THE IMPACT OF FEDERAL REGULATIONS ON
SMALL FIRMS IN THE
NEW ENGLAND FISHING INDUSTRY

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Statements and conclusions herein
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Small Business Administration.
FOREWORD

This report is submitted to the Small Business Administration in accordance with the terms of Contract #SBA-2640-OA-79, as modified, "The Impact of Federal Regulations on Small Firms in the New England Fishing Industry."
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Chapter</th>
<th>Pages</th>
</tr>
</thead>
<tbody>
<tr>
<td>FOREWORD</td>
<td>I-1 to I-8</td>
</tr>
<tr>
<td>I. EXECUTIVE SUMMARY</td>
<td>II-1 to II-12</td>
</tr>
<tr>
<td>II. INTRODUCTION</td>
<td></td>
</tr>
<tr>
<td>III. DECLINE OF THE FISHING INDUSTRY AND FCMA REGULATIONS</td>
<td>III-1 to III-18</td>
</tr>
<tr>
<td>IV. THE NEW ENGLAND FISHERY MANAGEMENT COUNCIL AND THE GROUNDFISH FISHERY MANAGEMENT PLAN</td>
<td>IV-1 to IV-10</td>
</tr>
<tr>
<td>V. SURVEY OF SMALL NEW ENGLAND FISHERMEN</td>
<td>V-1 to V-23</td>
</tr>
<tr>
<td>VI. THE IMPACT OF THE FISHERY CONSERVATION AND MANAGEMENT ACT</td>
<td>VI-1 to VI-30</td>
</tr>
<tr>
<td>VII. CONCLUSIONS AND RECOMMENDATIONS</td>
<td>VII-1 to VII-11</td>
</tr>
<tr>
<td>APPENDIX</td>
<td></td>
</tr>
<tr>
<td>A Membership of the New England Fishery Management Council</td>
<td></td>
</tr>
<tr>
<td>B Tentative Development Plan for the Preparation and Implementation of Groundfish Fishery Management Plan</td>
<td></td>
</tr>
<tr>
<td>C Groundfish Vessel Telephone Questionnaire</td>
<td></td>
</tr>
</tbody>
</table>

BIBLIOGRAPHY
CHAPTER I

EXECUTIVE SUMMARY

A. Purpose of the Study

The purpose of this study is to examine the impact of federal regulations on small firms in the New England fishing industry. Specific items to be researched are the following:

- What federal regulations are impacting on the fishing industry, in general, and what are the impacts of increased federal regulation of the New England fishing industry?

- What are the impacts of federal regulation on small firms in the New England fishing industry?

- How can policies governing the industry be modified to alleviate or reduce the negative impacts of federal regulation on the small fishing firm?

B. Scope of the Study

The Fishery Conservation and Management Act (FCMA) of 1976 (P. L. 94-265) was passed in an attempt to reverse the decline in the United States fishing industry, due largely to over-fishing by foreign vessels in United States coastal areas. This study limits its focus mainly to an examination of the impact of federal regulations on small vessel owners in the New England Groundfish Fishery due to the implementation of the FCMA in 1977. The study examines the following three hypotheses:
The FCMA has had significant impacts on reversing the decline of the New England fishing industry.

The FCMA has had negative impacts on small vessel owners in the New England Groundfish Fishery.

The New England Fishery Management Council is not an effective mechanism for small fishermen to participate in fishery management planning.

In conducting this study, the Principal Investigator (P.I.) reviewed studies and statistical data on the New England fishing industry; made comparisons between available data on the fishery; reviewed the Groundfish Fishery Management Plan, amendments to the plan, and minutes of the New England Fishery Management Council and Groundfish Oversight Committee meetings; attended Council meetings and Groundfish Oversight Committee meetings; interviewed Council members and staff; and held discussions with representatives of various state and federal agencies involved with the fishery. The P.I. also conducted a telephone survey of a 10 percent random sample of 150 owners of fishing vessels between 5 and 60 gross registered tons with federal licenses to fish in the New England Groundfish Fishery. Of the 122 fishermen contacted, questionnaires were completed for 106, giving a response rate of 87 percent.
C. **Background to the FCMA Regulation**

The New England fishing industry, which consists primarily of individually owned small fishing vessels, has traditionally been an important industry to the economy of the region. Almost a decade ago, however, the industry began to experience serious economic problems. Competition from foreign fishing vessels, unregulated increases in the numbers of persons fishing, and pollution problems were contributing to decreasing yield in the industry. Thus a traditionally unregulated industry began advocating for federal regulation as perhaps the only route to survival.

It was against a background of intermittent state regulation and management, and a lack of meaningful federal regulation and management to conserve fisheries that the FCMA was signed into law in April 1976 in an attempt to reverse the decline of the industry. The two broad purposes of the FCMA were to extend the jurisdiction of the United States for the purpose of regulating the marine fisheries to the newly created Fishery Conservation Zone (FCZ) which joins the territorial sea (three-mile limit) and extends seaward out to 200 nautical miles from the coast, and to impose a management regime within the FCZ to be administered by the Department of Commerce.
A key provision of the FCMA was the establishment of Regional Fishery Management Councils to be responsible for several development and planning functions including the preparation of Fishery Management Plans (FMP). Regional Councils were established to gain input from the various sectors of the fishing industry in formulating FMPs. Included among the various FMPs developed under the FCMA was the New England Groundfish Plan for cod, haddock, and yellowtail flounder prepared by the New England Council. It is this Council and the Groundfish FMP which are the foci of this study.

D. Highlights of the Study

Hypothesis #1 - The FCMA has had significant impacts on reversing the decline of the New England fishing industry. The study's findings supported this hypothesis. There has been a reduction in foreign fishing and an increase in fishery stocks in New England since the implementation of the Act. There has also been increased capital investment in the industry from both the public and private sectors. This increased investment is most evident in the harvesting sector of the industry where there has been a tremendous increase in vessels built and licensed to fish in the groundfish fishery—a 56 percent increase in vessels built during the three-year period following the FCMA as compared to the three years prior to the Act. The largest percentage increases were among
the larger vessels with those between 51 and 100 tonnage and 101 and 150 tonnage increasing 138 percent and 405 percent respectively.

Hypothesis #2 - The FCMA has had negative impacts on small vessel owners in the New England Groundfish Fishery. The results of the study do not support this hypothesis. The fishermen's perceptions of the impact of the Act on their fishing activities were somewhat inconclusive since

- 54 percent felt that their fishing activities were affected adversely by foreign fishing prior to the FCMA
- 55 percent felt that the FCMA had some positive impacts on their fishing activities
- 51 percent felt that the FCMA had some negative impacts on their fishing activities.

The study's findings on the characteristics of the small-scale fishery and problems in the formulation and implementation of the Groundfish Fishery Management Plan, however, indicate several variables which tend to reduce negative impacts of the Act on small vessel owners.

Characteristics of the small-scale fishery which have lessened negative impacts are (1) small vessels are not severely affected by catch restrictions; (2) small vessels fish closer to shore and are able to catch regulated species in state territorial
waters; (3) small vessels lobster and fish for multi-species and are less affected by quotas and fishery closures; and (4) the smaller capital investment in small vessels and lower operating cost make them less vulnerable to the economic impact of FCMA restrictive regulations. Obstacles to the effective formulation and implementation of groundfish plans reducing negative impacts are (1) fishermen's opposition to regulations; (2) inadequate and unavailable data; (3) unrealistic and frequently changing regulations; (4) fragmented jurisdiction; and (5) inadequate and inconsistent enforcement of regulations.

Hypothesis #3 - The New England Fishery Management Council is not an effective mechanism for small fishermen to participate in fishery management planning. Study and observations of the New England Fishery Management Council and survey findings support this hypothesis. Fifty percent of the fishermen surveyed indicated that they participated in management planning, yet many were not able to identify the form of participation. Of those who had participated, most had attended hearings, but only five had attended a Council meeting. Their participation is restricted because of (1) the limited representation of small fishermen as Council members; (2) the relatively short three-year terms of non-government appointees; (3) the highly formalized structure of the Council meetings; (5) the time and costs involved in attending
Council meetings; and (6) the perception that the Council is really a "government agency" which wants to "over-regulate" the fishing industry.

**Federal Assistance.** With respect to questions on federal assistance, over 70 percent of the fishermen surveyed indicated that they did not want increased assistance because they believed that such assistance led to increased federal control.

**E. Conclusions and Recommendations**

The major conclusions reached through the conduct of this study can be summarized as follows:

- Among the positive impacts of the FCMA on the New England fishing industry have been a reduction in the level of foreign fishing, increased capital investment in the fishing industry, and increases in fishery stocks.

- The characteristics of the small-scale fishery and problems in the formulation and implementation of the Groundfish Fishery Management Plan have reduced the negative impacts of the FCMA on small vessel owners.

- The New England Regional Fishery Council has not provided an effective mechanism for small fishermen to participate in fishery management planning and it is unlikely that there will be increased participation in the future.

- Small fishermen are very conservative in their views on federal assistance to the fishing industry, favoring an increased government role in protecting the industry from foreign influence, but a reduced role in regulating the domestic fishery.
Based on the study's findings, recommendations directed primarily toward the future development of the small-scale fishery and the role of the federal government in fostering that development can be summarized as follows:

. The federal government should expand its role in obtaining data on the small-scale fishery and its impact on the fishery and the region's economy.

. The federal government should conduct a comprehensive cost-benefit analysis of the FCMA, focusing on the various sectors of the fishing industry and consumers.

. The federal government should assist associations and cooperative groups to increase their involvement in Council activities.

. The federal government should re-evaluate and improve its assistance programs for small fishermen with respect to loans, tariffs on foreign gear and foreign-built vessels, the development of the sectors of the industry other than the harvesters, and imposing restrictions on imported fish and fishery products.

. The federal government should consider the feasibility of limiting the number of vessels in the groundfish fishery.
CHAPTER II

INTRODUCTION

A. Background for the Study

The New England fishing industry, which consists primarily of individually owned small fishing vessels, has traditionally been an important industry to the economy of the region. Almost a decade ago, however, the industry began to experience serious economic problems. Competition from foreign fishing vessels, unregulated increases in the numbers of persons fishing, and pollution problems were contributing to decreasing yield in the industry. Thus a traditionally unregulated industry began advocating for federal regulation as perhaps the only route to survival.

Although there is a recognized need for more effective conservation and management of the fishing industry, the growth and nature of federal regulations beginning with the passage of the Fishery Conservation and Management Act (FCMA) of 1976 raise concerns about the impacts of federal regulations on small firms in the fishing industry. Recent research on government regulations of business, in general, indicates that regulations place small businesses in increasingly disadvantaged positions in comparison to their larger competitors. These findings suggest that the FCMA and the regulations of the fishing industry
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A study conducted by the General Accounting Office on federal laws affecting the United States commercial fishing industry broke the laws down into three major categories: (1) management and regulation of fisheries; (2) federal assistance; and (3) enforcement and sanctions. Most federal laws related to management and regulation prior to 1970 were administered by the Bureau of Commercial Fisheries of the United States Fish and Wildlife Service of the Department of the Interior. In response to concern about the decline in the United States fishing industry in the 1960s, however, Congress in 1970 passed the Reorganization Plan No. 4, 84 Statute 2090, which provided for the creation of NOAA in the Department of Commerce to be responsible for the administration of fishery management laws. The Reorganization Plan No. 4 thus attempted to overcome some of the fragmentation in the management and regulation of the industry through the establishment of a single unit within the Department of Commerce which would focus, manage and regulate the developmental, operational and environmental aspects of coastal zone management.

Our review of federal fishery-related laws prior to the FCMA, however, shows that although there were a number of laws, the focus of these laws was mainly on the conservation of resources, research and international fishery agreements to
regulate fishing on the high seas. Even with the passage of the Reorganization Plan in 1970 and the creation of NOAA, there was no overall fishery management plan in the federal laws for United States fisheries prior to the enactment of the FCMA. Thus the FCMA, in establishing a comprehensive plan for managing the fisheries, significantly changed the nature and extent of federal regulation of the industry. Therefore our examination of the impact of federal regulations on small firms in the New England fishing industry will focus on the regulations of the industry resulting from the development of fishery management plans in the implementation of the FCMA.

C. The Fishery Conservation and Management Act of 1976

The Fishery Conservation and Management Act (FCMA) of 1976 (P. L. 94-265) went into effect in March 1977. Congress passed this Act in response to widespread public concern about over-fishing, especially by foreign vessels, in United States coastal areas. In passing the Act, Congress noted that certain stocks of fish "have been overfished to the point where their survival is threatened and other stocks have been so substantially reduced in number that they could become similarly threatened." The FCMA extended United States jurisdiction of the fishery to 200-miles, creating a Fishery Conservation Zone (FCZ) to be managed by the Department of Commerce through the creation of Regional Fishery Management Councils. The Act gave the
government power to exclude or limit foreign fishing in the FCZ and to impose on foreign and domestic fishermen responsibilities for conservation and utilization of the fishery resources within the zone.

The New England fishing industry was severely depressed during the 1960s due largely to the extent of overfishing by foreign vessels in its coastal waters. New England fishermen strongly supported the passage of the FCMA and most saw the Act as providing a much needed stimulus for the revitalization of the industry.

D. Purpose of the Study

The purpose of this study is twofold: (1) to examine the impact of FCMA on small vessel owners in the New England fishing industry and (2) to examine the regulatory process and the extent of participation by small fishermen in formulating management plans. Previous research on government regulation of business indicates that regulations have a disproportionate negative impact on small business. This research suggests that increased regulation of the fishing industry may lead to greater control of the industry by large fishing firms and threaten the future survival of the traditional small New England fisherman.

A significant factor contributing to the negative impact of federal regulations on small business, in general, is the disadvantaged position of small businesses in the statutory and
regulatory process. Due process provides that firms directly affected by proposed regulations have a right to participate in the decision-making process. Despite this right, however, small businesses often are not aware of their rights nor are they able to exercise them.

An important provision of the FCMA was the creation of Regional Fishery Management Councils (RFMC) which are responsible for the formulation of fishery management plans (FMP) for each of the major fisheries within the region. FMPs, which are proposed by the Councils and submitted to the Secretary of the Department of Commerce, provide the basis for fishery regulations promulgated by the Secretary. The establishment of Councils on a regional basis, as well as some provisions of the Act governing Council operations, are intended to solicit widespread input from the various sectors of the fishing industry in fishery management planning. Thus, an important focus of this study on the impact of the FCMA on small vessel owners is to examine the regulatory process and the extent to which small fishermen are able to participate in fishery management planning.

This in-depth study of the impact of the FCMA on small vessel owners in New England will contribute to a better understanding of the regulatory process and problems faced by small businesses due to federal regulations. More importantly,
the findings in this study will be used to formulate policy recommendations to improve the present economic positions of small fishermen while preserving regulations necessary to promote the future conservation of the industry. The hypotheses upon which this study is based are as follows:

. The Fishery Conservation and Management Act has had significant impacts on reversing the decline of the New England fishing industry.

. The Fishery Conservation and Management Act has had negative impacts on small vessel owners in the New England Groundfish Fishery.

. The New England Fishery Management Council is not an effective mechanism for small fishermen to participate in fishery management planning.

E. Scope and Methodology

Because of the great diversity in the fishing industry, it was necessary to set parameters for the scope of the study. First, the fishing industry consists of several components--harvesters, processors, wholesalers, and retailers--and such closely allied groups as boat builders, banking and lending institutions, truckers, etc. The FCMA might have different impacts on the various segments of the industry. Thus it was necessary to limit this analysis to one component of the industry--the harvesters (or fishermen).
Second, harvesters in the fishing industry consist of many different types of fishermen, ranging from those who fish commercially with a hand line from a bridge to those who fish in huge steel trawlers. There is no agreed upon distinction as to who among this group constitutes the small-scale fishery. The New England Regional Council, however, has instituted a vessel allocation system which defines vessels between 0-60 gross registered tons as small vessels. With modification, this study adopted the Council's designation of small vessels. We defined a small firm as the owner of a fishing vessel between 5 and 60 gross registered tons, eliminating those vessels under 5 tons which would include large numbers of persons who do not fish in the commercial fisheries and persons who fish only occasionally.

Third, the New England Fishery consists of several different fisheries designated according to the species being fished--scallops, herring, groundfish, tuna, etc. Under the FCMA, a separate FMP is required for each fishery which is in need of regulation. Thus there are several FMPs which have been implemented and which are in various stages of preparation to regulate the New England fishery. Since each FMP is different, the impacts of the FCMA on small vessel
owners might also differ according to the fishery. This study limits its focus to an examination of the impact of the FCMA on small vessels in the groundfish fishery (cod, haddock, and yellowtail flounder) in New England. The study focused on the groundfish fishery because it is the largest fishery in New England, it was the one most endangered by overfishing at the time the FCMA was passed, and it is the fishery first covered by a FMP.

Various research methods were employed in conducting this study. The Principal Investigator (P.I.) reviewed studies and statistical data on the New England fishing industry, with emphasis on the groundfish fishery. Comparisons were made between available data on the fishery pre- and post-FCMA. The P.I. also reviewed the Groundfish FMP, amendments to the plan, and minutes of the New England Fishery Management Council and Groundfish Oversight Committee meetings; attended Council meetings and Groundfish Oversight Committee meetings; interviewed Council members and staff; and held discussions with representatives of National Oceanic and Atmospheric Administration (NOAA), National Marine Fisheries Services (NMFS), the Coast Guard, and various State agencies involved in the fishery and fishery associations. The P.I. also conducted
a telephone survey of a random sample of owners of small fishing vessels which have federal licenses to fish in the New England groundfish fishery.

F. Organization of the Report

The structure of this report is designed to present findings on the impact of the FCMA on small vessel owners in the New England fishery and the extent of their participation in fishery management planning. The remainder of this report is organized as follows:

- Chapter III discusses the decline of the New England fishing industry and increased regulation of the industry to reverse this decline through the formulation and implementation of the FCMA.

- Chapter IV describes the organization and operations of the New England Fishery Management Council and the development of the Groundfish Fishery Management Plan.

- Chapter V presents the survey findings on the profile of the small-scale fishery, fishermen's perceptions of the impact of the FCMA on their fishing activities, the extent of their participation in fishery management planning and the type of assistance needed from the federal government to aid the small-scale fishery.

- Chapter VI is an analysis of the hypotheses on the impact of the FCMA on the New England fishing industry and on small vessel owners, and the Council as a mechanism for small fishermen to participate in fishery management planning.
Chapter VII presents conclusions and recommendations on the future development of the small-scale fishery and the role of the federal government in fishery management.
FOOTNOTES


CHAPTER III

DECLINE OF THE FISHING INDUSTRY
AND FCMA REGULATIONS

A. Decline of the United States and New England Fishing Industries

Twenty-five years ago, the United States was the second largest fishing nation in the world. By 1975 (the year prior to the passage of the Fishery Conservation and Management Act (FCMA), however, American fishermen were fifth, catching only 4% of the world's supply. During this period this country's catch had dropped only about 8 percent, but the catch of some foreign nations had increased as much as 250 percent.\(^1\) The United States with the largest coastline and the third largest continental shelf in the world, has about one-fifth of the world's marine fish resources within 200 miles of its coasts.\(^2\) With this abundance of resources, one might expect its fishing industry to be thriving and prospering, yet this was not the case. In 1974, while domestic demand for fish was increasing, imports increased to the point of representing 67 percent of the total supply of edible fish products. This increasing reliance on imported fish resulted in a United States fish trade deficit of $1.4 billion in 1974.\(^3\)

In addition to concern about the relative decline of the fishing industry and the increasing fish trade deficit, there was increasing concern about the extent of overfishing and its impact
on future stocks. Worldwide, the National Oceanic and Atmospheric Administration (NOAA) projected that the oceans could sustain an annual catch of only 100 million metric tons, a figure expected to be reached by 1980. NOAA found that increased fishing had already caused acute pressure on some stocks, depleting the supply and threatening their existence. 

In 1975 NOAA published a list containing 20 species of fish and shellfish found off the United States coasts that were believed to be seriously depleted.

The New England fisheries are America's first commercial enterprise. Over the years New England has seen its important fisheries rise, and then decline. Outstanding examples are the whales, Atlantic salmon, cod, mackerel and menhaden. However, in each instance other fisheries developed and fishing remained an important part of the economy of the region.

As with the country, New England also began to experience difficulties in its fishing industry. In 1960, New England's fishing fleet--12,800 craft (including vessels, motor boats and auxiliary craft)--landed a catch of 852 million pounds worth $61.5 million. Its 22,000 fishermen accounted for 17 percent of the total fishing products landed by commercial fishermen that year. More than 14,000 people were busily engaged in preparing fishing products with a market value of $117 million. By 1975 only 498 million pounds were landed by a reported fishing fleet of 16,538 (vessels, motor boats and other craft), and 31,685
fishermen.

The reason for the decline in fish caught in New England from 1960 to 1975, despite increases in the fishing fleet and numbers of fishermen is perhaps explained by a further statistic. During the 10-year period from 1962 to 1972, total catch in the Northeast Atlantic by all countries doubled from 536,841 metric tons to 1,117,784 metric tons, while domestic fishermen saw their catch decline by over 50%. Clearly foreign boats were taking an increasingly large proportion of fish within United States coastal areas. In Massachusetts, for example, landings of groundfish from 1962 to 1972 dropped from 387 million to 150 million pounds. Haddock, in particular, fell prey to foreign fishermen, with domestic catch falling from an annual average of 138 million pounds in the 1951-1962 period to 16 million pounds in 1975. The number of trawlers in the Massachusetts commercial fleet declined from 408 vessels in 1962 to 343 in 1970, while the number of wholesalers and fish processors in the Bay State fell from 236 in 1960 to 201 in 1973.

In examining the reasons for the decline in domestic landings by the New England fishing fleet and the increased landings by foreign fishermen, several factors are important. First, foreign countries—especially the undeveloped countries—have recognized the protein value of fish, increasing the world market for fish and fishery products. Consumption of fish and
Ill-4

shellfish by man provide 14 percent of the world's supply of animal protein. The Food and Agriculture Organization (FAO) of the United Nations has estimated that every man, woman and child in the world consumes an average of 26 pounds of fish each year. According to FAO the consumption of fish is likely to increase through 1990 at a growth rate higher than that of beef, pork, vegetables, cereal or milk. Indirectly fish provide another 10 to 11 percent of the world's animal protein in the form of meal and oil fed to pigs and chickens. Thus the direct, indirect and projected increases in the consumption of fish and fishery products created increasing pressures on ocean resources worldwide.

Capitalizing on the increasing market for fish and fishery products, foreign fishing industries developed tremendously during the 1960s. For example, in Russia, Japan, and Canada fishing vessels either owned and operated by their governments or heavily subsidized by them, increased in number, size and capabilities. New trawlers with modern equipment capable of harvesting large quantities of fish were found off United States coasts, thousands of miles from their home ports. These vessels would fish for weeks at a time, literally wiping out the stocks in a given area. In addition to the big trawlers, these countries build factory ships, capable of processing fish at sea,
preventing the frequent need for the fishing vessels to return to the port. Thus, in addition to their increased capacity for harvesting fish, which was literally depleting some of the stocks in New England coastal areas, these foreign countries also forged ahead in the development of new processing and distribution methods. Much of the fish and fishery products being imported by the United States and contributing to the fish trade deficit were being caught by foreign vessels within this country's coastal waters. Fishermen report that in the mid-1970s one could observe at any one time as many as 20 to 30 Russian trawlers fishing within United States territorial waters, especially in the Georges Banks (Maine) fishing area, one of the best fishing grounds in the world.

In contrast to the large new, modernized foreign trawlers fishing within this country's territorial waters, the New England fishing fleet consisted mainly of small, old wooden boats. This prompted a congressional report by the Comptroller General of the United States in 1976 to refer to the fleets in several New England ports as being in a "chronically depressed state." In 1975 almost 47% of the fishing vessels were over 25 years old, while over 58% were under 60 gross registered tons.
Nationwide about 80% of the fishing vessels were owned individually by small entrepreneurs. The percentage was even higher in New England where almost all the fleet was owned by individuals or families. Since these vessel owners were not subsidiaries of large corporations and did not receive government subsidy, they did not have ready access to extra capital to invest in large expensive vessels. Although most established fishermen might have had good relations with their local banks, loans tended to be for boat repairs, equipment, or to purchase slightly larger boats. Moreover, these small entrepreneurs were reluctant to borrow funds to purchase larger boats. A new small steel hull trawler in 1975 cost approximately $300 thousand, with the new larger steel trawlers (over 100 feet) costing close to $1 million.

Thus, by 1975 the state of the fishing industry in this country, in general, and New England, in particular, was causing political forces to come together in support of a law to protect the industry.

B. Marine Fishery Management Prior to the FCMA

The United States approach to marine fishery management prior to the FCMA was haphazard, at best, as federal fishing management legislation resembled a crazy patchwork quilt of pieced-together remnants. Generally its basis was not on
resource information, landing statistics, and data, but in weak divided authority and inadequate enforcement among complex jurisdictions. In reality, the states, through the authority given them by the Submerged Land Act of 1953 which created a 3-mile state territorial zone, were the only government units with comprehensive fishery management authority. This authority was inadequate, however, to deal successfully with the growing crisis being created by foreign fishing interests.

At the same time that the federal government was doing little more than acting as a research back-up to state conservation efforts, international agreements were doing little to help conserve the fishery stocks on the high seas. For example, the International Convention for the Northwest Atlantic Fisheries (ICNAF) annually permitted quotas which caused stocks of haddock, cod, yellowtail flounder and herring--species important to the New England fishery--to be steadily depleted. Under the ICNAF provisions, regulations were weak and enforcement often non-existent. Most other international fishery treaties were similarly ineffective.

It was against this historical background of intermittent state regulation and management to conserve the fisheries and a lack of meaningful federal regulation and management to conserve...
the fisheries that the 94th Congress took action.

C. Enactment of the FCMA

During the 93rd and 94th Congresses, 36 bills were introduced for the purpose of conserving and managing fish stocks. After long and heated debates, the FCMA was finally signed into law on April 13, 1976, as an amalgam of several of the approaches suggested by the various bills.

There were two broad purposes of the FCMA: (1) to extend the jurisdiction of the United States for the purpose of regulating the marine fisheries to the newly created Fishery Conservation Zone which joins the territorial sea (three-mile limit) and extends seaward out to 200 nautical miles from the coast, and (2) to impose a management regime within the fishery conservation zone to be administered by Regional Fishery Management Councils and the Department of Commerce. The combined extension of sovereign jurisdiction with a comprehensive resource management scheme was in response to what the resource managers saw as a tripartite requirement for wise utilization of fish stocks--management planning, regulation, and enforcement.

The two broad purposes of the Act also represented a compromise between the goals of fishermen who wanted to exclude foreign fishing off United States coasts and government officials who were concerned with creating a fishery management system. The emphasis in the Act on conservation and management--not on
exclusion--is a reflection of compromising legislation. In order to gain support for legislation which would protect domestic fishermen, the sponsors of the Act had to overcome the concern about the international implications and impacts of legislation which would be viewed as exclusionary by foreign interests. The administration and many members of Congress, as well as distant water tuna and shrimp fishermen, favored continued efforts toward fishery management through international agreement (Law of the Sea Conference) as opposed to coastal fishing interests which favored unilateral management through the adoption of an extended fishery zone. As will be seen below, the emphasis in the Act on conservation and management, as opposed to merely excluding foreign fishermen, has had significant effects on the implementation of the Act and the impacts of the Act on the New England fishing industry and small vessel owners in the New England groundfish fishery.

D. Provisions of the Act

The Act was organized into four titles: Title I defined the authority of the United States for fishery management; Title II specified the relationship between the administration of the domestic fishery and foreign fishing within the fishery conservation zone; Title III established a system for developing regional
fishery management plans for the purpose of providing a framework for control, regulation and enforcement; and
Title IV contained conforming amendments and incremental changes to existing related laws to make them consistent with the intent of the Act.

Title I established the Fishery Conservation Zone (FCZ), which extended seaward from the coast to a distance of 200 nautical miles. Within the FCZ the United States exercises exclusive fishery management authority over all fish with the exception of highly migratory species, defined in the Act as tuna. It is significant that the establishment of the FCZ did not alter state control over fisheries within the 3-mile territorial sea. In debates on the Act, it was evident that the exclusion of the 3-mile territorial sea from the FCZ was necessary in order to reduce concerns about the expansion of federal control vs. States' authority to manage the fisheries. This compromise in the Act was to create problems in the implementation and to affect the impact of the law on the New England fishing industry, as well as small vessel owners in the groundfish fishery.

In keeping with concern that the Act not be a measure to exclude foreign fishing, Title II authorized foreign fishing within the FCZ if (1) a treaty or international fishery agreement was already in force (such fishing would continue until the
instrument expired or was renegotiated), or (2) a foreign country entered into a governing international fishery agreement with the United States. Foreign vessels permitted to fish in the FCZ were to be issued a permit annually by the Secretary of State, with the concurrence of the Secretary of Commerce. "Reasonable" non-discriminatory license fees were charged foreign vessels based on costs of management, research, administration, enforcement, and other factors relating to the conservation and management of the fishery. Foreign fishermen, however, were to be permitted to take only that portion of the optimum yield not harvested by domestic fishermen. The determination of optimum yield and its allocation was part of the responsibility of the Regional Fishery Management Councils established in Title III.

Title III enumerated the duties of the Regional Fishery Management Council, as follows:

- to develop and amend fishery management plans;
- to submit periodic reports to the Secretary of Commerce;
- to review and revise assessments of optimum yield and fishing allowances to foreign licenses;
- to encourage public participation, through hearings, in the development of fishery management plans and the administration of the Act;
- to establish scientific and statistical and advisory panels; and
to undertake other activities necessary for carrying out the Act.

Although the Councils were to be relatively independent, each was to operate within uniform standards promulgated by the Secretary of Commerce. Although the Act clearly gave responsibility for formulating fishery management plans upon which management and conservation measures were to be based to the Regional Councils, it was the Secretary of Commerce who would promulgate and implement the regulations. Management plans were to be submitted to the Secretary of Commerce, who would have 60 days to review them and to notify the Council of approval, disapproval, or partial disapproval. When approved, the plan was to be published in the Federal Register, and after hearings and prescribed administrative actions, the plan went into effect. According to the Act, regulations were to be enforced by the United States Coast Guard in conjunction with National Oceanic and Atmospheric Administration's National Marine Fisheries Service. Both civil and criminal penalties were provided for with possibility of forfeiture of vessel, gear and catch.

Title IV of the Act provided authority to revise the regulations to conform to any agreement reached as a result of the Law of the Sea Conference and to revise any inconsistent
provisions of existing fishery legislation to conform to the intent of the Act. The inclusion of these provisions in Title IV indicated that the Act was an interim measure to be used until an acceptable comprehensive international agreement could be reached. While this was perhaps a necessary step to gain support of those who opposed the Act and favored waiting for the Law of the Sea Conference to establish a more acceptable management system, it suggested the conflicts of interest existing in relation to the Act and suggested possible difficulties in implementation.

E. Implementation of the FCMA

The FCMA was passed on April 13, 1976, and became effective March 1, 1977. The first step in implementing the Act—establishment of the Councils—was carried out quickly. Charters for the councils were filed on June 21, 1976, and members were appointed by August 1976. By the end of 1976 the following councils established by the Act were operating:


Councils. The Councils are federally supported by the Department of Commerce through the National Oceanic and
Atmospheric Administration (NOAA), the agency designated with the legal authority for the implementation of the Act, and the National Marine Fisheries Services (NMFS), the principal agency within NOAA to interact with the Councils. The Secretary of Commerce provided funding as well as administrative, program and technical support to the Councils.

Interim and final regulations were published by the Secretary in the Federal Register on September 15, 1976, and July 5, 1977, respectively. Generally, the regulations defined terms, geographical boundaries, uniform standards for organization, practices and procedures, and guidelines for development of Fishery Management Plans (FMP). Additional regulations have been published as needed in order to address more controversial areas such as intercouncil boundaries.

The Councils have voting and non-voting members as mandated by the Act. Voting members include:

- the principal fishery management official in each State in the Council's region;
- the NMFS Regional Director; and
- individuals selected by the Secretary of Commerce from lists submitted by Governors of the States in the Council's region.
The State appointees act as liaisons between the Councils and the States. The NMFS representative performs a similar role between the Council and NMFS. Individual members selected from the Governors' lists generally include commercial and recreational fishermen, processors, and consumers in order to give broad representation to the Council. Non-voting members include Federal, State and local representatives and others with an interest in fishery management.

As mandated by the Act, each Council was to establish a scientific and statistical committee to assist the Council in collecting and evaluating statistical, biological, economic, social and other scientific information as needed by the Council as input for fishery management plans. Such committees were to be multidisciplinary and generally to include biologists and other scientists, statisticians, and economists.

The Act also provided that the Councils establish advisory panels to assist in carrying out their responsibilities. Such panels were to be made up mainly of persons from various segments of the fishing industry--fishermen, processors, dealers, and others knowledgeable about issues of concern to the Council.

Each Council can appoint and assign duties to an executive director and other full- and part-time administrative employees.
Council staff are responsible for preparing budgets, financial, management, procurement, coordinating planning efforts, maintaining council records, correspondence, and preparing required council reports.

Fishery Management. In addition to the creation of Councils, a second major step in the implementation of FCMA was the creation of management plans for the fisheries. The Act specified two types of plans: (1) Preliminary Management Plans (PMP) and (2) Fishery Management Plans (FMP). NOAA/NMFS initially prepared the PMPs to provide fishery management over those fisheries for which there was a foreign application to fish, but for which no management plan could be prepared by a Council and implemented by the Secretary of Commerce by March 1, 1977. The PMP deals only with foreign fishing. In contrast FMPs were to be prepared by the Councils for the purpose of providing fisheries management for both domestic and foreign fishermen. The FMP, when approved and implemented by the Secretary, replaced the PMPs. By the end of 1977, the first year of the implementation of FCMA, 13 preliminary fishing management plans and appropriate environmental impact statements were prepared by NMFS containing proposed conservation and management measures.
governing foreign fishing in the FCZ during 1977. On the other hand only three FMPs had been approved and implemented by emergency regulations by the close of 1977. Several other FMPs, however, were in various stages of planning and review. Included in the three FMPs which were implemented by emergency regulation in 1977 was the New England groundfish plan for cod, haddock, and yellowtail flounder. This FMP was prepared by the New England Council and approved by the Secretary of Commerce. It is this Council and the Groundfish FMP which are the foci of our study.
FOOTNOTES


2 Establishing a 200-Mile Fisheries Zone, Office of Technology Assessment, Washington, D.C., June 1977, p. 3.


7 Ibid.


CHAPTER IV

THE NEW ENGLAND FISHERY MANAGEMENT COUNCIL
AND THE GROUNDFISH FISHERY MANAGEMENT PLAN

A. Introduction

The Fishery Conservation and Management Act (FCMA) provided that Regional Councils be created to develop fishery management plans and to encourage various sectors of the fishing industry to participate fully in management planning. The description of the Council and the development of the Groundfish Fishery Management Plan contained in this chapter, combined with the survey finding in Chapter V, provide the basis for our evaluation of the impact of federal regulations on small fishermen and the extent of their participation in management planning presented in Chapter VI.

B. The Organization and Functions of the Council

The New England Fishery Management Council is responsible for managing the fisheries off the five coastal New England states: Maine, New Hampshire, Massachusetts, Rhode Island, and Connecticut. The Council's jurisdiction extends from 3 to 200 miles seaward off the coastlines of these states. The states exercise control of the areas from their coastlines out to three miles.
Council Membership and Organization. The Council is composed of 21 members, 17 voting and 4 non-voting. Members include State and Federal fishing personnel, commercial and recreational fishermen, vessel owners, and processors. The 17 voting members are:

- The principal fishery management official in each of the five states
- The Regional Director of National Marine Fishery Service (NMFS)
- Eleven individuals selected by the Secretary of Commerce from lists submitted by the Governors of the five states.

The four non-voting members are:

- The Regional Director of the United States Fish and Wildlife Service
- The Commander of the Atlantic Area Coast Guard District
- The Executive Director of the Atlantic States Marine Fisheries Commission
- A representative from the State Department.

Appendix A lists these 21 members as of December 1979.

The original Council members were appointed in August 1976. State and Federal voting members, as well as non-voting members, serve indefinite terms. The remaining voting members are appointed to the Council for three-year terms with approximately one-third of the terms expiring in August of each year.
The Council held its first meeting in October 1976 and normally holds one two-day meeting per month at local hotels in the Danvers-Peabody, Massachusetts area which is convenient to the Boston airport and to the Council office in Saugus, Massachusetts. In addition to the regular meetings, the Council sponsors periodic public hearings on special issues throughout the New England states.

The Council has formed over 25 special committees to address specific management issues and problems dealing with various fish species and fishery related matters. These committees are composed of from four to seven members who work in groups and then present their findings and recommendations to the entire Council. In accordance with the Act, the Council has also established a Scientific and Statistical Committee which assists in the development, collection, and evaluation of statistical, biological, economic, social and other scientific information necessary to develop a fishery management plan. This committee includes marine biologists, scientists, and economists.

An Advisory Panel has been formed to assist the Council and to provide a means of communication between the fishing community and the Council. The Panel represents all five states and is composed of over 100 fishermen and others knowledgeable about and interested in the conservation and management of fish.
The Panel advises the Council on specific management strategies.

Council Staff. The Council staff consists of nine full-time employees, including its Executive Director, a Deputy Executive Director, two economists, a biologist, chief technical officer, statistician, and two secretaries. In addition to the full-time employees, there are part-time staff, as well as consultants who are generally hired for special short-term projects.

The Council staff has grown since it was initially established, reflecting the Council's growing role in management planning and an increased appreciation of the complexity of the regulatory process. The Council staff in 1980 moved from its original location in Peabody, Massachusetts, to a new, larger office complex in Saugus. The staff's responsibilities include implementing Council policy and decisions; assisting in the development of fishery management plans and environmental impact statements; and analyzing the biological, economic, social and legal implications of alternative management approaches.

Functions of the Council. The Council's principal function is preparing fishery management plans. Other responsibilities include conducting public hearings on management plans, reviewing and revising assessments of fishery stock levels, preparing comments on applications for foreign fishing permits,
and preparing and submitting prescribed reports to the Secretary of Commerce.

A fishery management plan generally includes conservation and management measures consistent with national standards described in the Act. The purpose of the plan is to permit a level of fishing which achieves the optimum yield from fish stocks. To accomplish this objective, the plan may require fishing permits; limit fishing zones or seasons; establish catch quotas; specify types of fishing gear, vessels, or equipment; or restrict access to the fishery. Plans also contain a description of the fishery to the extent that such data are available, including vessels, gear, species location, costs, potential revenues, recreational interests, and foreign fishing. Additionally, the plan describes the present and projected fish stock levels. The Council also proposes regulations to implement the plan.

To obtain approval for a management plan, the Council is required to submit it to the Secretary of Commerce via the National Marine Fisheries Service (NMFS). Within 60 days after receipt of a plan, the Secretary reviews and either approves or disapproves it. If approved, the Secretary issues implementing regulations. If, however, the Secretary has problems with the plan, he returns it to the Council along with notification of the reasons it was not approved. The Council then has 45 days to resubmit the plan. In the event the Council is unable to develop
an acceptable approach in this time frame, the Secretary has the authority to prepare and implement an alternate plan.

In the event the Secretary of Commerce determines that a particular fishery resource is endangered, the above procedures can be bypassed and emergency action taken. Emergency regulations for a plan can be implemented immediately through publication in the Federal Register. Public hearings and environmental assessments are not required. Although such regulations are only effective initially for up to 45 days, the Secretary does have authority to extend them an additional 45 days. The groundfish management plan, which is the focus of this study, was first implemented as an emergency regulation.

C. The Groundfish Fishery Management Plan

Under the FCMA, the first measures for management of domestic fishing for cod, haddock, and yellowtail flounder in the United States Fishery Conservation Zone (FCZ) were implemented on an emergency basis in March 1977 because of rapidly depleting stocks. These measures specified annual catch quotas (categorized according to geographical area for cod and yellowtail flounder) based upon established levels of optimum yield, fish size restrictions (haddock and cod), closed areas and seasons, mesh size regulations and landings restrictions (haddock and yellowtail). With some modifications, the
regulations implementing the plan became permanent in June 1977. By mid-1977, the annual commercial quotas for cod were being harvested at a rate which would not permit the fishery to remain open throughout the year without exceeding those quotas. Faced with the unacceptability of closures (periods when directed fishing is prohibited), emergency action was taken to increase annual optimum yield for cod, haddock, and yellowtail flounder effective November 1977.

Quarterly allocations of annual optimum yield levels were established early in 1978 as a means of distributing fishing activity throughout the year. Clearly the institution of the quarterly allocation system was intended to prevent large vessels from quickly catching the annual quotas causing the fishery to be closed and from flooding the market and driving prices down. The quotas under the quarterly allocation system, however, were also surpassed in the first two months of the first quarter. Therefore, on March 1, 1978, the open fishery for cod was terminated and incidental catch restrictions were applied for the balance of the quarter.

Closing the cod fishery and restricting incidental catch created problems because fishermen began discarding fish. Sensitive to the discarding practices which developed in the fishery, the Council in the spring of 1978 adopted a system of
restricted fishing in order to keep the regulated fisheries open. This system which was known as the Vessel Class Allocation Plan was prepared and proposed to the Council by the Massachusetts Inshore Draggerman's Association and the Cape Cod Commercial Fishermen's Coalition. It was characterized by adjustable per vessel landings limitations (per week or trip) and applied to four different classes of vessels based on gross registered tonnage. Each vessel class received an allocation of the quarterly share based upon its historical share. Although the system resulted in frequent changes in vessel class landing limitations, it helped to prevent the need for the entire fishery to be closed and eliminated the need for smaller boats to compete with larger boats in obtaining their quotas.

Although the vessel allocation plan adopted in the spring of 1978 helped to prevent closures for the small vessels, the fishery continued to experience expanded quotas and fishery closures. In May 1978, the Council began developing a new groundfish plan, under the tentative schedule shown in Appendix B. Justifying the need to replace the current plan the Council stated:
In addition to failing to control overall removals, the plan was recognized to have contributed to (1) conservationally undesirable practices of discarding, (2) widespread mis-reporting of landings, (3) erosion of an essential data base for resource and industry analysis, and (4) effectiveness of management. 1

While working on the proposed new groundfish management plan, the Council saw the need to extend the management unit beyond the focus on haddock, cod, and yellowtail flounder to include such other demersal finfish as pollock, redfish, and silver hake. Thus, by the fall of 1980, the intent of the Council was to replace the current plan with a new plan which would evolve into a multi-species Atlantic Demersal Finfish Fishery Management Plan.
FOOTNOTES

CHAPTER V

SURVEY OF SMALL NEW ENGLAND FISHERMEN

A. Introduction

In January 1981, a survey of small fishermen licensed to fish in the New England Groundfish Fishery was conducted. The purpose of this survey was to obtain their perceptions of the impact of the Fishery Conservation and Management Act (FCMA) on their fishing activities and to obtain information on their participation in the Council and management planning in the groundfish fishery.

B. Survey of Small Groundfish Fishermen in New England

Sample. Persons included in the survey were owners of fishing vessels between 5 and 60 gross registered tons in New England who were licensed by National Marine Fisheries Services (NMFS) in Gloucester, Massachusetts to fish in the groundfish fishery. In November 1980, when the sample for the survey was taken, there were 1,542 vessels between 5 and 60 gross registered tons in New England licensed to fish in the groundfish fishery. From this list of 1,542 vessels, NMFS supplied a ten percent random sample of small vessel owners, providing a survey sample of 150 persons. NMFS supplied names, addresses and telephone numbers of the 150 persons included in the survey.
**Methodology.** The survey tool used in this study was a telephone questionnaire which was designed to obtain information in the following four areas:

- **Profile of small fishing vessels affected by the FCMA**
- **Impact of FCMA on small fishermen**
- **The extent of small fishermen's participation in the regulatory process**
- **Type of assistance needed from the Federal Government to assist small commercial fishermen.**

The initial series of questions in the survey was concerned with establishing a profile of the small-scale fishery affected by the FCMA. There were inadequate data available on the small-scale fishery for fishery management planning in general and an absence of research on the impact of the FCMA on small vessels in particular. Data obtained in the survey on the profile of the small-scale fishery in the groundfish fishery such as vessel size, age of vessel and ownership of vessel will help to better understand the fishery and characteristics of the fishery which affect the impact of the FCMA on small vessel owners.
The second series of questions in the survey was designed to obtain small fishermen's impressions of the impact of the FCMA on their fishing activities. Impact questions sought information on both the positive and negative impacts of the FCMA on small fishermen, the specific groundfish management regulations which have negatively impacted on their fishing activities, and factors which have reduced negative impacts of the Groundfish FMP. Questions were also asked concerning their membership in fishery cooperatives and associations.

Initially, questions were included in the survey design to obtain data on the time spent fishing and gross income from fishing two years prior to the FCMA and two years after the passage of the Act. This information would have been used to help substantiate the fishermen's impressions of the impact of the FCMA on their fishing activities. These questions, however, were omitted from the survey because of the objections of the Office of Management and Budget (OMB). OMB objected to the inclusion of these questions mainly because of its concern about the amount of time the fishermen would need to consult their records in order to respond.
The third series of questions was concerned with the extent of small fishermen's participation in the regulatory process. Fishermen were asked if they participated in activities of Management Council and through what means. They were also asked to indicate the reasons they do not participate in management planning and the means through which they learn of new fishing regulations.

Finally, the last question in the survey was designed to obtain the fishermen's views on the type of assistance from the Federal government which would be most needed to assist small commercial fishermen. Responses to this question are important to the Small Business Administration (SBA) in its advocacy role for small business.

The questionnaire used in the telephone survey was approved by SBA and OMB. The final approved questionnaire appears in Appendix C. The survey was conducted in January 1981.

Prior to conducting the telephone survey a letter was mailed to each person included in the sample, explaining the study and soliciting their cooperation. Approximately two weeks after the mailings, persons in the sample were telephoned. The principal investigator conducted all of the telephone interviews.
Survey Responses. The response rate to the survey was an important factor in the study. Although there had been frequent "warnings" that fishermen would be reluctant to respond to a government-supported study, reflecting their general mistrust of government, the responses from fishermen contacted were high. Of the 150 small vessel owners in the sample, 122 (80 percent) were contacted, while for 28 (20 percent) contact was not accomplished. Of the 122 fishermen contacted, questionnaires were completed for 106, giving a response rate of 87 percent. Of the remaining 16 persons contacted, but for whom questionnaires were not completed, only two persons refused the interview and the remaining 14 did not meet the criteria established for inclusion in the sample or did not feel that they could provide sufficient information to be included. For example, persons contacted for whom no questionnaire was completed included those who no longer owned a fishing vessel, who did not fish commercially, and those who did not fish in the groundfish fishery. As anticipated, the list of persons licensed to fish in the New England groundfish fishery was not an accurate indication of vessels actively engaged in the fishery. Concern about possible future limited entry into the fishery has caused some persons to obtain a license who are not currently fishing.
There were 28 persons in the sample for whom no contact was made. This group included persons who had moved with no forwarding telephone number, unpublished telephone numbers, wrong telephone numbers, and no telephones, and persons who did not answer the telephone after several attempts to reach them. Table V-1 presents a breakdown of the contact/no contact cases for each person in the sample. The sample is divided into the following sub-categories:

1) Full interview: interview completed
2) Refusal: subject refused to grant interview
3) No interview: subjects did not meet criteria established for sample
4) No contact: persons could not be reached

<table>
<thead>
<tr>
<th></th>
<th>Number of Cases</th>
<th>Percentage of Total Cases</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Full Interview</strong></td>
<td>106</td>
<td>70</td>
</tr>
<tr>
<td><strong>Refusal</strong></td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td><strong>No Interview</strong></td>
<td>14</td>
<td>9</td>
</tr>
<tr>
<td><strong>No Contact</strong></td>
<td>28</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>150</td>
<td>100</td>
</tr>
</tbody>
</table>

Table V-1
Survey Responses
C. Results of Survey on Profile of Small-Scale Groundfish Fishery

The first series of questions in the survey was concerned with obtaining profile data on the small-scale fishery from small vessel owners who fish in the groundfish fishery.

Ownership of Vessel. Of the 106 persons interviewed 85 (80 percent) were the sole owners of the fishing vessel with 21 (20 percent) reporting the form of ownership as family, partnership (other than family), or corporation. This finding supports statements in the literature and findings of previous studies that the vast majority of small boats are individually or family owned. Although not a marked trend among small boat owners, the ownership of boats by corporations was reflected in the sample which found boats owned by corporations including boat builders, fish market owners, seafood restaurant owners and a trucking firm. Table V-2 indicates the form of ownership of the vessels included in the study.

<table>
<thead>
<tr>
<th>Form of Ownership of Vessel</th>
<th>No of Responses</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sole Owner</td>
<td>85</td>
<td>80</td>
</tr>
<tr>
<td>Family</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Partnership (other than family)</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td>Corporation</td>
<td>10</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>106</td>
<td>100</td>
</tr>
</tbody>
</table>
Full- or Part-time Fishermen. The vast majority of fishermen in the survey were full-time fishermen (81 or 76%) as opposed to those who indicated that they only fish part-time (20 or 19%) and those who own vessels but do not fish and employ a skipper to operate the vessel (5 or 5%). The distinction between full-time and part-time fishermen was based on source of income and time spent fishing. Fishermen who spent the majority of their working hours fishing and whose primary source of income was from fishing were considered full-time. Table V-3 indicates time spent fishing.

<table>
<thead>
<tr>
<th></th>
<th>Number</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full-time</td>
<td>81</td>
<td>76</td>
</tr>
<tr>
<td>Part-time</td>
<td>20</td>
<td>19</td>
</tr>
<tr>
<td>Non-fishermen</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>106</td>
<td>100</td>
</tr>
</tbody>
</table>

Characteristics of Fishing Vessel. Several questions in the survey were concerned with obtaining data on the characteristics of the small vessels in the groundfish fishery, including the year the vessel was purchased, the year the vessel was built, its hull
construction, its gross registered tons and its length, its crew size, and its estimated replacement cost.

The majority of the 106 respondents indicated that their vessels were purchased since the passage of the FCMA in 1976. Seventy-seven (73 percent) vessels were purchased in the five-year period from 1976 to the beginning of 1981, as compared to only 18 (17 percent) for the five years prior to the passage of the FCMA. The remaining 11 boats were purchased over a 25-year period from 1946 to 1970, except for one boat purchased in 1922. Table V-4 shows the number of vessels purchased according to year.

<table>
<thead>
<tr>
<th>Years</th>
<th>Vessels Purchased</th>
</tr>
</thead>
<tbody>
<tr>
<td>1976-81</td>
<td>77</td>
</tr>
<tr>
<td>1971-75</td>
<td>18</td>
</tr>
<tr>
<td>1966-70</td>
<td>3</td>
</tr>
<tr>
<td>1961-65</td>
<td>2</td>
</tr>
<tr>
<td>1956-60</td>
<td>2</td>
</tr>
<tr>
<td>1951-55</td>
<td>2</td>
</tr>
<tr>
<td>1946-50</td>
<td>1</td>
</tr>
<tr>
<td>1921-25</td>
<td>1</td>
</tr>
</tbody>
</table>

106
Since there has been concern expressed about the increase in the number of new vessel owners following the passage of FCMA, we asked the owners of vessels purchased after 1976 whether their vessel represented a first ownership of a fishing vessel. Thirty-nine of the 77 boats purchased after the passage of the FCMA represented first ownerships with the remaining 38 vessels being purchased to replace generally smaller vessels. Three of the purchases represented second boat ownership.

Forty (37 percent) of the 107 vessels (one person owned two vessels) in the sample were built since the passage of FCMA in 1976 as compared to 19 (18 percent) built during a corresponding five-year period prior to the passage of FCMA. Thus the building of small vessels in the groundfish fishery more than doubled after passage of the FCMA. The remaining 48 vessels in the sample were built during the 55 years prior to 1971. Table V-5 shows the number of vessels in the survey according to year built.
Sixty-four (60 percent) of the vessels in the sample were built of wood, with the newer vessels being mainly fiberglass (36 or 33%), and steel (7 or 6 percent), and aluminum (1 or one percent). Table V-6 represents the hull construction of vessels in the survey.
With respect to gross registered tons and length, over half (51 or 52 percent) of the 98 vessels for which owners reported tonnage were under 15 gross registered tons. Ten (10 percent) of the vessels were larger than 45 gross registered tons. More than half (56 or 52 percent) of the vessels were under 40 feet, with the remaining 48 percent between 41 and 75 feet long. The following Tables V-7 and V-8 show the number of vessels according to gross registered tons and length, respectively.
### Table V-7

**Vessels by Gross Registered Tons**

<table>
<thead>
<tr>
<th>Gross Registered Tons</th>
<th>Number of Vessels</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-5</td>
<td>7</td>
</tr>
<tr>
<td>6-10</td>
<td>27</td>
</tr>
<tr>
<td>11-15</td>
<td>17</td>
</tr>
<tr>
<td>16-20</td>
<td>7</td>
</tr>
<tr>
<td>21-25</td>
<td>8</td>
</tr>
<tr>
<td>26-30</td>
<td>4</td>
</tr>
<tr>
<td>31-35</td>
<td>6</td>
</tr>
<tr>
<td>36-40</td>
<td>7</td>
</tr>
<tr>
<td>41-45</td>
<td>5</td>
</tr>
<tr>
<td>46-50</td>
<td>5</td>
</tr>
<tr>
<td>51-55</td>
<td>2</td>
</tr>
<tr>
<td>56-60</td>
<td>2</td>
</tr>
<tr>
<td>61-65</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td><strong>98</strong></td>
</tr>
</tbody>
</table>

### Table V-8

**Length of Vessel**

<table>
<thead>
<tr>
<th>Feet</th>
<th>Number of Vessels</th>
</tr>
</thead>
<tbody>
<tr>
<td>26-30</td>
<td>8</td>
</tr>
<tr>
<td>31-35</td>
<td>16</td>
</tr>
<tr>
<td>36-40</td>
<td>32</td>
</tr>
<tr>
<td>41-45</td>
<td>15</td>
</tr>
<tr>
<td>46-50</td>
<td>12</td>
</tr>
<tr>
<td>51-55</td>
<td>6</td>
</tr>
<tr>
<td>56-60</td>
<td>13</td>
</tr>
<tr>
<td>61-65</td>
<td>4</td>
</tr>
<tr>
<td>66-70</td>
<td>1</td>
</tr>
<tr>
<td>71-75</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td><strong>107</strong></td>
</tr>
</tbody>
</table>
The majority of the fishing vessels (52 percent) had average crew sizes of less than three persons, including the vessel owner. Although a few fishermen (6) reported that they fished alone, the most typical pattern was for a small vessel owner to engage one or two helpers on the boat. The larger vessels in the sample averaged from four to five crew members with five being the maximum crew size. Table V-9 indicates crew size in 1980.

<table>
<thead>
<tr>
<th>Crew Size</th>
<th>Number of Vessels</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>1-2</td>
<td>5</td>
</tr>
<tr>
<td>2</td>
<td>26</td>
</tr>
<tr>
<td>2-3</td>
<td>15</td>
</tr>
<tr>
<td>3</td>
<td>27</td>
</tr>
<tr>
<td>3-4</td>
<td>5</td>
</tr>
<tr>
<td>4</td>
<td>12</td>
</tr>
<tr>
<td>4-5</td>
<td>1</td>
</tr>
<tr>
<td>5</td>
<td>2</td>
</tr>
</tbody>
</table>

99

The final question on the characteristics of the small-scale fishery obtained data on the estimated replacement cost of the vessel and gear. The small fishermen's capital investment in
the fishery varied greatly from a low of $8,000 to a high of $500,000. Approximately half (52 or 49 percent) of the 106 fishermen estimated the combined replacement cost of vessel and gear at under $75,000 with the largest number of fishermen estimating cost between $26,000 and $50,000. Forty-two fishermen (40 percent), however, estimated replacement costs of more than $100,000 with 3 persons estimating cost at $500,000. Table V-10 indicates the estimated replacement cost of vessel and gear of vessels included in the survey.

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<th>Table V-10</th>
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<tr>
<td><strong>Replacement Cost of Vessel and Gear</strong></td>
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<td><strong>Cost</strong> (in thousands of dollars)</td>
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other fishing vessels. Or they do not use the proper gear or leave the nets unattended too long and thus bring an inferior product to market. There is obviously increasing diversity among New England fishermen, including more young persons, part-time fishermen, and fishermen trained in occupations other than fishing. Moreover, there are those who have received academic training to become a fisherman, and more fishermen who are hired to skipper and fish on vessels who do not have financial investments in the industry. Although there are observed changes in the types of persons fishing in the New England fishing industry and some problems related to these changes, the full impact of such changes may not be quickly realized.

The "boon" in the New England fishing industry as a result of the FCMA has had positive impacts on some segments of the fishing industry but may not be a boon for all vessel owners. Boat builders, bankers and other lending institutions, suppliers, wholesalers and retailers of boat equipment, processors, packers and fish wholesalers and retailers are among those who have obtained positive benefits from the boon. However, a combination of FCMA-related factors such as the increase in fishing vessels and vessel size and increases in operating cost of vessels and declines in fish prices, have caused many vessel owners to believe that the boon was short-lived. There are recent reports of
vessels tying up at the piers due to high operating cost and low fish prices, of vessels leaving New England ports for West and/or Southwest ports, and of vessels being sold because owners are unable to meet mortgage payments.

B. **Hypothesis #2--The FCMA Has Had Negative Impacts on Small Vessel Owners in the New England Groundfish Fishery**

Our evaluation of the Groundfish Fishery Management Plan (FMP) and the survey findings do not support hypothesis #2. On the contrary, the results of the study indicate that the FCMA has not significantly impacted on small vessels in the New England Groundfish Fishery. Both characteristics of the small-scale fishery and obstacles to the effective formulation and implementation of the Groundfish Fishery Management Plan (FMP) have reduced the negative impacts of the FCMA on small vessel owners. These variables which reduced the negative impacts are discussed in Sections C and D below.

C. **Impact Implications of the Small Scale Fishery**

Characteristics of the small-scale fishery affecting the impact of the Act on small vessel owners include the following:

- Vessel size (tonnage and length)
- In-shore vessels
- Fish in multiple fisheries
- Limited investment.
**Vessel Size.** As found in the survey, the majority of the vessels in the small-scale fishery are quite small, being under 40 feet and 15 gross registered tons. Thus, these vessels have limited catch capacity and many vessel owners reported that catch restrictions did not affect their fishing activities since they did not normally catch the weekly or trip limits. In addition, the institution of the Vessel Class Allocation Plan, which prevents the small vessels from having to compete with larger vessels in obtaining established quotas, has prevented the frequent need to close fisheries for small vessels.

Small vessel size has also become an increasingly significant factor in reducing operating cost and thus lessening the impact of the FCMA on small vessel owners. A report prepared by the Cape Ann Chamber of Commerce on the economic impact of the closing of the cod fishery on the Gloucester, Massachusetts, fishing industry in 1977 compared the operating cost of various size fishing vessels. Based on these comparisons, the report stated that large and medium vessels were more adversely affected by quota closings than small vessels.5

**In-Shore Day Vessels.** The majority of vessels in the small-scale fishery are in-shore day vessels. Their size and electronic equipment do not generally permit them to fish further
than 30 to 40 miles off the coasts. Thus, these vessels typically leave the port in the morning and return in the afternoon. Fishing near the shore substantially reduces high fuel cost and lessens other operating expenses.

Fishing near the coast also enables small fishing vessel owners to catch regulated species in state territorial waters which are not managed under the FCMA. Thus, many fishermen in the survey found that they were not impacted by the FCMA because they fish mainly in the state territorial areas.

Fish in Multiple Fisheries. The survey indicated that the small-scale fishery is highly diversified with respect to species fished. Fishermen tend to fish seasonally, fishing for unregulated groundfish species as well as for cod, haddock and yellowtail. In addition to groundfish, many reported fishing for tuna, herring, shrimp and scallops and lobstering. Those who lobster and fish for multi-species are less likely to be negatively impacted by management regulations established under the FCMA such as quotas and fishery closures.

Limited Financial Investment. Perhaps the most significant characteristic of the small-scale fishery reducing the impact of the FCMA on small vessel owners is the fact that the majority of the small fishermen have limited financial
investment in their vessels and gear. The survey showed that owners of the larger new vessels who had substantial investments in the industry or who had incurred large debts in purchasing their vessels were much more likely to report negative impacts of the FCMA than owners of smaller vessels.

Large investments in the fishery and/or large debts associated with the vessel cause vessel owners to be more concerned about negative impacts of landing restrictions and fishery closures. These fishermen have a greater need for a large catch and high prices if they are to obtain a profit after meeting operating cost and mortgage payments.

D. Impact of the Groundfish Fishery Management Plan on Small Vessel Owners

Although the New England Council has made progress in the relatively short time it has been in operation, obstacles to the effective formulation and implementation of groundfish plans have reduced the impact of these plans on small vessel owners. Variables which have affected the formulation and implementation of a FMP in the groundfish fishery include the following:
Fishermen's opposition to regulation
Inadequate and unavailable data
Unrealistic and frequently changing regulations
Fragmented jurisdiction
Inadequate and inconsistent enforcement.

_Fishermen's Opposition to Regulation._ One of the most serious problems with respect to effective fishery management is the opposition of fishermen to government regulation of the industry. Most fishermen looked at passage of the FCMA as a panacea. Their focus, however, was on the restriction of foreign vessels from fishing in the Fishery Conservation Zone which they believed would allow fishing stocks to replenish. These traditionally independent New England fishermen were opposed, and continue to be opposed, to management regulations which restrict their fishing activities and adversely affect their income.

A major fishery management issue in regulating the groundfish fishery is reconciling the goal of rebuilding fish stocks with fishermen's desires to maximize present annual catch. Conservation, while an important goal of management planning, conflicts with fishermen's present concerns about earning a living.
The general opposition of the fishermen to management regulations impacts both on formulation plans and implementation. Commercial fishing interest is heavily represented on the Council, reducing the likelihood that fishery management plans will be proposed which will seriously negatively impact on the commercial fishermen. Although some of the early provisions of the groundfish management plan established by emergency regulations were having negative impacts on the fishing industry, fishermen's opposition and problems in enforcing these regulations have led to the Council's increased recognition of the need for management plans to have the support of the industry if they are to be effective.

Inadequate and Unavailable Data. Fishery management planning in the groundfish fishery has been continually hampered by limited biological and socio-economic data. Prior to FCMA, biologists used the concept of maximum sustainable yield—the total allowable catch that each species can sustain without damage to the parent stock—as the basis for fishery management planning. This law, however, established a new concept of fishery management planning—optimum yield. Optimum yield is the allowable catch which will provide the greatest overall benefit to the nation, particularly concerning food production and recreational opportunities, and which is determined on the basis of maximum yield modified by relevant economic, social and ecological factors.
The Council's primary source of data is the NMFS. New England's NMFS's research program is administered by the Northeast Fisheries Center in Woods Hole, Massachusetts. The Center provides biological data for management planning and NMFS is currently developing a computerized information center in Woods Hole to further support the fisheries management process. Both Council members and NMFS staff, however, report that data available have not been reliable and suitable for effective management planning.

In an attempt to supplement data being provided by NMFS, the Council contracted with the University of Maine and the University of Rhode Island for socio-economic data on New England fisheries and fishing communities. The time, cost, and difficulty of obtaining such data, however, and the urgency of planning needs, have necessitated the Council's moving ahead to create plans on the basis of inadequate data.

Biological data is essential to the development of appropriate fishery management plans. Marine biologists, however, have been unable to develop precise data, even for cod and haddock, which are among the better understood species. Their assessment of size and age distribution of fish stocks, life cycles and the importance of various harvesting levels on stock size are based on the best available information gathered from statistical
analysis of commercial catch reports, which are subject to error, and research crew findings. These estimates are subject to wide variations. NMFS indicated that their assessments can vary by plus or minus 25 percent for haddock, one of the better understood species.

Since the data base for management planning is inadequate and stock assessments, at best, imprecise, fishermen argue that the groundfish plans are unrealistic. Assessments of fishing stocks provided by NMFS are generally lower than industry's assessment of the stocks, which fishermen tend to feel is a more reliable measure. Fishermen therefore argue that they should be allowed to fish without restrictions or, at worse, that quotas based on unreliable assessments should be adjusted so as to permit increased fishing. The frequent changes in the groundfish management plan increasing quotas indicate that NMFS and the Council are sensitive to problems related to assessments and that they have been responsive to possible economic and social hardships which the quota system creates.

Unrealistic and Frequently Changing Regulations. The passage of the FCMA placed the New England Fishery Management Council in an unenviable position. The emergency existing in the groundfish fishery due to rapidly depleting stocks created pressures to produce a FMP. On the other hand, the
organizational and operational problems inherent in creating a new structure for management planning, the fishermen's opposition to management planning, and the inadequate data base made effective planning for the fishery very difficult.

The history of management planning in the groundfish fishery as discussed in Chapter IV has consisted largely of a series of emergency actions. Our analysis of the Groundfish FMP reveals a series of regulations developed in response to unanticipated changes in the industry—such as the rapid increase in vessels fishing in the groundfish fishery—and industry's demands for changes in regulations due to economic hardships. The frequency with which changes have taken place in the Groundfish Management Plan make it difficult to evaluate the impacts of the FMP on small fishermen. Yet, an analysis of the Plan indicates that the Council has generally been responsive in considering the economic needs of small fishermen as they seek to reconcile the often conflicting needs of the various segments of the industry and that the changes in plans have tended to reduce the negative impacts of the Groundfish FMP on small fishermen.

Study findings show that the initial quotas established by the Groundfish FMP created economic hardships for the fishing industry. Both annual quotas and quarterly allocation levels
often have not been sufficiently high to prevent the need for closures, a measure which can cause severe economic hardships for the fishing industry. Closures in the groundfish fishery for small vessels, however, have been less frequent since the institution of the Vessel Class Allocation Plan.

The Vessel Class Allocation Plan was spearheaded through the Council largely as a means of protecting small vessel owners in the quarterly cod allocations. The proposal presenting the Plan to the Council stated:

We are committed to assisting the Council on resource management issues, and to this end, present the following proposal for the cod fishing for the remainder of 1978.

The issues considered are conservation of the resources, equal distribution of fish among all types of fisheries and market stability.

After a description of the Plan, the proposal justified the need for adoption by stating:

The Massachusetts Inshore Dragermen's Association and the Cape Cod Commercial Fishermen's Coalition feel the suggested change in the vessel categories is more reflective of vessel capabilities. The 0-60 GRT vessels are primarily inshore, daytrip vessels, while the 61 and over GRT vessels are primarily offshore trip vessels. The fixed gear category is broken out because reliable catch data exists for the traditional hook fishery, while more catch data is needed for the gillnet fishery.
The yearly allocation, broken into quarters, to each of the three vessel classes promotes equity among the different types of fisheries and gives all vessels within each class a fair chance at the available resources.7

Another member of the New England Council, in a letter to Terry Leitrell, Assistant Administrator for Fisheries at National Oceanic and Atmospheric Administration (NOAA), wrote in support of the Vessel Class Allocation Plan and the need for close monitoring of quarterly quotas. She stated:

First of all, the strength of the quarterly quota and vessel allocation approach lies in the protection it gives each class from competition from other classes for a limited resource...

...it is my opinion that Maine groundfish fishermen (largely small vessel owners) have the greatest interest in the close monitoring and control of quarterly catches and quotas early in the fishing year that began October 1, 1978. Spring and early summer are the times of heaviest landings of cod and haddock in Maine and a year-end closure or much reduced quarterly quotas because of previous averages during that period would be extremely harmful to the state's industry. Any breakdown of either quarterly quotas or the vessel class allocations will reduce the equity of the regulations as proposed and Maine stands to lose in such a situation because of the timing of the groundfish migration and the immobility of the Maine fleet relative to many of the groundfish boats from the rest of New England.8

The vessel allocation plan as adopted in the spring of 1978 has not been without its problems as the fishery has continued to experience expanded quotas, adjustments in weekly and/or trip
limits, and fishery closures. The Plan, however, has prevented the need for small vessels to compete with larger vessels in obtaining quotas and has helped to prevent the need for closures in the fishery for small vessels. Fishery management problems created by the quota system, such as large illegal catches and an inability to enforce established quotas, has led to current emphasis in the proposed new fishery management plan on the replacement of quotas with mesh size and closed spawning area regulations.

**Fragmented Jurisdiction.** A significant variable in reducing the impact of FCMA on small vessels is the exclusion of the three-mile state territorial zone, an area in which many small vessels fish or claim to fish, from the FCZ. Although the FCZ encourages states to implement fishery management plans covering the state territorial waters in conformity with Council management plans, states generally have not developed such plans. This fragmented jurisdiction between the states and federal government allows many small boats to legally fish for regulated species in unregulated areas.

Some states are also reluctant to enforce Council regulations in their jurisdictional areas. Some states consider the Council plans unfair; others contend that they lack the resources
necessary to enforce Council regulations. As a result, there is little regulation in the 0-3-mile zone and fishermen who exceed their allotted quota of regulated species often claim that the excess was caught within this zone. This enforcement loophole caused by fragmented jurisdiction allows fishermen to circumvent quotas established by the Council and to reduce the negative impacts of the regulations.

The Secretary of Commerce has pre-emptive authority to extend federal fisheries management over the territorial areas in cases where the actions, or inactions, of the states adversely affect the implementation of fishery management plans. The position of the New England Council, however, has been to establish a cooperative working relationship with the states, an important factor in long-term management planning but one which has restricted the short-term implementation of the groundfish management plan and reduced its impact on small vessels.

Inadequate and Inconsistent Enforcement. An important variable in the implementation of a new policy is the enforcement mechanism. Enforcement under the FCMA is shared between the Coast Guard, which is responsible for foreign enforcement, and NMFS, which along with the Coast Guard, is responsible for domestic enforcement. While enforcement of foreign fishing
appears to have been generally satisfactory, domestic enforcement has been much more difficult and less effective. Inadequate and inconsistent enforcement have contributed to reduced impact of the Groundfish FMP on small vessels in the fishery.

Given the vast area included in the FCZ, the large number and mobility of vessels, the variety of species caught together in the groundfish fishery, rapidly changing groundfish regulations, opposition to the groundfish FMP, and inadequate resources, the Groundfish FMP has been virtually unenforceable. In view of these factors, successful surveillance at sea would entail a significant increase in resources and even then enforcement would still be difficult.

As the "200-mile limit" implies, there is a large area that is fished off New England's coast. The most common method of fishing is trawling with various sized nets, depending on the species being fished. Groundfish regulations require a net mesh size of 5 1/8 inches to assure that fish below a certain size are not caught. The Coast Guard, which is responsible for enforcing net mesh size regulations at sea, report that if more than one size net is allowed on board, it is almost impossible to enforce these regulations. Regulations presently allow several size nets on board, and the Council, which is considering this question in
the new groundfish management plan, has been reluctant to restrict fishermen to one net since this would limit the species fished and increase operating costs.

Some fishermen also ignore quotas and land as many fish as they can. As previously discussed, these fishermen then report that the fish were caught within the state 3-mile limit. To disprove this contention the vessel has to be boarded before it enters state waters, and the catch examined. However, this is virtually impossible to do with present staffing levels and illegal catch goes undetected.

Many groundfish species are caught together, especially cod and haddock. This presents an enforcement problem when fishing for one of these species is not allowed. For example, when the cod fishery was closed in 1978, fishermen trawling for haddock caught cod. Because of the no-discard policy, fishermen would say that the fish was caught in the state jurisdictional area which was not closed for cod in order to avoid penalties. Again, inadequate enforcement staff made it impossible to prove otherwise.

The issue of enforceability of management measures has been of serious concern to the Council. Views expressed by Council members indicated their reluctance to take a strong
position on the need for greater enforcement of groundfish management plans. Some members felt that aspects of the FMP were unjustified and unworkable, and that they should not increase enforcement measures and institute penalties until the new management plan is instituted. With respect to this position, a statement of Council policy on enforceability of management regulations stated:

The management experience of the last three years provides ample evidence that a management system which requires a high degree of enforcement to assure compliance will probably not be effective, and further the Council believes that this mode of management is not consistent with the basic principles and purposes of FCMA. It is not this Council's intent to impose or continue with a management regime which relies solely on a high degree of enforcement to be effective. The decision to develop a new interim groundfish plan recognized the need for a major change in the management environment and direction...

Enforcement of management regulations, through penalties or sanctions for detected violations is only one method of providing a degree of compliance with a regulation. The Council prefers the alternative method of providing for a high degree of compliance by designing effective management measures which are also acceptable to the industry.9

Many fishermen have complained that enforcement of fishery regulations are inconsistent. They allege that NMFS efforts for the most part have centered on selected ports, such as Gloucester,
where the agency's regional headquarters is located, while other ports receive lesser attention. Some ports which receive little or no coverage provide a safe haven for fishermen to unload their illegal hauls with virtually no risk of discovery.

Staff officials at NMFS report that inadequate enforcement staff requires them to target their efforts on certain ports and certain vessels which have reported consistent large violations. This practice has generally meant a lack of federal enforcement with respect to small fishing vessels.

Many Council members and NMFS staff stated that fishermen who are caught violating regulations are not promptly penalized and penalties imposed have not been stringent enough to prevent violations. The Groundfish FMP went into effect in March 1977 and cases involving violations of the plan reported in the fall of that year were not heard until August 1979, over two years later. Fines imposed in these cases in February 1980 against eleven Gloucester fishermen were the first cases in which civil penalties were assessed by an Administrative Law Judge against domestic fishermen in New England.

Individual fines ranged from a high of $66,349 to a low of $1,007. The majority of the violations were for landing cod and haddock in excess of the quotas. Other violations included
failure to maintain log books, fishing without a license, fishing in a closed area, and using improper fishing gear.

Enforcement officials and persons involved in management planning, however, do not feel that the fines imposed for illegal catch will deter the practice since the profits from the catch tended to exceed fines.

E. **Hypothesis #3--The New England Fishery Management Council Is Not An Effective Mechanism for Small Fishermen to Participate in Fishery Management Planning**

Study and observations of the New England Fishery Management Council and findings in the survey of small fishermen support the hypothesis that the Council is not an effective mechanism for small fishermen to participate in fishery management planning. The procedures established in the Act for the selection of Council members, and the organization of the Council and its established practices preclude significant participation on the part of the small fishermen in the management of the fishery.
Selection to Council. Ten of the 21 Council members are government employees--state, regional, or federal. Thus there are only 11 positions on the Council to be filled by representatives of the various sectors of the commercial fishing industry--fishermen, processors, wholesalers, and retailers--recreational fishermen, consumers, academics, and others interested in the fishery. There are great competition and political pressures exerted by the various interest groups in the selection of persons to be recommended by the state governors to the Secretary of Commerce for appointment to Council membership. A further selection process must occur at the federal level where the Secretary tries to balance representation on the Council from the five states as well as various interest groups. This selection process largely precludes the appointment of a small fisherman to the Council. The typical small fisherman who spends most of his time fishing is not sufficiently involved in the political system to obtain needed support for a Council appointment.

In order for a small fisherman to be appointed to the Council, he would generally have to represent a fishery cooperative or association as in the case of Daniel Arnold, a Council member who is the Executive Director of the Massachusetts Inshore Dragermen's Association, a group of small inshore day vessels in Massachusetts. Arnold has become a very strong advocate of
the Council for small fishermen. He was instrumental in getting the Vessel Class Allocation Plan adopted by the Council, a measure which lessened the negative impacts of the annual quota system on small vessel owners. Thus, while obtaining representation on the Council through the influence of fishery associations appears to be an effective means for small fishermen to indirectly participate in management planning, the success of this method will be limited by the frequent failure of small fishermen to join such groups, as was found in the survey.

**Council Organization.** Council organizational features also limit the small fishermen's effective participation in the fishery management planning process. For example, guidelines governing the tenure of office of Council members provide that state and federal appointees to the Council serve an indefinite term, while non-government appointees serve a limited 3-year term. Therefore, bureaucrats on the Council, through their greater tenure of office and, in most cases, greater involvement in management planning as a result of work experiences, are in a more favorable position to acquire the knowledge and expertise necessary for effective management planning as compared to small fishermen.
**Council Operations.** In addition to the selection process for Council members and organizational features which limit the small fishermen's participation in fishery management planning, Council operating procedures also limit their involvement.

First, Council meetings are highly formalized. Long tables at the front of a large meeting room are used to seat Council members, each with a microphone. Formalized procedures are followed in the conduct of the meeting. In addition to the Council members and alternate representatives for government appointees, there is generally an audience of between 30-50 persons who attend regular Council meetings. The majority of those in the audience are representatives of government fishery agencies, fishery associations, educational institutions, and the press. Such formal proceedings do not encourage participation on the part of small fishermen, and there is generally an absence of small fishermen at the Council meetings.

Second, most members of the Council are professionals: lawyers, economists, or biologists. The language used in discussions of management plans at the Council meetings reflect these different professional expertises and is difficult for the
non-professional to understand. Fishermen interviewed in the survey reported that often they did not understand the basis for Council decisions. They frequently disagreed with Council decisions but did not believe that they could adequately present their views to the Council to influence decisions being made.

Third, the location of the regular Council meetings makes it difficult for small fishermen to participate. Meetings have generally been held in the Danvers-Peabody area of Massachusetts, convenient for the Council staff but not convenient for a small fisherman in Maine, for example.

Fourth, the time and cost involved in attending Council meetings provide a further deterrent to small fishermen participating in the management planning process. Council meetings generally involve two days and the locations alternate between the different local hotels in the area of the Council office. While Council members receive expenses and are paid on a per-diem rate, the cost of attending these meetings are prohibitive for most small fishermen. Not only are there the direct costs, involving travel and hotel expenses, but there are opportunity costs resulting from loss of work.

Factors which prevent small fishermen from participating in Council meetings also tend to apply to Oversight Committee Meetings. One person interviewed in the survey reported that he
had served as an advisor to the Groundfish Oversight Committee. However, because the Groundfish Oversight Committee met in conjunction with the regular Council meetings, he found it difficult to participate effectively.

Small fishermen who did participate in management planning, as found in the survey, were most likely to do so through special hearings held periodically throughout the New England region. These meetings which are generally on special announced topics of interest to the small fishermen are held at more convenient locations. The meetings are also held at night so that it is not necessary to lose a day fishing in order to attend.

**Philosophical Barriers to Participation.** Although there are significant organizational and operational barriers that limit the participation of small fishermen in the management planning process, the most important barriers to participation seem to be philosophical in nature. Small fishermen are opposed to government regulation of the fishing industry. Although they believe that some individual members of the Council represent their interests, the more prevalent belief is that the Council is an extension of the federal regulatory bureaucracy controlled by National Marine Fisheries Service. Under these circumstances their increased direct participation in the regulatory process
seems unlikely. The small fishermen's participation in the management planning will therefore continue to be an indirect one, depending mainly upon the influence of their representatives on the Council.
FOOTNOTES


4 Ibid.


7 Ibid., p. 2.


CHAPTER VII

CONCLUSIONS AND RECOMMENDATIONS

A. Introduction

This study tested three hypotheses concerning the impact of federal regulations on small firms in the New England fishing industry. The conclusions based on the findings as they relate to each of the hypotheses are presented in Section B. During the survey fishermen were also questioned on their views concerning the need for federal assistance to aid the small-scale fishery. These findings are discussed in Section C. Finally, based upon the study findings, Section D presents recommendations directed primarily toward the future development of the small-scale fishery and the role of the federal government in fostering that development.

B. Hypotheses

Hypothesis #1--The Fishery Conservation and Management Act (FCMA) Has Had Significant Impacts on Reversing the Decline of the New England Fishing Industry. The findings in this study support this hypothesis. Foreign fishing has been significantly reduced as indicated by the statistical data on the number of vessels fishing off the New England coastal areas and the reduced foreign catch. On the other hand, the New England fishery fleet has substantially improved, increasing the number and size of
vessels. Moreover, vessels have more modern equipment enabling them to fish further from shore for longer periods of time.

The FCMA has led to increased capital investment in the fishing industry. Both private and public funds have been more readily available for the revitalization of the industry. These funds, however, have been mainly invested in fishing vessels leading to over-capitalization of the fishing fleet. This situation is economically threatening to many vessel owners who have large investments in the industry or who have incurred large debts in purchasing their vessels.

Another significant impact of the FCMA is an increase in fishery stocks as reported by National Marine Fisheries Service—one of the goals of the FCMA. An increase in fishing stocks has been aided by restrictions on foreign fishing and possible impacts of fishery management plans.

**Hypothesis #2—The FCMA Has Had Negative Impacts on Small Vessel Owners in the New England Fishery.** The study's findings did not support this hypothesis. Based on an evaluation of the Groundfish Fishery Management Plan and the survey of small fishermen, it was concluded that the FCMA has not significantly impacted on small vessel owners. Both characteristics of the small-scale fishery and problems in the formulation and
implementation of the Groundfish FMP have reduced the negative impacts of the Act on small vessel owners.

Characteristics of the small-scale fishery which have reduced possible negative impacts of the Act are the small size of vessels in the small-scale fishery, the fact that these vessels are mainly in-shore day vessels which fish in the 3-mile territorial area, the diversity of the small vessels in fishing for multi-species, and the limited investments of small fishermen in the fishing industry. Larger vessels in the survey which fished further from shore had greater operating costs and debt causing them to be more negatively impacted by regulations restricting their fishing activities.

Problems in the formulation and implementation of the Groundfish FMP have also reduced the negative impacts of the Act on small fishermen. These problems included fishermen's opposition to federal regulations, inadequate and unavailable data, unrealistic and frequently changing regulations, fragmented jurisdiction, and inadequate and inconsistent enforcement. The Council is currently proposing a new groundfish management plan which seeks to eliminate the problems identified. Although it is difficult to anticipate the impact of the new plan on small fishermen, characteristics of the small-scale fishery will continue to be important variables reducing negative impacts of federal regulation of the industry.
Hypothesis #3--The New England Fishery Management Council Is Not An Effective Mechanism for Small Fishermen to Participate in Management Planning. Based upon an examination of the New England Fishery Management Council and survey findings, the Principal Investigator has concluded that the Council does not provide an effective mechanism for small fishermen to participate in fishery management planning. Aspects of both the Council's organization and operating practices limit their participation. These factors include: selection process and limited tenure for non-governmental Council members, professionalism of Council members, formalized procedures of Council meetings, location of meetings, and the time and cost involved in attending Council meetings.

Although these factors limit small fishermen's participation in management planning, they are organizational and procedural factors which could be changed in order to encourage greater participation of the small fishermen if the Council so desired. More significant limiting variables, which are less amenable to change, include the small fishermen's opposition to federal regulation of the industry, their mistrust of the federal government, and their perceptions of the Council as an extension of National Marine Fisheries Service.
Considering the many factors which limit small fishermen's participation in the fishery management planning process, it seems unlikely that one should expect increased future participation. In fact, the study found greater participation during the initial period of the Council's operations when small fishermen attended Council meetings and hearings to protest quotas and fishery closures. Fishery management planning, however, is an ongoing process requiring continuous input from small fishermen if they are to significantly influence the decision-making process.

Thus, in view of the continuous nature of fishery management planning and the factors limiting small fishermen's participation in the process, protection of small fishermen's interests depends largely on the representation they receive from individual Council members and from members of their associations who participate in fishery management planning. Small fishermen have been successful in having representatives from their associations elected to the Council. Representatives also attend Council meetings and serve on fishery committees. As the study indicated, however, representation of the small fishermen in the fishery management planning process is limited by their frequent failure to join fishery associations.
C. Federal Assistance and the Small-Scale Fishery

The survey indicated that small fishermen were mainly opposed to federal assistance to harvesters in the fishing industry. Government loans and loan guarantee programs have increased the number and size of fishing vessels. Competition from foreign fishing vessels has declined but competition among American fishermen has increased, frequently subsidized by the federal government.

Small fishermen were particularly concerned about the administration of government loan programs. They believed government loan programs favored owners of large fishing vessels, leaving the small fishermen dependent upon loans from local banks with higher interest rates. In addition, loan programs favored "newcomers" to the industry as opposed to the established fishermen. Loan requirements, such as the need to be turned down by a bank prior to applying for a government loan to purchase a fishing vessel appeared to discriminate against established fishermen with good credit.

The most important concern of small fishermen was the recent low prices they were receiving for their fish. This problem was due mainly to two factors: the failure of the government to restrict the increasing flow of Canadian fish into the New England market and the rapid expansion of the harvesting capacity of the
New England fleet without a corresponding expansion in the other sectors of the industry. On the one hand, small fishermen were being hurt by the failure of the federal government to take action; and on the other hand, they were hurt by actions which the government took to encourage expansion of the fishing fleet.

Fishermen are accustomed to fluctuations in market prices, depending on the supply of fish on the market. Yet prices have been low since the summer of 1980 when the New Bedford fleet tied up at dock in protest of declining prices. Prices continued low into January 1981 when the survey was conducted and cold weather was preventing many vessels from fishing. Low prices in January, when the fish supply was greatly reduced, suggested forces other than supply and demand were operating to determine price. There is an apparent increase in control of market price by buyers--influenced perhaps by the amount of illegal fish on the market as a result of quotas--and Canadian fishermen who sell at lower prices because they are government subsidized.

Small fishermen's concern about low fish prices is heightened by increasing operating costs, with emphasis on the cost of fuel. Many fishermen expressed a need for government subsidy for fuel. Other fishermen, however, acknowledged their concern about the increases in fuel cost but did not support government subsidy. Based on the operations of previous
government loan programs to fishermen, such a subsidy would undoubtedly be of greater benefit to owners of large vessels and would tend to encourage the purchase of larger vessels which are less energy efficient.

In summary, fishermen are very conservative in their views on federal assistance to the fishing industry. They favor an increased role for the government in protecting the industry from foreign influence, such as the current influx of Canadian fish on the market, but a reduced role for the government in regulating the domestic fishery. They believe that under a free market system without government controls and assistance, the industrious, hard-working fishermen will survive and thus the future of the small-scale fishery will be enhanced.

D. Recommendations

Regulations, Policies and Laws. It is recommended that the government conduct a comprehensive cost-benefit analysis of the FCMA, focusing on the various sectors of the fishing industry and consumers. Continued management planning and regulation of the industry should take into account the costs and benefits of adopted and proposed regulations. Based on such an analysis the Council and the Secretary of Commerce might find it feasible to exempt small fishermen from regulations and focus management planning on those vessels which harvest large portions of the catch.
The federal government should also re-examine policies which increase the cost of fishermen's operations, such as tariffs on foreign gear and foreign built vessels, and which allow foreign fish and fish products to enter the New England market. Owners of small vessels with limited catch capacity must keep operating costs down and obtain a high price for their catch if they are to obtain a profit.

Policies governing federal assistance to the fishing industry need to encourage the development of sectors other than the harvesters. The large number of vessels fishing has caused the catch to increase beyond the capacity of the port facilities, processors, wholesalers, and marketing resources.

Finally the New England Fishery Management Council should consider the feasibility of limited entry into the groundfish fisheries. The focus in the Groundfish FMP has been on quotas and fishery closures which were intended to limit the catch of fish. These regulations, however, have been impossible to enforce and large quantities of illegal fish have been on the market. An alternative to present plans which intend to limit fish supply would be to limit the number of vessels fishing. Although most fishermen are philosophically opposed to limited entry, forms of limited entry such as the residency requirement in order to fish for shellfish in Rhode Island are being instituted in other
fisheries. Limited entry, if instituted in the groundfish fishery, would provide benefits to small vessel owners currently licensed to fish for groundfish.

**Database.** It is recommended that the federal government expand its role in obtaining data on the small-scale fishery and its impact on the fishery and the region's economy. Such data are necessary for effective management planning in the industry and to assist in the future development of the small-scale fishery.

**Fishery Management Planning Groups.** Based on the study findings on the extent of small fishermen's participation in fishery management planning, it is recommended that the government assist associations and cooperative groups to increase their involvement in Council activities. Participation of representatives of these groups in management planning seems to be the most effective mechanism for small fishermen to influence the decision-making process.

**Loan Programs.** It is recommended that the federal government re-evaluate loan programs which assist small fishermen. There is a need for increased coordination of these programs and for funds to be targeted more directly to small fishermen. These programs should include small loans such as those needed by the owners of small vessels for repairs and/or
gear replacements. The time required to process such loans should also be reduced since these loans generally involve an emergency which may cause the fishermen not to be able to fish and create economic hardships.
APPENDIX A

Membership of the New England Fishery Management Council

1979

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APPENDIX A

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## APPENDIX B

### Tentative Development Plan for the Preparation and Implementation of Groundfish Fishery Management Plan

<table>
<thead>
<tr>
<th>Date</th>
<th>Action or Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>October 25, 1979</td>
<td>EIS Scoping notice published in the Federal Register (44 FR 61407) with provision for November 14 public hearing.</td>
</tr>
<tr>
<td>November 14, 1979</td>
<td>Public scoping meeting held on proposed Groundfish FMP.</td>
</tr>
<tr>
<td>December 17, 1979</td>
<td>Work Plan submitted to NOAA for Approval.</td>
</tr>
<tr>
<td>January 11, 1980</td>
<td>Work plan for FMP development approved by Administrator of NOAA</td>
</tr>
<tr>
<td>January 1980</td>
<td>Draft FMP/RA/EIS prepared.</td>
</tr>
<tr>
<td>January 28, 1980</td>
<td>Draft FMP/RA/EIS submitted to NOAA for filing with EPA.</td>
</tr>
<tr>
<td>February 1, 1980</td>
<td>NOAA transmits draft FMP to EWG for review (5 days for EWG review).</td>
</tr>
<tr>
<td>February 8, 1980</td>
<td>EWG gives approval to file document with EPA and document filed.</td>
</tr>
<tr>
<td>March 31, 1980</td>
<td>End NEPA public review period.</td>
</tr>
<tr>
<td>April 30-May 1, 1980</td>
<td>Council adopts final FMP at its regular meeting.</td>
</tr>
<tr>
<td>May 5, 1980</td>
<td>Adopted final FMP transmitted to NOAA for approval.</td>
</tr>
<tr>
<td>May 7, 1980</td>
<td>Final FMP received in necessary numbers. Begin 60-day Secretarial review period.</td>
</tr>
</tbody>
</table>
APPENDIX B

Tentative Development Plan
for the Preparation and Implementation
of Groundfish Fishery Management Plan

<table>
<thead>
<tr>
<th>Date</th>
<th>Action or Event</th>
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</thead>
<tbody>
<tr>
<td>July 7, 1980</td>
<td>End Secretarial review period. Council notified of NOAA's approval, partial</td>
</tr>
<tr>
<td></td>
<td>disapproval, or disapproval of FMP.</td>
</tr>
<tr>
<td>July 21, 1980</td>
<td>FMP and proposed regulations published in Federal Register. Begin 60-day public</td>
</tr>
<tr>
<td></td>
<td>review period on proposed regulations and draft RA. Begin 30-day cooling-off</td>
</tr>
<tr>
<td></td>
<td>period on final EIS.</td>
</tr>
<tr>
<td>September 22, 1980</td>
<td>End review period.</td>
</tr>
<tr>
<td>October 20, 1980</td>
<td>Final regulations published in Federal Register. Begin EPA 30-day cooling-off</td>
</tr>
<tr>
<td></td>
<td>period.</td>
</tr>
<tr>
<td>November 20, 1980</td>
<td>Final regulations become effective.</td>
</tr>
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</table>

Glossary of Abbreviations

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Definition</th>
</tr>
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<tbody>
<tr>
<td>EIS</td>
<td>Environmental Impact Statement</td>
</tr>
<tr>
<td>FMP</td>
<td>Fishery Management Plan</td>
</tr>
<tr>
<td>NOAA</td>
<td>National Oceanic and Atmospheric Administration</td>
</tr>
<tr>
<td>RA</td>
<td>Regulatory Analysis</td>
</tr>
<tr>
<td>EPA</td>
<td>Environmental Protection Agency</td>
</tr>
<tr>
<td>NEPA</td>
<td>National Environmental Protection Act</td>
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</table>
GROUNDFISH VESSEL TELEPHONE QUESTIONNAIRE

A. The following questions will give SBA a profile of the small fishing businesses affected by the 200-mile limit law and groundfish management plans.

1. Are you the sole owner of the fishing vessel? Yes ___ No ___
   If No: What is the form of ownership of the vessel?
   Family
   Partnership (other than family)
   Corporation
   Other (specify)

2. Are you a full-time or part-time fisherman?
   Full-time ___ Part-time ___

3. What year did you purchase vessel? ______

4. What year was vessel built? ______

5. What is the hull construction of vessel?
   Wood ___ Steel ___ Fiberglass ___

6. How many gross registered tons is the vessel? ______

7. How many feet is the vessel? ______

8. What is the average crew size on vessel in 1979? ______

9. What is the estimated replacement cost of the vessel? ______

B. The following questions indicate the impact of regulations on small fishermen.

10. Prior to the implementation of the 200-mile law in 1977, were your fishing activities affected adversely by foreign fishing?
    Yes ___ No ___
APPENDIX C

15. Are you a member of a fishery cooperative?
   Yes ___   No ___

16. Are you a member of a fishery association?
   Yes ___   No ___

C. The following questions examine the extent of small fishermen's participation in the regulatory process.

17. Do you participate in activities of management council?
   Yes ___   No ___
   If Yes, through what means?
   
   Hearings ______________________________
   Council meetings ______________________
   Letters to council members, legislators, etc. ______________________
   Other _________________________________

18. If you do not participate in management planning, why?
   
   Lack of time __________________________
   Cost _________________________________
   Problems in communicating to Council __________________________
   Belief that no one listens ______________
   Other _________________________________
   _________________________________

19. How do you learn of new fishing regulations?
   
   Federal Register ______________________
   NMFS news releases and/or permit holder letters ______________
   Association Newsletters ______________________
   Other Fishermen _______________________
   Fishing newspapers, journals, etc. ______________
   Other (specify) _________________________
   _________________________________
APPENDIX C

D. The following question is important to SBA in establishing policy.

20. What type of assistance from the Federal Government is most needed to assist small commercial fishing vessel owners?

- Subsidy for operation cost
- Subsidy for vessel construction
- Lifting of import tariffs on fishing gear
- Tariffs on imported fish and fishery products
- Low interest loans
- Other

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BIBLIOGRAPHY


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"Maine Commercial Fisheries," Stonington, Maine.


Atlantic Groundfish, Final Supplement #2, July 14, 1978.

Atlantic Groundfish Fishery, Final Supplement #3, June 1979.


