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REPORT TO THE CONGRESS

093787



BY THE COMPTROLLER GENERAL
OF THE UNITED STATES

Action Is Needed Now To Protect Our Fishery Resources

National Marine Fisheries Service
National Oceanic and Atmospheric Administration
Department of Commerce

Many fish species important to the U.S. fishing industry are being depleted or threatened with depletion through overfishing by U.S. and foreign fishermen and alteration of U.S. coastal areas.

The State-Federal Fisheries Management Program was established in 1971 to achieve coordinated management of domestic fishery resources, but progress has been slow. States have had trouble agreeing on (1) what management measures are appropriate and (2) a timetable for implementing such measures.

The Congress should consider giving the Secretary of Commerce statutory authority to impose management measures on U.S. fisheries when States fail to do so.

GGD-76-34

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FEB. 18, 1976

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COMPTROLLER GENERAL OF THE UNITED STATES

WASHINGTON, D.C. 20548

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To the President of the Senate and the
Speaker of the House of Representatives

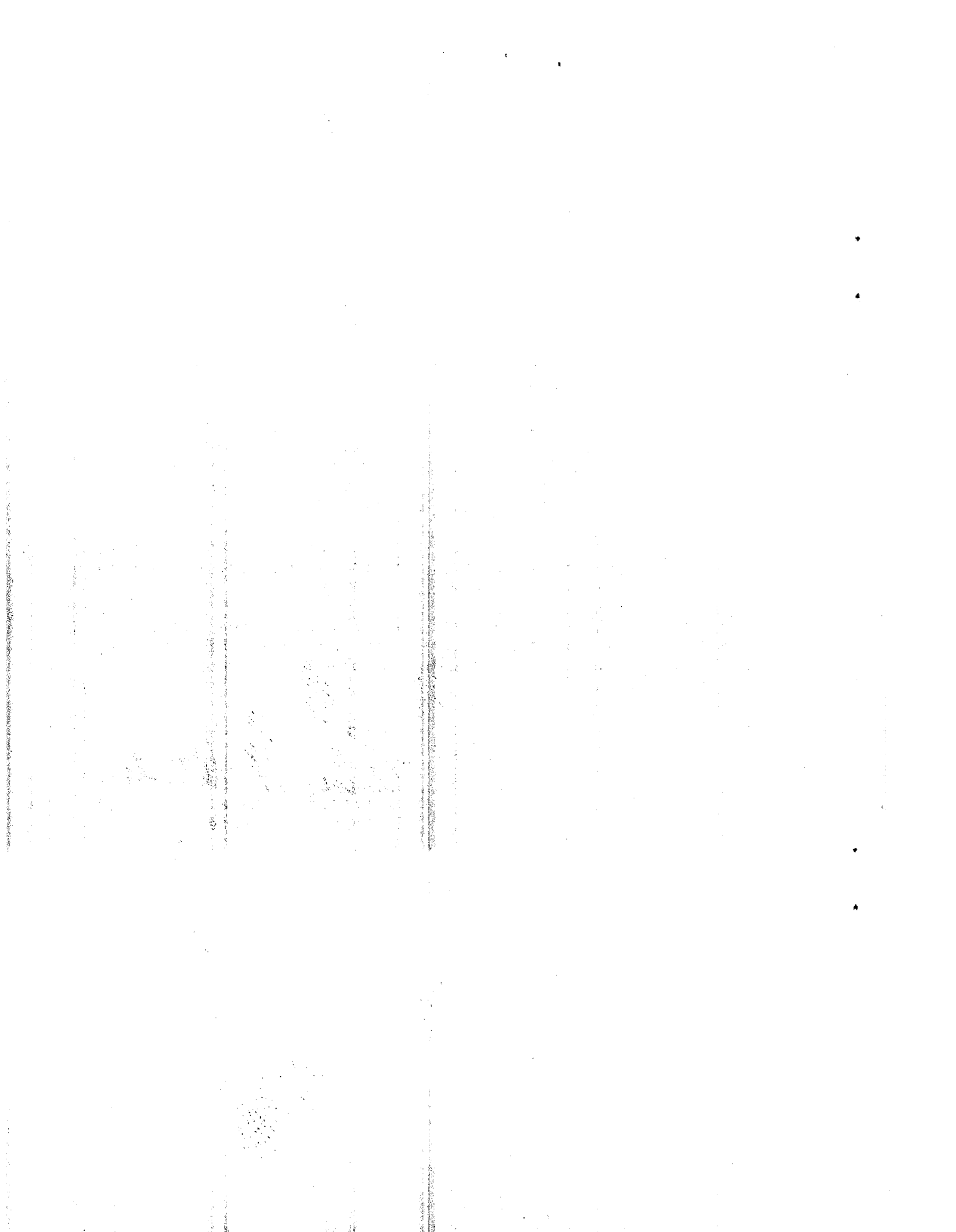
This is our report discussing the need for action now
to protect our fishery resources.

We made this review because of the expressed concern
of the Congress on (1) the need to strengthen and rehabili-
tate the sagging U.S. fishing industry and (2) the exten-
sive fishing efforts of foreign fleets off our coast and
their impact on the domestic industry.

Our review was made pursuant to the Budget and Account-
ing Act, 1921 (31 U.S.C. 53), and the Accounting and Auditing
Act of 1950 (31 U.S.C. 67).

We are sending copies of this report to the Director,
Office of Management and Budget; the Secretary of Commerce;
and the Administrator, National Oceanic and Atmospheric
Administration.


Comptroller General
of the United States



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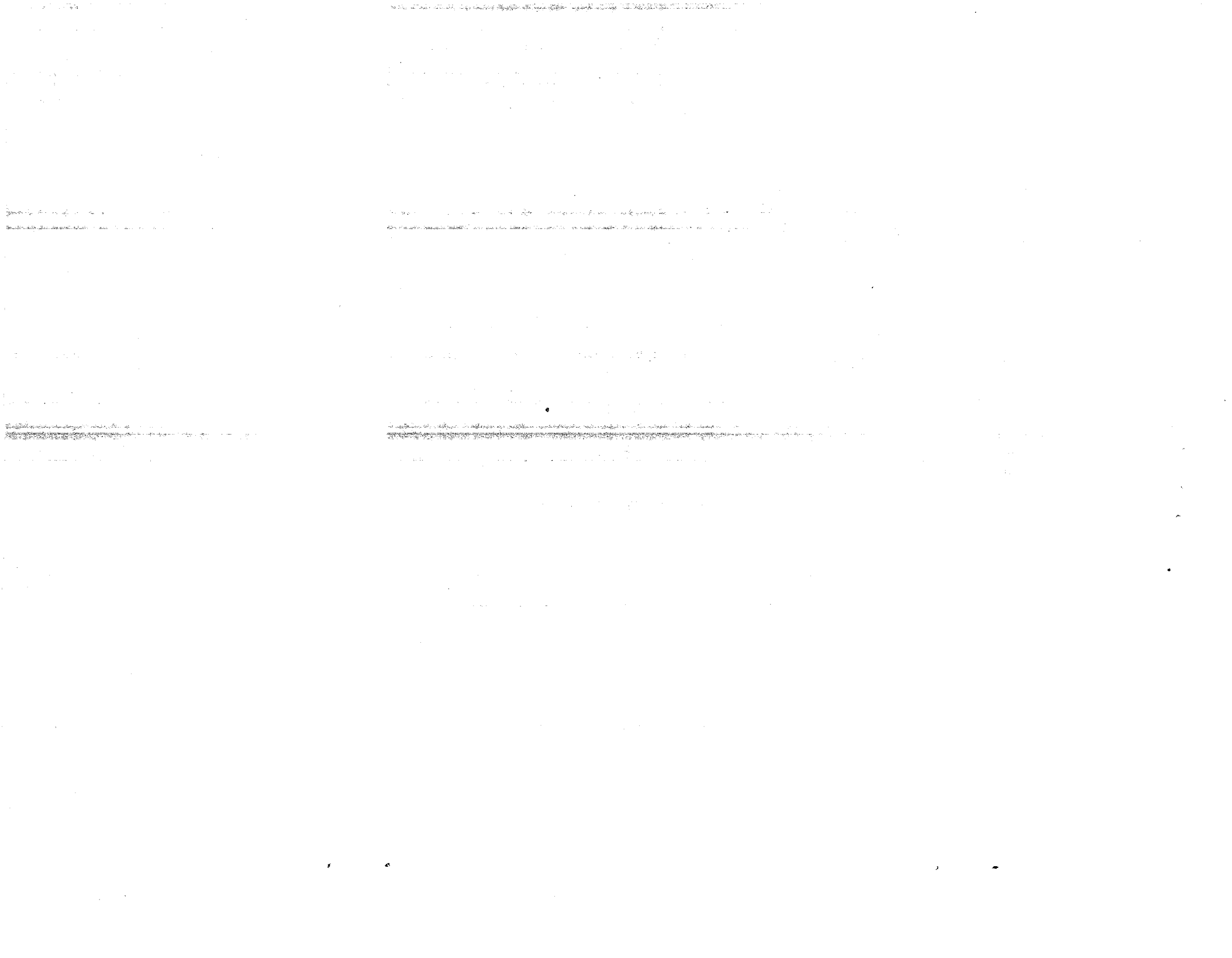
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ABBREVIATIONS

GAO	General Accounting Office
ICNAF	International Commission for the Northwest Atlantic Fisheries
IPHC	International Pacific Halibut Commission
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration

GLOSSARY

Anadromous species	Fish, such as salmon, which spawn in fresh waters, migrate to ocean waters, then return to fresh waters to spawn.
Depletion	Reduction of stock size due to overfishing or any other cause induced by man or a natural cause resulting in substantially reduced yield and requiring a reduction of fishing effort to enable replenishment of the stock.
Domestic fisheries	Fisheries or portions thereof under U.S. jurisdiction or for species taken entirely or predominantly by U.S. fishermen.
Fisheries resources	Fish, shellfish, and other forms of aquatic plant or animal life.
Fishery	The act of or place for commercial and recreational fishing, often with reference to a particular season, species, or group of species.
Fishing effort	The activity of catching or harvesting fish, usually measured as a combination of the amount of gear and time used while fishing.
Gear	Fishing equipment of various types such as nets, lines, and traps.
Landings, commercial	Quantities of fish, shellfish, and other aquatic plants and animals brought to shore and sold.
Marine mammal	Any mammal which is adapted to the marine environment, such as the sea otter, or which primarily inhabits the marine environment, such as the polar bear.
Mesh	One of the openings between the cords of a fishing net.
Stock	A type or species of fish capable of managing as a unit.



COMPTROLLER GENERAL'S
REPORT TO THE CONGRESS

ACTION IS NEEDED NOW TO
PROTECT OUR FISHERY RESOURCES
National Marine Fisheries Service
National Oceanic and Atmospheric
Administration
Department of Commerce

D I G E S T

Many fish species important to the U.S. fishing industry are being depleted through overfishing and/or alteration of coastal areas.

Scientists have concluded that about 25 stocks of fish off the U.S. coasts have been depleted or threatened with depletion and that about 17 commercial fisheries have excess harvesting capacity or have had their harvesting rendered inefficient through restrictive regulations.

Difficulties in management of U.S. fisheries center around

- the common property nature of the resource (almost anyone can harvest fish);
- fragmented jurisdiction involving foreign governments as well as Federal, State, and local entities; and
- lack of precise biological data.

The Congress should consider enacting legislation which would give the Secretary of Commerce authority to impose management measures in fisheries under domestic jurisdiction in case such measures are not implemented by the States in a timely manner. The Congress should also consider amending the Fish and Wildlife Act of 1956, as amended (16 U.S.C. 742c), Fisheries Loan Fund, to establish priorities for its use, including encouraging transfer of vessels from fisheries having excess harvesting capacity.

GAO recommends that the Secretary of Commerce direct the Administrator, National Oceanic and Atmospheric Administration, to

- accelerate fisheries research, giving priority to the data needs of fisheries

management, including the State-Federal Fisheries Management Program;

- issue and implement criteria for the future selection of species to be included in the program; and
- establish for each selected species a timetable for implementing appropriate conservation measures.

Large, modern foreign fishing fleets operating off the U.S. coasts have contributed to overfishing and depletion of many species especially valuable to U.S. fishermen, such as Atlantic haddock, yellowtail flounder, halibut, herring, Bering Sea sockeye salmon, Pacific mackerel, and yellowfin sole.

Fish stocks harvested almost exclusively by U.S. fishermen becoming depleted or threatened by depletion include the inshore American lobster, northern shrimp, and surf clam.

Many U.S. fish species are dependent on coastal areas, particularly estuaries, for

survival. Population growth, economic development, recreational usage, and waste disposal destroy or alter these areas causing increased mortality rates and lower reproduction rates.

Reduced availability of fish brings higher prices to consumers and lower incomes to fishermen. In Bristol Bay, Alaska, the stock of sockeye salmon was reduced to such a low level in May 1974, that the Governor declared the Bay a disaster area.

Efficient development and use of natural resources requires controls to prevent overexploitation and to limit fishing. Traditionally, marine fish resources are common property and States generally have not placed limits on the number of boats allowed to engage in a fishery. This contrasts with most other natural U.S. resources where access is limited. Commercial use of Federal timber is controlled by a program of competitive bidding as

well as limits on the amount that can be harvested.

Because States are reluctant to limit access, conservation efforts in some fisheries involve restricting the use of efficient harvesting methods. In parts of the Pacific salmon fishery with excess harvesting capacity, regulations have been adopted limiting the number of fishing lines per vessel and prohibiting use of more efficient nets and electronic locating devices. Likewise, portions of Atlantic oyster fisheries are subject to regulations which prohibit efficient dredging gear or restrict use of motor powered vessels.

Domestic fisheries management has been uncoordinated and ineffective, causing excess harvesting capacity in some fisheries and depletion of some species. Because fish span or migrate between State boundaries, management has been fragmented and fishery regulations have varied considerably among States.

The National Marine Fisheries Service established the State-Federal Fisheries Management Program in 1971 to achieve coordinated management. Although some improvements have been made, progress has been slow.

The basic problem is the difficulty in obtaining agreement of States to put necessary controls into effect. This can be attributed in part to a lack of biological and economic data on specific species and to the varying State regulatory mechanisms for approval of controls. In some States, fishery administrators have wide latitude to issue regulations. In others they are restricted because legislative approval must first be obtained for many types of regulations.

For a description of State-Federal management activity for the American lobster and the surf clam, see pages 11 to 20.

The Congress has not enacted legislation providing Federal authority to regulate fisheries. Among the proposals, for example, was the Fisheries Conservation Act of 1974. This bill would have given the Department of Commerce authority to promulgate and enforce regulations in the contiguous zone and, in certain circumstances, beyond the 12-mile limit. National Marine Fisheries Service officials believe that such authority is essential. (See p. 21.)

Until the 1960s, international waters off U.S. coasts were fished almost exclusively by U.S. fishermen. Increased worldwide demand for fish and fish products caused other nations to operate in these waters in evergrowing numbers and with increasing intensity. In 1972 over 3 million tons of fish were caught by foreign fishermen off U.S. shores at a distance of 12 to 200 miles; by comparison, U.S. fishermen caught only about 0.3 million tons of fish in this area. About two-thirds of the foreign catch was made by Japan and the Soviet Union.

Not only do foreign fleets affect the economic position of U.S. fishermen adversely, but their massive efforts have contributed to depletion of a number of stocks of fish, including some of the more valuable species.

In January 1975 234 foreign fishing vessels were observed off New England and Mid-Atlantic coasts. A striking feature of the fleet composition was the extremely high incidence of the more efficient vessels including factory ships capable of processing the catch onboard for later transfer to large refrigerated transport vessels. (See photograph on p. 26.) Among the Soviet Union vessels in the area was the new "Super-Atlantiks" class of trawler. (See photograph on p. 27.) For comparison we have included on page 28 a photograph of a typical U.S. side trawler common to the area.

Generally, the executive branch has been opposed to legislation which extended unilaterally jurisdiction of U.S. commercial fisheries. Its position has been to leave the question of fisheries management jurisdiction to resolution by the United Nations at its Law of the Sea Conferences.

The U.S. position at these conferences basically has been the extension of coastal nation jurisdiction over coastal stocks (e.g., haddock) out to 200 miles offshore. It would also provide coastal nations preferential harvesting rights, to the limit of their capacity, within the allowable catch. Other nations would be entitled to harvest the remaining allowable catch. Coastal nations from whose waters anadromous species (e.g., salmon) originate would also have management jurisdiction and preferential rights over such stocks throughout their range on the high seas.

Highly migratory species (e.g., tuna) cover vast distances through the waters off many nations. The U.S. proposal, therefore, provides for international or regional management of such stocks. (See p. 34.)

The United Nations conducted Law of the Sea Conferences in 1958 and 1960. In March 1975 GAO reported to the Congress 1/ on the third Law of the Sea Conference held at Caracas, Venezuela, in 1974. A fourth session was held in Geneva, Switzerland, in 1975. No agreement on fisheries management in international waters was reached. Another session is planned for 1976.

1. The first part of the document discusses the importance of maintaining accurate records of all transactions. It emphasizes that proper record-keeping is essential for ensuring the integrity and reliability of financial data. This section also outlines the various methods and tools used to collect and analyze data, highlighting the need for consistency and precision in all reporting.

2. The second part of the document focuses on the role of technology in modern accounting and finance. It explores how digital tools and software have revolutionized the way businesses manage their finances, from automating routine tasks to providing real-time insights into financial performance. This section also addresses the challenges associated with data security and privacy in a digital environment.

3. The third part of the document discusses the impact of regulatory changes on financial reporting. It examines how new laws and standards have shaped the way companies disclose financial information to investors and other stakeholders. This section also highlights the importance of staying up-to-date on regulatory developments to ensure compliance and avoid potential legal consequences.

4. The fourth part of the document addresses the role of ethics in financial reporting. It emphasizes that transparency and honesty are fundamental to building trust with investors and other stakeholders. This section also discusses the consequences of unethical behavior, such as financial fraud, and the importance of implementing strong internal controls to prevent such incidents.

5. The fifth part of the document discusses the future of financial reporting. It explores emerging trends, such as the use of artificial intelligence and blockchain technology, and how these innovations may reshape the way financial data is collected, analyzed, and reported. This section also addresses the challenges of integrating new technologies into existing financial systems.

6. The sixth part of the document discusses the importance of financial literacy for individuals and businesses alike. It emphasizes that understanding financial concepts and data is essential for making informed decisions about investments, savings, and overall financial health. This section also provides resources and tips for improving financial literacy skills.

7. The seventh part of the document discusses the role of financial reporting in corporate governance. It highlights how transparent financial reporting helps investors and other stakeholders assess the performance and risks of a company, thereby promoting accountability and responsible management. This section also discusses the importance of clear communication and disclosure in building trust with investors.

8. The eighth part of the document discusses the impact of global economic trends on financial reporting. It examines how factors such as inflation, interest rates, and currency fluctuations can affect a company's financial performance and, consequently, its financial reporting. This section also provides insights into how companies can adapt to these challenges and maintain accurate financial records.

9. The ninth part of the document discusses the role of financial reporting in social responsibility. It highlights how companies can use their financial reports to disclose information about their environmental, social, and governance (ESG) performance, thereby promoting transparency and accountability to a wider range of stakeholders. This section also discusses the importance of integrating ESG factors into financial reporting.

10. The tenth part of the document discusses the importance of financial reporting in the context of the global financial system. It highlights how accurate and reliable financial data is essential for maintaining the stability and integrity of the global financial markets. This section also discusses the challenges of ensuring consistency and comparability in financial reporting across different countries and regions.

CHAPTER 1

INTRODUCTION

Fish--a renewable but limited resource, sensitive to harvesting pressures and to natural and man-induced environmental changes--are an important national resource. Their harvest involves major commercial and recreational industries.

In 1974 U.S. commercial landings totaled 4.9 billion pounds, worth about \$900 million to fishermen and \$3 billion at the retail level. In 1970, the most recent year for which information is available, about 9.4 million saltwater sports fishermen caught 1.6 billion pounds, the equivalent of one-third of that year's commercial landings.

Rising U.S. demand for edible fish has not been matched by domestic supply. From a record catch of 3.3 billion pounds in 1950, total U.S. landings declined in the 1960s and early 1970s to 2.4 billion pounds in 1974. Domestic consumption, meanwhile, has been steadily increasing and in 1974 reached about 6.6 billion pounds. To make up the difference between domestic catch and consumption, the United States, in 1974, imported 4.2 billion pounds of edible fish. This resulted in a fishery balance of payments deficit of about \$1.3 billion.

In the 1960s, worldwide demand for fish rose dramatically and fishing activity in international waters (beyond the 12-mile limit) off the U.S. coast intensified. Large foreign fishing fleets began to harvest vast quantities of fish in these waters, historically considered the domain of U.S. fishermen. In addition, certain species caught by U.S. fishermen primarily within U.S. waters were subject to intense fishing effort. As a result, many fish stocks, including some of the more important edible species consumed in the United States, were severely reduced.

This report discusses domestic and international efforts to manage fisheries.

CONGRESSIONAL CONCERN

The Fish and Wildlife Act of 1956 (Public Law 84-1024) recognized that U.S. fish resources made a material contribution to the national economy and food supply and that such resources were a living, renewable form of wealth capable of being maintained and greatly increased with proper management. The Congress declared that the act's provisions be administered to stimulate the development of a strong, prosperous fishing industry.

The Marine Resources and Engineering Development Act of 1966 (Public Law 89-454), also established as national policy the need to rehabilitate U.S. commercial fisheries.

More recently, Senate Concurrent Resolution 11, introduced in February 1973 and adopted by both Houses of the Congress, declared that it was the policy of the Congress that all necessary support be provided to strengthen and rehabilitate the sagging U.S. fishing industry.

In February 1974 the Senate adopted Senate Resolution 222, authorizing a National Ocean Policy Study. Among other things, the study aims to (1) establish policies to achieve full utilization and conservation of living ocean resources and (2) recommend solutions to problems in marine fisheries and their management, rehabilitation of U.S. fisheries, and future international negotiations on fisheries.

In addition to the above, numerous bills, including H.R. 200 in the 94th Congress, have been introduced to extend U.S. jurisdiction over fisheries to 200 miles off the U.S. coast. These bills express the concern of individual Congressmen over the extensive fishing efforts of foreign fleets off our coast and their impact on the domestic industry.

NATIONAL MARINE FISHERIES SERVICE

The National Marine Fisheries Service (NMFS) is the principal Federal agency responsible for carrying out programs relating to the U.S. fishing industry. NMFS was established pursuant to Reorganization Plan No. 4 of 1970 as part of the National Oceanic and Atmospheric Administration (NOAA), Department of Commerce.

The basic mission of NMFS is to protect and promote the wise and full use of marine fisheries resources. Research programs comprise the largest segment of NMFS activities. Basic research is designed to better understand living marine resources and the environmental quality essential for their existence. Applied research provides information on such matters as the availability of fish, the design and testing of fishing gear, and the properties and methods of handling and processing fish. NMFS also performs marketing and economic research, collects and disseminates fishery statistics, provides financial assistance to vessel operators, and enforces international fishery agreements.

Policies and procedures are established at NMFS headquarters in Washington, D.C. Field units, located throughout the country, consist of five regional offices, seven fisheries centers, and three fisheries product utilization centers. Numerous small laboratories report through these major components.

As of June 30, 1975, NMFS had 1,701 permanent staff positions--371 at headquarters, 417 at the 5 regional offices, and 913 at the fisheries centers and other laboratories around the country. NMFS received appropriations of \$50 million, \$55 million, and \$61 million in fiscal years 1973, 1974, and 1975, respectively.

SCOPE OF REVIEW

Our review concentrated on NMFS programs and activities to manage the Nation's fishery resources. We reviewed literature on fishery management activities and problems and examined legislation indicating congressional interest in U.S. fisheries. We interviewed NMFS personnel involved in fisheries management, economic analysis, biology, and program administration and representatives of the fishing industry, coastal States, and recognized authorities from universities and other concerned groups.

The review was performed in all five NMFS regional offices and in many of its research laboratories. We visited NMFS' headquarters in Washington, D.C., and NMFS installations in St. Petersburg, Florida; Gloucester and Woods Hole, Massachusetts; Oxford, Maryland; Beaufort, North Carolina; Seattle, Washington; and Juneau, Alaska.

CHAPTER 2

PROBLEMS OF FISHERIES MANAGEMENT

Many fish species important to the U.S. fishing industry are being depleted through overfishing and/or alteration of coastal areas. In addition, many fisheries have excess harvesting capacity (often referred to as overcapitalization)--more men, vessels, and gear than necessary to harvest efficiently--which often leads to overfishing. Scientists have concluded that about 25 stocks of fish off the U.S. coasts have been depleted or threatened with depletion and have indicated that about 17 fisheries have excess harvesting capacity or have had their harvesting process rendered inefficient through restrictive regulations.

Difficulties encountered in fisheries management have centered on (1) the resource's common property nature (almost anyone can harvest fish), (2) fragmented jurisdiction involving foreign governments as well as Federal, State, and local entities, and (3) lack of precise biological data.

DEPLETION OF FISH STOCKS

Fish stocks can be depleted by excessive harvesting pressures and natural and man-induced environmental changes. To conserve a species, a sufficient number must be allowed to mature and reproduce.

Large modern foreign fishing fleets, some subsidized by their governments, operating off U.S. coasts and using highly sophisticated fishing technology, have contributed to overfishing and depletion of many species of fish. Species depleted or threatened with depletion include Atlantic haddock, yellowtail flounder, halibut, herring, Bering Sea sockeye salmon, Pacific mackerel, halibut, and yellowfin sole. These species include some of the more valuable fish harvested by U.S. fishermen. Among the species almost exclusively harvested by U.S. fishermen that are becoming depleted or threatened by depletion are the inshore American lobster, northern shrimp, and surf clam.

Environmental changes can also affect fish stocks. Many important domestic fish species are dependent on coastal areas, particularly estuaries, for survival. Such species account for an estimated 50 percent of U.S. domestic landings. Population growth, economic development, recreational use, and waste disposal can destroy or alter these areas and adversely affect fish growth, mortality rates, and reproduction rates. Although there is much to be learned about environmental effects on fish, extensive damage to fish

habitat has been identified. Following are examples of man-made changes to fish habitats:

- Drainage of 14 million acres of wetlands during the past 20 years.
- Closure of millions of acres of domestic shellfish producing areas because of contaminated water.
- Alteration and loss of considerable shrimp habitats through dredging and filling operations in South Atlantic coastal areas.
- Dam construction making about 62 percent of the Columbia River tributaries inaccessible to salmon and steelhead trout.

Depletion leads to economic problems for both consumers and fishermen. It results in reduced availability of fish which leads to higher prices to the consumer and lower incomes to fishermen. For example, the stock of sockeye salmon in Bristol Bay, Alaska, was reduced to such a low level that the Governor, in May 1974, declared the Bay a disaster area and reduced fishing to a very low level. Individuals who relied on this fishery for a livelihood had to be assisted because of reduced income and/or employment.

EXCESS HARVESTING CAPACITY

In many fisheries there are more vessels, fishermen, and gear than necessary to harvest a species' maximum sustainable yield ^{1/}. As a result, some harvesting segments of the commercial fishing industry have experienced continual difficulty over the past two decades. When commercial harvesting becomes sufficiently profitable a fishery attracts additional fishermen. Unless appropriate conservation measures are applied, the unmanaged flow of men and vessels into the fishery can result in unproductive use of human and economic resources, increased production costs and consumer prices, reduced earnings, and the inevitable depletion of fish resources.

In 1972 scientists indicated that about 17 fisheries of particular interest to U.S. fishermen had excess harvesting

^{1/}Maximum sustainable yield is the scientific term describing the balance between catching a certain number of fish of a particular species and leaving the necessary number to allow propagation.

capacity or inefficient vessel operation because of restrictive regulations. Examples included the yellowfin tuna, Alaskan king crab, and Pacific salmon. Determining and resolving the problem of excess harvesting capacity for specific species is complicated by a number of factors, including use of vessels for harvesting more than one species, large species population fluctuations, and inadequate controls of foreign fishing effort.

Views of national groups

A 1973 report to the President and the Congress by the National Advisory Committee on Oceans and Atmosphere stated that conservation is not realistically achievable solely by biological management. Unless there is a limit to the fishing effort, an inherent surge to overcapitalization (excess harvesting capacity) will soon make the fishery marginal. Further, fisheries that are already marginal can only be restored through such means. The Committee also noted that in implementing control measures, due regard must be given to historic rights and social consequences.

The National Commission on Productivity in 1973 also noted inadequate control over fishing effort and indicated that, as a result, productivity of labor and capital used in harvesting fish had declined in recent years.

DIFFICULTIES IN MANAGING FISHERIES

We contacted a cross section of State, industry, academic, and recreational officials and prepared a list of the management problems they noted. (See app. I.) Among the more important problems cited were the common property nature of fisheries resources, fragmented jurisdiction, and a lack of precise biological data.

Common property

Efficient development and use of natural resources requires controls to prevent overexploitation and to limit the amount of harvesting effort. In fisheries, generally there have been no such controls. Traditionally, in this country marine fish resources have been common property available to all and States generally have not limited the number of boats allowed to engage in a fishery. This contrasts with most other natural resources where access is limited. For example, commercial use of Federal timber is controlled by a program of competitive bidding as well as by limits on the amount that can be harvested.

Because States are reluctant to limit access, conservation efforts in some fisheries involve restricting the use of efficient harvesting methods. For example, in parts of the Pacific salmon fishery with excess harvesting capacity, regulations have been adopted limiting the number of fishing lines per vessel and prohibiting use of more efficient nets and electronic locating devices. Likewise, portions of Atlantic oyster fisheries are subject to regulations prohibiting efficient dredging gear or restricting use of motor-powered vessels.

A 1971 Department of Commerce publication noted that progress in developing the harvesting segment of U.S. fisheries is limited by a maze of State and local government laws. Much of the legislation was passed without considering biological or economic implications or was political in nature, resulting from conflicts between fishermen.

Fragmented jurisdiction

Fisheries off the U.S. coasts are located in three ocean zones: the territorial sea, which extends to 3 miles off the coastline; the contiguous zone, covering 3 to 12 miles offshore; and the high seas or international waters, extending beyond 12 miles. Generally, individual States have jurisdiction over the territorial sea bordering their coastlines which, in some instances, had been delegated to local governing units (cities, towns, counties). In the other two zones, a State may enforce regulations against its own citizens but not those of other States.

The Federal Government has jurisdiction over the contiguous zone and U.S. vessels operating on the high seas. However, except for marine mammals, endangered species, and species covered by international agreements, clear authority to manage U.S. fishing activity in these zones has not been assigned to a specific Federal agency. Fisheries on the high seas are open to all nations. In some instances, certain fisheries are managed through international agreements, but membership in such agreements is voluntary and compliance is difficult to enforce.

Since many species span or migrate across the three zones, jurisdiction is fragmented. In 1969 the Commission on Marine Science, Engineering and Resources analyzed fishery problems and concluded that there was a mass of conflicting, overlapping, and restrictive regulations in the United States. Responsibility was noted as being hopelessly splintered. The Commission stated that jurisdiction over domestic

fishery management and development had been largely in the hands of States, with ill-defined lines of authority between States and the Federal Government.

Lack of precise data

Obtaining the data necessary for fishery management is a complex process. It involves determining (1) the abundance, distribution, and condition of stock; (2) the effects of various levels of fishing; and (3) the effects of environmental changes. In most cases, it is impossible to develop complete scientific proof of fishery conditions or to precisely determine how much fish can be harvested annually without depleting the stock. As a result, decisionmakers have been reluctant to take timely conservation action.

As one scientist noted, a far greater degree of precision is expected from research than is reasonable, even after lengthy investigation. He stated that the belief that controls should not be applied until overfishing is conclusively established almost guarantees that timely management measures will not be applied.

Economic and social data, also critical for management, are often lacking.

CHAPTER 3

EFFORTS TO IMPROVE MANAGEMENT

OF DOMESTIC FISHERIES

Domestic fisheries management, primarily the States' responsibility, has historically been uncoordinated and ineffective. This has resulted in excess harvesting capacity in some fisheries and depletion of certain species. Because fish are common property and span or migrate between various State jurisdictional boundaries, management has been fragmented and fishery regulations have varied considerably among the States. To achieve coordinated management NMFS, in 1971, established the State-Federal Fisheries Management Program. Since its inception, some improvements have been made but progress has generally been slow.

Other efforts to improve domestic management include actions by individual States, redirection of Federal financial assistance programs to vessel operators, and development of a national fisheries plan.

STATE-FEDERAL FISHERIES MANAGEMENT PROGRAM

In 1969 the Commission on Marine Science, Engineering and Resources recommended Federal encouragement of interstate cooperation for regulation and conservation, and enactment of improved State laws for more efficient fisheries development. In response to the recommendation, NMFS, in October 1971, established a cooperative management program with the States.

The program's goal is to manage fisheries by (1) creating a mechanism for resolving problems created by fragmented jurisdiction and the common property and migratory nature of fish and (2) developing and implementing fisheries management plans to insure effective conservation and obtain optimum economic, recreational, and social benefits. Under the program, plans are developed cooperatively by the States, the Federal Government, and other interested parties.

Work on a plan's development is carried out by State-Federal management committees (now referred to as Regional Marine Fisheries Councils). Members include State fishery administrators concerned with particular species and NMFS regional directors. Subcommittees composed of technical and scientific experts from States, NMFS, and the private sector assist in plan development and implementation.

The program budget for fiscal year 1975 was \$1.4 million, or about 3 percent of the total NMFS budget. NMFS officials expect a funding level of \$1.7 million a year for fiscal years 1976 and 1977. In addition to program administration, funds have supported research projects conducted in cooperation with States, universities, and interstate marine fisheries commissions.

Program status

During 1972 program activity involved discussions between NMFS and officials of 21 States on species to be cooperatively managed, establishment of a lobster management committee, and award of a surf clam research contract. By June 1973 State-Federal management committees were established for six species, including the American lobster, surf clam, northern Atlantic shrimp, Dungeness crab, Gulf menhaden, and the South Atlantic shrimp.

NMFS recognized the need for high-level State representation on the management committees to examine and make decisions on fisheries management policy issues. To accomplish this, beginning in late 1973 and ending in 1975, the State-Federal management committees were abolished and five Regional Marine Fisheries Councils were created; i.e., New England, South Atlantic, Gulf, Western (California, Oregon, and Washington), and Alaskan.

Through April 1975 comprehensive management plans, including a timetable for implementing appropriate conservation measures, had not yet been fully developed for any of the above species. Further, there had been only limited progress in implementing proposed conservation measures.

The major problem, basic to the program itself, involves the difficulty in obtaining agreement of States to implement necessary controls. This can be attributed, in part, to a lack of biological and economic data on specific species and to the varying State regulatory mechanisms which must approve controls--in some States fishery administrators have great flexibility in issuing regulations while in others they are restricted because legislative approval must first be obtained for many types of regulations.

A description of State-Federal management activity for the American lobster and the surf clam follows. Discussion of the other four species is contained in appendix II.

American lobster

The American lobster is being seriously overfished, resulting in depletion in the inshore area (within the 12-mile fisheries zone) from Maine to Cape Cod Bay, Massachusetts, which has historically produced over 90 percent of U.S. landings. Scientific studies have shown that existing legal minimum-size limits--considered inadequate--permit most females to be caught before they can spawn. A study in one State concluded that nearly all available legal-size lobsters are caught each year.

Although lobster fishing effort has increased substantially, landings in the inshore area have declined. For example, as shown on the following page, landings in Maine, the leading producer State, dropped by about 20 percent since 1968 while the price per pound nearly doubled. During this same period, the number of lobster traps in Maine increased and, according to a State official, there are more than twice as many traps as necessary for efficient harvesting. Scientists also point out that wastage--lobsters caught in traps which cannot be recovered--is inevitable and that it increases with additional harvesting capacity. The director of a large lobster fishermen's association indicated that increasing numbers of fishermen and gear are causing excessive competition for available lobster supplies and could eventually result in deterioration of the industry.

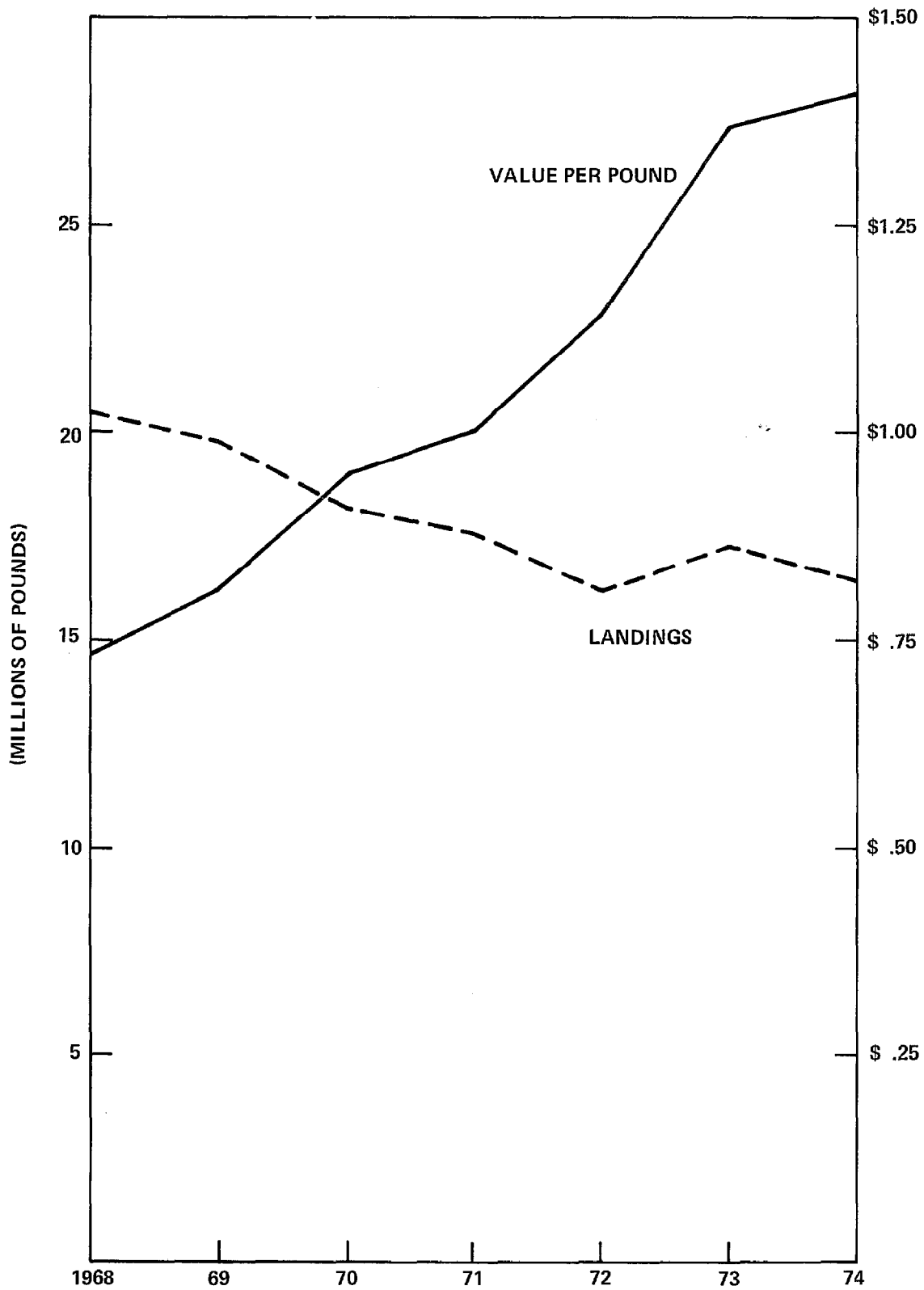
Initiation of cooperative lobster management

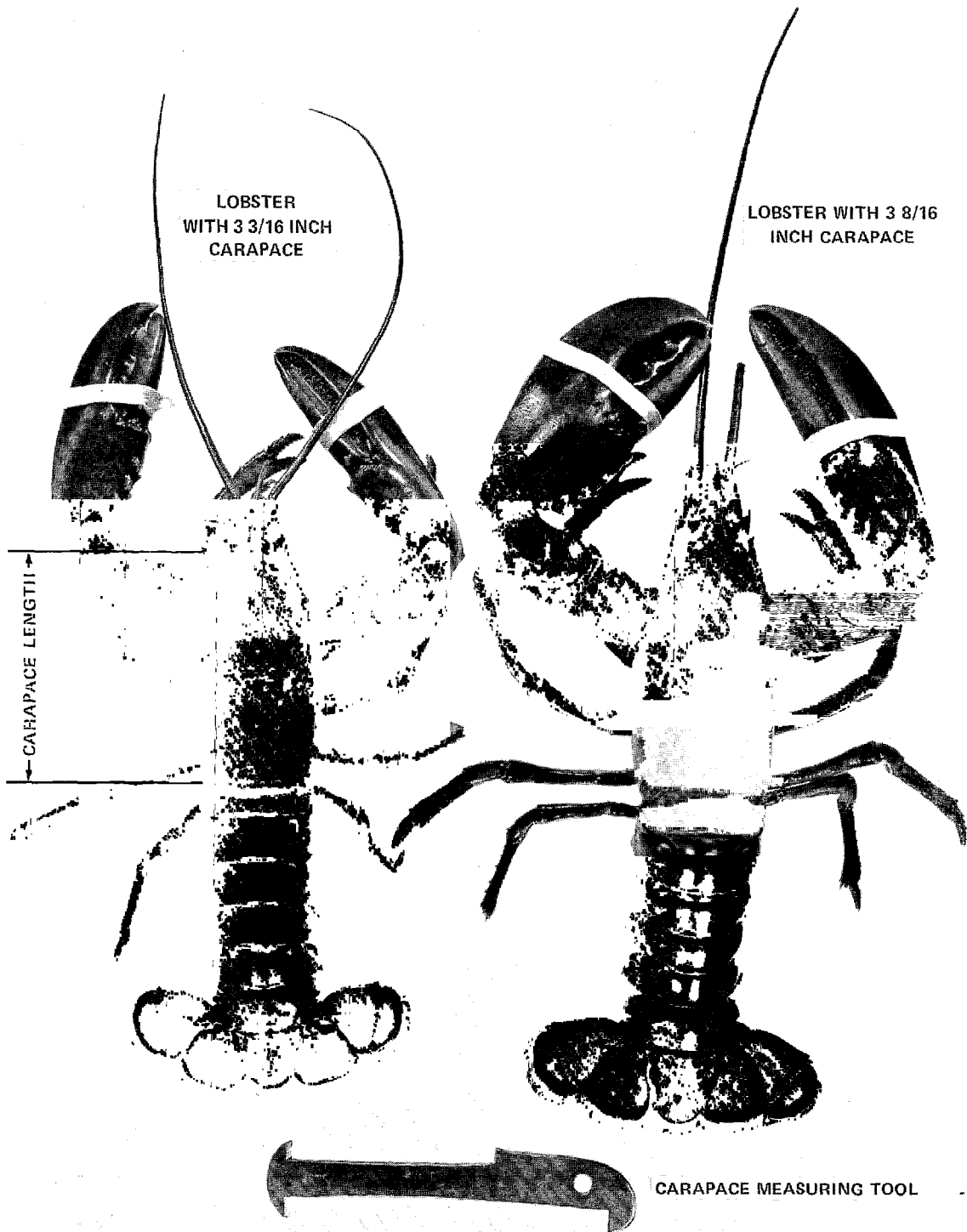
To halt declines in lobster stocks, State and Federal officials met in January 1972 to discuss development of a cooperative lobster management plan. A management committee for lobster, composed of an NMFS official and fishery administrators from the 11 coastal States from Maine to North Carolina, was established in August 1972. The committee adopted a management plan which included 10 precepts, the more important being:

--Establishing a uniform minimum legal carapace length of 3-1/2 inches, which was considered to be the minimum needed to achieve optimum economic and biological objectives. (Identification of the carapace and differences in sizes are shown on p. 13.)

--Developing a program to effectively control entire fishing effort.

AMERICAN LOBSTER LANDINGS AND VALUE PER POUND IN MAINE





CARAPACE LENGTH

Distance From Rear Of Eye Socket Along A Line Parallel
To The Center Line Of The Juncture Of The Abdomen And Carapace.

The plan provided for establishing (1) reciprocal enforcement among States, (2) licensing and reporting requirements for fishermen, and (3) escape vents in traps for undersized lobsters. The plan prohibited (1) landing of lobster meat, (2) notching $\frac{1}{16}$ of female lobsters, (3) possession of egg-bearing lobsters, (4) a maximum-size limit, and (5) possession of detached lobster parts.

Existing legal minimum-size limits for the 11 States before plan adoption were:

<u>Number of States</u>	<u>Minimum carapace size (inches)</u>
4	3 $\frac{3}{16}$
4	3 $\frac{2}{16}$
1	3 $\frac{1}{16}$
2	no regulation

Limited progress in plan implementation

Except for prohibiting possession of egg-bearing lobsters which all States adopted, implementation of the lobster management plan has been slow. This has been due to difficulties, anticipated or encountered by State administrators, in obtaining acceptance of the proposed regulations by fishermen and/or State legislatures, lack of data, and reconsideration of the need for certain regulations in some States.

For example, although the management committee for lobster agreed that a 3- $\frac{1}{2}$ -inch minimum carapace was necessary to achieve optimum management goals, it concluded that implementation was not feasible for at least several years. An increase in the minimum-size lobster which could be legally harvested would initially serve to reduce supplies, and the committee recognized that it would be extremely difficult to gain the support of industry and legislative officials for such action. Accordingly, the committee set a 3- $\frac{3}{16}$ -inch interim goal for all States by January 1, 1976.

Two States subsequently adopted the 3- $\frac{3}{16}$ -inch minimum size. However, legislatures in three States defeated the

1/Making a V-shaped cut in the tail flippers for identification purposes. It was found that such cuts make the lobster vulnerable to certain diseases.

proposal. Existing minimum-size limitations, 3 years after committee adoption of the plan, are shown below

<u>Number of States</u>	<u>Minimum carapace size (inches)</u>
6	3 3/16
3	3 2/16
1	3 1/16
1	no regulation

The original committee proposal of a 3-1/2-inch minimum carapace was based on research conducted in Maine waters. Several States have questioned the applicability of this study to conditions in their States and are doing additional research in the area.

None of the States have adopted a plan to effectively control lobster fishing effort. For example, since adoption of the lobster management plan, numerous bills to limit the number of licenses and amount of lobster gear have been submitted to the Maine State legislature but none have been enacted. According to a State official, most fishermen were opposed to certain provisions of these bills. The legislature did, however, impose a moratorium on issuance of additional lobster licenses between May 15, 1974, and December 31, 1975. Passage of the moratorium was prompted by a challenge to a Maine statute requiring State residency of 3 years for license qualification. About 10,500 lobster licenses were issued before the May 15, 1974, deadline, a substantial increase over the 7,894 licenses issued for the 1973 season.

Massachusetts issued about 1,280 commercial lobster licenses in 1974. In July 1975 Massachusetts enacted legislation placing a moratorium on the number of inshore commercial lobster licenses issued in the State. The limit was set at 1,300, with an allowance for a 10-percent increase under certain circumstances. The legislation also provides for a lobster fishery study to develop rules and regulations for annual license limits and to control the amount of gear that can be used.

Surf clam

This is an example of an essentially unregulated fishery, where lack of data and inaction may be contributing to over-fishing and possible depletion.

The surf clam fishery extends along the coasts of New York, New Jersey, Delaware, Maryland, and Virginia. It extends through all three jurisdictional zones (0 to 3 miles, 3 to 12 miles, and beyond the 12-mile limit), with most of the harvest made outside the 12-mile limit. As shown on the following page, surf clam landings have increased considerably in recent years and currently the species represents over 70 percent of total clam landings.

Initiation of cooperative surf clam management

Concern about depleting the inshore surf clam, generally located within the 3-mile territorial zone, led New Jersey industry members in September 1971 to recommend strong conservation measures within the State. As a result, in November 1971, New Jersey requested that the surf clam be considered for participation in the State-Federal Fisheries Management Program. The matter was discussed with the appropriate States in February 1972 but a State-Federal management committee was not formed until June 1973. This delay was partly due to the concentration of the fishery at that time in New Jersey and to State and NMFS involvement in management programs for the lobster and Northern shrimp. The committee established as its goals the conservation of surf clam resources and protection of the industry.

According to a State fisheries commissioner, if each of the five States in the committee adopted similar regulations, control could be effected. He indicated, however, that this would be difficult to achieve.

Little coordinated action has been taken to assure surf clam conservation. The States agreed in September 1974 to establish a mandatory system for collecting statistical data on fishing effort and fish mortality. As of April 1975, such a system had not been developed and there was no agreement among States on management measures limiting fishing effort or landings.

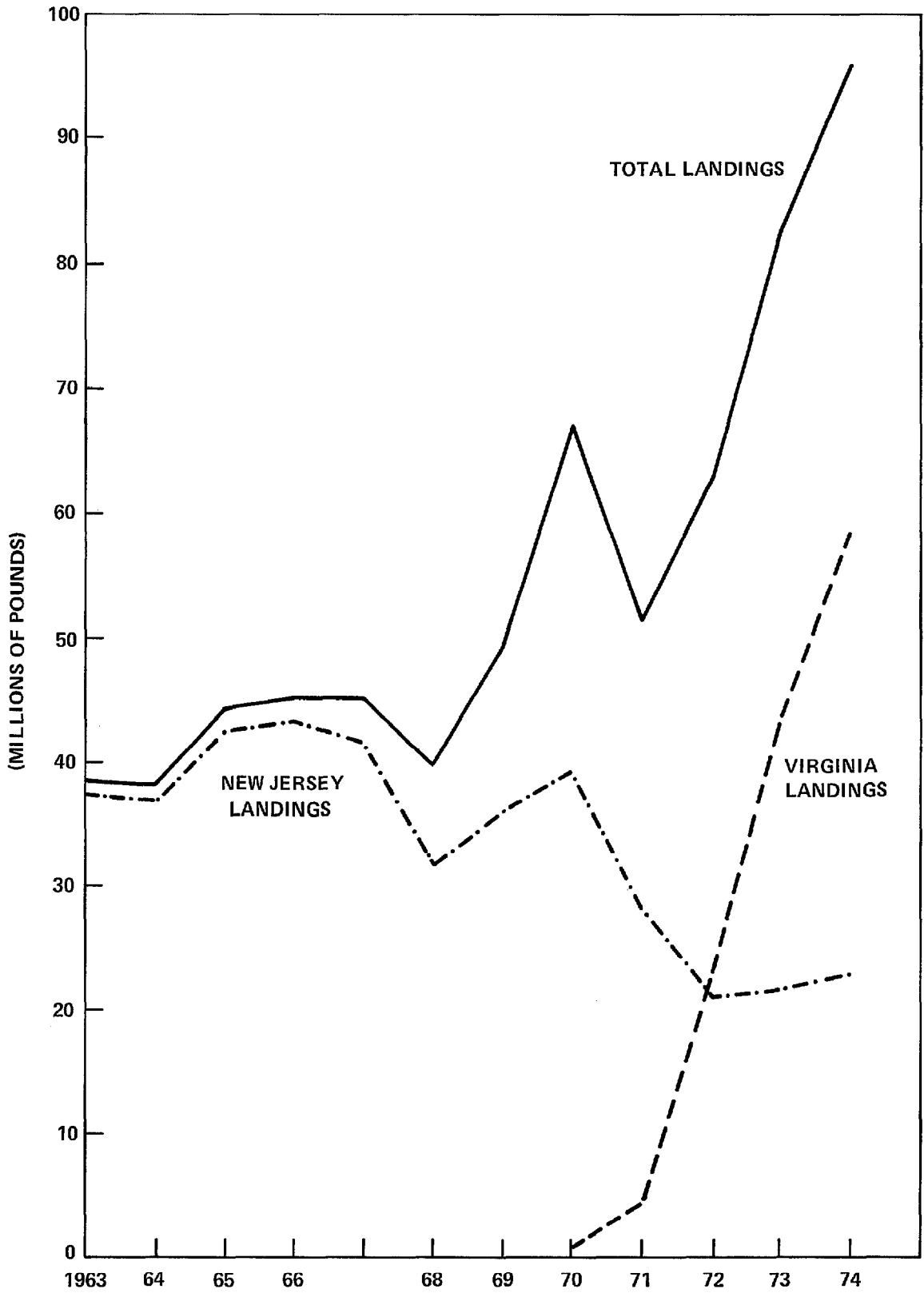
Problems limiting progress

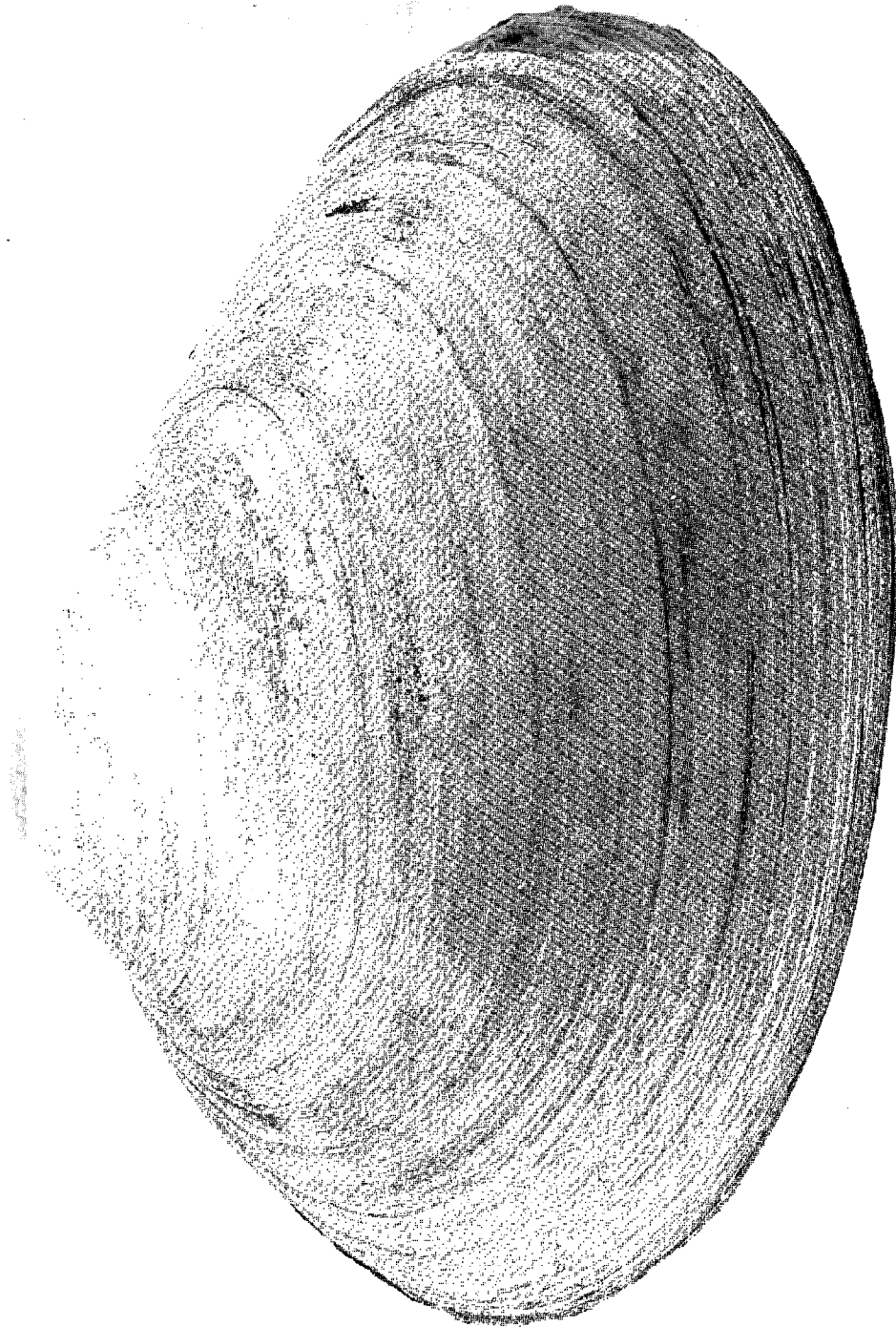
Slow progress in achieving coordinated management in surf clam fishery is attributable principally to funding and research difficulties, fragmented jurisdiction, and the common property nature of the species. These are discussed below.

Funding and research support difficulties

In response to the concern of fishermen regarding depletion of the inshore surf clam population in New Jersey, NMFS, in June 1972, initiated a research project with a university to study

TOTAL SURF CLAM LANDINGS





TYPICAL SURF CLAM ABOUT 6 INCHES IN WIDTH

the situation. The results, accepted by the surf clam management committee in May 1974, indicated that based on the 1971 harvest rate there was only a 5-year supply of clams in a major portion of the New Jersey inshore area. The State responded by closing two sections of this area effective June 10, 1974, about 2 years after the study was initiated. The closings will enable researchers to accumulate additional data on population rates and other aspects of surf clams in areas both closed and open to commercial fishing.

Although there are indications that overfishing and depletion of surf clam stocks are taking place, biologists have been unable to conclusively prove this. Accordingly, the fishery continues to be essentially unregulated. Indications of overfishing provided by biologists and fishermen include an estimated 50-percent decline in the New Jersey offshore clam resource during the last decade, record high harvests in 1974, decreased harvests per unit of fishing effort in Virginia, and the belief that the surf clam resource off Virginia is declining.

Additional research results made available in April 1975 also indicate that overfishing may be occurring. Biologists estimated that the 96 million pounds of surf clams landed in 1974 was about double the amount that should have been landed to preserve the maximum sustainable yield. After subsequently reviewing this research, NMFS biologists disagreed as to whether it adequately supported a conclusion that the surf clam was being overfished. However, members of a technical committee, representing the five States principally concerned with the surf clam, agreed that the resource had been overfished. While work is continuing on developing better information, there has been little agreement on conservation measures. In this regard, a State official informed us that it was politically impractical for a State to adopt regulations without solid research support. NMFS officials stated that lack of information about the fishery is partly due to insufficient State and NMFS funding of surf clam research in previous years.

Fragmented jurisdiction

A State fisheries commissioner explained that implementation of management regulations is complicated by the jurisdictional problem. Most surf clams are harvested from 5 to 15 miles offshore and no Federal agency has authority to control surf clam harvesting in this area. Further, no one State can effectively regulate the fishery. If one State adopted regulations and another did not, fishermen probably would land their catch in the State without regulations.

Common property

A surf clam industry official explained that the common property nature of the resource is also a problem. He noted that more and better vessels were being added to the fleet and that fishing effort is increasing rapidly. Further, some fishermen are more interested in maximizing their harvests than in conserving the resource. He stated that increased fishing effort is not likely to diminish even in the face of decline in the resource. Fishermen and processors will merely work harder to maintain production levels.

Species selection

Established criteria are needed for selection of species in the State-Federal Fisheries Management Program. An NMFS official said initial selections were made on a judgment basis for a variety of reasons, including a desire for geographical distribution, type of management problems, and willingness of States to participate in the cooperative management of certain species. Program officials agreed selection criteria were needed and said they were being developed. As of October 1975, NOAA had not established such criteria.

Model fisheries management legislation

The NMFS State-Federal Fisheries Management Program sponsored a research project to prepare model State legislation for fisheries management. On June 17, 1974, NMFS awarded an \$81,000 contract to the Council of State Governments for this purpose. In its contract proposal, the Council noted the increasing complexity of fisheries management and the need for a legislative and organizational framework permitting the most efficient realization of fisheries management objectives on both an intra- and interstate basis. In June 1975 the Council furnished NMFS a legislative model to be used as a guide for States in the adoption of regulations leading to more efficient management of fisheries resources.

An improved legislative and organizational framework, if adopted by each State, would enhance cooperative management efforts, but not resolve all major domestic fisheries problems. Because of varying interests, achieving State agreement to implement conservation measures in a given fishery will continue to be difficult.

Need for increased Federal authority

Legislation providing Federal authority to regulate fisheries has been introduced, but has not been enacted. Among the proposals was the Fisheries Conservation Act of 1974 (H.R. 15619), introduced in the House on June 25, 1974. This bill would have given the Department of Commerce authority to promulgate and enforce regulations in the contiguous zone and, in certain circumstances, beyond the 12-mile limit.

NMFS officials believe that authority to promulgate and enforce regulations is essential to (1) facilitate development and implementation of the State-Federal Fisheries Management Program, (2) provide adequate funds to develop and implement cooperative management plans, and (3) control access to fisheries. The National Advisory Committee on Oceans and Atmosphere in its second annual report, dated June 29, 1973, supported the need for this regulatory authority. The Committee noted that Federal authority to regulate U.S. fishing vessels operating beyond the territorial sea would help resolve State conflicts and encourage cooperation.

OTHER EFFORTS TO DEAL WITH PROBLEM OF EXCESS HARVESTING CAPACITY

Under the State-Federal Fisheries Management Program, no provisions were agreed upon or implemented regarding reducing excess harvesting capacity. However, the States of Alaska and Washington have enacted legislation to deal with this problem. On April 27, 1973, Alaska established a program to regulate entry to commercial fisheries. The legislation is designed to stabilize the amount of gear used in each fishery at levels which permit (1) a fair return on investment, (2) effective management of the resource, and (3) upgrading of fishing vessels and gear. Alaska had found that commercial fishing had reached a level that impaired or threatened the economic welfare, overall efficiency, and sustained yield management of the State's fisheries.

The State of Washington, on May 6, 1974, enacted legislation limiting the number of commercial salmon licenses and vessel permits. This State had found an overabundance of commercial salmon fishing gear, which contributed to overfishing the resource. This was economically wasteful and adversely affected conservation programs. The legislation was designed to preserve the salmon and meet the conflicting demands of sports and commercial fishermen and Indian rights to salmon.

Redirection of financial assistance programs.

In a prior report to the Congress 1/, we concluded that NMFS financial assistance programs were being administered in a manner that limited progress in improving the efficiency and competitiveness of the U.S. fishing fleet. For example, assistance was being provided to vessel operators enabling them to maintain or add vessels to fisheries considered by NMFS to have excess harvesting capacity. We recommended that priorities be established for directing program funds. In response to our report, NMFS began to redirect its financial assistance programs. Assistance will no longer be provided to operators of vessels in fisheries clearly having excess harvesting capacity unless it can be shown to the satisfaction of the Director, NMFS, that such assistance is warranted.

NMFS also declared a moratorium on the use of the Fisheries Loan Fund--a revolving fund for long-term loans to fishing-vessel operators unable to obtain financing elsewhere. This action was taken to permit replenishment of the Fund through loan collections and to provide time to redirect its use. Presently, there are no priorities for use of the Fund. NMFS has drafted proposed legislation which would authorize the Secretary of Commerce to prescribe the conditions for making loans from the Fund; however, there is no mention of specific priorities.

We noted that the Fund could be used to help mitigate the problem of excess harvesting capacity. Emphasis could be placed on loans to vessel owners willing to transfer their harvesting operations from fisheries with excess capacity to those which are less developed. NMFS officials advised us, however, that assigning priorities for Fund use will require amending the Fund's authorizing legislation--the Fish and Wildlife Act of 1956, as amended (16 U.S.C. 742c). In addition, in commenting on our draft report, the Department of Commerce said that, because of the relatively small size of the present loan fund and the substantial excess harvesting capacity which exists nationally, the Fund has only a limited capability to mitigate the problem of overcapitalization.

1/"Need to Establish Priorities and Criteria for Managing Assistance Programs for U.S. Fishing-Vessel Operators," B-177024, Feb. 22, 1973.

NATIONAL FISHERIES PLAN

The National Advisory Committee on Oceans and Atmosphere in its 1972 and 1973 annual reports, expressed concern about the deterioration of U.S. fisheries and noted that, while some action was being taken, it was not adequate. The reports indicated that more effective planning was needed to assure that the most crucial issues were assigned priority and recommended development of a national fisheries plan. NMFS developed such a plan which includes reexamination of a variety of issues, including fisheries management policies, organization systems and support, and development of recommendations to restore and conserve fisheries resources and insure equitable allocation and efficient use. NOAA and the Office of Management and Budget were reviewing the plan in October 1975.

In a recent report to the Congress, ^{1/} on developing underutilized fish resources, we recommended that the Secretary of Commerce direct NMFS to complete the plan and provide for monitoring its development. The Department of Commerce agreed with our recommendation and stated that a schedule of implementation and monitoring would be established.

^{1/}"U.S. Fishing Industry Can Be Strengthened by Developing Underutilized Fish Resources," GGD-75-68, May 30, 1975.

CHAPTER 4

INTERNATIONAL FISHERIES MANAGEMENT

International waters off the U.S. coast were fished almost exclusively by U.S. fishermen until the 1960s, when foreign nations, in response to the increased worldwide demand for fish and fish products, began to operate in these waters in ever-growing numbers and with increasing intensity. In 1972 over 3 million tons of fish were caught by foreign fishermen off U.S. shores at a distance of 12 to 200 miles; by comparison, U.S. fishermen caught only about 0.3 million tons of fish in this area. About two-thirds of the foreign catch was made by Japan and the Soviet Union.

Not only do foreign fleets adversely affect the economic position of U.S. fishermen by being intense competitors but, more importantly, their massive efforts have contributed to the depletion of a number of stocks of fish, including some of the more valuable species to U.S. fishermen.

INTERNATIONAL APPROACH TO FISHERIES MANAGEMENT

The Department of State is responsible for formulating and implementing U.S. policy regarding international fisheries management. NMFS assists State by furnishing scientific advice and, when requested, participating in negotiations.

International fisheries management is based on bilateral and multilateral agreements governing certain species in specified geographical areas. (See app. III for a list of international fishing agreements.) In some instances, these agreements have provided for establishment of international fisheries commissions such as the International Commission for the Northwest Atlantic Fisheries (ICNAF) and the International Pacific Halibut Commission (IPHC).

The United States participates in these commissions to

- provide a means of preventing disputes between nations fishing in common areas on the high seas;
- insure the conservation of important fish resources;
and
- increase the opportunity for U.S. fishermen to share in the catch of fish.

The commissions also carry out or coordinate scientific studies on the resources for which they are responsible and recommend conservation measures to member governments.

EFFECTIVENESS OF INTERNATIONAL FISHERIES MANAGEMENT

International fisheries agreements have not been fully effective in conserving coastal fishery resources. Fishing industry representatives and State, Federal, and academic officials gave us a number of reasons for this situation, including:

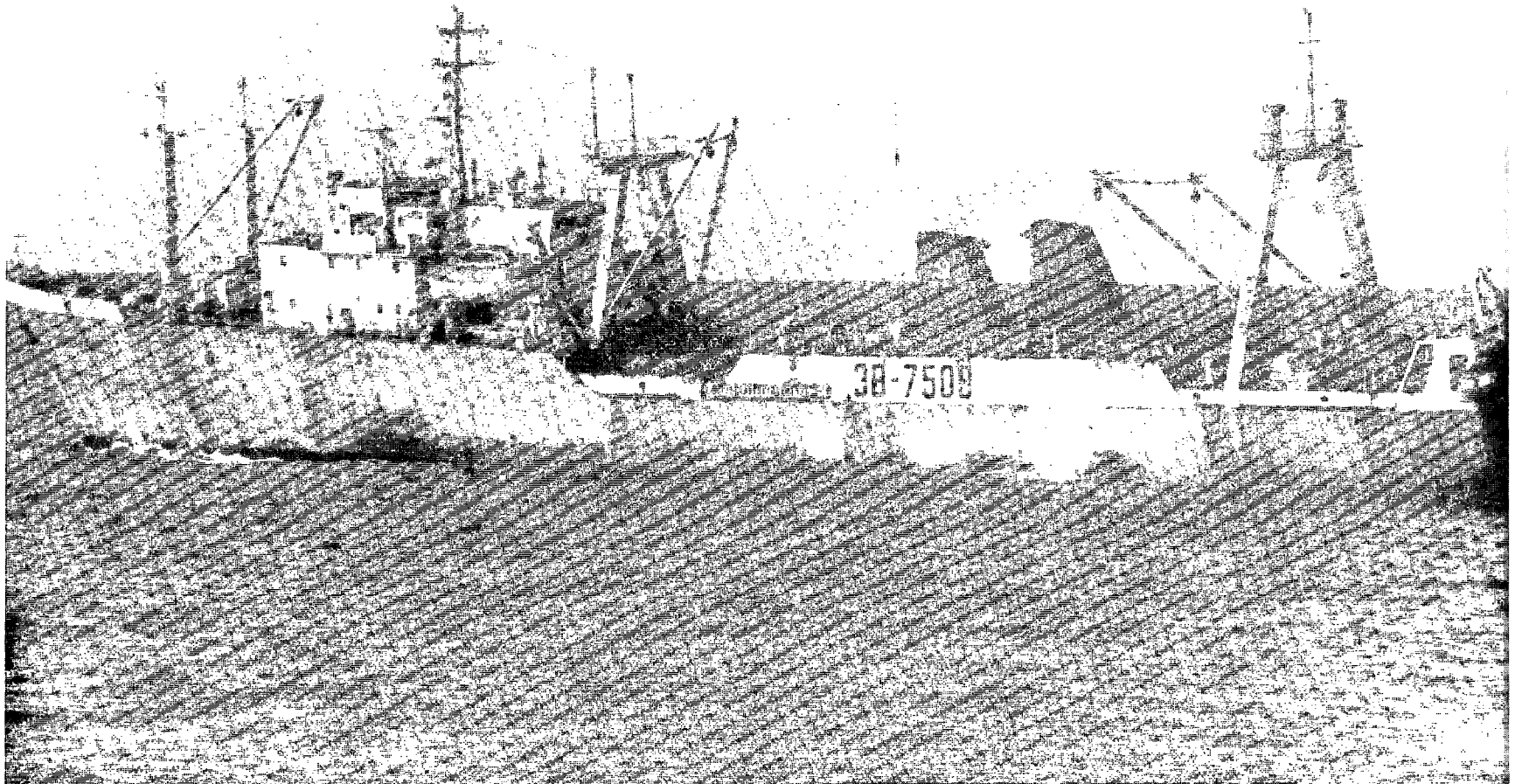
- Under the "freedom of the seas" concept, fish are common property.
- Participation in commissions is voluntary.
- Parties to international agreements often have conflicting interests.
- Effective methods of allocating ocean resources among nations have not been developed.
- Conservation measures are often untimely and insufficient.
- Monitoring and enforcement of regulations are not adequate.
- Assessment of penalties is not consistent because each nation handles violations by its own fishermen.
- Accurate biological data is lacking for many species.

Foreign vessels fishing off U.S. coasts

Since the 1960s, foreign fishing off U.S. coasts has intensified. For example, in January 1975, 234 foreign fishing vessels were observed off the New England and Mid-Atlantic coasts. A striking feature of the fleet composition was the high percentage of the more efficient vessels, including factory ships capable of processing the catch onboard for later transfer to large refrigerated transport vessels. (See photograph on p. 26.) Among the Soviet vessels in the area was the new "Super-Atlantiks" class of trawler. (See photograph on p. 27.) For comparison we have included on page 28 a photograph of a typical U.S. side trawler common to the area.



Large Soviet refrigerated transport (575 feet long with a capacity of 7,000 to 8,000 metric tons) and two factory stern trawlers (275 feet to 300 feet, with a capacity of 700 to 800 metric tons) transferring processed fish.



Soviet " Super-Atlantiks" (335 feet long with a capacity of about 1,000 metric tons). This vessel has dual trawls to save time. As one net is being hauled in, a second net is let out right over the first.



U.S. side trawler about 25 years old, having a wood hull (75 to 80 feet long) and a capacity of about 50 metric tons.

In testimony before a congressional committee, an industry representative stated that the concentration of foreign ships, including catch trawlers and factory, command, supply, transport, and, at times, repair ships, turns the area at night into an awesome sight simulating the lights and movements of a large city.

International efforts to manage
haddock and other species under ICNAF

ICNAF was established in 1949 to conserve the fishery resources of the northwest Atlantic Ocean, extending along the coast of North America from Rhode Island east and north to Greenland. Currently 17 nations are members. Appendix IV shows the Commission's areas of responsibility.

In addition to haddock, the principal fish species under the Commission's jurisdiction are cod, redfish, mackerel, silver and red hake, flounder, and herring--species valuable to U.S. fishermen. Concurrent with the buildup of foreign fleets and stock depletion, U.S. landings for these species in waters off the New England coast have declined. As shown in the graph on page 30, landings have dropped to a level less than half those of 1960.

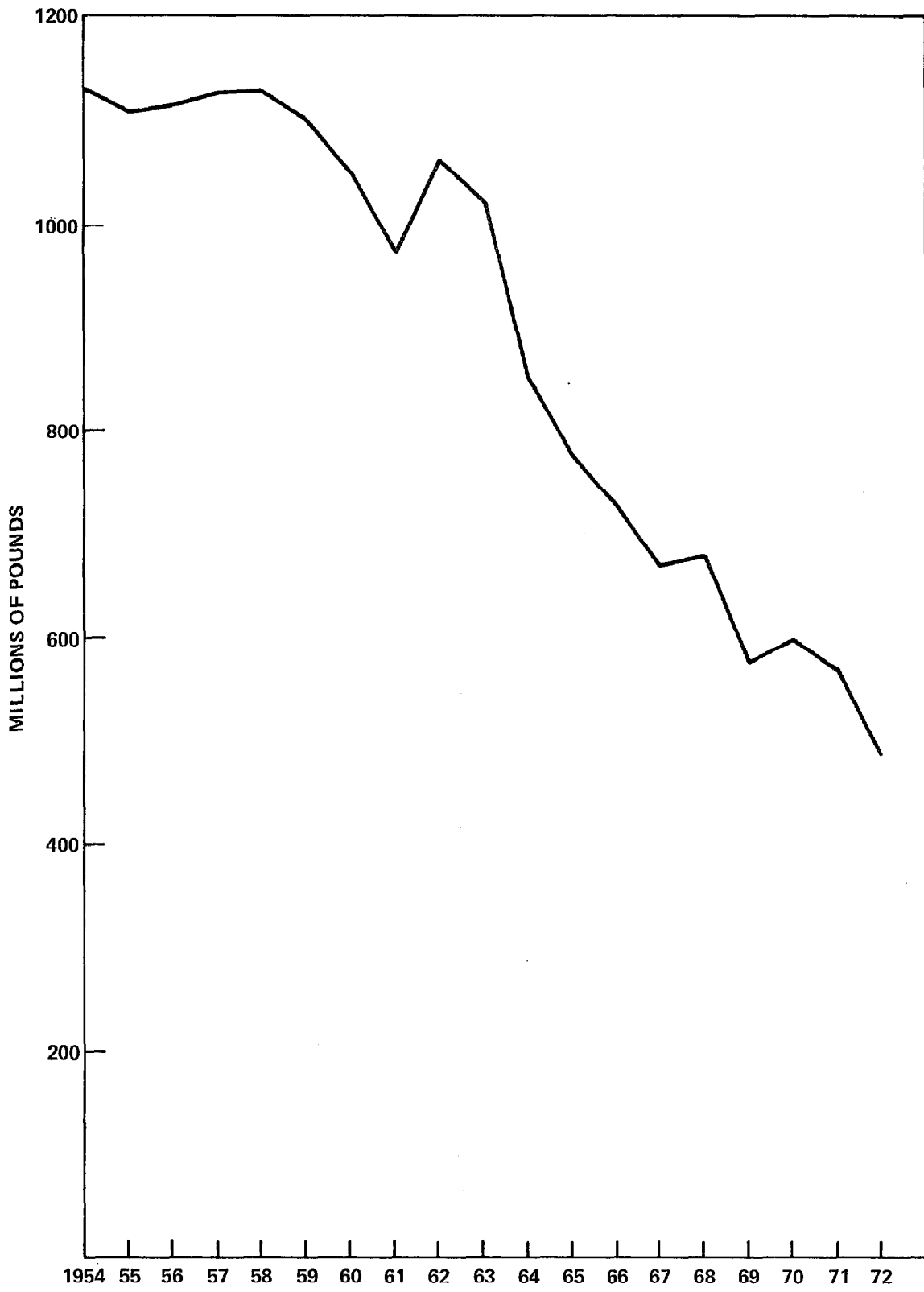
Haddock stocks have been severely depleted. At one time, the Georges Bank haddock fishery (see app. V) was almost the exclusive domain of U.S. fishermen. In the early 1960s, other nations began fishing for haddock. Extremely heavy fishing occurred in 1965 and 1966, primarily by the Soviet Union. Total haddock landings peaked in 1965, with a catch of about 330 million pounds, after which they began to decline. This coupled with more intense fishing effort caused ICNAF, in 1969, to adopt catch quotas. This emergency measure, designed to permit the resource to replenish itself, proved inadequate.

As shown by the graph on page 31, U.S. landings of haddock declined from about 116 million pounds in 1966 to approximately 7 million pounds in 1973, a 94-percent reduction.

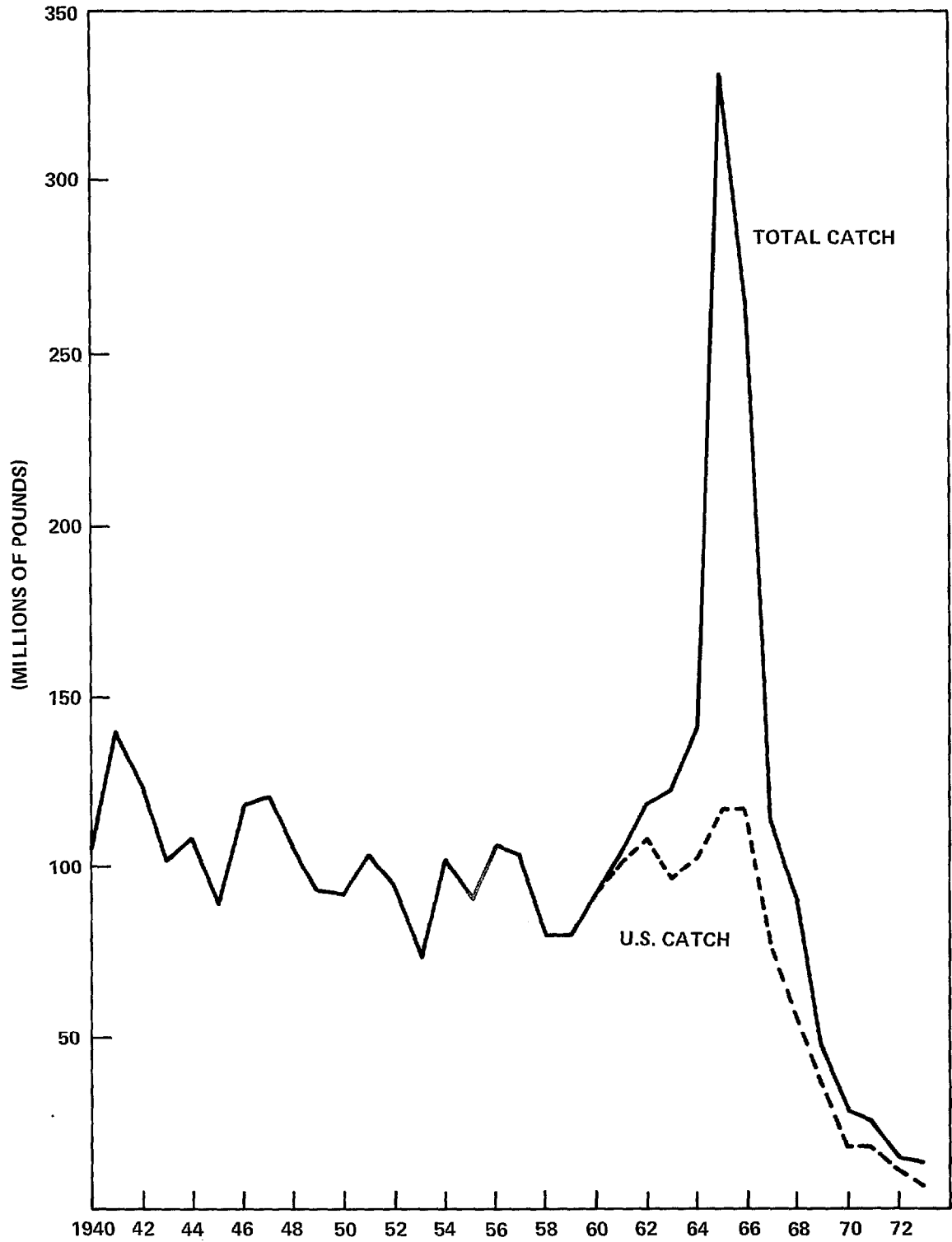
As a result, ICNAF closed the haddock fishery for 1974 and noted

"the incidental or by-catch of haddock is more than enough to exceed the annual surplus yield at the present time."

TOTAL U.S. CATCH OF SPECIES REGULATED BY ICNAF



GEORGES BANK HADDOCK CATCH



Even with such a restriction scientists believe that it may take several years before a viable fishery is reestablished.

International efforts to manage halibut under IPHC

IPHC was established in 1923, under a bilateral agreement between the United States and Canada. The Commission's goal is to maximize the yield of halibut--which are found from Central California to the Aleutian Islands and the Bering Sea.

Notwithstanding the Commission's management efforts, U.S. landings of halibut have declined steadily, from a high of about 54 million pounds in 1959 to approximately 24 million pounds in 1973. The decline is shown in the graph on page 33.

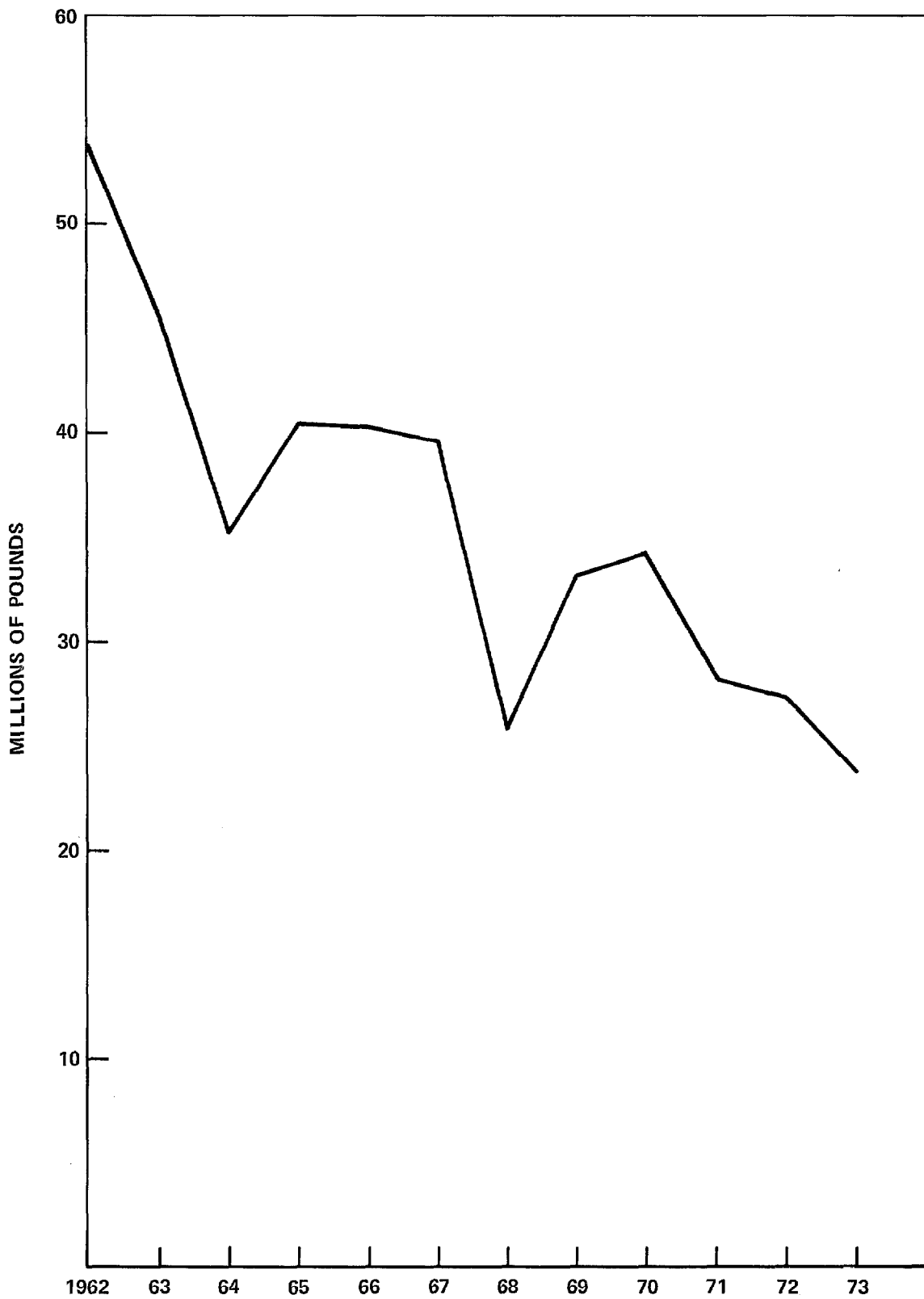
The Commission has promulgated conservation measures--such as season catch limits and minimum harvesting size--to rebuild and maintain halibut stocks at a level of maximum yield. The impact of foreign vessels, however, has required the Commission to adopt more stringent measures. In this regard, it should be noted that only fishermen of the United States and Canada must comply with Commission regulations. For example, U.S. and Canadian fishermen are required to return to the sea all halibut caught incidental to their fishing for other species; fishermen of other nations need not comply. State informed us that to help correct this problem, it and foreign countries have concluded agreements containing provisions to protect the halibut.

RECENT U.S. ATTEMPTS TO CONTROL FISH RESOURCES IN INTERNATIONAL WATERS OFF ITS COAST

The Congress, in its 93d and 94th sessions, was concerned with jurisdiction over fish resources located within 200 miles of the U.S. coast and over anadromous species whose migratory range is beyond 200 miles because of the adverse effect foreign fishing fleets were having on the U.S. fishing industry and because certain species were being overfished. In October 1975 the House of Representatives, by better than a 2 to 1 margin, passed H.R. 200 extending the contiguous zone to 200 miles. On January 28, 1976, the Senate amended and passed H.R. 200 which is now waiting to go to conference.

As the cosponsor of one of these pieces of legislation stated

U.S. LANDINGS OF HALIBUT



" * * *the protection of the domestic fishing industry is an issue of vital importance. Our fishing industry, which has provided food and jobs for thousands of people over its illustrious past, is in serious danger of collapsing in the face of unrestrained foreign competition. Only with fast and effective help can this industry continue to occupy a prominent position in the American economy."

Generally, the executive branch has been opposed to legislation which would unilaterally extend U.S. fisheries management jurisdiction. Its position has been to leave the question of fisheries management jurisdiction to U.N. resolution at the U.N.'s Law of the Sea Conferences.

The U.S. position at the conferences has basically been extension of coastal nation jurisdiction over coastal stocks (e.g., haddock) to 200 miles offshore. Its position would also provide coastal nations preferential harvesting rights, to the limit of their capacity, within the allowable catch. Other nations would be entitled to harvest the remaining allowable catch. Coastal nations from whose waters anadromous species (e.g., salmon) originate would also have management jurisdiction and preferential rights over such stocks throughout their range on the high seas.

Highly migratory species (e.g., tuna) cover vast distances through the waters off many nations. The U.S. proposal, therefore, provides for international or regional management of such stocks. The United States has also proposed that fishery regulations be applied provisionally--after signature of a treaty but before ratification.

The United Nations conducted Law of the Sea Conferences in 1958 and 1960. In March 1975 we reported to the Congress 1/ on the progress made at the third Law of the Sea Conference held at Caracas, Venezuela, in 1974. A fourth session was held in Geneva, Switzerland, in 1975. Another session is planned for 1976. Recent conferences have reached no agreement on fisheries management in international waters.

State informed us that the executive branch has recognized the serious and immediate problems of conserving fisheries stocks off U.S. coasts. In a speech to the

1/"Information on United States Ocean Interest Together with Positions and Results of Law of the Sea Conference at Caracas," ID-75-46, March 6, 1975.

American Bar Association in August 1975, the Secretary of State announced that, although the United States wishes to avoid unilateral action which is extremely dangerous and incompatible with negotiations, it could not indefinitely accept unregulated and indiscriminate foreign fishing off U.S. coasts. Although sharing the concern which has led to proposals for unilateral legislation, State believes the immediate depletion of U.S. stocks will be met by interim arrangements with other nations to conserve fish stocks, insure effective enforcement, and protect the domestic industry. Such agreements will serve as a transition to the eventual 200-mile fisheries zone to be established under the treaty.

CHAPTER 5

CONCLUSIONS, RECOMMENDATIONS, MATTERS

FOR CONSIDERATION BY THE CONGRESS,

AND AGENCY COMMENTS

CONCLUSIONS

Many fish species of importance to the U.S. fishing industry are being depleted or threatened with depletion through overfishing by domestic and foreign fishermen and/or the alteration of coastal areas. In addition, many U.S. fisheries have excess harvesting capacity which often leads to overfishing.

The State-Federal Fisheries Management Program was established to achieve coordinated management of domestic fishery resources. Although some improvements have been made, progress has generally been slow. The major problem, basic to the program itself, involves the difficulty in obtaining general agreement among States on appropriate management measures and a timetable for implementation. Other problems include a lack of precise data and criteria for selecting additional species to be included in the program.

Because fisheries can change rapidly and scientific evidence is seldom complete, the Federal Government should be in a position to impose conservation measures in case States cannot agree on what controls are needed or do not take timely action. This will involve improving the data base for decisionmaking, issuing and implementing criteria for species to be included in the program, and setting goals or timetables for implementation.

The Fisheries Loan Fund could be used to help mitigate the problem of excess harvesting capacity by encouraging vessel owners to transfer their operations from fisheries with excess capacity to those that are less developed. To use the Fund in this way, existing legislation will have to be amended.

The jurisdictional, monitoring, and enforcement problems currently inhibiting effective management of international fisheries also must be resolved. The Law of the Sea Conference has addressed extending the fishing zone to 200 miles from the shores of coastal nations on a number of occasions (Caracas 1974, Geneva 1975), but has not reached a solution. Another session is scheduled in 1976. Legislation has been

introduced in the 94th Congress to extend the contiguous zone from 12 to 200 miles off the U.S. coast. However, at the time of this report it has not been enacted. Extending the contiguous zone would be extremely valuable in managing fish resources.

RECOMMENDATIONS

We recommend that the Secretary of Commerce direct the Administrator of NOAA to

- accelerate fisheries research, giving priority to the data needs of fisheries management, including the State-Federal Fisheries Management Program;
- issue and implement criteria for the future selection of species to be included in the program; and
- establish for each selected species a timetable for implementing appropriate conservation measures.

MATTERS FOR CONSIDERATION BY THE CONGRESS

The Congress should consider enacting legislation which would give the Secretary of Commerce authority to impose management measures in fisheries under domestic jurisdiction in case such measures are not implemented by the States in a timely manner.

The Congress should also consider amending the Fish and Wildlife Act of 1956, as amended (16 U.S.C. 742c), Fisheries Loan Fund, to establish priorities for its use, including encouraging transfer of vessels from fisheries having excess harvesting capacity. We suggest that a new subparagraph be added to 16 U.S.C. 742c(b) as follows:

"(11) No financial assistance shall be extended to this section unless the applicant agrees that the assistance will not be used for operations in a fishery which the Secretary has determined in a rule-making proceeding to have excess harvesting capacity."

AGENCY COMMENTS

The Department of Commerce informed us that, in general, the report presented a fair and comprehensive evaluation of its fisheries management programs and that, for the most part, the facts and figures were consistent with its

records. It stated that progress to implement uniform management regimes for regional coastal fisheries through the State-Federal Fisheries Management has not been as rapid as it would like. It noted that the report recognized that the lack of legislative action to provide a statutory base and Federal management authority had hampered its efforts in the complex process of cooperative management.

Commerce stated that two of the three recommendations directed towards NOAA appeared to be of a lower priority and missed the main issues in the management of fisheries. It stated that our recommendations concerning development of criteria for selecting species and establishing timetables for their implementation have been addressed to the extent practicable, pending resolution of the more basic management problems. The recommendations could have addressed more clearly a defined Federal management role for NOAA vis-a-vis States and strengthened institutional arrangements to carry out respective management roles.

We agree that the Federal management role needs to be strengthened and have indicated this in our discussion of matters for consideration by the Congress. As pointed out in the preceding paragraph, the agency stated that two of the recommendations had been addressed to the extent practicable, pending resolution of the more basic management problems. As indicated on page 20, program officials agreed that selection criteria were needed and were being developed but, as of October 1975, such criteria had not been established. Commerce stated that progress under the program had not been as rapid as it would like. We believe that a timetable for establishing and implementing criteria is essential to insure conservation of the resources.

DOMESTIC FISHERIES PROBLEMS

We contacted a cross section of officials involved in fisheries activities to obtain their opinion as to the major problems affecting domestic fisheries. Domestic fisheries include species taken entirely or predominantly by U.S. fishermen and exclude fisheries managed by international commissions. The following problems were identified as serious by a majority of those interviewed.

Issues related to national goals and objectives:

- Establishing a definitive national fisheries policy, including goals and objectives.
- Obtaining acceptance of management goals and objectives.

Issues related to coordination and cooperation:

- Cooperation between commercial and recreational fishing groups.
- Establishing cooperative management programs among States.

Issues concerning control of fisheries resources:

- Managing a common property resource.
- Managing resources which have split jurisdiction.
- Harvesting fish (principally by foreigners) outside the 12-mile fisheries zone.
- Pollution in spawning areas.
- Excess harvesting capacity (overcapitalization)--having too much gear, vessel, and manpower in relation to available yield.
- Overfishing--catching a species in excess of quantity needed to maintain a viable fishery (maximum sustainable yield).
- Maintaining regulations which restrict efficient fishing methods.
- Making the necessary regulation changes before problems become serious.

Issues related to management information needs:

- Acquiring sufficient information to determine optimum biological yields.
- Acquiring the information needed to determine optimum economic yields.

Other issues:

- Obtaining sufficient Federal and State funding for fisheries management.
- Acquiring expertise in economic and social impact assessments in State agencies.

SPECIES UNDER STATE-FEDERAL MANAGEMENTDUNGENESS CRAB

The Dungeness crab is a highly desirable species sought by sport and commercial fishermen. The interstate fishery extends along the coasts of Washington, Oregon, and California. Dungeness crabs are also found in Alaska. In recent years, landings have averaged about 34 million pounds. This species was selected for cooperative State-Federal management because of conflicts between fishermen of the various States arising from different season opening dates and a belief that there may be excess harvesting capacity in the fishery.

In September 1972 officials of the three States proposed a study of the Dungeness crab, and in January 1973 a management committee was established. Planning activity has involved two phases. Phase I, completed in September 1974, included analysis of the fishery and development of preliminary recommendations including a uniform data system, optimum size crab pot escape ports (for small crabs), a revised season opening date, and additional studies of problems such as lost crab pots and conflicts between sports and commercial fishermen. Phase II will include an evaluation of the need for controlling the amount of fishing effort and is expected to be completed in 1976.

Although implementation of phase I regulatory recommendations has been limited, some progress has been made. For example, two States adopted a regulation requiring, over a period of years, use of recommended escape ports. Another State also adopted an escape port provision, but with a slightly smaller size than recommended.

The following discusses the difficulties the committee faced in obtaining State implementation of an important recommendation--a revised opening season date.

Difficulties in establishing
a uniform fishing season

Variations in State fishing seasons are related to the meat content of Dungeness crabs. Content is low when the crabs have soft shells and high when the shells become hard. Because the hardening of shells occurs at different times, individual States have established varying season opening dates; generally December 1 in Northern California and Oregon and January 1 in Washington.

In 1972 fishermen in California and Oregon experienced a poor season and, as a result, began in December to fish the waters (beyond the 3-mile limit) off the coast of Washington. The fishermen in Washington accordingly became upset. Much of their annual harvest is made during the first month of the season which does not open until January 1. Further, it was noted that the California and Oregon fishermen in sorting out the desirable hard shell crabs for harvest had destroyed many soft shell crabs.

To avoid such conflicts, the phase I study evaluated alternative season opening dates. The results indicated that a staggered opening or a January 1 opening were, for the region as a whole, the best alternatives. Neither of these proposals were acceptable to the committee. It was felt that a staggered opening would aggravate the problem of nonresident fishermen fishing in areas closed to residents, while the January 1 opening would result in one State gaining at the expense of another. As a compromise, the management committee agreed to seek implementation of a uniform December 15 season opening date. This proposal, however, was also discarded when fishermen in one State opposed it on the basis that it could adversely affect their ability to supply the crab market around the Christmas season--one of their most profitable periods. A State official said the committee would continue, in 1975, its efforts to find a solution acceptable to all three States.

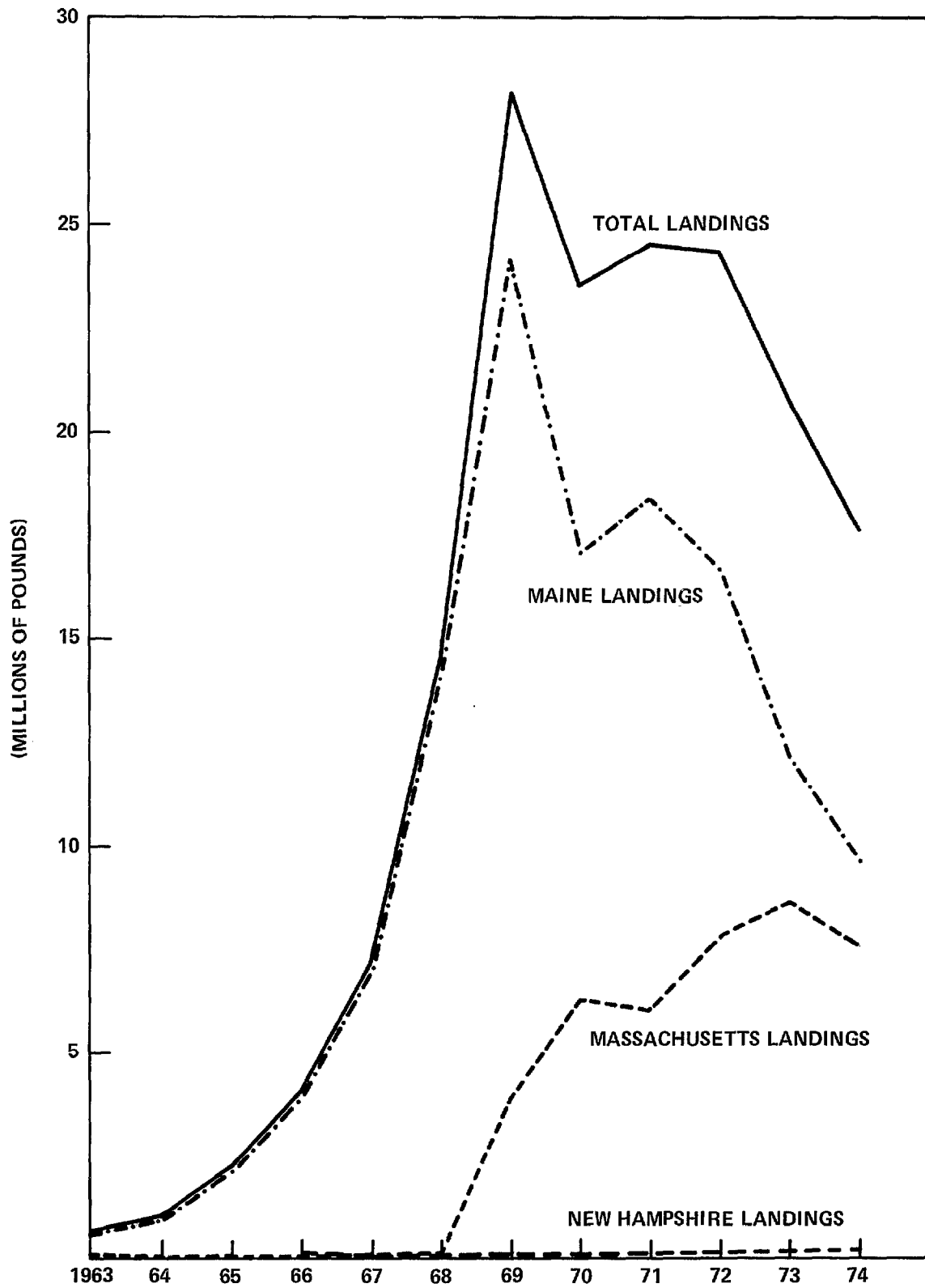
NORTHERN ATLANTIC SHRIMP

The northern Atlantic shrimp fishery is located off the coasts of Massachusetts, New Hampshire, and Maine. The species migrates through all three jurisdictional zones and a substantial portion of the landings have come from each of the zones, including offshore areas out to about 25 miles.

Shrimp stocks have been declining at an alarming rate. As shown in the chart on the following page, despite a high level of fishing effort, landings since 1972 have dropped sharply. Biologists, however, believe further reductions in landings are necessary to conserve the resource. Stock depletion is attributed to an intense buildup of fishing effort resulting in a level of harvesting greater than stock replacement. Some biologists believe that environmental factors have also contributed to the decline.

The number of vessels in the fishery has grown rapidly. In 1967 there were 89 vessels; in 1972 about 400. Because of this increase and the decline in stocks, the fishery is currently considered to have excess harvesting capacity.

NORTHERN ATLANTIC SHRIMP LANDINGS



The extent of this excess has not, however, been determined since there is a wide variation in vessel size and many also harvest other species.

Cooperative management efforts

In December 1972, at the request of its shrimp fishermen, Maine initiated action jointly with NMFS and New Hampshire and Massachusetts to cooperatively manage this species. By May 1973, the three States formally agreed to cooperate and in June 1973, established a shrimp management committee.

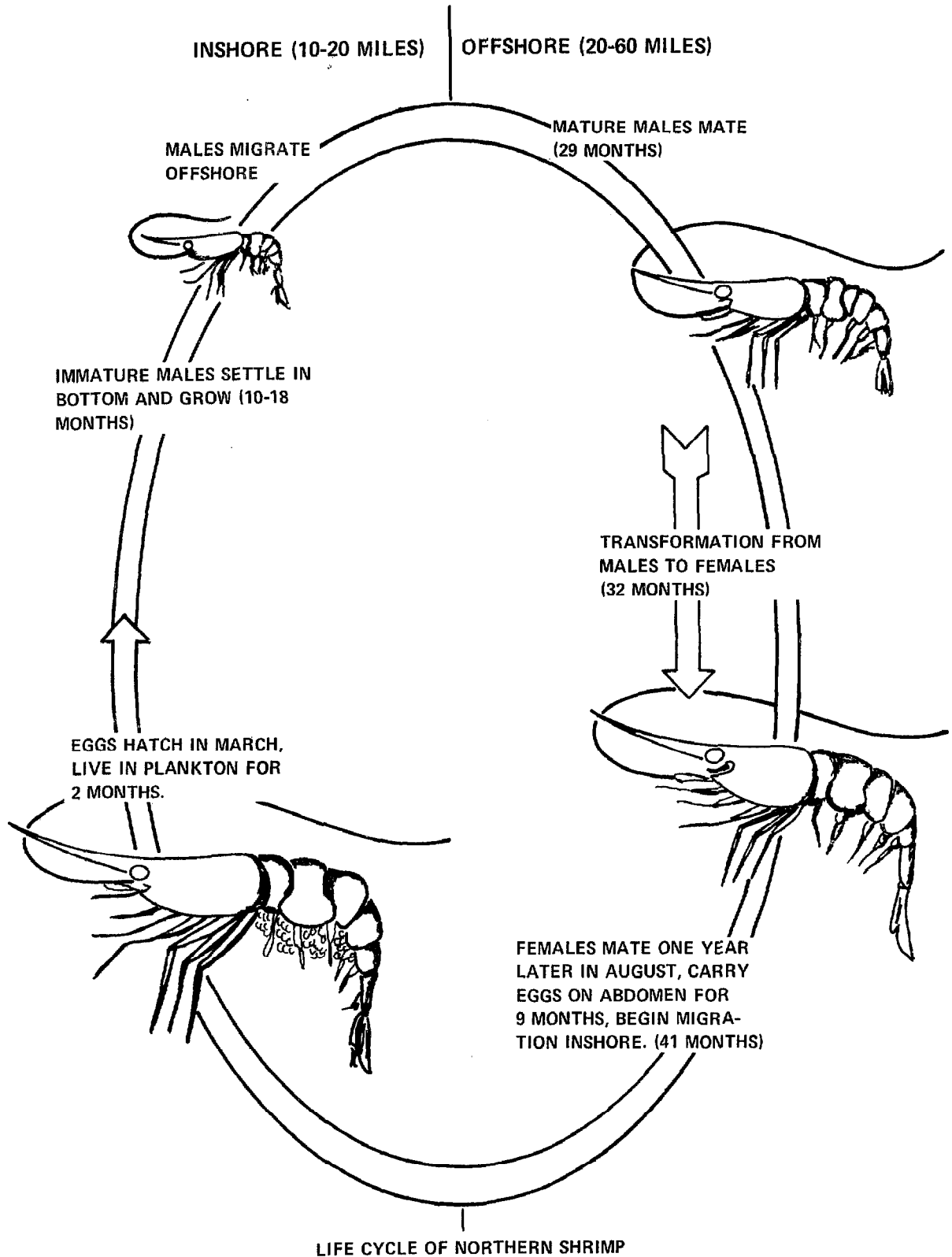
Maine fishermen had noted indications of problems, including increased landings of small shrimp. The harvest of small shrimp increased as more and larger vessels using small mesh nets entered the fishery. The importance of protecting the small shrimp is related to the species' unique biological characteristic of sex transformation. (See p. 45.) Northern shrimp begin their lives as males and in their third year transform into females. Accordingly, to assure continuation of the species the small males must be protected.

During 1973 each of the three States adopted an interim net mesh size regulation to protect small shrimp and delegated authority to the Atlantic States Marine Fisheries Commission to regulate the fishery. In November 1973 the Commission issued an interim net mesh regulation.

Because of continued landings of small shrimp, industry, State, and NMFS officials believe that small mesh nets continue to be used in offshore areas. Improved enforcement of the mesh regulation is, however, expected as a result of joint patrols of offshore areas by the three States. In addition to net size, the committee considered other conservation measures, but could not reach agreement. The States were reluctant to impose additional regulatory measures on fishermen, especially since available data on the seriousness of the shrimp population decline was not conclusive.

Continuing decline in shrimp resource

The decline in the shrimp population is growing more serious and additional conservation measures are needed. A State official noted that immediate action is necessary. He stated that landings must be reduced below the level of annual stock replacement, and to rebuild the stock, landings must be reduced even further. Season and area closures, landing quotas, and limited entry were recently considered to reduce landings. In June 1975 the Commission adopted a July 5 to September 17, 1975, fisherywide season closure. A study will be enacted under the State-Federal Fisheries Management Program to evaluate the effect of the closure.



GULF MENHADEN

The Gulf menhaden fishery is the largest domestic fishery in volume and the most valuable of nonedible species. It appears to be in good condition, with landings and fishing effort relatively stable in recent years. In 1974 landings amounted to 1.3 billion pounds, with a dockside value of \$48 million. Menhaden are processed into fish meal, solubles for animal food supplements, and fish oil used in the manufacture of paints, lubricants, cosmetics, and a variety of other products. The menhaden range through the coastal waters of all the Gulf States from Florida to Texas with most landings coming from the territorial sea.

In March 1973 officials of Florida, Alabama, Louisiana, Mississippi, and Texas agreed to develop a management plan for the Gulf menhaden as part of the State-Federal Program. The menhaden was selected because of industry interest in developing a management plan and the fishery's importance. The need for cooperative management related to concern about conflicts between sports and commercial fishermen and the possibility of overfishing as happened to the Atlantic menhaden in the early 1960s. Another problem involved differing State fishing seasons which resulted in crew hiring difficulties and uneconomical vessel operation. This problem was resolved by 1974 when Louisiana, Mississippi, and Alabama, which account for most of the landings, adopted uniform opening and closing fishing season dates.

Management planning for the species is only partially complete and has not progressed substantially from May 1974 when a preliminary planning strategy was drafted. An NMFS official attributed this to the fact that State and industry officials do not perceive the need for extensive planning and regulatory action at this time.

SOUTH ATLANTIC SHRIMP

Shrimp is the principal fishery of North Carolina, South Carolina, Georgia, and Florida. There are three major species, commonly referred to as white, brown, and pink shrimp. Landings for this complex domestic fishery were relatively stable from 1969 to 1974, averaging about 26 million pounds. Most shrimp are harvested in the territorial sea.

In November 1972 officials from NMFS and the four Southeastern States discussed cooperative State-Federal management and agreed that the shrimp deserved careful study. By January 1973 a management committee was formally established.

The fishery was selected for cooperative management because it was the most valuable in the region and was evenly distributed among the States.

The first phase of management planning for the fishery was completed in September 1974. It was prepared by the States under a contract with NMFS and identified a number of problem areas including increased operating costs and low prices, the inability to regulate and administer the fishery on a regional basis, low productivity, indications of excess harvesting capacity, destruction of shrimp habitats, conflicts between users of fixed and mobile gear, law enforcement difficulties, differing laws and regulations at local, State, and Federal levels, and the lack of statistical data on harvesting and fishing effort.

In May 1975 a comprehensive management plan proposal was completed. The plan recommends actions to deal with the problems identified during the initial planning phase. A State official believed that implementation of recommendations would begin after formal acceptance by the States.

INTERNATIONAL FISHING AGREEMENTSENTERED INTO BY THE UNITED STATES

International Convention for the Regulation of Whaling

Convention for the Establishment of an Inter-American
Tropical Tuna Commission

Interim Convention on the Conservation of North Pacific
Fur Seals

Convention for the Preservation of the Halibut Fishery
of the Northern Pacific Ocean and Bering Sea

International Convention for the High Seas Fisheries
of the North Pacific Ocean

Convention for the Protection, Preservation and Ex-
tension of the Sockeye Salmon Fishery of the Fraser River
System

International Convention for the Northwest Atlantic
Fisheries

International Convention for the Conservation of
Atlantic Tunas

Agreement with Brazil Concerning Shrimp

Agreement with the U.S.S.R. on Certain Fishery Problems
on the High Seas in the Western Areas of the Middle Atlantic
Ocean

Agreement with the Republic of Korea Concerning
Cooperation in Fisheries

Agreement between the Government of the United States
of America and the Government of the Union of Soviet Social-
ist Republics Regarding Fisheries in the Northeastern Pacific
Ocean off the Coast of the United States of America

Agreement Between the Government of the United States
of America and the Government of the Union of Soviet Social-
ist Republics Relating to Fishing for King and Tanner Crab

Agreement with the U.S.S.R. Relating to the Considera-
tion of Claims Resulting from Damage to Fishing Vessels or
Gear and Measures to Prevent Fishing Conflicts

Agreement with Poland Regarding Fisheries in the Western Region of the Middle Atlantic Ocean

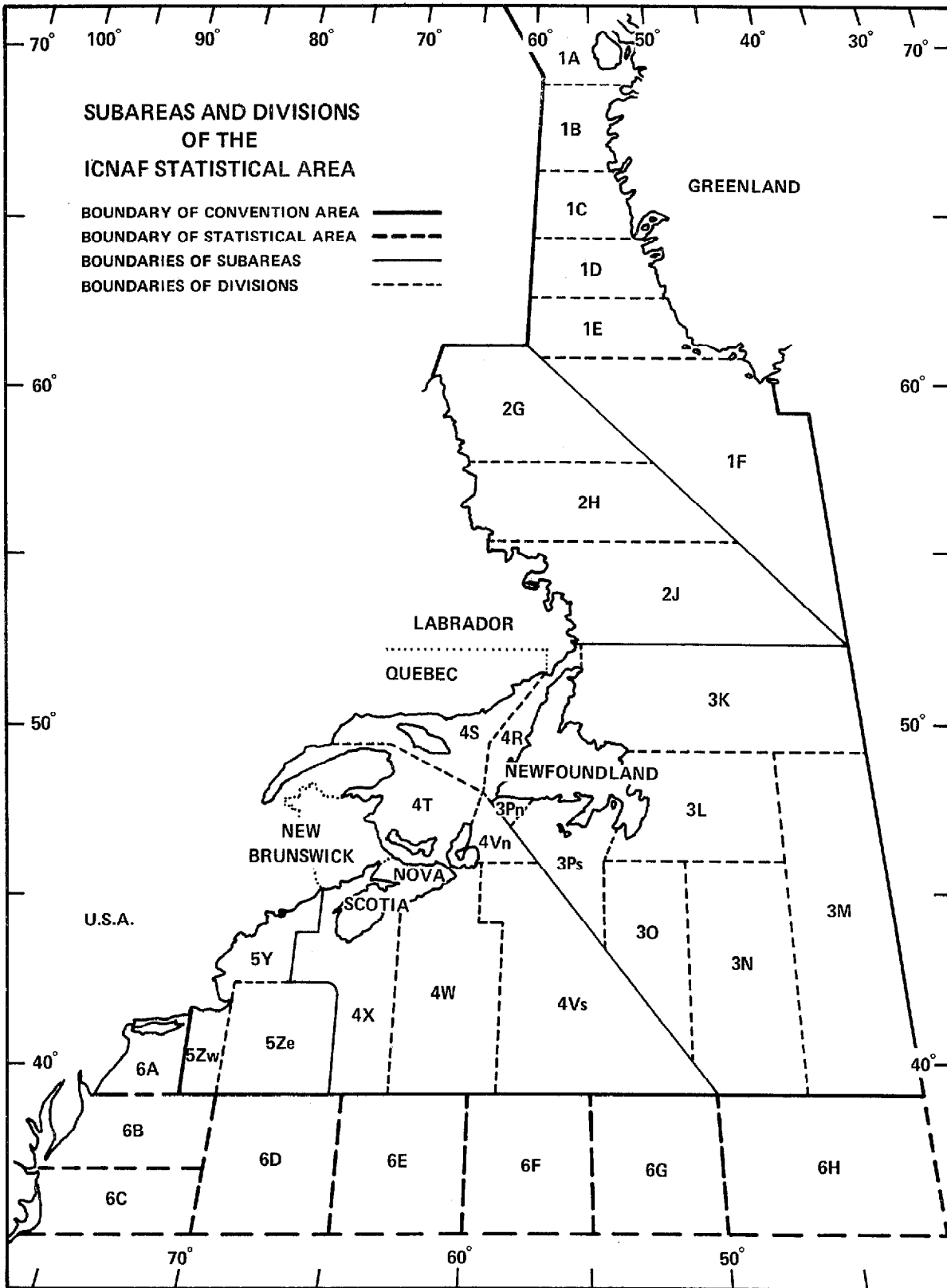
Agreement with Poland Regarding Fisheries in the Northeastern Pacific Ocean off the Coast of the United States

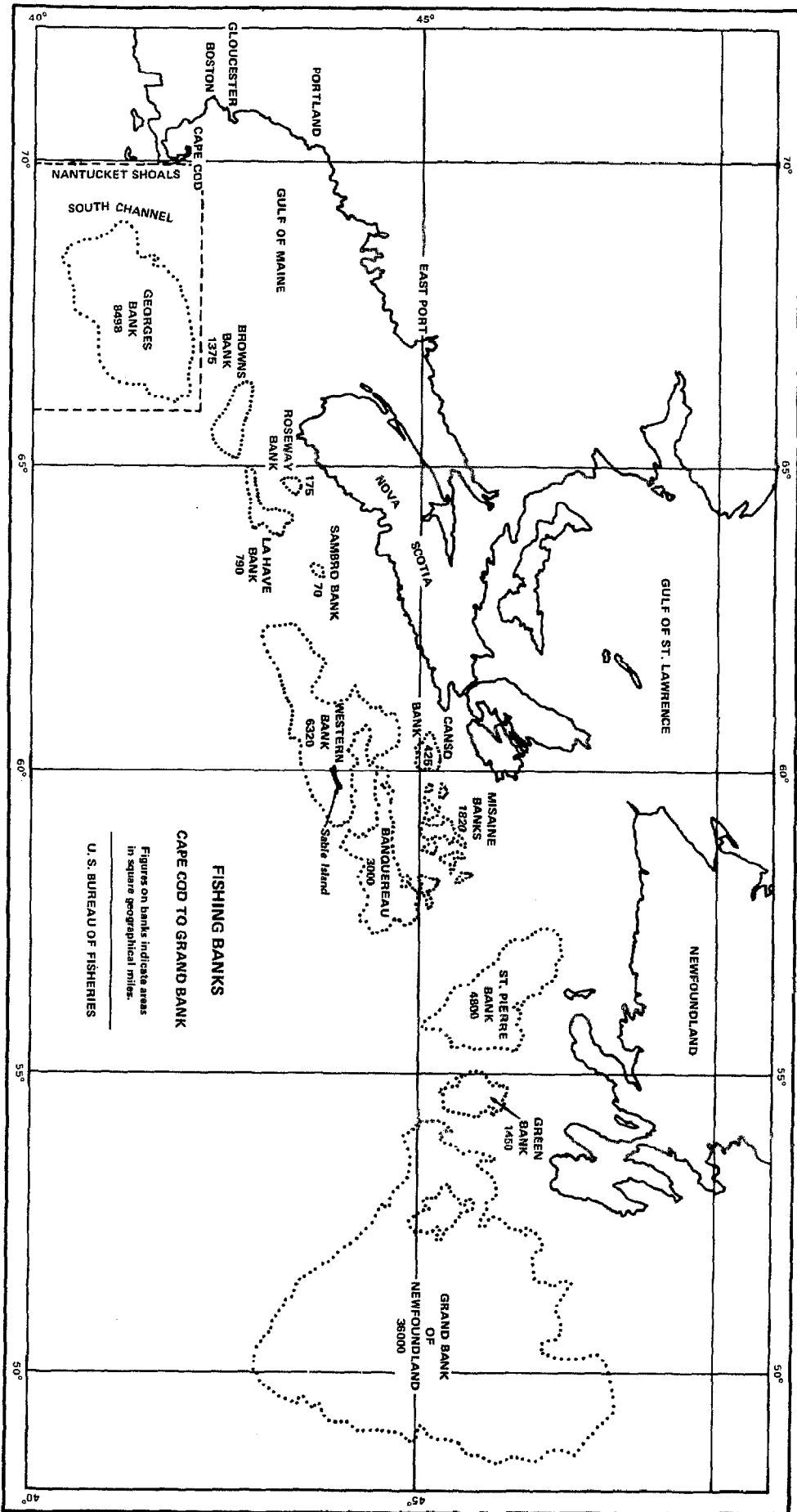
Agreement Between the United States and Canada on Reciprocal Fishing Privileges in Certain Areas off Their Coasts

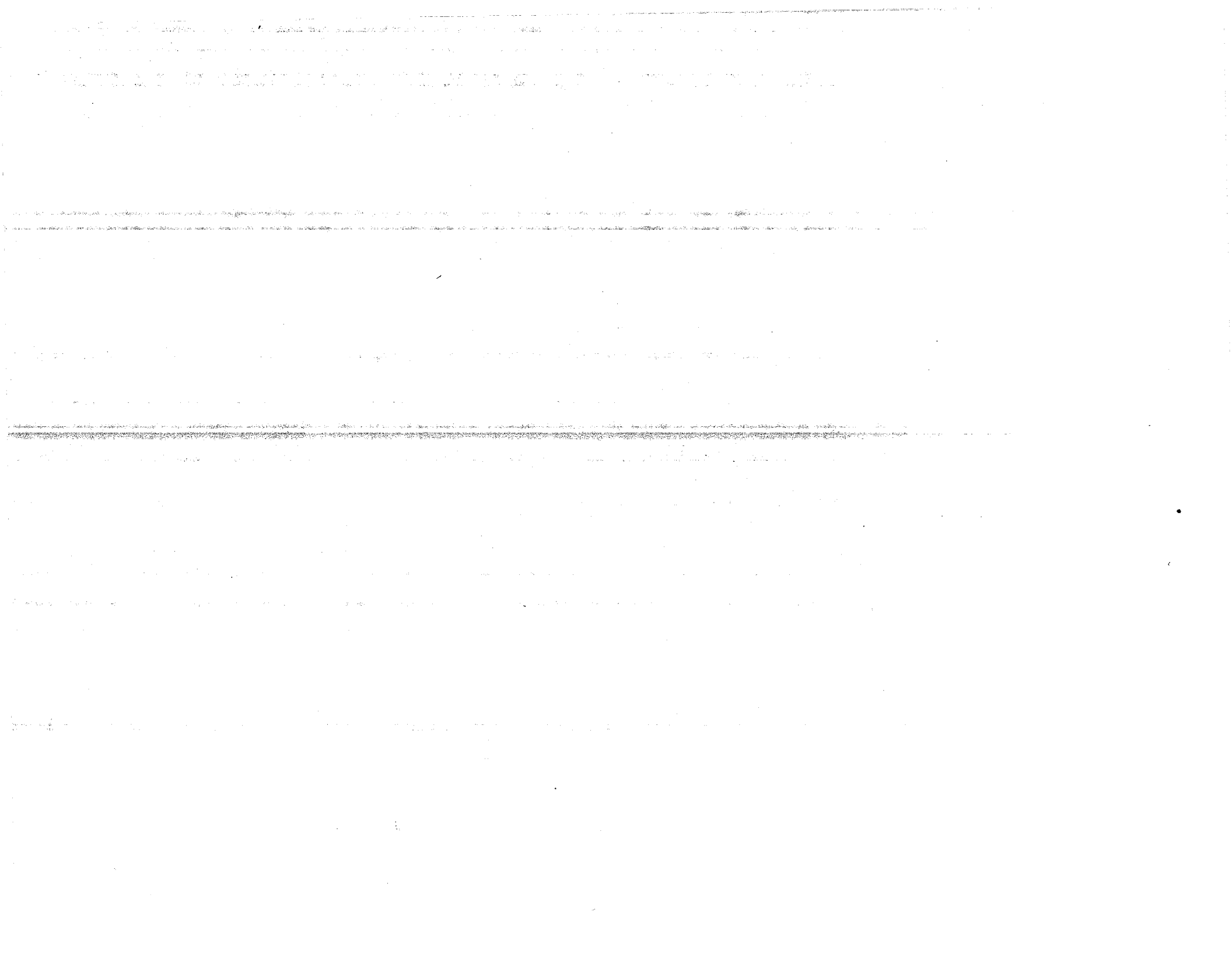
Agreement with Romania on Fisheries in the Western Region of the Middle Atlantic Ocean

Agreement with Japan Concerning the King and Tanner Crab Fisheries in the Eastern Bering Sea

Agreement with Japan Concerning Certain Fisheries off the Coast of the United States; and Salmon Fishing









UNITED STATES DEPARTMENT OF COMMERCE
The Assistant Secretary for Administration
Washington, D.C. 20230

October 7, 1975

Mr. Victor L. Lowe
Director, General Government Division
U. S. General Accounting Office
Washington, D. C. 20548

Dear Mr. Lowe:

This is in reply to your letter of August 27, 1975, requesting comments on the draft report entitled "Action Is Needed Now To Protect Our Fishery Resources."

We have reviewed the enclosed comments of the NOAA Administrator and believe they are responsive to the matters discussed in the report.

Sincerely,

A handwritten signature in black ink, appearing to read "Guy W. Chamberlin, Jr.", written over a horizontal line.

Guy W. Chamberlin, Jr.
Acting Assistant Secretary
for Administration

Enclosure





U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
Rockville, Md. 20852 F31/DJL

SEP 24 1975

Mr. Victor L. Lowe
Director, General Government Division
General Accounting Office
Washington, D.C. 20548

Dear Mr. Lowe:

We appreciate the opportunity to review your draft report entitled Action is Needed Now to Protect our Fishery Resources. In general the report presents a fair and comprehensive evaluation of the fisheries management programs within the National Marine Fisheries Service. For the most part, the facts and figures in the report are consistent with our records, however, there are some inconsistencies and a detailed commentary is enclosed for your consideration and use.

We also offer the following comments of substance which we would like you to consider in preparing the final report.

Two of the main problems in the fisheries--common property and fragmentation of jurisdiction--are correctly identified in the report. The third problem, lack of biological data, has not been completely defined. The problem could more precisely be defined as a lack of adequate biological, economic and social data. We strongly believe that the proper general goal of fisheries management is optimum sustained yield. The design of management regimes for specific fisheries to attain this goal requires significant input of socio-economic, as well as biological, data.

We recognize that progress to implement uniform management regimes for regional coastal fisheries through the State-Federal Fisheries Management Program has not been as rapid as we would like. We are pleased to note the report recognizes that the lack of legislative action to provide a statutory base and Federal management authority has hampered our efforts in the complex process of cooperative management. We believe the report does not give proper attention to a major program achievement, i.e., the creation of improved institutional arrangements for the development and implementation of cooperative State-Federal management plans. More specifically, this refers to the establishment of five regional fisheries councils which, with their various committees, facilitate joint planning and management actions. We note also that the regional council concept developed by the program appears in several of the extended jurisdiction bills now before the Congress.

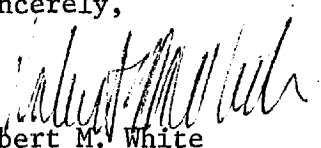
We are pleased by your favorable response to our efforts to redirect the financial assistance program. However, because of the relatively small size of the present loan fund and the substantial excess harvesting capacity which exists on a national basis, the fund has only limited capability to mitigate the problem of overcapitalization.

The chapter of the report on "International Fisheries Management" concentrates attention on the international management of haddock and halibut. In our view, the report gives a very incomplete and misleading picture of the international fisheries situation by failing to mention our other major international activities. While the commentary provides additional material for your consideration, we would be pleased to arrange a meeting with our international fisheries staff and your concerned specialists for an indepth discussion of this aspect of the report.

Finally, two of the three recommendations directed towards NOAA appear to be of a lower order of priority and miss the main issues in the management of the fisheries. The recommendations of developing criteria for selection of species, and establishment of timetables for their implementation, have been addressed to the extent practical pending resolution of the more basic management problems. The recommendations could have addressed more clearly a defined Federal management role for NOAA vis-a-vis States and strengthened institutional arrangements to carry out respective management roles.

We welcome your evaluation of our programs. Please let me know if we may be of further assistance in completing the report.

Sincerely,



Robert M. White
Administrator

Enclosure

PRINCIPAL DEPARTMENT OF COMMERCE OFFICIALSRESPONSIBLE FOR ADMINISTERING ACTIVITIESDISCUSSED IN THIS REPORT

	<u>Tenure of office</u>	
	<u>From</u>	<u>To</u>
SECRETARY OF COMMERCE:		
Rogers C. B. Morton	May 1975	Present
John K. Tabor (acting)	Mar. 1975	May 1975
Frederick B. Dent	Feb. 1973	Mar. 1975
Peter G. Peterson	Feb. 1972	Jan. 1973
ADMINISTRATOR, NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION:		
Robert M. White	Feb. 1971	Present
DIRECTOR, NATIONAL MARINE FISHERIES SERVICE:		
Robert W. Schoning	July 1973	Present
Robert W. Schoning (acting)	May 1973	July 1973
Philip M. Roedel	Oct. 1970	May 1973

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