Foreign Fishing

CHAPTER 2

1. Introduction

The emergence of a highly mobile and technologically sophisticated worldwide fishing industry dramatically transformed concepts of fishery management in the United States and resulted in Congress' enactment of the Magnuson Fishery Conservation and Management Act of 1976 (FCMA). To understand how the FCMA currently affects foreign fishing within the "200-mile" Fishery Conservation Zone (FCZ), it is necessary to examine congressional purpose in enacting the FCMA.

Between 1938 and 1973 the quantity of fish harvested off the United States tripled, increasing from approximately 4.4 billion pounds to 11.8 billion pounds, while the landings of American vessels remained virtually constant, increasing only from 4.3 to
In 1973, foreign fishermen took nearly seventy percent of the commercial fish harvest off United States coasts. At the time of congressional debate on the Act, approximately 16 important species of fish off the United States coast were judged over-fished. While domestic fish harvests remained relatively constant, the United States more than doubled its consumption of fish products. The increase in consumption was met by imported fish products, much of which had been caught in United States coastal waters. All of this had a negative impact not only on the health of marine fishery stocks, but also on the United States balance of trade and on the economic well-being of the American fishing industry.

Between 1948 and 1975 the United States concluded over 20 international fishing agreements in an effort to conserve fish stocks and protect the domestic fishing industry. These international conservation efforts, however, generally proved ineffective in preventing further depletion of fish stocks or economic deterioration of the American fishing industry.

Recognizing that a successful conclusion to the Third United Nations Law of the Sea Conference was not imminent, Congress responded to this deteriorating situation by enacting the Fishery Conservation and Management Act of 1976.

The desire to control the domestic impact of foreign fishing was part of the reason for enacting the FCMA. Congress nevertheless recognized that it was neither practical nor desirable to exclude all foreign fishing from the FCZ of the United States. At the time of enactment, Congress felt that to exclude foreign fishing totally within the 200-mile zone would violate international law. Furthermore, Congress recognized that a prohibition of all foreign fishing within 200 miles of the United States coast might have severe consequences on the United States distant-water shrimp and tuna fleets if prohibition should result in retaliatory denial of access to foreign fishing grounds. Finally, Congress acknowledged a moral obligation to permit foreign fishing within the FCZ because of the important role of fish as a source of protein for many nations of the world.

Congressional intent in enacting the FCMA was thus not to exclude foreign fishing within the FCZ entirely, but rather to limit both domestic and foreign fishing to the "optimum yield" of the resource. As Senator Warren Magnuson, a principal sponsor of the FCMA, stated: "Emphasis was on conservation and management, not on exclusion." Like the Coasting and Fishing Act enacted long ago, the FCMA does, however, prohibit foreign fishing within state boundaries. As discussed later in this chapter, the 1980 amendments to the FCMA establish a mechanism for accelerated phaseout of foreign fishing within the FCZ, indicating a changing perception of Congress regarding the proper role of foreign fishing within the FCZ.

While foreign fishing was not eliminated by enactment of the
FCMA in 1976, it is now subject to United States control. This chapter discusses the regulations that govern foreign fishing fleets fishing within the 200-mile FCZ.

In order for a foreign vessel to qualify for fishing in the FCZ, the foreign government sponsoring the foreign fishing vessel must: (1) be a party to an existing fishery treaty or agreement, or a "governing international fishery agreement" (GIFA) negotiated pursuant to the Act; 19/ (2) extend similar privileges to United States fishing vessels; 20/ and (3) apply for and obtain an annual permit from the Secretary of State for each applicant vessel it represents. 21/ The GIFA and corresponding vessel permit establish "conditions and restrictions" on foreign fishing for the nation and the individual fishing vessel. 22/ Part II of this chapter will discuss the GIFA negotiation and review process and also the conditions to which a foreign nation agrees when it enters into a GIFA.

The Secretary of State, after consultation with the Secretary of Commerce, issues permits for foreign fishing pursuant to a GIFA, depending on the extent to which an allocation of the target stock is available. 23/ If the optimum yield (OY) for the target fishery stock as predicted by the regional Council 24/ is greater than United States harvesting capacity 25/ the surplus may be then made available to foreign fishing interests and is designated as the "total allowable level of foreign fishing" (TALFF). 26/ Since the total amount of foreign fishing depends upon the levels determined for optimum yield and domestic harvesting capacity, the criteria and considerations used to define these concepts are of crucial importance to foreign fishing interests. Part III of this chapter will examine the calculations of optimum yield and domestic harvesting capacity for a fishery.

The Secretary of State then allocates among qualified foreign applicants the surplus or total allowable level of foreign fishing, according to specific criteria. 27/ The allocation process and criteria will be examined in Part IV.

In 1978 Congress passed an amendment to the FCMA 28/ that created preference for American processors of fish harvested in the FCZ. The amendment also specifically authorized "joint ventures," by which foreign processing vessels can receive from United States fishing vessels that part of the domestic harvest which United States processors have no capacity or intent to process. 29/ The background of the "joint ventures" amendment and its implementation and effect on foreign fishing will be discussed in Part V of this chapter.

Under the provisions of the FCMA, those engaged in foreign fishing may be charged "reasonable" nondiscriminatory license fees based upon the cost of management, research, administration, enforcement, and other factors relating to the conservation and management of fisheries. 30/ The 1980 amendments increased the
permit fees for foreign fishing vessels and required that each vessel pay the cost of providing an American observer aboard that ship.\textsuperscript{31} The fees and the observer program will be examined in Part VI of this chapter.

The 1983 amendments to the FCMA distinguish foreign recreational from commercial fishing.\textsuperscript{32} The amended FCMA allows foreign recreational fishing within the FCZ and state waters if the vessels are not operated for profit. Previous requirements of a GIFA, a specified allocation, and permits have been eliminated. Foreign vessels must, however, comply with applicable federal and state laws, any applicable fishery management plan, and also other conditions deemed appropriate by the Secretary and the Governor of the appropriate coastal state. Most coastal states have licensing or other requirements that will apply.

II. GIFAs

Under the Fishery Conservation and Management Act, each nation seeking to fish within the FCZ or for anadromous species\textsuperscript{33} or for "sedentary" continental shelf fishery resources\textsuperscript{34} must enter into a "Governing International Fishery Agreement" (GIFA) with the United States\textsuperscript{35} or renegotiate an existing international fishery agreement to conform to GIFA requirements.\textsuperscript{36} Upon expiration of the existing international fishery agreement, the foreign nation must negotiate a GIFA if it desires continued access to the FCZ.\textsuperscript{37} Permits for individual vessels will be issued only to fishing vessels of nations that are parties to a GIFA with the United States.\textsuperscript{38}

By entering into a GIFA, the foreign nation acknowledges the exclusive management authority of the United States as set forth by the Act.\textsuperscript{39} The GIFA must also include a binding commitment on the part of the foreign nation and each of its fishing vessels to comply with a wide range of conditions -- including all regulations promulgated by the Secretary of Commerce pursuant to the Act and regulations promulgated to implement any applicable fishery management plan.\textsuperscript{40}

The FCMA specifies some of the terms and conditions that the GIFA must impose on a foreign nation and its vessels. Each foreign fishing vessel seeking to fish within the FCZ, for example, must first obtain a permit from the Secretary of Commerce\textsuperscript{41} and, having obtained it, must prominently display it on the wheelhouse of the vessel.\textsuperscript{42} Transponders or other appropriate position-fixing devices must be installed and maintained on the foreign vessels.\textsuperscript{43} The foreign nation must assist enforcement of fishery regulations by permitting the Coast Guard to board and inspect its fishing vessels at any time and to make arrests and seizures of the vessel if violations are found.\textsuperscript{44} On becoming a party to a GIFA, a foreign nation must permit a United States observer to be stationed aboard each of its fishing vessels and must agree to pay for the cost of each observer.\textsuperscript{45} Fees required for individual fishing permits must be paid in ad-
To ensure that the foreign nation and its fishing fleet may not claim immunity from legal action in United States courts, the foreign nation and owners of the foreign fishing vessels must maintain within the United States agents authorized to receive and respond to legal process. The foreign nation must also assume responsibility for gear loss or damage suffered by United States fishermen that was caused by the foreign nation's fishing vessels. The foreign nation must also agree that its vessel owners and operators will limit their annual harvest to a quantity not to exceed that nation's allocation of the total allowable level of foreign fishing (TALFF). Finally, the GIFA requires the foreign nation to enforce all of the above conditions and restrictions against its nationals, as well as any conditions and restrictions that might be applicable to each individual vessel pursuant to that vessel's permit.

Under the FCMA, the Department of State is responsible for negotiating GIFAs with foreign countries that seek to fish within the FCZ. Once a GIFA has been negotiated and signed, the President is required to submit it to Congress. The agreement takes effect 60 days after submission, unless disapproved by a joint "fishery agreement resolution" originating in either House of Congress. Although the FCMA does not expressly provide for an acceleration process, Congress has in the past made GIFAs effective prior to the end of the 60-day period by taking affirmative action to that effect in the form of a joint resolution.

It should be noted, however, that the FCMA's provision for legislative veto of GIFAs is now constitutionally suspect. Recently the Supreme Court declared unconstitutional certain provisions of the Aliens and Nationality Act, which authorized Congress to invalidate, by resolution, an action of the executive branch. The scope of this holding has not yet been established, but the continued viability of the FCMA's legislative veto provision appears in doubt.

The FCMA states that it is the "sense of Congress" that GIFAs "include a binding commitment, on the part of such foreign nation and its fishing vessels," to comply with the specified conditions and restrictions of the Act. The use of the term "sense of Congress" suggests Congress' recognition that the formation and control of international fishery agreements does not lie clearly within its constitutional power. This uncertainty is a consequence of unsettled application of the separation of powers doctrine in the field of foreign affairs.

Treaties are the only form of international agreement for which the Constitution specifically provides. Article II, Section 2 of the Constitution requires that treaties be negotiated by the executive branch of the federal government and ratified by the President with the advice and consent of the Senate. GIFAs are, however, not "treaties," but rather are "executive agreements." The process for adoption of GIFAs
therefore differs in several ways from that required by the Constitution for the adoption of treaties. First, Congress has imposed conditions and guidelines that must be included in the agreements negotiated by the Secretary of State. The President and the State Department are thus purportedly constrained in their ability to consider other aspects of foreign policy to the detriment of the Act's goals of conservation and management of the fishery resources. Another way the provisions of the FCMA differ from constitutional requirements for treaties is that the GIFAs are subject to the approval of both houses of Congress, not just the Senate. Congress is therefore more actively involved in the negotiation process of GIFAs than it is with treaties.

The FCMA also contains a further restraint on the ability of the State Department to negotiate GIFAs with nations seeking to qualify for fishing in the FCZ. As an incentive for foreign governments to conclude agreements that ensure access to foreign fishing zones for United States distant-water fishing fleets, the Act provides that foreign fishing will not be authorized for vessels of any nation unless that nation extends substantially the same fishing privileges to vessels of the United States as the United States extends to foreign fishing vessels. The effect of this "reciprocity provision" may actually be slight, because nations seeking to fish in the United States FCZ often do not have fishery resources desired by the United States distant-water fleet.

As of November 1984, GIFAs have been concluded with Bulgaria, Cuba, the European Economic Community (France, Federal Republic of Germany, Ireland, Italy), the Faroe Islands (signed by Denmark, the Faroe Islands and the United States), the German Democratic Republic, Japan, Mexico, Norway, Poland, Portugal, Republic of Korea, Romania, Spain, Taiwan, and the U.S.S.R. GIFAs concluded with Cuba and Mexico have expired or been terminated.

Mexico signed a Governing International Fishery Agreement on August 26, 1977, but decided to terminate the agreement on June 29, 1980. One of the major reasons for the decision of the Mexican Government to terminate the GIFA was the failure of its squid fishery to receive allocations of squid from the United States.

The agreement with the European Economic Community (EEC) has presented certain special problems, because not all of the EEC members have traditionally fished off United States coasts. However, the Community as a whole adopted a common fishery policy and at the same time established its 200-mile Conservation and Management Zone. An agreement with the EEC as a whole was therefore unavoidable. While the agreement theoretically applies to all members of the EEC, priority fishing rights have been granted to those of its members who have fished in United States waters in the past.
In addition to gaining recognition of the United States FCZ, the GIFA negotiated with the EEC fulfilled another purpose of the Act by protecting the interests of the United States distant-water fishing fleets. The agreement with the European Economic Community was thus advantageous to the United States in that it protected the interest of "approximately 100 U.S. shrimp trawlers that fish in waters off French Guiana which lie in the EEC zone." 68/

III. Optimum Yield (OY)

The critical requisite for foreign access to a fish stock -- even if a GIFA has been signed and approved -- is the existence of a surplus of fish over and above what the United States domestic fleet will harvest. Only when the predicted "optimum yield" of a fishery, as determined by the appropriate regional Fishery Management Council, is greater than United States harvesting capacity can the surplus be made available to foreign fishing vessels.69/ The calculation of "optimum yield" is thus of crucial importance to both domestic and foreign fishermen. Nearly all of the specific criteria set forth in Title III of the FCMA, which govern promulgation of fishery management plans and their review by the Secretary of Commerce, are designed to ensure achievement of the goal of optimum yield, "the underlying management concept" of the Act.70/ Yet the optimum yield concept has been criticized for its apparent failure to establish adequate guidelines for decision-making. As one commentator states: "The nebulous nature of this standard ... renders it ineffective in providing a basis for decision-making. 'Optimum yield' becomes merely a 'best' yield, to be defined on an ad hoc basis by decision-makers."71/

The FCMA defines the concept of "optimum yield" as the amount of fish --

(A) which will provide the greatest overall benefit to the Nation, with particular reference to food production and recreational opportunities; and

(B) which is prescribed as such on the basis of the maximum sustainable yield from such fishery, as modified by any relevant economic, social, or ecological factor.72/

This concept represents a fundamental change from the traditional management objective of "maximum sustainable yield" (MSY) used for many years.73/ The MSY of a fishery is the largest annual catch or yield (in terms of weight of fish) that can be taken continuously from a stock under existing environmental conditions.74/ The concept of MSY is thus based on the observation that (up to a point) the more fish of a given species that are caught, the more fish (by weight rather than numbers) there are to catch. When surplus fish are harvested, more food resources are available to be more efficiently consumed by the remaining fish stock. Thus the remaining fish grow faster than if no har-
vest had occurred. As fishing effort increases, however, the
catch increases only up to a point where it begins to level
off. Beyond this point, increased fishing effort results in a
decreasing catch. Therefore, a fish stock produces its greatest
harvestable surplus when it is at some intermediate level of
abundance.\footnote{15}

As a goal of fishery management, the concept of MSY has been
criticized by biologists and economists because of its narrow
biological basis.\footnote{16} The criticisms of MSY as a fishery manage-
ment goal include its failure to account fully for ecological
relationships and to accommodate economic and social interests.
As one fishery expert noted in 1974: "Few would now defend the
MSY as an abstract concept providing the ideal theoretical guide
to management objectives."\footnote{17}

An inherent shortcoming of the strict MSY standard lies in
its failure to account for ecological interrelationships among
species. The MSY concept, for example, does not consider whether
two targeted species might compete for the same food source or
engage in a predator-prey relationship, making it impossible to
maximize respective yields of the related species simultane-
ously.\footnote{18} The MSY standard also fails to address the situation
of incidental catches where, due to the close physical proximity
of the stocks, the fishing of one stock \footnote{19} at MSY levels may produce
destructively high catches of the other.

Some of the strongest arguments against the MSY concept have
come from economists. Because fisheries have traditionally been
regarded as a common property resource with open accessibility,
fishing at the level of MSY often results in indirect encourage-
ment of overfishing accompanied by substantial economic
waste.\footnote{20} The primary shortcoming of MSY -- or any other purely
quantitative objective -- is that it is subject to the economic
principle of diminishing marginal returns.\footnote{21} As fishing
approaches MSY, the yield increases very slowly with larger in-
creases in effort. In terms of the additional effort required to
harvest it, the last ton of fish caught costs many times the
average cost per ton. The costs in capital and labor expended to
take these last few fish would be put to much better use else-
where in the economy, according to this economic analysis. The
economic effects of a strict MSY standard thus can result in
social problems affecting the welfare of the fishing industry and
the economics of coastal fishing regions.\footnote{22}

One commentator has suggested that the deficiencies of a
purely biological goal (such as MSY) adopted without regard to
its associated costs and benefits can be best illustrated by
applying them to land-based resources.\footnote{23} If states, for exa-
ple, were to adopt a goal of maximizing sustainable yield from an
acre of ground, they might produce several times as many bushels
of wheat, rice, or corn than that acre might normally produce.
But this could be achieved only by incurring costs that would
greatly exceed the revenues gained, or by diverting scarce labor
or capital away from other more profitable or productive activities. Similarly, say many economists, it makes little sense to base fishery management upon a goal of maximum sustainable yield without regard to the costs and revenues associated with that level of production.

Congress recognized the ecological and socio-economic shortcomings of the MSY concept as a management objective when it adopted "optimum yield" (OY) as a goal for fishery management under the FCMA. The MSY concept, however, was not abandoned; instead, optimum yield was defined to include MSY as the "basic standard of reference," as modified by relevant economic, social, and ecological considerations. This definition reflects Congress' recognition that the concept of MSY can continue to be a valuable management concept for meeting the Act's goals of conservation and management of fish stocks. A management system was envisioned whereby the MSY would be established for each managed species; then OY would be set as a carefully calculated deviation from MSY designed to include consideration of the unique ecological, economic, and social problems of that fishery or region. The importance of MSY as a conservation goal for depleted stocks was noted thus in the Senate Report: "Although it may be conceivable that a situation may occur in which a yield higher than the maximum sustainable [yield] might be defensible, this would seem rare and should be only temporary. In almost every other instance, the optimum yield should be equal to or below the maximum sustainable yield."

The FCMA is designed to overcome defects of management under a strict MSY concept; however, it does not provide guidelines regarding what factors should be considered or how much weight should be given to them. The guidelines promulgated by the National Marine Fisheries Service (NMFS) and the National Oceanic and Atmospheric Administration (NOAA) provide that the concept of OY should take into account the economic well-being of commercial fishermen and the interests of recreational fishermen, as well as habitat quality and the national interest in conservation and management. According to the NOAA and NMFS guidelines, the OY concept must account for resource uses and values other than harvesting, such as the importance of the quality of the recreational fishing experience and also the need for fishery by-products. Furthermore, OY must be treated as a dynamic concept. The OY for a specific fishery may be valid only for a limited time because of changing ecological conditions or desires of the users. Therefore, periodic adjustments of harvest quotas, rates, and methods may be needed so that the OY will achieve the long-term objectives of the Act.

Each regional Fishery Management Council is responsible for annually determining the optimum yield for each fishery subject to its management authority. According to the NOAA and NMFS guidelines, the Councils must undertake this task with the assistance and advice of scientific and technical advisory groups, users of the resource, and the general public. The Councils
are to consider both regional objectives and the national interest in determining the relative weights of the elements of the OY calculation. Because regional objectives of fisheries management may conflict, the Councils must also decide priorities.

The resulting OY determination can be defined in a number of ways. For example, (1) as a number that functions as a quota (e.g., fishery management plans for Atlantic groundfish, Tanner crab, Pacific salmon, Gulf of Alaska groundfish); (2) as a description incorporating biological characteristics (e.g., stone crab, Gulf of Mexico shrimp); (3) as a percentage of another species in the management unit; (4) as a result of a model or formula using environmental or biological characteristics (e.g., original fishery management plan for Atlantic herring); or (5) as a range with a yearly fixed point (e.g., northern anchovy). This list is by no means exclusive, and there may be other ways to calculate OY.

The complexities involved in arriving at an OY determination can be illustrated by the 1977 Fishery Management Plan for Salmon Fishing Off the Coasts of Washington, Oregon, and California. The Plan notes that the existence of a major ocean fishery results in millions of pounds of salmon production lost annually. The reasoning is as follows: when salmon are in the ocean, growth rate exceeds mortality rate and total biomass of the stock is always increasing. It is not until salmon re-enter fresh water on their spawning migration that mortality rate starts to exceed growth rate (and hence total biomass of the stock begins to decrease). Therefore, achieving maximum yield in terms of poundage would require the elimination of ocean troll and sport fishing for salmon. Only at or near river mouths could fish be harvested. The Plan, however, deviates from the MSY calculation by maintaining ocean troll and sport fisheries, but with fishing rates reduced to provide increased spawning escapements and availability of salmon to "inside" fisheries.

The Plan projected an OY of 12 to 18 percent below MSY. A harvest of less than the MSY was proposed for two primary reasons: (1) the high recreational value of the ocean fishery; and (2) the higher market value for ocean-caught Columbia River fall chinook (due both to perceived quality differences and different marketing channels). The Plan noted other considerations involved in determining the OY for Pacific salmon: (1) the availability of salmon over a longer annual time period and in greater variety in an ocean troll fishery; (2) a lesser degree of socio-economic dislocation would thus result than with immediate elimination of the troll fishery and charter boat industries, both of which offer significant coastal employment alternatives; and (3) the desirability of preserving the lifestyle represented by troll fishing and charter boat operations, because they are activities accessible with modest capital investments.
The Plan's OY recommendation of reduced ocean fishing rates to increase spawning escapements and availability of fish to "inside" fisheries was deemed justified for several reasons: (1) a projection that reduced catches of depleted fish stocks would provide increased salmon production over the long term; (2) federal court rulings that require certain quantities of fish to be provided for treaty Indian fisheries; and (3) a desire to reverse past trends that had shifted the burden of conservation restrictions to inside fisheries.

The 1977 Salmon Plan is thus a splendid example of a recommended OY that is less than MSY, and also of an OY based on consideration of relevant recreational, sociological, and economic values. The Plan noted, however, that precise quantification of all relevant factors is not possible because of limitations of currently available technology and data. The final determination of OY was therefore achieved by a consensus of "the professional judgments and experience of the working team who prepared the plan, the Scientific and Statistical Committee, and the Council."

Although OY has so far been discussed only with reference to domestic concerns, the Council's determination of OY for a fishery is also of great concern to foreign fishing interests, because the level of allowable foreign fishing is that portion of OY that will not be harvested by United States vessels. Since the economic, sociological, and ecological components of a fishery are often not amenable to precise quantification, the Council might also use these considerations to justify an OY determination that is lower than the MSY, but with an actual and unstated goal of reducing or eliminating foreign fishing for the managed fishery. The discretionary nature of the OY standard might thus make it difficult to prove that reduction of foreign fishing was the actual intent of the Council.

The Council's determinations of OY and the existence of surpluses for foreign fishing have resulted in several disagreements between the United States fishing industry and the federal government. One controversy occurred in 1978 when the North Pacific Council set the OY for the C. opelio species of tanner crab in the area north of 58° N latitude. According to fishery scientists, the MSY for the fishery was estimated at an annual harvest of 102,000 metric tons (m/t). United States fishermen, however, had no plans to fish for this stock, and instead were expected to harvest 40,381 m/t of C. bairdi tanner crab and 10,000 m/t of C. opelio tanner crab south of 58° N latitude. Because American fishermen had no plans to harvest C. opelio tanner crab north of 58° N latitude, the entire quantity of the OY level would thus be available as surplus for foreign fishing. However, the North Pacific Council set the OY for this fishery at only 15,000 m/t, justifying the 87,000 m/t reduction below MSY on ecological and economic grounds. Ecological concerns, such as maintaining a food supply of tanner crab for marine mammals, were mentioned. The major justification, how-
ever, seemed clearly economic, since the Council stated that the OY was reduced in an effort to prevent foreign fishing fleets — mainly the Japanese — from flooding the world market with tanner crab, thus reducing world market price. It believed that reduced foreign fishing would result in a tighter supply and higher market price, and would thus spur the growth of the United States tanner crab fishery. The Council reasoned that, by creating a more favorable balance of trade with Japan and by promoting United States industry growth into fisheries of under-utilized species, its action was fulfilling two specific policies of the FCMA.

The Secretary of Commerce, who must ultimately approve all management plans, denied approval when the tanner crab FMP was first submitted, on the grounds that evidence was inadequate to indicate that a higher OY would depress the price of tanner crab and adversely affect the United States industry. However, the concept that market competition by foreigners could be a valid economic modifier of MSY for determining OY was not specifically disapproved. The Secretary ultimately approved the Plan on the basis of a later memorandum submitted by the North Pacific Council that contained supporting statements from noted economists, fish processors, and fishermen.

The rationale used by the North Pacific Council could thus lead to further reductions in foreign fishing through the use of OY levels lowered by policy judgments. The market competition rationale just discussed resulted in a drastic amendment to the Tanner Crab Fishery Management Plan in 1981, in which foreign fishing for both species of tanner crab was eliminated completely. Under the amendment, the OY for both species was set as equal to the domestic annual harvest (OY=DAH), up to the limit of the acceptable biological catch. The C. opilio tanner crab fishery in the Bering Sea provides an example of the effect of the newly amended OY. The 1981 FMP projected an acceptable biological catch of 41,300 m/t, yet the previous year's domestic harvest was only 17,900 m/t. Although the domestic harvest may increase, it is doubtful whether United States vessels can harvest the entire difference of 23,400 m/t. A large quantity of harvestable protein is thus left in the ocean, arguably violating a moral obligation to produce food and possibly also violating international law.

Another controversy concerning OY ultimately led to the first judicial decision on the FCMA within a year of its passage. When the FCMA was enacted, the New England Council was unable to prepare a management plan for the Georges Bank herring stock before the March 1, 1977 implementation date of the Act. In such a situation, the Secretary of Commerce was authorized to prepare a provisional management plan. In the provisional plan thus promulgated, Secretary of Commerce Juanita Kreps noted that a healthy stock of herring would consist of 350,000 to 500,000 m/t and would yield an MSY of 100,000 to 150,000 m/t. The Secretary determined that the present size of the
herring stock was much smaller -- 218,000 m/t113/ and was 7,000 m/t below the level at which recruitment failure was threatened.114/ The Secretary set the 1977 OY level at 33,000 m/t, with 12,000 m/t for domestic harvest and 21,000 m/t for foreign fishermen. She projected that this OY figure would allow a 10 to 13 percent increase in the herring stock within a year, bringing the stock to a level of 247,000 m/t by 1978.115/ The Secretary acknowledged that the OY figure corresponded exactly to the herring quota adopted by the International Convention for the Northwest Atlantic Fisheries (ICNAF) in December, 1976.116/

In Maine v. Kreps,117/ the state of Maine alleged that the OY figure was too high and violated the provisions of the FCMA. The state's primary contention was that where an area's stock is so depressed as to be unable to maintain the MSY, the Act requires selection of an OY figure that would rebuild the stock as rapidly as possible, and that no foreign fishing should be allowed. The state also argued that general foreign policy considerations are impermissible OY criteria, so that the Secretary could not consider international consequences of permitting foreign fishing in selecting an OY figure. Thus, the issue before the federal court of appeals was whether the determination of OY could include not only economic, social, and ecological considerations, but foreign policy as well.

The Court of Appeals for the First Circuit upheld the Secretary's OY determination. The court noted that the Act's strong conservation goals clearly precluded the setting of an OY that would permit overfishing.118/ However, the court found nothing in the FCMA that prescribed a particular annual rate at which depleted stocks should be rebuilt, and found that a 10 percent increase in the stock was not "too slight to promote the purposes of the Act."119/ The court also found that nothing in the Act declared that foreign fishing was to be halted when fish stocks were incapable of sustaining the MSY. Finally, the court noted that the part of the OY definition that calls for "the greatest overall benefit to the Nation, with particular reference to food production"120/ was broad enough to allow the Secretary to bring foreign policy considerations related to fishing into her OY determination.121/

The court noted that national benefits that would result from cooperating with other nations might include sharing of scientific research conducted by foreign vessels; recognition of negotiating needs of the United States at the Law of the Sea Conference; the cooperation of other nations in international fishery conservation; consideration of the needs of United States distant-water fleets; and foreign fishing trade benefits.122/ However, the court qualified its view of the scope of these benefits. Noting that the Act's specific language refers to "national interest with particular reference to food production," the court stated that the international considerations that can be given weight in determining the OY for a fishery are limited, and must relate to fishing and fish or to other activities and prod-
ucts pertaining to food supply. To illustrate this limitation, the court observed that the nation's fisheries could not be swapped for a world banking agreement.

The Maine v. Kreps decision was attacked by those who thought the FCMA had eliminated foreign policy considerations in fisheries management. The case, however, may ultimately prove of limited precedential value. First, the state of Maine conceded that the OY did allow for some rebuilding of the herring stock, thereby observing the Act's goals of conservation and management. Second, due to the time constraints present during the Act's implementation, the case presented an unusual situation in which the Secretary of Commerce rather than the regional Council prepared the fishery management plan. Management plans prepared by the regional Councils would presumably be more responsive to the needs and desires of the domestic fishing industry. This can be exemplified by the approach taken by the North Pacific Council in determining the OY level for the tanner crab fishery, discussed above. Third, the Secretary and the court were both heavily influenced by the novelty of the FCMA. The court stated that it was appropriate to honor the commitments to other nations by using the same quota as that previously allowed by the International Convention for the Northwest Atlantic Fisheries, since it was a "transitional year" and because the commitments preceded in part the passage of the Act and preceded entirely its implementation. The court, however, cautioned that such reasons might not be acceptable at a later date, noting that "[w]hat is reasonable now may be less so later."

IV. TALFF And Its Allocation

As previously noted, the Fishery Conservation and Management Act provides that the "total allowable level of foreign fishing" (TALFF) for a fishery within the United States fishery conservation zone is limited to the portion of the optimum yield (OY) that will not be harvested by United States vessels. The extent to which United States fishing vessels will harvest in a particular fishery within a given year is commonly termed the "domestic annual harvest" (DAH). Like the OY, it is also determined by the regional Councils. The Secretarial guidelines require the Councils, when determining DAH, to consider commercial, recreational, subsistence, and treaty Indian fishing.

Although the FCMA was intended primarily as a conservation and management measure, many hoped that absolute United States priority to the fishery resources within the FCZ would provide a foundation for substantial growth and development of the domestic fishing industry. A desirable by-product of the absolute preference formula for TALFF, along with the Act's other provisions, would be a rapid expansion of the domestic fishing industry, providing jobs, transforming the United States into a net exporter of fish products, and reducing the balance of trade deficit. In 1980, however, Congress assessed the performance of
the domestic fishing industry since the enactment of the FCMA and was disappointed with what it found. Three years after the enactment of the FCMA, United States fishermen harvested only 33 percent by volume, and 66 percent by value, of the total catch in the FCZ. Taking into account a decreased total harvest since 1976, the domestic displacement of foreign fishing in the FCZ had amounted to only 1 percent per year by volume, and less than 3 percent per year by value.  

Congress also concluded that the Act had not ameliorated the fisheries trade deficit. While the growth in exports of fish products had been substantial, the increase in imports was even greater — growing from $1.8 billion in 1976 to $3.8 billion in 1979. This latter figure represented approximately 10 percent of the total trade deficit. Domestic landings accounted for only about 40 percent of the total United States consumption of edible and industrial fish products. Thus, with 20 percent of the world's fishery resources under United States control and management, the country was still a substantial net importer of fish products.  

Congress recognized that as long as foreign nations were permitted to continue a high level of fishing — much of it subsidized — in the FCZ of the United States, while domestic fish exporters were denied access to important foreign markets, the United States would be unable to achieve full development of its fishing industry. In response to these problems, Congress amended the FCMA with the American Fisheries Promotion Act of 1980 (1980 Act). The 1980 Act was designed to promote development of the United States fishing industry by increasing its share of the total harvest in the FCZ and encouraging greater access of domestic fish products to foreign markets.  

Section 230 of the 1980 Act amended Section 201(d) of the FCMA to provide the regional Councils with an alternative formula for determining the total allowable level of foreign fishing for a managed fishery. Under the new provision, each fishery management Council can elect whether to continue with the previously established system (TALFF = OF - DAH) or whether to adopt a new formula that provides for phased reduction of foreign fishing in a fishery. The Council can, in its discretion, choose the system it determines to be more advantageous to domestic fishing interests for each season and fishery.  

The new reduction formula provides that, as United States fishing increases to specified levels in the fishery, the level of foreign fishing in that fishery will be reduced by an even greater increment. The 1980 Act's reduction formula defines the "base harvest" of a fishery as the TALFF for that fishery in 1979. The "calculation factor" equals 15 percent of the base harvest (15 percent of the 1979 TALFF). The first phased reduction would occur when United States fishermen increase their catch in that fishery by an amount equal to a certain percentage of the calculation factor. The 1980 Act provides for three such
thresholds and three corresponding levels of reduction of foreign fishing. If United States fishermen should increase their harvest from 25 up to 50 percent, from 50 up to 75 percent, or from 75 percent or more of the calculation factor in a fishery, the TALFF will be reduced by an amount equal to 5, 10, or 15 percent respectively of the 1979 TALFF for that fishery. Each time a threshold is achieved, that level of domestic harvest will become the base upon which any additional increase in domestic fishing may be used to achieve a further percentage reduction of the TALFF.

To illustrate how the reduction factor quantity is computed, assume that the TALFF for a particular fishery in 1979 was 10,000 metric tons and the domestic catch was 1,000 tons. The "base harvest" is thus 10,000 tons and the "calculation factor" is equal to 15 percent of the base harvest, or 1,500 tons. To achieve the first percentage reduction of TALFF in accordance with the formula, the domestic catch would have to increase by 375 tons (25 percent of the calculation factor) over its 1979 level, for a total domestic catch of 1,375 tons. The reward for United States fishermen the next year would be a reduction of TALFF by 500 tons (5 percent of the base harvest). This reduction would occur in addition to the reduction attributable to the actual increase in the United States catch. Therefore, the TALFF for the following year would be 9,125 tons (10,000 tons, minus the sum of 375 tons -- which represents the actual increase in the domestic harvest -- and the 500-ton reward). United States fishermen would then have, in essence, a 500-ton reserve from which they could increase their harvest. Further reductions of TALFF would be triggered by additional domestic catches that meet the 375-ton target level.

In accordance with this formula, incremental increases in the domestic catch would result in correspondingly larger reductions of TALFF. If United States fishermen should increase their catch by 750 tons (50 percent of the calculation factor) over their harvest level of the earlier threshold, the TALFF would then be reduced the following year by an additional 1,000 tons (10 percent of the base harvest) plus a reduction equal to the actual increase in performance, 750 tons. TALFF would thus be reduced by 1,750 tons to a level of 7,375 tons.

If the appropriate regional Council should determine that United States vessels will be unable to harvest any portion of the quantity of fish reserved from TALFF under the reduction formula, the Secretary of State may release that portion to foreign fishing. If, however, the Secretary of Commerce should determine, on the basis of recommendation of the regional Council, that the release of all or part of the unused reserve to foreign fishing would be detrimental to the development of the domestic fishing industry, the release may be withheld until the following year. The drafters of the 1980 Act intended that, in determining whether the release might be detrimental to the domestic fishing industry, the Secretaries should follow the advice
of the Councils and base any finding of detriment on economic and social data, including the effect of the release on the marketing of domestic fish products. A possible scenario in which release of the unused reserve might not be found detrimental to the domestic fishing industry would occur if the United States were to secure a specific concession from a foreign nation that would increase United States harvesting or processing capacity, or would increase the market opportunities for domestically harvested or processed fish.

The 1980 Act's "reduction formula" for calculating TALFF can thus be seen as a compromise between those interests that sought to impose strict exclusion of foreign fishing or mandatory reductions of the level of foreign fishing and those interests that viewed such reductions as contrary to the principles of optimum yield and full utilization as endorsed by the Law of the Sea Conference. The compromise reallocation provision is thus seen as consistent with the principle of optimum utilization, because the portion of the reserve that is not harvested by United States vessels is released to foreign fishing the following year.

Once the TALFF for a fishery is established by a regional fishery management Council (whether by application of the OY minus DAM formula or by the "reduction factor amount" formula), the Secretary of State, in cooperation with the Secretary of Commerce, must allocate the TALFF among the foreign nations that have signed GIFAs and wish to harvest that particular fishery. The 1980 Act increased the number of criteria that the Secretary must consider in determining the allocation among foreign nations. In allocating the allowable level of foreign fishing, the Secretary shall consider whether the applicant nation:

1. imposes tariff or non-tariff barriers on the importation of United States fish products or otherwise restricts the market access of United States fish products;
2. is assisting United States fisheries development through the purchase of United States fisheries products;
3. has cooperated in the enforcement of United States fishing regulations;
4. requires fish harvested from the FCZ for its domestic consumption;
5. is minimizing gear conflicts with United States fishing vessels and transferring harvesting and processing technology to the United States fishing industry;
6. has traditionally engaged in fishing for the species being applied for; and
7. has cooperated in fisheries research.

Other matters as the Secretary of State and Secretary of Commerce deem appropriate may be stated separately.
The extent of an applicant nation's traditional fishing, contribution to research, and cooperation in enforcement are criteria that were present in the FCMA as enacted in 1976. Although not defined in the Act, "traditional foreign fishing" has been defined by the Senate Commerce Committee as "long-standing, active, and continuous fishing for a particular stock by citizens of a foreign nation." Nations that have continually fished on a particular stock for 10 or 15 years in compliance with applicable international agreements would thus have a preference in allocation over those nations that have only recently begun to fish.

Contribution to research and cooperation in enforcement are criteria designed to encourage foreign nations to comply with the provisions of the Act. Thus it is advantageous for a foreign nation to enforce United States fishery regulations against its own nationals.

The American Fisheries Promotion Act of 1980 added criteria that now require the Secretary to place a strong emphasis on the linkage between allocations of the TALFF and the willingness of foreign nations to provide improved export opportunities for domestic fish products, purchase more United States fish exports, and transfer technology to the United States fishing industry. It is expected that nations that reduce tariff and non-tariff trade barriers on United States fish exports will in turn receive appropriate concessions on their TALFF allocations. It is also expected that nations unwilling to assist and encourage United States exports will have their allocations reduced or terminated. The importance of the market access factors in the calculation of TALFF is stated in the 1980 House Report: "While cooperation of foreign states with the United States in FCMA enforcement and conservation is essential and in fisheries research is important, market access is the touchstone."

There are two other criteria that the Secretary of State may consider. The needs of foreign nations for the basic nutritional requirements of their citizens may be considered in setting the TALFF in the FCZ of the United States. As a final criterion, the Secretary of State may consider such other matters as are deemed appropriate. While the limits of this discretion have not been defined, this criterion has been used to ban Soviet fishing in the FCZ because of the Soviet invasion of Afghanistan, and also to ban fishing by Polish vessels after the imposition of martial law in Poland.

Recent (1983) amendments to the FCMA give the State Department greater flexibility in basing the TALFF allocations on the degree of a foreign nation's cooperation with the United States law. Foreign allocations are now affected in two additional ways. First, the carry-over from year-to-year is now discretionary: the deferred quantity of the annual fishing level now "may" (rather than "shall") be allocated in the following year. Second, the "partial allocation process" that the
National Marine Fisheries Service (NMFS) and the State Department adopted as policy in 1982 is now formally incorporated into the Act.\textsuperscript{159} Thus, the aggregate allocation made to each foreign nation is calculated at the start of each year. The original release (by the Department of State) may be no more than 50 percent of this aggregate. This preliminary release is apportioned (with a written explanation of the basis of the calculation) among the various fisheries in which the nation participates, but the allotment to each fishery need not be proportionate. That is, any percentage of a single fishery may be allocated initially, provided that no more than 50 percent of the aggregate allocation for the nation in question is released at that time. In April of each year a further portion of the next 25 percent will be released to each nation, depending on its cooperation with and adherence to TALFF criteria such as enforcement, research, trade barriers, and export policies. The remaining 25 percent will be released in July of each year.\textsuperscript{160}

To receive an allocation of the TALFF, each nation that has entered into a GIPA must apply annually to the Secretary of State for a permit for each vessel seeking to fish within the FCZ.\textsuperscript{161} The permit applications must be "stock-specific" (i.e., they must identify the target fishery), and they must provide detailed information about the anticipated fishing effort, including information about tonnage, capacity, processing equipment, and fishing gear.\textsuperscript{162} Applications must identify the season or period during which the fishing will occur, the location, and the estimated amount of the tonnage of fish that will be harvested in each fishery by the vessel, or received at sea from United States vessels pursuant to a joint venture.\textsuperscript{163} The permit application must be published in the Federal Register, with copies provided to the Secretary of Commerce, the appropriate regional Council, the Secretary of Transportation (for the Coast Guard), the House Committee on Merchant Marine and Fisheries, and the Senate Committees on Commerce and Foreign Relations.\textsuperscript{164}

After receipt of regional Council comments, and after consultation with the Department of State and with the Coast Guard, the Assistant Administrator of NMFS (whose responsibility has been designated by the Secretary of Commerce) may approve an application if he or she determines that the fishing described in the application meets the requirements of the Act.\textsuperscript{165} Although each application is considered on its own merits, NMFS has generally applied the following guidelines: (1) applications by vessels for species or fisheries not covered by a fishery management plan, or for which there is no applicable national allocation, will be disapproved; (2) applications by vessels with overdue assessed fines will be disapproved; and (3) recommendations for disapproval based on a vessel's record of violations will receive favorable consideration until a system is developed to exclude culpable ships' masters and fish managers from participation.\textsuperscript{166} In its guidelines NMFS has stated that applications will generally not be disapproved solely for the purpose of limiting the number of vessels in a fishery.\textsuperscript{167}
The Secretary of Commerce is authorized to establish the conditions and restrictions to be included in each permit. A permit may be granted only when all the requirements of any applicable fishery management plan and all the requirements set out in the foreign nation's GIPA are satisfied. The permit is valid only for the specific vessel for which it is issued. If the permit is issued to a foreign processing vessel that is participating in a joint venture, it must state the maximum quantity or tonnage of domestically harvested fish the foreign vessel may receive at sea from United States vessels. Permits for all other vessels must include the restriction that the vessel may not receive at sea any domestically harvested fish. The Secretary of Commerce may also attach additional conditions and restrictions as necessary and appropriate, but these will generally not be employed as a substitute for management measures in the applicable FMP or appropriate foreign fishing regulations. They may, however, be temporarily employed to respond to situations not adequately addressed in plans and regulations.

The owner or operator of each vessel that receives a permit must pay the appropriate fee to the Secretary of Commerce. (Types and schedules of fees applicable to foreign fishing are discussed in Part VI of this chapter.)

Finally, a permit may be revoked, suspended, or modified at any time if the permitted vessel has been used in the commission of an offense prohibited by Section 307 of the Act, or if a civil penalty imposed under Section 308 or a criminal penalty imposed under Section 309 has not been paid. These and other offenses and penalties are addressed in Chapter Five on enforcement of the FCMA.

V. Joint Ventures

A joint venture has been described as a mutual contribution of assets to a joint collaboration by two or more separate legal entities. In the fisheries field, a "joint venture" is typically an arrangement whereby fish harvested by United States fishermen are sold and delivered to foreign processing vessels operating within the FCZ of the United States.

Prior to passage of the FCMA in 1976, countries such as Japan, Korea, Poland, and the U.S.S.R. relied heavily upon their own technologically advanced distant-water fishing fleets to supply fish products. In these nations, fish products provide a major portion of the protein supply, and are also a major export. Because their fleets were not well suited for other fisheries in other areas, the anticipated reduction of fishing opportunities in the FCZ presented a threat to the economy and food-producing ability of these countries. Foreign nations such as these often see international joint ventures involving United States fishermen and foreign processing vessels as a way to guarantee an adequate supply of fishery products while at the same time protecting the enormous investment in their distant-water
Although international joint ventures in fishery operations are common in other parts of the world, this type of joint venture had never been proposed or undertaken by United States fishermen prior to enactment of the FCMA. For purposes of the Act, "fishing vessels" were defined to include processing and support ships and these were therefore subjected to the permit system applicable to all foreign fishing vessels. The FCMA as originally enacted did not address the possibility of foreign processing ships conducting cooperative fishing operations with United States fishermen. Thus, in the spring of 1977, when two applications for foreign processing ships to receive domestically harvested fish were received, they were denied by the regional Councils concerned. NOAA, however, decided that no regional Council should take final action on a joint venture proposal until a national policy could be developed.

Domestic shoreside processors opposed the joint venture proposal as a mere subterfuge to circumvent the provisions of the FCMA and continue foreign domination of certain fisheries. More importantly, opponents argued, onshore processors cannot compete with foreign processing vessels not subject to United States wage requirements, anti-pollution laws, and safety and health regulations. New investment necessary for development of processing capacity for underutilized species would be discouraged because of the competitive disadvantage. Opponents also noted that joint ventures would adversely affect the gross national product (GNP). It has been estimated, for example, that three pounds of whole fish caught by American fishermen and sold to a foreign processing ship contribute about 18 cents to the GNP. If the same quantity were processed in a domestic shoreside facility, it would contribute at least 50 cents to the GNP.

In contrast, United States fishermen who favored joint ventures noted that they had been proposed only for species for which there was little or no domestic processing capacity. United States fishermen have traditionally avoided fish such as pollock and whiting (formerly known as hake), because of their low economic value and lack of processing or marketing outlets. Joint ventures would provide the opportunity for United States fishermen to harvest new fisheries and develop an immediate market. Domestic processors have never been convinced that American fishermen possess the experience or technology to catch economically significant quantities of underutilized species. Proponents thus argued that joint ventures would actually aid in the development of both the fishing and processing industries in two ways: by giving fishermen experience in new fisheries, and by creating confidence among processors that an adequate supply of underutilized species will be available to justify new investment and market expansion.

After extensive public hearings, the Department of Commerce, through the National Oceanic and Atmospheric Administration
(NOAA), issued proposed regulations that would have allowed joint ventures only upon a showing that domestic processing capacity in a fishery was inadequate to process the optimum yield allowed by the FMP, and that the foreign vessels had the capability and intent to process the fish.\(^{187}\) However, on May 12, 1978, NOAA retracted the proposed regulations because of negative comments received after release of the proposal. In its retraction, NOAA expressed its agreement with many comments arguing that the Secretary of Commerce lacked authority under the FCMA to favor domestic over foreign processors in granting permits.\(^{188}\) According to NOAA, the Secretary had authority to adopt a policy or permit approval system based only upon factors relating to the conservation and management requirements of the Act, and not on the basis of economic preference for domestic processors.\(^{189}\)

This sudden reversal of policy enlarged a so-called loophole in the FCMA. Response was swift, as domestic fish processors filed two suits challenging the validity of the May 12 reversal.\(^{190}\) Both Houses of Congress quickly responded to NOAA's withdrawal of the proposed regulations. On August 28, 1978, the Processor Priority Amendment of 1978 was signed into law.\(^{191}\)

The 1978 amendments to the FCMA clarified congressional intent that all segments of the United States fishing industry -- including processors -- are to fall within the jurisdiction and protection of the FCMA.\(^{192}\) In effect, the amendments created a three-tiered priority system for access to United States fishery resources.\(^{193}\) First priority is given to the United States fishing industry for fish harvested and processed domestically. Second preference is given to joint ventures in which domestically-harvested fish are delivered at sea to foreign processing vessels. Lowest priority is given to foreign-harvested fish.\(^{194}\) Under this system, joint venture permits for foreign processing vessels can be issued only for that part of the optimum yield of a fishery that will not be utilized by domestic processors.\(^{195}\) Thus the formula for allocation to foreign processing vessels is now optimum yield (OY) minus domestic annual processing (DAP).

The 1978 amendments require a foreign nation to submit a permit application to the Secretary of State in order to enter into a joint venture.\(^{196}\) The application is transmitted to the appropriate regional Council for comment.\(^{197}\) and then to the Secretary of Commerce for approval.\(^{198}\) The Secretary of Commerce must deny the application if he or she determines that domestic fish processors have the capacity and intent to process all domestically harvested fish from the fishery concerned.\(^{199}\) If the Secretary determines that the requisite capacity and intent is lacking, he or she may approve the permit.

The amendments also require that certain information concerning the processing industry be included in the fishery management plans (FMPs) prepared by the regional Councils. The FMPs must now include an assessment of the "capacity and extent to
which United States fish processors will process United States harvested fish.200/ Several criteria may be considered in determining domestic processing capacity and intent for a particular fishery. The determination must not rest simply on ascertaining the maximum potential physical productivity of domestic processing units.201/ There must also be a showing of demonstrated intent of the domestic processors to utilize the particular fish species. One measure of intent is found in the extent to which domestic fish processors have processed a fish species in the past. Other considerations include the existence of contracts or agreements with fishermen for the purchase of the harvest of particular species, as well as evidence of expansion of facilities to accommodate processing of those species.202/ Geographical location of the processor may also be considered, because some underutilized fish species deteriorate rapidly after harvest and require almost immediate processing to maintain quality.203/

Determination of domestic capacity and intent does not, however, require a showing of ability to outbid the price of other contract provisions offered by foreign processors.204/ Therefore, if the domestic processors are able to process the entire harvest, they are given absolute priority for processing that species, regardless of the price they offer. Among the species that are clearly not within the scope of joint venture provisions are salmon, king crab, halibut, surf clams, menhaden, lobster, and shrimp.205/

In the case of fisheries for which domestic processing capacity is relatively low -- such as whiting, pollock, and squid -- domestic capacity must be ascertained in order to determine whether any of the domestic annual harvest (DAH) will be available for joint ventures.206/ The limiting factor in harvesting underutilized species has typically not been insufficiency of stocks or lack of skill and technology, but rather an absence of markets and correspondingly low prices. Thus for underutilized species domestic processing capacity has, in effect, determined domestic annual harvest (DAH). When joint ventures provide additional markets, the net effect on the domestic annual harvesting capacity of United States fishermen is hard to determine. Proponents of joint ventures assert that when availability of markets becomes the major limiting factor, the DAH should be calculated simply by adding together the domestic processing capacity and the quantity of fish that can be processed by joint ventures. But because this method automatically creates allocations for joint ventures without providing any priority or protection for the United States processing industry, processors disagree.207/

Although domestic processors are technically given priority for all fish that they have capacity and intent to process, it may nevertheless be difficult for them to expand capacity to meet new markets because of the direct competition from joint ven-
tures. Studies have shown that even when a joint venture operation and onshore processors pay the same price per pound of fish, it is more profitable for domestic fishermen to deliver their harvested fish to the joint venture because of a more favorable ratio of fishing time to delivery time, more efficient delivery techniques, and savings of fuel and ice.208/ The FCMA does not require fishermen to fulfill the requirements of domestic processors before fish can be delivered to foreign processing vessels pursuant to an approved joint venture arrangement. In fact, United States fishermen have the right to refuse to deliver to domestic processors if they are dissatisfied with terms offered by the processors.209/ Therefore, the 1978 amendments may establish a processor priority for fishery allocations of underutilized species, but they do not guarantee that anticipated levels of fish will be delivered to the processors. Given the competitive advantage of foreign processing vessels and the flexibility of domestic fishermen to switch to more profitable fisheries, it is difficult to determine whether the priority given to processors of underutilized species is of any advantage at all.

It must be noted further that although United States fishermen and fish processors of underutilized species are mutually dependent upon each other, their interests often conflict. While competition between processors creates a fair market for fully utilized species, the situation is different for underutilized species. Without external competition from joint ventures, the relatively few domestic processors of underutilized species would be able to subject fishermen to unilaterally established terms and conditions.

There are ways, however, that processor priority may be protected. The Secretary of Commerce may impose on foreign fishermen quota limitations consistent with fishery management plans and "any other condition or restriction related to fishery conservation and management which ... [is] necessary and appropriate."210/ The additional conditions have usually been time, area, and gear restrictions designed to reduce incidental catch. While the language of the FCMA requires that such conditions and restrictions on foreign fishing be related to conservation and management of the fishery resource,211/ the legislative history of the joint venture amendments suggests that conditions and restrictions should also be imposed to achieve the objectives of those amendments.212/ The Senate Report, for example, states that in order to foster the development of onshore processing facilities the Secretary may consider imposing geographical restrictions on areas where foreign processing vessels may operate.213/ It can therefore be persuasively argued that "fishery conservation and management" should be defined broadly enough to achieve the amended purpose of the FCMA "to encourage the development of fisheries which are currently underutilized or not utilized by the United States fishing industry ...."214/

While time and area restrictions on foreign processing vessels may be appropriate to protect the domestic processor prior-

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ity in a given area, they must also be viewed as restrictions on domestic fishermen. Because of the conflicting interests of domestic fishermen and processors of underutilized species, the role of joint ventures in United States fisheries policy has not yet been settled.

Joint ventures were originally regarded as an interim step towards a totally domestic fishing industry.215/ A natural progression was intended to take place from total foreign domination, to joint ventures whereby domestic fishing vessels would supply foreign processors, to full domestic control with United States fishing vessels supplying United States processors. However, the continuing growth in joint venture arrangements and their increased importance to domestic fishermen raise doubts about whether joint ventures are destined to remain only a temporary phase in the United States fishing industry.

Joint venture operations began on a small scale in 1978 with United States fishermen participating in two joint ventures on the Pacific coast. The first such venture was undertaken by Marine Resources Company, a partnership of an American corporation, Bellingham Cold Storage of Washington, and Sovryflot, a special agency of the Soviet Ministry of Fisheries.216/ The other was formed between the Korean Marine Industry Development Corporation and R. A. Davenny and Associates of Alaska.217/

Although the foundations had been laid, joint ventures did not catch on until after the passage of the American Fisheries Promotion Act of 1980.218/ The 1980 Act initiated what has become known as the "fish and chips" policy, which ties allocations of TALFF to the degree to which foreign nations cooperate with and assist the United States fishing industry.219/ By 1981, Poland, West Germany, Japan, and other nations had joined Korea and the Soviet Union in launching joint ventures to secure allocations of valuable underutilized species, mainly Alaskan bottomfish.220/ The combination of an excess of modern, high-priced, and often heavily mortgaged U.S. fishing vessels, and a surplus of foreign processing vessels that had been idled by the advent of the 200-mile FCZ, joined with the incentive of the fish and chips policy and produced a boom in joint venture operations. Alaskan trawl production increased more than 50 percent during the three-year period of 1979 through 1982.221/ Seventy-six percent of the 118,000 metric tons caught by Alaskan trawlers during a ten-month period ending in October, 1981 was delivered to joint venture operations.222/ Recent studies estimate that by 1987 Alaskan joint venture production could reach 750,000 metric tons per year, while joint ventures on the lower Pacific coast could reach 200,000 metric tons per year.223/

The most successful of the joint ventures was also the first to begin operation (the Marine Resources operation mentioned above), a 50-50 joint equity venture that purchases bottomfish from United States fishermen to be processed aboard leased Soviet processing vessels. The finished product is then sold on the
international market. In 1981, Marine Resources bought 80,000 metric tons of bottomfish from domestic fishermen and helped offset the United States trade deficit by 20 million dollars.

According to company spokesmen, the Marine Resources joint venture experience also illustrates how joint ventures can benefit domestic processors of underutilized species. Both harvesting and processing sectors have benefitted from learning new skills, transferring technology, and demonstrating that United States fishermen can indeed catch and deliver large quantities of non-traditional species. Domestic processors have also been able to take advantage of the joint ventures' development of new fisheries without risking any initial investments of their own. Because of the demonstrated success of joint ventures, United States fishermen are now providing a steady supply of bottomfish to a new onshore processor and a U.S. trawler-processor has begun operation in the Gulf of Alaska.

Although the joint venture amendments created a processor priority for species not fully utilized, while at the same time attempting to maintain a fair market for United States fishermen, they have not spurred the tremendous expansion of domestic processing capacity that some expected. Dr. Walter Pereyra, manager of the Marine Resources joint venture, argues that this lack of expansion should not be blamed on the existence of joint ventures, but rather on the economic reality that domestic processors must compete on the world market. Even if this view is correct, with the advent of the "fish and chips" policy of the American Fisheries Promotion Act of 1980 and its linkage of international trade and tariff barriers to TALFF allocations, domestic processing of underutilized species may soon become competitive on the world market, which will in turn allow for the United States processing industry to expand its capacity.

VI. Observer Program and Foreign Fishing Fees

A foreign vessel fishing within the FCZ of the United States must comply with two other provisions of the FCMA. The owner or operator of a foreign fishing vessel must allow a United States observer to be placed on board and must pay certain related fees in advance. These provisions have recently been amended as a result of Congress' efforts to improve monitoring and control of foreign fishing activities.

A. Observer Program

The FCMA as originally enacted in 1976 states that Congress intended that Governing International Fishing Agreements (GIFAs) include a binding commitment on the part of foreign fishing nations to permit United States observers aboard their vessels, and to reimburse the United States for the cost of these observers. Thus, the terms of the original negotiated GIFAs placed observers aboard foreign fishing vessels and billed the
foreign fishing nation for the cost of the observer coverage.

The observer program has had two broad objectives: to collect biological data on foreign fisheries conducted within the FCZ of the United States, and to provide a "compliance presence" aboard the foreign fishing vessels.233/

The data collection aspect of the observer program has been useful in accomplishing the FCMA's purpose of conservation and management of fishery resources. Observers collect biological data that is in turn used to assess the species, age, and sex composition of foreign harvest, the quantity and type of fish harvested, and the degree of effort expended to gather the harvest.234/ The data collected, together with other available information, may be used to establish maximum sustainable yield (MSY) and optimum yield (OY) levels. Observers may also collect biological data -- such as the population and distribution of marine mammals -- that may be used in the enforcement of other United States laws and regulations.235/

In addition to data gathering, observers also have an enforcement function in that they can witness and document violations of foreign fishing regulations. Documentation may be used to substantiate charges of violations and to levy penalties.236/ Observer reports have even been used to justify seizure of foreign fishing vessels.237/ Observers on foreign vessels have been effective in detecting and deterring violations involving unlawful retention of prohibited species, excess incidental catch, quota violations, use of unlawful gear, and failure to return certain prohibited species to the water with a minimum of injury.238/ Regulatory monitoring is vital to implementation of fishery management plans. Without it, regulations are very difficult to enforce.

It must be noted, however, that although observers play an important role in ensuring compliance with United States fishing laws and regulations, they have no enforcement authority. Instead, they must summon the Coast Guard for immediate action on serious violations.239/ The observer should thus be viewed not as a resident enforcement officer but as a permanent witness on whose reports action can be taken.240/

The owner or operator of a foreign fishing vessel to which an observer is assigned must provide, at his own expense, on-board accommodations for the observer that are equivalent to those provided to officers of that vessel.241/ The owner or operator must also allow the observer to use the vessel's communication equipment and personnel as necessary to transmit and receive messages.242/ Use of the vessel's navigation equipment must also be available to the observer in order to determine the vessel's position.243/ The owner or operator of the vessel must also provide all other reasonable assistance to enable the observer to carry out his or her duties.244/ It is unlawful for any person to forcibly assault, resist, oppose, impede, intimi-
date, or interfere with an observer placed aboard a foreign vessel.\textsuperscript{245}

The cost of the observer program is borne by foreign fishing interests. The owner or operator of each foreign fishing vessel to which an observer is assigned must pay the total costs of placing the observer aboard, including the observer's salary, transportation to and from the vessel, and overhead costs.\textsuperscript{246}

Prior to enactment of the American Fisheries Promotion Act of 1980, receipts collected from foreign fishing vessels for the cost of observers were deposited in the general treasury.\textsuperscript{247} The observer program, while not a burden on United States taxpayers, still had to compete with other uses of the funds thus collected.

Since observer placement was not mandatory and had to compete for funding through the general appropriations process, full coverage was never realized. Although the United States had the authority to place an observer aboard every foreign fishing vessel operating within the 200-mile FCZ, the National Marine Fisheries Service (NMFS) until recently considered 20 percent observer coverage to be statistically sufficient to meet the objectives of the program.\textsuperscript{248}

The proportion of foreign fishing operations actually covered by observers declined steadily over the years. In 1979, United States observers were placed aboard foreign fishing vessels only 18 percent of the time.\textsuperscript{249} By 1980 observer coverage of foreign fishing operations had slipped to an average of only 14 percent.\textsuperscript{250}

During this same period, the number and severity of violations of foreign fishing regulations increased. In 1979, there were 382 reported violations.\textsuperscript{251} Twelve of these were major violations involving attempted concealment of total catch by erroneous entry into the ship's log. These violations included underlogging by 25 to 60 percent of the total catch on board and attempted retention and concealment of several thousand metric tons of fish.\textsuperscript{252} According to NMFS agents, the extent of the violations indicated a "formidable and possibly pre-planned effort at non-compliance" with the regulations,\textsuperscript{253} and a serious threat to effective management of fishery resources.\textsuperscript{254}

Domestic fishermen expressed vigorous frustration at the reluctance of NMFS to expand the observer program. The fishermen believed expansion would, at no cost to United States taxpayers, help control overfishing by foreign nations. In 1980, Congress responded by passing the American Fisheries Promotion Act.\textsuperscript{255} Section 236 of that Act, which took effect on January 1, 1982, requires that a United States observer be stationed aboard each foreign fishing vessel engaged in fishing within the FCZ.\textsuperscript{256} A few exceptions to the full coverage requirement exist. The Act permits the Secretary of Commerce to waive the observer
requirement in cases where it might be more efficient to station
one observer aboard a foreign "mother ship" to document the
catches from all the harvesting vessels supplying her, and
also in instances in which conditions aboard the vessel might
jeopardize the health or safety of an observer. The
Secretary may also waive the observer requirement in instances
where the foreign vessel will be engaged in fishing for such a
short period of time in the FCZ that placing an observer aboard
would be impractical. This provision was included to accom-
modate some fisheries of the South Pacific, where foreigners fish
in the FCZ of United States territories for only a few days of
the year.

The Act requires each foreign vessel to pay a surcharge
sufficient to cover all costs of providing an observer. Payments are no longer deposited in the general treasury; instead, they are now deposited in a special Foreign Fishing Observer Fund. The Fund is available to the Secretary to finance the cost of full observer coverage. The observer program is now directly financed and supported by foreign fishing ves-
sels.

With a mandate of 100 percent observer coverage, it was
expected that full compliance would be achieved by the January 1,
1982 effective date. However, coverage did not meet that
expectation, mostly because of the effect of two provisions in
the Act that weakened the mandate. The first allowed the
Secretary of Commerce to decline to place observers on any vessel
if, "for reasons beyond the control of the Secretary, an observer
is not available." The other provision allowed the Secretary
to draw upon the Foreign Fishing Observer Fund "only to the ex-
tent and in the amounts provided for in advance in appropriation
Acts." Because of the combined effect of these provisions,
the full observer coverage mandate could have been thwarted by
failure of the Office of Management and Budget to budget enough
money to keep the observer force at full strength. Such a situa-
tion is, of course, "beyond the control" of the Secretary of
Commerce, and full observer coverage might have been waived for
both reasons.

In response to this apparent loophole, Congress passed a
supplemental amendment in 1982, adding a new subsection to
ensure 100 percent observer coverage regardless of the availabil-
ity of observer funds. The new subsection directs the
Secretary to establish a pool of qualified observers available on
call for foreign fishing vessels. When funding appropriations
are insufficient to enable the Secretary to provide each appli-
cant vessel with an observer, the vessel must contract with an
individual from the pool. An applicant vessel will pay the ob-
server directly according to a reasonable fee schedule estab-
lished by the Secretary. Funding shortfalls have now been
removed as a reason "beyond the control of the Secretary." As a
result of the amendment, observer coverage rose from 32
percent in 1982, to 48 percent in 1983, to 100 percent in

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In the 1983 amendments, Congress expanded the scope of duties to be performed by observers at the expense of the fishing permit applicant. The foreign vessel now will also absorb costs of necessary data processing associated with the functions of the observer, which have also been expanded beyond mere compliance monitoring. Observers may now carry out scientific experiments or programs not directly related to the fishery under supervision, but related in general to the conservation and management of living resources, as the Secretary deems appropriate. Additionally, the 1983 amendments provide that administrative costs of monitoring the observer program will be borne by foreign vessels fishing in the FCZ.

B. Foreign Fishing Fees

In addition to paying a surcharge to cover the costs of an observer, the owner or operator of a foreign fishing vessel must prepay certain fees in order to fish in the FCZ of the United States. Both the FCMA and the GIFA signed by each foreign nation require them.

Under the FCMA as originally enacted, the Secretary of Commerce was given authority to charge "reasonable fees" to the owner or operator of a foreign fishing vessel that has received a permit. The original provisions also required that the fees be applied to each foreign nation in a non-discriminatory fashion. The FCMA established no fee levels, leaving them to the Secretary's discretion, but listed several criteria that could be considered in determining foreign fishing fees. The Secretary could, for example, take into account the cost of carrying out the provisions of the FCMA with respect to foreign fishing, and could consider the costs of management, fishery research, administration, and enforcement.

The fee schedule established by the Secretary of Commerce, through the Director of the National Marine Fisheries Service, provides for two types of fees: permit fees and poundage fees. As of January 1984, permit fees were set at $86 per vessel. A poundage fee is charged to foreign vessels according to a schedule that varies with the fishery and species involved. Foreign vessels that pay a poundage fee also pay a surcharge equal to 4 percent of the poundage fee. This surcharge may be reduced or waived if the Fishing Vessel and Gear Damage Compensation Fund is sufficiently capitalized or increased to as much as 20 percent if necessary to maintain capitalization of the fund. Fee schedules and surcharges are subject to change from year to year.

The method of calculating fees has evolved significantly since the FCMA was first enacted, and may change from year to year. As an example of how the process works, we discuss the computations used to establish the 1982 fees at the level re-
quired by Section 232 of the American Fisheries Promotion Act of 1980. The National Marine Fisheries Service first calculated the total costs incurred by themselves, by other departments of the National Oceanic and Atmospheric Administration, by the Coast Guard, and by the State Department in administering the FCMA. For 1982, total costs were calculated at $112,901,000.281/ The next step of the process was to determine the "foreign catch ratio." In this calculation, domestic catch must first be tallied. United States domestic catch included fish commercially harvested within the three-mile territorial sea, the United States recreational catch, and the domestic catches delivered at sea to foreign processing vessels pursuant to joint venture agreements.282/ For 1982, the total volume of the foreign harvest was calculated at 30.7 percent of the total volume of fish harvested within United States territorial waters and the FCZ.283/ The foreign catch ratio of 30.7 percent was then applied to the total cost of administering the FCMA ($112,901,000) to find the foreign fee collection target for 1982 of $34,660,607 (30.7 percent of $112,901,000). The dollar amount of permit application fees, $78,000, was then subtracted from this figure. Thus it was calculated in 1982 that Section 232 of the American Fisheries Promotion Act required foreign fishing vessel owners to pay a total of $34.6 million in fees in addition to permit application fees.284/ The 1982 poundage fee for each species was calculated by multiplying each 1981 species fee by a factor of 1.65, in order to attain the fee collection target of $34.6 million.285/ The factor of 1.65 was derived by dividing the fee collection target of $34.6 million by the anticipated 1982 catch at the 1981 fee levels. Fees paid for allocations of Pacific ocean perch exemplify the increased fees paid by foreign fishermen under the new fee schedules. In 1980, the poundage fee for Pacific ocean perch was 3.5 percent of United States ex-vessel value per metric ton. Using values based on domestic landings in Alaska, the 1980 value was $397 per metric ton and the poundage fee was $13.90 per metric ton.286/ In 1981, the fee was increased under the interim fee schedule to a set dollar amount of $44 per metric ton.287/ But in 1982, a new fee schedule was established so that foreign vessels might pay for more of their share of administration costs of the FCMA. Thus, under the 1982 fee schedule, the poundage fee for Pacific ocean perch was further increased to $73 per metric ton. This was increased to $93 per metric ton in 1983.288/ The method used to calculate the 1982 fee schedule will likely be continued because the system is considered satisfactory from several standpoints. It is consistent with the requirements of the FCMA, GIFAs, and other applicable law. Moreover, it helps to recover the costs of the FCMA, is easy to administer, and
minimizes disruption of traditional fishing practices, existing markets, and consumer demand.\footnote{289}

Finally, it should be noted that while the current fee schedules help to ensure that foreign fishermen pay a fair share of the costs of administering the FCMA, the absolute dollar amount required from foreign fishermen will steadily decrease in the future. As foreign fishing in the FCZ decreases because of the increased role of joint ventures and the phased reduction formula of Section 230 of the American Fisheries Promotion Act,\footnote{290} taxpayers will have to bear an increased share of the costs of administering the FCMA. It is likely that in the future Congress will have to deal with decreased revenues from foreign fishing fees.