



THE FISHERY CONSERVATION
AND MANAGEMENT ACT OF 1978
THE NEED FOR STATE
AND FEDERAL COOPERATION

BY CRAIG R.O'CONNOR

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Advisory Services
Sea Grant Program
University of Miami
Box No. 248106
Coral Gables, Florida 33124

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Introduction

On April 13, 1976, the Fishery Conservation and Management Act of 1976 (FCMA) became law.^{1/} With it came a new dimension in the management of our Nation's fishery resources; a dimension which incorporates biological, ecological, economic, and social factors into the management and conservation of those resources.

Pursuant to the FCMA, the Secretary of Commerce (Secretary) is delegated regulatory authority over U.S. marine fisheries^{2/} with threshold management responsibility being vested in Regional Fishery Management Councils (Councils).^{3/}

The geographic scope of federal jurisdiction under the FCMA, the fishery conservation zone (FCZ), extends from the seaward boundary of the territorial sea to a line 200 miles from the baseline of that sea.^{4/} The coastal states retain fishery jurisdiction over those fisheries within the territorial sea.^{5/}

The fishery resources of our country are of undisputable importance. Sound management of those resources is imperative. The FCMA takes a significant step forward in their management. However, with the establishment of a dicotomy of management authority between the state and federal governments, there is a void created; a void which must be addressed for the intent of the FCMA to be realized and effective fishery management to prevail.^{6/}

^{1/} Pub. L. No. 94-265, 90 Stat. 331 (1976) (codified at 16 U.S.C.A. 1801-1882 (West Supp. 1977) (hereinafter cited as FCMA or the Act).

^{2/} Id.

^{3/} Id., 302(h), 16 U.S.C.A. 1852(h).

^{4/} Id., 101, 16 U.S.C.A. 1811.

^{5/} Id., 306(a), 16 U.S.C.A. 1856(a).

^{6/} Id., 2, 16 U.S.C.A. 1801.

Fishery management must transcend geographical bounds and be applicable throughout the entire ecosystem^{3/} of the resource. There must be state and federal cooperation to assure total ecosystem management. The FCMA, in content and application, provides the foundation for that cooperation.

Ecological Focus For Management

The FCMA establishes eight Regional Fishery Management Councils.^{7/} Their functions include the preparation of Fishery Management Plans (Plans) for fisheries within their area of authority.^{8/} The Plans must conform to the National Standards set forth in the Act.

Any fishery management plan prepared, and any regulation promulgated to implement any such plan, pursuant to this title shall be consistent with the following national standards for fishery conservation and management:

1) Conservation and management measures shall prevent overfishing while achieving, on a continuing basis, the optimum yield from each fishery.

(2) Conservation and management measures shall be based upon the best scientific information available.

(3) To the extent practicable, an individual stock of fish shall be managed as a unit throughout its range, and inter-related stocks of fish shall be managed as a unit or in close coordination.

(4) Conservation and management measures shall not discriminate between residents of different States. If it becomes necessary to allocate or assign fishing privileges among various United States fishermen, such allocation shall be (A) fair and equitable to all such fishermen; (B) reasonably calculated to promote conservation; and (C) carried out in such manner that no particular individual, corporation, or other entity acquires an excessive share of such privileges.

(5) Conservation and management measures shall, where practicable, promote efficiency in the utilization of fishery resources; except that no such measure shall have economic allocation as its sole purpose.

(6) Conservation and management measures shall take into account and allow for variations among, and contingencies in, fisheries, fishery resources, and catches.

(7) Conservation and management measures shall, where practicable, minimize costs and avoid unnecessary duplication.^{9/}

^{7/} Id., 302(a), 16 U.S.C.A.1852(a).

^{8/} Id., 302(h), 16 U.S.C.A. 1851(a).

^{9/} Id., 301(a), 16 U.S.C.A. 1851(a).

The ecological focus of these standards is evident. That focus is further emphasized by a review of certain applicable definitions contained in the Act.

The phrase "conservation and management" refers to

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

(ii) irreversible or long-term adverse effects ^{10/} on fishery resources and the marine environment are avoided. . .

Likewise, "fishery resource" means "any fishery, any stock of fish, any species of fish, and any habitat of fish."^{11/} "Optimum" for purposes of optimum yield means that amount of fish ". . .which is prescribed as such on the basis of maximum sustainable yield. . . as modified by any relevant . . .ecological factor."^{12/}

^{10/} Id., 3(2), 16 U.S.C.A. 1802(2).

^{11/} Id., 3(9), 16 U.S.C.A. 1802(9)

^{12/} Id., 3(18), 16 U.S.C.A. 1802(18).

These provisions indicate that an ecological basis for management is mandated. However, the bifurcated jurisdiction established by the FCMA presents the opportunity for that basis to be ignored.^{13/}

Management of living marine resources must recognize that the sea is not subject to physical delimitation.^{14/} The marine ecosystem is a continuum of interaction, the full scope of which must be treated for successful fishery management. Failure to incorporate the coastal aspect of that ecosystem into a management plan may undermine its effectiveness. However, the FCMA provides for incorporation only with state approval.

^{13/} A second issue of concern is that under the FCMA the Secretary of Commerce has authority to enforce regulations only for stocks of fish harvested outside state waters, unless the fishery is predominantly within the FCZ. Except in this latter case, neither the RFMCs nor the Secretary of Commerce can require a state to implement an RFMC-approved plan within its territorial sea, since the FCMA left essentially unchanged the authority of the coastal states to regulate fisheries within the territorial sea. Inland waters, such as Cape Cod Bay, Mobile Bay, and Puget Sound, are not even covered by the FCMA. Attempting to manage interstate fish stocks through the disparate state and local political jurisdictions has been a major weakness in the US system. The FCMA does little to correct this weakness for a number of important stocks.

The magnitude of this problem is better understood when one recognizes that the resources involved include some of our most important and valuable commercial and recreational fisheries: at least 50 percent of the domestic commercial harvest and approximately 80 percent of the recreational catch are involved. Examples are menhaden (the largest volume fishery in the US), striped bass (a major recreational species found off every coastal state from Maine to Washington and a commercial fish in some states), and shrimp in the Gulf of Mexico and the South Atlantic (our most valuable fishery). In the past this lack of uniform management for many interstate fisheries has caused user conflicts and resource depletion.

David H. Wallace, Emerging Policy for the Management of United States Marine Fisheries, EXTENDED FISHERY JURISDICTION: PROBLEMS AND PROGRESS, 1977 13 at p. 23. (hereinafter cited as Extended Fishery Jurisdiction).

^{14/} Courtland, What Are the Metes and Bounds of a Wave?, 4 Ocean Development and International Law J. 369, 371 (1977).

A study of the estuarine^{15/} ecosystem,^{16/} subject to state control under the FCMA, will illuminate the issue. The estuary is an integral part of the life cycle or food chain of many marine species. Thus, it is a vital constituent of any management scheme for estuary dependent species.

Estuaries, are found where fresh and salt water mix. They include bays, sounds and harbors and can vary tremendously in size. Notably they are protected areas providing shelter for a myriad of biological activities including production, consumption and exchange processes.^{17/}

^{15/} An estuary is defined to be a body of coastal water openly connecting with the sea and possessing measurable salinity. See J. Clark, Coastal Ecosystem Management 1977 at p. 915 (hereinafter cited as CLARK).

^{16/} An ecosystem is defined to "the complete biological system operating in a given geographical unit, including the biological community and the physical environment." CLARK at 915.

^{17/} Estuaries are systems which are normally under high stress. In these waters there are changes alternating from total exposure to sunlight and air to full submersion by relatively high-salinity water. It may alternate seasonally from small freshwater inflow, when the river is relatively low, to freshet which subjects the organisms to a virtually freshwater environment. Few organisms can survive these wide variations in environmental conditions. For this reason, there is usually a low diversity of species in such highly stressed environments. The number of each of these particularly resistant species may be quite high. Their food may be largely derived from detritus contributed by terrestrial vegetation or from benthic algae. Such organisms may provide a vital part of the nutrition for anadromous fish, which use the waters of an estuary as nursery feeding grounds. These organisms, usually tiny isopod and amphipod crustaceans, must be sustained if the food supply for young fish is to be maintained. Once their environment is destroyed by some type of estuarine modification, such as super-port development or other coastal installations involving dredging and filling, then the young fish have to go further afield in search of food. There they usually encounter a much more hostile environment, where their chances for survival are substantially diminished. For this reason, the destruction of salt marshes, sedge-grass deltas and other estuarine habitats can be disastrous to a fish population. Waldichuk, Coastal Marine Pollution and Fish, 2 Ocean Management 1, 12 (1974) (hereinafter cited as Waldichuk).

Characteristically, estuaries are confined in structure, of shallow depth, and decreased salinity.^{18/} These features enable plants to root, larvae to attach, certain suspended life forms and nutrients to be retained, light penetration for photosyntheses, and flushing.^{19/} The freshwater outflow, tides and salinity of estuaries create a beneficial system of water movement and transport and the dilution and flushing of waste materials.^{20/} These conditions allow the estuary to serve a multitude of functions in the coastal ecosystem. Those functions include: habitat, nutrient producer, energy storage unit, water purification, sedimentation trap, storm barrier, shoreline stabilizer and aesthetic attraction.^{21/}

Estuaries are likewise a primary component of the marine food chain.^{22/} Their submerged grass beds provide food and detrital matter for certain forms of marine life, oxygenate the water, and stabilize bottom sediments. Residents of estuaries include dozens of varieties of fish, including the majority of commercially and

^{18/} CLARK at 29.

^{19/} Id.

^{20/} Id.

^{21/} Id. at 30.

^{22/} The phytoplankton are referred to as the producers, for through photosynthesis they produce the carbohydrates which form the base of the "food pyramid" in the oceans. They serve as the direct food source for the next trophic level, the zooplankton, which are the drifting animal organisms of the sea. The zooplankton are then consumed by the plankton-grazing fishes, such as the herring and anchovies, which are in turn eaten by predator fishes like the salmon and tuna. As a rough rule of thumb, there is a transfer of about 10% of body tissue of organisms (prey) of one trophic level to the bodies of the organisms (predators) in the trophic level immediately above it; the rest of the food goes to energy and waste. Waldichuk supra note 17 at 7-9.

recreationally significant species which use the estuary as nursery or feeding areas.^{23/}

It is clear that state sanctioned activities in the coastal zone which negatively impact the fine balance of the estuarine system may have a like impact on a management plan. An example of such an activity is the introduction of sewage effluent into the estuarine ecosystem.

Sewage effluent can have a multitude of constituents, depending on its source and treatment, if any. Household, industrial and municipal wastes as a whole contain mainly dissolved and particulate organic matter, including large populations of bacteria and viruses. There is also a high concentration of nutrients which may include growth promoting substances such as phosphates, ammonia, nitrates and vitamin B₁₂. Oil, grease, detergents, cyanide and metals may also be present.^{24/} The introduction of these substances may well grossly affect the delicate balance of the estuarine system producing potentially undesirable results.

[The] effect of . . . [a] pollutant on the ecosystem, where the food chain may be altered, by elimination of certain species and replacement of some species by others, and by disruption of energy flow through the various routes between trophic levels, can be far more serious than the effect on one particular organism. The interaction between the various components of the food web usually leads to a lower diversity of species and a simplification of the ecosystem. It can lead to the decline of a particularly useful species, such as salmon and herring, and yet there may be no overt symptoms of direct harm to the fish. If the primary food supply is diminished, then the populations of fish, or the aquatic organisms on which they depend for sustenance, may decline because of starvation.^{25/}

The effects of the introduction of sewage into the estuarine ecosystem will, of course, depend on the constituents and the amount of pollutants, and upon the physical and biological characteristics of the estuary itself such as water movement, circulation, and assimilation capacity. As these materials interact with the estuarine environment, any number of changes can take place.

^{23/} Stepian and Fernandez, Wetlands-Related Legislation in the United States, U. of Miami Sea Grant Special Rpt. 11, 1977 at p. 2.

^{24/} Waldichuk supra note 17 at 19-20.

^{25/} Waldichuk supra note 17 at 10.

The introduction of certain compounds, especially those which are easily oxidized, will deplete the available dissolved oxygen in the water and thus inhibit the growth of aerobic organisms. Overtertilization, precipitated by increased nutrient content, can cause eutrophication, glutting the surface water with algae and other aquatic plants. During decay, these masses of plants, through oxygen consumption, can kill entire populations of fish and shell fish.^{26/}

Turbidity, caused by the suspended particulate matter in effluent, will limit light penetration, thus limiting photosynthesis in aquatic plants. The particulate matter which settles out of the effluent, called sludge, will physically cover benthic organisms (shell fish and important grass beds) and smother them. Heavy metals, many of which are long lived and toxic, may be taken up by aquatic life and cycle through food chains indefinitely. Other toxicants include some plastics and detergents and harmful bacteria and viruses which have been implicated in the transmission of certain diseases to man.^{27/}

An example of the potential effects of estuarine degradation is the spiny lobster fishery. The estuarine system of Biscayne Bay, Florida, serves as the nursery grounds for the juvenile lobster for a period of 2 to 3 years. When they begin reaching legal size they migrate into deeper water and to offshore reefs, many of which are subject to the Act's jurisdiction. Unless these nursery grounds are preserved, the fishery may be reduced or eliminated, rendering federal management useless.^{28/} As has been stated:

Fish that are healthy and healthful cannot be produced in polluted waters. The Mid-Atlantic Fishery Management Council (MAFMC), for example, has attached to its revised surf clam and ocean quahog fisheries plan a strongly worded amendment

^{26/} See generally Waldichuk supra note 17 and CLARK supra note 15.

^{27/} Id.

^{28/} See Stone, The Lobster Patrol. FLORIDA SPORTSMAN, February, 1978 at 22.

expressing "deep concern" over pollution, particularly from ocean dumping of sewage sludge, dredge spoil, and chemical wastes; from discharge of raw sewage in the Hudson River, and from discharge of primary-treated sewage from ocean outfalls, which are all impacting negatively on surf clam and quahog. The MAFMC's amendment notes: "The extremely substantial quantity of pollutants which are being introduced into the Atlantic Ocean poses a threat to the continued existence of a viable fishery" (Mid-Atlantic Council, 1977, p. 15-A). This is but one example of an increasingly serious problem that must be resolved. ^{29/} if a number of objectives of the FCMA are to be realized.

Foundation for Cooperation

The necessity of including the estuarine ecosystem in an effective management plan is obvious. However, the FCMA does not accommodate this necessity. The void thus created can be filled in one of two ways: federal pre-emption or state and federal cooperation.

The FCMA makes it clear that federal pre-emption is not the chosen approach. Pre-emption is effected only in a limited circumstance: if a managed fishery is located primarily in the fishery conservation zone and a state's action substantially and adversely impacts the management of that fishery. Specifically, Section 306(b) of the Act provides:

(1) If the Secretary finds, after notice and an opportunity for a hearing in accordance with section 554 of title 5, United States Code, that--

(A) The fishing in a fishery, which is covered by a fishery management plan implemented under this Act, is engaged in predominately within the fishery conservation zone and beyond such zone; and

(B) any State has taken any action, or omitted to take any action, the results of which will substantially and adversely affect the carrying out of such fishery management plan; the Secretary shall promptly notify such State and the appropriate Council of such finding and of his intention to regulate the applicable fishery within the boundaries of such State (other than its internal waters), pursuant to such fishery management plan and the regulations promulgated to implement such plan. ^{30/}

^{29/} Honorable ROBERT L. LEGGETT, Extended Jurisdiction: Prologue To a National Fisheries Policy and Rational Fisheries Management, EXTENDED FISHERY JURISDICTION, supra note 13 at 116.

^{30/} F.C.M.A. supra note 1 at 306(b), 16 U.S.C.A. 1856(b).

This provision does not resolve the issue, however.

Since federal pre-emption is not the alternative at this juncture, state and federal cooperation must prevail. The foundation for that cooperative approach is provided by the FCMA. The voting constituency of each Council consists primarily of persons with arguable state interest. Those members include principal state marine fishery management officials and appointments by the Secretary of Commerce from state recommended personnel.

The general composition of each Council is established in Section 302(a):

(a) Establishment. There shall be established, within 120 days after the date of the enactment of this Act, eight Regional Fishery Management Councils, as follows:

(1) New England Council. The New England Fishery Management Council shall consist of the States of Maine, New Hampshire, Massachusetts, Rhode Island, and Connecticut and shall have authority over the fisheries in the Atlantic Ocean seaward of such States. The New England Council shall have 17 voting members, including 11 appointed by the Secretary pursuant to subsection (b) (1) (C) (at least one of whom shall be appointed from each such State).

(2) Mid-Atlantic Council. The Mid-Atlantic Fishery Management Council shall consist of the States of New York, New Jersey, Delaware, Pennsylvania, Maryland, and Virginia and shall have authority over the fisheries in the Atlantic Ocean seaward of such States. The Mid-Atlantic Council shall have 19 voting members, including 12 appointed by the Secretary pursuant to subsection (b) (1) (C) (at least one of whom shall be appointed from each such State).

(3) South Atlantic Council. The South Atlantic Fishery Management Council shall consist of the States of North Carolina, South Carolina, Georgia, and Florida and shall have authority over the fisheries in the Atlantic Ocean seaward of such States. The South Atlantic Council shall have 13 voting members, including 8 appointed by the Secretary pursuant to subsection (b) (1) (C) (at least one of whom shall be appointed from each such State).

(4) Caribbean Council. The Caribbean Fishery Management Council shall consist of the Virgin Islands and the Commonwealth of Puerto Rico and shall have authority over the fisheries in the Caribbean Sea and Atlantic Ocean seaward of such States. The Caribbean Council shall have 7 voting members, including 4 appointed by the Secretary pursuant to subsection (b) (1) (C) (at least one of whom shall be appointed from each such State).

(5) Gulf Council. The Gulf of Mexico Fishery Management Council shall consist of the States of Texas, Louisiana, Mississippi, Alabama, and Florida and shall have authority over the fisheries in the Gulf of Mexico seaward of such States. The Gulf Council shall have 17 voting members, including 11 appointed by the Secretary pursuant to subsection (b) (1) (C) (at least one of whom shall be appointed from each such State).

seaward of such States. The Gulf Council shall have 17 voting members, including 11 appointed by the Secretary pursuant to subsection (b) (1) (C) (at least one of whom shall be appointed from each such State).

(6) Pacific Council. The Pacific Fishery Management Council shall consist of the States of California, Oregon, Washington, and Idaho and shall have authority over the fisheries in the Pacific Ocean seaward of such States. The Pacific Council shall have 13 voting members, including 8 appointed by the Secretary pursuant to subsection (b) (1) (C) (at least one of whom shall be appointed from each such State).

(7) North Pacific Council. The North Pacific Fishery Management Council shall consist of the States of Alaska, Washington, and Oregon and shall have authority over the fisheries in the Arctic Ocean, Bering Sea, and Pacific Ocean seaward of Alaska. The North Pacific Council shall have 11 voting members, including 7 appointed by the Secretary pursuant to subsection (b) (1) (C) (5 of whom shall be appointed from the State of Alaska and 2 of whom shall be appointed from the State of Washington).

(8) Western Pacific Council. The Western Pacific Fishery Management Council shall consist of the State of Hawaii, American Samoa, and Guam and shall have authority over the fisheries in the Pacific Ocean seaward of such States. The Western Pacific Council shall have 11 voting members, including 7 appointed by the Secretary pursuant to subsection (b) (1) (C) (at least one of whom shall be appointed from each such State).

Each Council shall reflect the expertise and interest of the several constituent States in the ocean area over which such Council is granted authority.^{31/}

Section 302(b) designates those members who have voting status.

(b) Voting Members. (1) The voting members of each Council shall be:

(A) The principal State official with marine fishery management responsibility and expertise in each constituent State, who is designated as such by the Governor of the State, so long as the official continues to hold such position, or the designee of such official.

(B) The regional director of the National Marine Fisheries Service for the geographic area concerned, or his designee, except that if two such directors are within such geographical area, the Secretary shall designate which of such directors shall be the voting member.

(C) The members required to be appointed by the Secretary shall be appointed by the Secretary from a list of qualified individuals submitted by the Governor of each applicable constituent State. With respect to the initial such appointments, such Governors shall submit such lists to the Secretary as soon as practicable, not later than 45 days after the date of the enactment of this Act. As used in this subparagraph, (i) the term "list of qualified individuals" shall include the names (including pertinent biographical data) of not less than three such individuals for each applicable vacancy, and (ii) the term "qualified individual" means an individual who is knowledgeable or experienced with regard to the management, conservation, or recreational or commercial harvest, of the fishery resources of the geographical area concerned.^{32/}

^{31/} Id., 302(a), 16 U.S.C.A. 1852(a).

^{32/} Id., 302(b), 16 U.S.C.A. 1852(b).

It seems safe to assume that coastal state interests will be accurately and amply reflected in Council management decisions. The progression to state acceptance of and cooperation with a management plan impacting coastal waters is reasonable to assume. That assumption must be correct for effective management to prevail.

The second foundational element for cooperative management is found in the regulations promulgated by the National Oceanographic and Atmospheric Administration under the authority of the FCMA. Those regulations mandate^{33/} that the Council coordinate Plans with approved state coastal zone management programs under the Coastal Zone Management Act (CZMA).^{34/}

^{33/} 42 Fed. Reg. 34460(1977) (to be codified in 50 C.F.R. 601.21(b)(3)).

^{34/} Pub. L. No. 94-370, Stat. 1013 (1976) (codified at 16 U.S.C.A. 1451-1464 (West Supp. 1977) (hereinafter cited as CZMA).

Though the CZMA is arguably a weak tool for assuring effective coastal zone management, the overall focus under FCMA regulation is state and federal cooperation.^{35/} One caveat must be addressed, however. A coastal zone management plan may be inapposite to a fishery management plan in impact. The CZMA nominally recognizes the importance of fishery resources of the coastal zone but there is no mandate that fishery resource management be accommodated. Care must be taken to assure a complimentary interface between the coastal zone management plan and the fishery plan.

Conclusion

The fishery resources of our country are of undisputable importance. Sound management is imperative for those resources to be maintained. The Fishery Conservation and Management Act of 1976 takes a significant step in the direction of effective management. To stop its progress by a geographical tether may so dilute its impact as to render it useless. There must be cooperation between the coastal states and federal fishery management authority to assure the efficacy of the Act and the management plans devised thereunder.

^{35/} See 42 Fed. Reg. 34458 (1977) (to be codified in 50 C.F.R., 602.2(d)(2). See also Wallace, EXTENDED FISHERY JURISDICTION, *supra* note 13 at 24 wherein it is stated:

A third issue requiring further examination is the need for closer coordination between the FCMA and the Coastal Zone Management Act (CZMA), which provides funds to states for programs and plans that contain "objectives, policies and standards to guide public and private uses of lands and waters in the coastal zone." The protection of fishery habitats and the development and implementation of state fishery management plans are included in the scope of the CZMA, which encourages two or more states through "executive instrumentalities or agencies" and provides for federal grants of up to 90 percent of the cost of establishing and maintaining such instrumentalities. This is an opportunity and a challenge for the RFMCs and the states to work together in seeking uniform fishery management regimes, both inside and outside the FCZ.

Another reason for close coordination between RFMCs and state Coastal Zone Planning Offices is that, once a state coastal zone plan is approved by the Secretary, activities conducted, controlled, or supported by federal agencies shall be, to the maximum extent practicable, consistent with the state plan. This consistency requirement could place limitations on the work of the RFMCs in their preparation of fishery management plans, even for stocks harvested predominantly beyond state waters.

