treaty. Under U.S. law, failure to provide waste reception facilities could result in the Coast Guard closing the port.

In summary, the power to govern vessel-source pollution lies principally in the international and federal arenas. International forums set standards for operation and construction which are enforced by national governments. Within the waters of the territorial sea, and for vessels destined for U.S. ports, national laws may apply more stringent discharge standards. In the United States, the states are offered a role in remedial responses to pollution incidents — clean up and removal, and liability and compensation for pollution damages. Local port authorities play a part in assuring compliance by providing necessary facilities.

Returning to the reevaluation of federal and state roles in the new offshore zone, it is evident that in the vessel-source pollution control arena, states are, at present, relatively minor players. In part, this is a consequence of the fact that international affairs and interstate commerce have traditionally been considered matters in which federal authority properly overrules the parochial interests of the states. In part, federal preeminence is due to fear that states would not adequately protect the environment in their pursuit of local economic advantage. Other factors concern the ability of state agencies to financially support enforcement activities in offshore areas, and the distressing prospect of a complex patchwork of inconsistent state laws.

Nevertheless, the call for an enhanced state role in offshore policy-making need not be summarily dismissed. The growing interdependence of world economies has spurred an increase in sophistication by states regarding international affairs. State governments have been undertaking economic development initiatives which demand the careful understanding of international markets, they are also showing evidence of a sophisticated appreciation of global and regional environmental problems. In the area of vessel-source pollution control, the new federalism may portend a greater role for states in developing the U.S. diplomatic position to be taken at international forums. Under the "new federalism," states may be given added enforcement and standard-setting powers over vessel-source pollution, but only if the rights and interests of the international community are given their due. If the states are permitted to take a more substantial role, they must display an understanding of the important international interests at work.

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LAGNIAPPE
(A Little Something Extra)

Correction: An article in the last issue of WATER LOG stated that all Gulf states have enacted laws prohibiting commercial landing of redfish taken from either state or federal waters. In fact, the situation is a good deal more complex. Alabama prohibits commercial landing of redfish only if taken in state waters. Mississippi and Louisiana prohibit catching of redfish from state or federal waters only in purse seine vessels. Florida prohibits landing of redfish caught anywhere by purse seine, but not by other methods. And Texas prohibits commercial landing of redfish caught by any method in state or federal waters, but does not prohibit their importation. Thanks to Dr. Hugh Swingle, Director of Alabama's Marine Resource Division, for pointing this out.

On November 14 President Reagan signed the Seafood Promotion Act, which provides for the establishment within 180 days of a national council to encourage consumption of seafood. Federal Saltonstall-Kennedy funds will pay for the program. Regional marketing boards targeting on promotion of certain species are to be funded through industry assessments.

Congress reauthorized the Magnuson Fishery Conservation and Management Act before it adjourned. Amendments include the following: (1) appointees to fishery management council membership must now be "knowledgeable" and "experienced"; (2) governors must see "where practical" that those "dependent for their livelihood upon the fisheries" are fairly represented as voting members; (3) governors must consult recreational and commercial user groups before nominating council members; (4) all fishery management plans must now include a section that considers fishery habitats; (5) the Fishery Conservation Zone will henceforth be called the Exclusive Economic Zone; (6) new standards to protect observers aboard foreign fishing vessels will be developed; (7) new penalties apply to anyone knowingly providing false information to the Secretary of Commerce or the councils; and (8) enforcement regulations will be amended to permit easier seizure of a catch or placing a lien on a vessel.

Other ocean or coastal related bills signed by the President include a reauthorization of the Deep Seabed Hard Minerals Resources Act, now funded through fiscal year 1989, and the Emergency Wetlands Resources Act, which increases funds available for wetlands acquisition by state or federal governments.

The Minerals Management Service has issued a Proposed Notice of Sale for Central Gulf OCS Sale #110. Scheduled for April 1987 bidding, the affected area covers about 32 million acres in the central Gulf. The 5,927 unleased parcels range from three to 200 miles offshore in depths ranging from four to 3,200 meters. The governors of Alabama, Louisiana, Mississippi, and Texas by law have 60 days to comment.