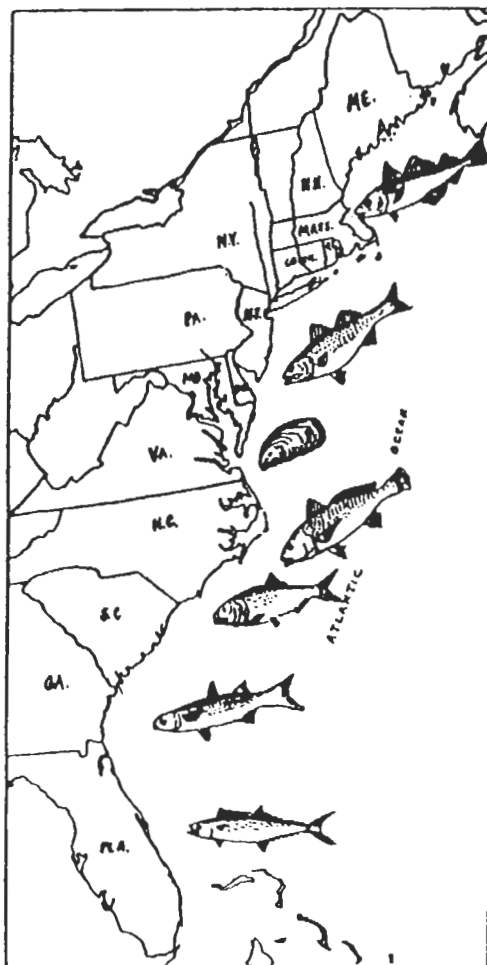


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Special Report No. 2
of the

**ATLANTIC STATES MARINE
FISHERIES COMMISSION**



**EASTLAND
FISHERIES
SURVEY
OF
THE
ATLANTIC
COAST
REGION**

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Prepared for the Atlantic States Marine Fisheries Commission under the supervision of the Executive Director of ASMFC, pursuant to P.L. 94-433 and S. Con. Res. 11 (93rd Congress, 1st Session, 1973) under National Oceanic and Atmospheric Administration Grant No. 04-5-158-68.

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The survey was conducted by William G. Mustard, Project Director of the Eastland Survey for the Atlantic Coast Region. This report was prepared and edited by Mark H. Zilberberg, Assistant to the Director, Atlantic States Marine Fisheries Commission, assisted by Patricia Ridgeway, Eastland Survey staff and Diana Bittern, Editor for the Atlantic States Marine Fisheries Commission.

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INTRODUCTION

Senate Concurrent Resolution 11, popularly known as the Eastland Resolution, which provided for a national program to support and strengthen the United States commercial and recreational fishing industries, was unanimously passed by the United States Senate and House in December, 1973.

Since the 1950's the United States commercial fishing industry has declined in importance relative to the productivity of other nations. Although the domestic demand for seafood products has increased steadily, the United States commercial catch has remained constant. During the same period the foreign catch has increased many-fold. From three to two hundred miles offshore of the United States foreign fleets harvest more of the total catch than domestic fishermen. To meet the growing demand for seafood products, the United States has become increasingly dependent on imported products. In 1975 imported fishery products made up 61.8% of the edible supply.

United States fishermen blame foreign effort, financial neglect and unfavorable marketing practices for much of the relative decline of the commercial industry. Although enactment of the Fishery Conservation and Management Act (Public Law 94-265) is expected to substantially benefit domestic fishermen, many other problem areas will remain.

It was intended by Senator Eastland and the other supporters of the Eastland Resolution that the Interstate Marine Fisheries Commissions aid in the gathering of the information necessary to remedy the ills of the commercial and recreational fishing industries. In compliance with Senate Con. Res. 11, the Congress appropriated funds to the Interstate Fisheries Commissions to survey the United States fishing industry.

This report is the result of information gathered through the efforts of the Atlantic States Marine Fisheries Commission by several methods, including regional hearings and town hall-type meetings and personal interviews. The ideas and information emanating from the Atlantic Coast Region were discussed at a National Conference on fisheries during the week of November 29-December 3, 1976. Consequently, a National Report was prepared, recommending to the Congress specific action, including legislative changes, necessary to revitalize the fishing industries and formulate a viable national fisheries program.

SUMMARY OF RECOMMENDATIONS

1. Increase research on species of importance to recreational anglers.
2. Develop a program to provide funds for access facilities for recreational fishermen.
3. Request that the Commerce Department compile a list of all available sources from which funds could be obtained for recreational access needs.
4. No salt water sportfishing licenses should be required unless certain criteria are met.
5. Dingell-Johnson funds should be administered in an equitable manner for the benefit of salt-water anglers.
6. Request that the Commerce Department compile a list of all federal financial sources for commercial port and harbor development.
7. Develop a special port and harbor fund to provide additional financing of projects benefiting commercial fishermen.
8. Safety requirements should be developed by the Coast Guard with the cooperation of the fishing industry.
9. Safety education programs should be developed and the information disseminated by the National Marine Fisheries Service and the Office of Sea Grant.
10. Maritime labor standards should be modified to exempt independent fishermen.
11. Strengthen laws and enforcement of existing laws relating to the discharge or dumping of pesticides, heavy metals and other toxic substances.
12. Streamline the enforcement and regulatory functions of agencies which have authority over activities relating to fish production.
13. Special consideration should be given to seafood waste products which can enhance the marine environment.
14. The Fisheries Vocational Training Act (16 U.S.C. 760d) should be amended and transferred to the Division of Vocational and Technical Education within the Department of Health, Education, and Welfare to encourage vocational training.
15. Agricultural authorizations should be expanded to include aquatic products.
16. A list of incentives and benefits for the fishing industry should be compiled by the agency responsible for fisheries.
17. Fishermen who haul their own products should be exempted from the Federal Highway Use Tax or taxed at a lower rate than other common carriers.

18. Tariffs on fish nets and netting should be substantially reduced.
19. Investigations should be conducted by the responsible agency on the effects of imported fish products on the domestic industry.
20. United States participation in international aid programs should be investigated.
21. A system should be developed to continually monitor international aid programs.
22. Programs of fishery utilization and development should be removed from the Department of Commerce and placed in an agency created for that purpose within the Department of Agriculture.
23. Access to all financial assistance programs which have an impact on fisheries should be facilitated.
24. A comprehensive financial assistance program to improve shoreside commercial facilities should be developed.
25. A comprehensive financial assistance program should be developed to encourage exploitation of underutilized species.
26. Legislation should be enacted to fund and organize Aquatic Production Credit Associations.
27. Industry and government should establish standards regulating the size and quantity of fresh and frozen seafood products.
28. Formation of fishery cooperatives should be encouraged.
29. Educational programs, staffed by home economists and nutritionists, which inform the public in the preparation of all types of fresh and frozen seafood, should be increased.
30. Floor prices for designated underutilized species should be established.
31. Alleged price-fixing and other market restraints by the major domestic market centers should be investigated by the Department of Justice.
32. Free market news information by the National Marine Fisheries Service should be distributed to the fishing industry.

I. NEW ENGLAND SECTION

A. BRIEF HISTORY OF FISHERIES

The New England-North Atlantic Section extends from the Maritime Provinces of Canada to New York. The coastal zone is not extensive in the section, particularly in the northern portions. There are a few major rivers, and sheltered deep-water harbors abound. The southern portion of the section is heavily industrialized and densely populated.

Most commercial fishing is concentrated offshore, particularly on the numerous "banks" (areas of shallow water surrounded by deep water) located primarily beyond the former 12-mile United States contiguous fisheries zone, and substantially seaward of the 3-mile territorial sea. The fish primarily sought on the banks include cod, haddock, hakes, halibut, various flatfishes, pollock, and ocean perch. Ocean crabs (red, rock and Jonah), sea scallop and sea clam (ocean quahog) are also harvested, and undoubtedly will be more intensely fished in the future. The banks also support a heavily-fished northern lobster population. Pelagic open-water fisheries for herring (juvenile herring are processed as sardines), mackerel, and pandalid shrimp are well-developed. This highly productive area is one of the world's most intensely fished ocean fishing regions. There is considerable competition among the fishermen of several countries. The majority of species are harvested by the Russians, followed by United States and Canadian fishermen. Vessels from Poland, Japan, Spain, Romania and West Germany also participate in the harvest.

Inshore of the high seas there is significant fishing effort in what was the contiguous fishery zone and in the territorial sea. Foreign fishing was permitted within the contiguous zone under the terms of bilateral agreements between the United States and the involved nations (e.g. a bilateral agreement permitted Russian vessels to fish within the zone). The coastal States strictly regulate and enforce fishing within the territorial sea, prohibiting foreign fishing from this area. American lobster is the leading commercial species in value in the contiguous zone and the territorial sea.

The inshore fish harvest of New England is small relative to the offshore catch (beyond 12 miles). There are relatively well developed seasonal fisheries for flounders, whiting, ling, striped bass, bluefish and smelt. The estuaries produce oyster, soft-shell and hard-shell clams, mussel and bay scallop.

B. CURRENT STATUS OF FISHERIES

1. Commercial

New England fishermen are strongly independent, and have been slow to organize into associations. There is a trend toward forming fishing cooperatives, in which individual fishermen pool their efforts in harvesting and marketing their catch and divide the proceeds. The cooperatives have also been moderately successful in the social and political arenas, vocalizing the needs of fishermen and helping to shape legislation. In most instances a fisherman owns a single boat. The duration of the fishing trip is most often one day, with trips up to three days not uncommon. Often, catches are sold dockside to the highest bidder, among the representatives of the large seafood processors, independent brokers and dealers, and institutional buyers, and are trucked to their destinations. At present, fishery resources are treated as common access resources, open equally to all who wish to enter the fishery.

New England fishermen were among the most outspoken in pressing for a 200-mile fishery conservation zone. The "foreign presence" is conspicuous off the highly productive New England banks. American fishermen, in relatively small vessels, and outfitted for short trips at sea, are constantly outfished and outmaneuvered by large foreign vessels, which are organized into efficient fleets complete with large mother ships which process and store the fishermen's catch.

2. Recreational

Recreational fishing provides much to the economy of the New England section, particularly in communities which have grown dependent on the seasonal sportfishing trade and associated industries (e.g. boating, tackle and tourism). Areas of primary significance include Cape Cod, the offshore islands of Cuttyhunk, Martha's Vineyard and Nantucket, as well as fabled ports such as Boothbay Harbor, Portsmouth and Narragansett. Several rivers are utilized by recreational fishermen (e.g. the Thames, Sakonnet, and Penobscot).

Species most sought after include striped bass, bluefish, scup, fluke, winter flounder, cod, pollock, hake, haddock, swordfish, tuna, shad, smelt, oyster, quahog, scallop, soft shell clam and northern lobster.

Sportfishing is becoming increasingly popular as a result of greater mobility of urban populations combined with easier access to coastal areas. In addition, seashore communities are becoming more aware of the necessity of maintaining an aesthetically attractive and healthful environment. Consequently, with the help of both federal and state aid, such communities are doing much to abate the pollution of coastal waters. As a result of favorable biological conditions, sportfishing for certain popular species such as bluefish and fluke has been highly successful.

C. OUTLOOK FOR FISHERIES

1. Commercial

The outlook for commercial fisheries in the New England Section will probably be affected by U.S. extended fishery jurisdiction to 200 miles (Public Law 94-265, The Fishery Conservation and Management Act of 1976). Although it is unlikely that the 200 mile fishery zone will result in the total absence of foreign fishing vessels within 200 miles of the New England coast, there will be some decline in the overall foreign fishing effort. It is likely that the United States Government, while adhering to international principles of full resource utilization, will gradually phase out foreign fishing effort as American fishermen develop the capacity to fully harvest stocks. The change will result in an eventual restructuring of the New England fish industry, and will alter the relationship between the United States and those foreign nations currently fishing off the New England coast.

Under Public Law 94-265, those species that are now being harvested at their optimum levels by American and foreign fishermen, and which could be harvested totally by American fishermen, will probably be allocated only to U.S. fishermen. Those species which are harvested primarily by foreign fishermen, and for which New England fishermen have neither the incentive nor the capability to utilize, will probably remain open to foreign exploitation. As the New England fishermen increase their harvests of such species, the foreign effort will be gradually reduced.

The foregoing should result in the eventual domination of the fisheries off New England by New England fishermen, a situation which has not existed since the early 1960's. It is likely that, given such control, United States fishing effort will be increased, creating investment opportunities which will attract much-needed capital for the construction of modern fishing vessels and processing and storage plants. It is suggested that the American consumer should derive the ultimate benefits through access to higher quality, more standardized, and lower-priced United States seafood products. Those species (e.g. squid, dogfish) for which an American market cannot be established will probably be exported to foreign nations either in raw form or processed to some degree, helping to offset the effects of imported fish products into the U.S.

The extension of U.S. fishery jurisdiction may encourage joint ventures between U.S. and foreign fishermen involving New England fisheries. Joint ventures may allow foreign fishermen to participate in the fisheries over which the United States has extended jurisdiction.

A healthy financial environment should result in more efficient utilization of popular New England fish stocks by American fishermen as well as greater utilization of those species which are

now harvested primarily by foreign fishermen. In addition, it is likely that greater United States effort will be expended to develop fisheries for species which are not currently being harvested (e.g. red crab, rock crabs, jonah crabs and ocean quahogs).

2. Recreational

Sportfishing in New England, as well as elsewhere in the nation, will probably continue to increase. It is probable that the current trend toward fewer fish caught per fisherman will continue. However, the amount of fish caught per fisherman is not a primary factor in the continued development of sportfishing. The greatest concentration of sportfishing is in inshore waters for species which may or may not be utilized by commercial fishermen. Conflicts of stock utilization occur between recreational and commercial fishermen. Because inshore sportfishing is increasing at a faster rate than commercial fishing, and since sportfishermen are attaining a more prominent role in the New England fishing economy, it is likely that the sportfishermen will harvest an increasingly larger proportion of those species caught in common.

The number of offshore sportfishermen will also continue to grow as faster and larger boats become available to recreational fishermen. Although many of the offshore species sought will be managed under extended jurisdiction (e.g. cod, Boston mackerel, swordfish) or will be regulated by international agreements (e.g. bluefin tuna), it is unlikely that such management and regulation will affect the sportfishing effort.

II. MIDDLE ATLANTIC SECTION

A. BRIEF HISTORY OF FISHERIES

The Middle Atlantic Section extends from New York to North Carolina. The section has an extensive coastal zone permeated by numerous large estuaries, such as Chesapeake and Delaware Bays. Several large rivers traverse the section, including the Hudson, Delaware, Susquehanna, Potomac, and James. More major port cities exist in this section than in any of the other coastal sections (e.g. New York, Philadelphia, Wilmington, Baltimore, Norfolk, Newport News). Although much of the coastal zone is densely populated, with intense industrialization occurring at the sites of most major ports, broad stretches of the coastal zone remain essentially undeveloped, and support substantial inshore fisheries. Much of the section is characterized by a broad continental shelf which slopes gradually offshore. The sea floor beneath the continental shelf is primarily sandy, whereas much of the sea bottom offshore of the New England-North Atlantic Section is rocky. Offshore of the Middle Atlantic Section are three deep troughs, the Hudson, Wilmington and Baltimore Canyons, which offer attractive potential for fisheries development.

B. CURRENT STATUS OF FISHERIES

1. Commercial

Several economically important species of finfish and shellfish spend some or all of their life cycles in the productive estuaries of the Middle Atlantic Section. Species of major importance include blue crab, bay scallop, soft-shell clam, quahog, oyster, menhaden, weakfishes (common or northern and spotted seatrouts), red and black drum, croaker, spot, king whiting (northern kingfish or surf mullet), bluefish, flounders, shad, white perch and striped bass. The inshore and shallow water fisheries of the Middle Atlantic Section are of major importance and comprise a significant portion of the total volume and value of the fish production for the section.

There is considerable offshore fishing effort in the Middle Atlantic Section within and beyond the 12-mile contiguous zone. Trawl fisheries are well developed, as is purse seining. Species caught include cod, whiting, hakes, flounders, butterfish, mackerel, herring and menhaden. Various shellfishes (e.g. red and calico crabs, sea scallop, surf clam, conch and northern lobster) are caught in dredges and traps. Some species (e.g. American lobster) which are caught inshore in New England, are caught offshore in deep water in the Middle Atlantic Section (the water temperatures in the two locations being similarly cold).

Beyond the contiguous zone the bulk of the catch is harvested by foreign fishermen. Species taken include cod, whiting, hakes, flounders, butterfish, mackerel, herring and squid. There is increasing offshore activity by American fishermen. Among the fisheries that could be expanded are those for red and calico crabs, butterfish and squid. Hudson, Wilmington and Baltimore Canyons offer the potential for greatly increased fishing effort.

2. Recreational

Sportfishing is well developed throughout the entire Middle Atlantic Section. Inshore, several popular marine species (e.g. striped bass, bluefish, weakfish, white perch, shad, croaker, black drum, winter and summer flounders, spot, cobia, surf mullet) are sought by anglers. Many large bays and rivers attract extensive numbers of recreational fishermen during all periods of the year. Of those species sought in common by recreational and commercial fishermen, many are more important to the economy as sport species than as commercial species.

Offshore of the Middle Atlantic Section there is considerable sportfishing effort. In the last few decades a distant water sportfishery for several large game species has developed. In addition, the offshore canyons are popular, productive sportfishing grounds for such esteemed pelagic species as blue and white marlin, swordfish, sailfish, bluefin and yellowfin tunas, wahoo, king mackerel, dolphin, bonito, albacore and sharks.

C. OUTLOOK FOR FISHERIES

1. Commercial

The fisheries picture of the Middle Atlantic Section is complex, containing strong elements of both inshore- and offshore-oriented industries. Although the offshore fisheries are not as significant to the total harvest as they are in the North Atlantic-New England Section, nevertheless, such fisheries are important to the Section and could be further developed. The extensive estuarine areas inshore support highly productive fisheries for finfish and shellfish.

It is possible that offshore fisheries in the Middle Atlantic Section will expand considerably, partly as a result of extended jurisdiction. The combination of increased fisheries technology, demand for offshore species, declining inshore species, expanding markets, and management prospects favoring United States fishermen should accelerate development of offshore fisheries. Consequently, offshore fisheries may be expected to increase in importance relative to inshore fisheries in the Middle Atlantic Section.

Fisheries for several species such as red, calico, jonah, and rock crabs may be developed in the future. The harvest of northern lobster may be increased far offshore in such areas as Hudson, Wilmington and Baltimore Canyons. Implementation of 200-mile extended jurisdiction may encourage United States fishermen to increase fishing efforts for those offshore species (e.g. butterfish, squid, herring and mackerel) which were harvested primarily by foreign fishermen.

Inshore fisheries may benefit by better management as a result of the Fishery Conservation and Management Act of 1976. Some species (e.g. oyster, menhaden, cod, striped bass, and porgy) are fully utilized. Regional management plans for the Middle Atlantic Section will address problems of fisheries' concentration on such species. In some instances, incentive may be provided for fishermen to transfer their effort from fully utilized to lesser utilized species.

2. Recreational

The sportfishery, both inshore and offshore, is an increasingly important component of Middle Atlantic fisheries. The proximity of the coastal zone to many areas of high urban density places recreational fishing within reach of increasingly mobile city dwellers. Continued construction within the coastal zone for industrial, residential and recreational uses will also result in additional numbers of sportfishermen. Although fishing pressure is heavy in many areas, particularly on weekends and holidays, future expansion and construction of harbors should accommodate the ever-increasing armada of sportfishing craft.

Although inshore fishing pressure is heavy, there are many popular species (e.g. spot, croaker, drums, bluefish, seatrouts, flounders) which are abundant enough to keep fishermen happy. The less accessible estuarine waters still offer some degree of solitude to more aesthetically-minded anglers. Therefore, it is probable that even with increased fishing effort, the inshore waters of the Middle Atlantic Section will continue to be productive and attractive to anglers. The recreational harvest should increase relative to the commercial catch, leaving fewer numbers of some species (e.g. striped bass) for commercial fishermen.

The offshore fishing outlook is similar to that for inshore fishing. Generally, the offshore regions, particularly the canyon areas, are not heavily fished. Fishing success is relatively high for popular, seasonal species such as tunas, billfishes, wahoo, dolphin, king mackerel and bluefish.

Mainstays such as cod and pollock attract winter anglers as well as warm-weather fishermen. The attractiveness of offshore fishing will probably result in greatly-increased angling pressure over the next few decades. The increased availability of fast, comfortable, high-powered boats, both private and charter, should help to encourage such an increase.

The increase of offshore fishing should be easily absorbed by the sportfishing community, and there should be no ill effects suffered by the fish stocks. Most offshore commercial species will not be significantly affected by sportfishing, and conflict between the two groups of fishermen should be minimal. Extended jurisdiction should have little effect on sportfishermen in the Middle Atlantic Section.

III. SOUTH ATLANTIC SECTION

A. BRIEF HISTORY OF THE FISHERIES

The South Atlantic Section extends from North Carolina through the Florida Keys. The estuarine zone is extensive throughout the section. There are many wide, long bays, and tidal rivers are numerous. The continental shelf is broad through much of the section, but in some areas (i.e. off the outer banks of North Carolina and South Florida) it is very narrow, and deep water occurs close to shore. The proximity of the Gulf Stream to the coast results in much warmer climates than would otherwise occur. The Gulf Stream also provides fishermen in those areas access to tropical species of fishes. Although the northern portions, and the fisheries located therein, are similar in many respects to the Middle Atlantic Section and its fisheries, the southernmost portions are tropical, with fishery characteristics unique to such climates.

The fishing industry of the South Atlantic Section is not as fully developed as the industries of either the Middle Atlantic or North Atlantic Sections. There is significant room for expansion in many fisheries, particularly those located offshore. Several inshore species offer potential for increased production.

Whereas some fisheries are similar throughout the South Atlantic Section, there are others which exist only in the southern or northern Subsections. Examples of the former are the stone crab and the spiny lobster, which do not occur in commercial quantities north of Florida. Examples of the latter are the northern weakfish, croaker, red and black drum, spot and flounder, which do not occur in commercial quantities south of Cape Canaveral, Florida.

The fisheries in the section from North Carolina south to the level of Cape Canaveral (the Indian River Region) will be discussed separately from the fisheries south of Cape Canaveral. Comparisons of the fisheries of the two Subsections will be made where appropriate.

B. CURRENT STATUS OF FISHERIES

1. Commercial

The structure of the fishing industry of the Northern South Atlantic Subsection is quite similar to that of the Middle Atlantic Section. The major differences include a change in several of the species harvested and in the extent of development of the industries. Cod, hakes, northern (Boston) mackerel, squid, common weakfish, herring and northern lobster give way to more southern species such as king and spanish mackerels, red drum (redfish or channel bass), spotted weakfish, pompano, mullets and shrimp (e.g. oyster, blue crab flounders, bluefish, shad and croaker). Some of the characteristically northern species (e.g. northern lobster) can still be caught in the cold depths offshore. Shrimp is the most important fishery throughout the South Atlantic Section.

The fisheries of the Northern South Atlantic Subsection are substantially less developed than those of the Middle Atlantic Section, and offer significant potential for development. Although the inshore fisheries are more established than the more recently-developed offshore fisheries, the harvest of several inshore species can be increased (e.g. mullets, blue crab, seatrouts, northern and southern varieties of quahogs, oyster, king and spanish mackerels, and bay scallop). The offshore fishery is lightly exploited and offers potential for development.

There is a developing offshore deepwater fishery (primarily hook and line) for grouper, snapper, tilefish and other, smaller bottomfish (e.g. grunts), particularly in the southern portion of the Subsection. These species are uncommon north of the South Atlantic Section. The shrimp fishery is paramount in the southern portion of the Subsection. The shrimp stocks are now fully utilized, and further expansion of the industry will create economic hardship on some sectors of the industry.

The structure of the fisheries of the Southern South Atlantic Subsection (in contrast to the Northern Subsection) is very different from the Middle Atlantic Section. Many of the species are subtropical or tropical in nature. Almost all of the species common to the Northern Subsection are also harvested in the Southern Subsection. Shrimp continues to be of primary importance. King and spanish mackerels, bluefish, pompano, mullets, snappers, groupers and grunts continue as important species. The importance of oyster, quahogs, flounder, channel bass and croaker is greatly decreased. Reduction of estuarine habitat and freshwater flow may be partly responsible for the decrease. Atlantic Coast spiny lobster, stone crab, and yellowtail and mangrove snappers are important to the Southern South Atlantic Subsection, but do not occur commercially north of the Subsection. Conch is of local importance in the southern portion of the Subsection.

Some fishermen in the southern portions of the Subsection fish in waters under the jurisdiction of foreign nations. For example, some shrimp boats based in the Florida Keys fish off the coasts of Brazil and Mexico. Other fishermen from the lower east coast of Florida fished for spiny lobster off the Bahama Islands until that nation declared spiny lobster a creature of its Continental Shelf and closed the fishery to United States fishermen. Additional species harvested off Central and South American coasts are conch, stone crab, and several varieties of snapper and groupers.

The fisheries of the Southern Subsection are more developed than those of the Northern Subsection. Even so, there are some fisheries which can be further developed (e.g. the king and spanish mackerel fisheries). The coastal zone of the Southern Subsection is extensively developed for commercial and residential purposes; therefore, more destruction and pollution of valuable estuaries has occurred there than in the Northern Subsection. Close inshore fisheries (e.g. those for oyster and blue crab) are not as significant in the Southern Subsection as in the Northern Subsection. Partially, because of the geophysical features of the section (the Gulf Stream is often less than one mile offshore of Miami Beach) and the close proximity of foreign nations (i.e. Bahama Islands, Cuba), there has been little development of a far offshore fishery under United States jurisdiction. Most of the fishing in the Subsection occurs within twelve miles of the United States coast.

2. Recreational

In the Northern South Atlantic Subsection, recreational fishing, although still important, is not as highly developed as in the Middle Atlantic Section. Many of the common inshore species of the Middle Atlantic Section also occur in abundance inshore in the Northern South Atlantic Section, and angler interest in those species (e.g. bluefish, flounder, spot, croaker, weakfishes, white perch, surf mullet) is high. In addition, several southern varieties add spice to the recreational fisherman's catch. Such species include spanish and king mackerels, channel bass and pompano.

The status of the offshore sportfishery of the Northern South Atlantic Subsection differs markedly from the sportfishery of the Middle Atlantic Section. Although some areas offer offshore sportfishing, much of the offshore sportfishery is in an embryonic stage of development. Much of the offshore fishing is for bottom-dwelling species such as snappers, groupers, and grunts. There is also significant seasonal offshore fishing for pelagic species such as king and spanish mackerels, cobia, several of the jacks, wahoo, dolphin, bluefish, tunas and billfishes. However, long-range offshore fishing effort for billfishes, tunas and other large game species is less than similar fishing effort elsewhere along the Atlantic Coast.

In the Southern South Atlantic Subsection, recreational fishing is highly developed. The subsection contains a large urban population, and, in addition, attracts many visitors to the coastal zone for recreation. Fishing receives much attention from permanent residents and tourists alike.

Inshore species include spanish and king mackerels, spotted seatrout, bluefish, channel bass, and pompano as well as such exotic tropical species as tarpon, snook, bonefish, and permit. Sportfishing for all of the popular species is of considerable economic importance to local communities.

Offshore fishing in the Southern South Atlantic Subsection is intensive. There is heavy resident

and tourist fishing pressure for all of the popular offshore species (e.g. billfishes, tunas, several jacks, dolphin, wahoo, cobia, king mackerel, tilefish, snappers and groupers).

C. OUTLOOK FOR FISHERIES

1. Commercial

The outlook for the Northern South Atlantic Subsection is promising. Even without the prospect of extended jurisdiction, much expansion would probably have occurred in the offshore fishery since it is currently not fully developed by domestic fishermen. Many of the offshore species are caught by foreign fishermen. It is unlikely that extended fishery jurisdiction will affect the relationship between foreign fishing and United States fishing in the Northern Subsection, at least in the immediate future. It will be some time before United States fishermen can fully utilize the stocks currently harvested by foreign fishermen. Therefore, much of the increased U.S. fishing effort should occur independently of U.S. extended jurisdiction.

Inshore, some fisheries can be further exploited. For example, eel, spanish mackerel and mullet stocks are not fully utilized. The only major inshore species which is now fully utilized is shrimp.

Although there is a possibility of additional exploitation of some stocks (e.g. king and spanish mackerel, members of the jack family, grunts and other bottom fish), it is unlikely that there will be much expansion of overall fishing effort for offshore species, even with extended fishery jurisdiction. Inshore stocks do not offer much potential for increased harvest. There is considerable competition between commercial and recreational fishermen, and the outlook is not especially promising for the inshore commercial fishing industry. Some species, such as snook and permit have been declared sport fishes, and the harvesting of such species has been closed to commercial fishermen.

Because of the close relationship of the Southern South Atlantic Subsection and foreign countries in that region of the Atlantic and the Caribbean, unilateral fishery jurisdiction by the U.S. and foreign nations such as the Bahamas and Mexico may result in the exclusion of U.S. fishermen from foreign waters and of foreign fishermen from U.S. waters. This situation could change the structure of fisheries in the subsection. One possible result could be the accelerated formation of joint ventures between United States fishermen and fish processors and citizens of foreign nations off whose shores the fish are caught and on whose shores the fish are processed. Joint ventures involving a transposition of the parties will also become more common as foreign fishermen and processors of foreign nations seek to continue participation in the fisheries of the United States.

2. Recreational

The Northern South Atlantic Subsection is currently one of the fastest developing areas of the United States. Space and necessary resources such as water are in ample supply. Considerable industrialization, urbanization and residential development should occur during the next few decades. As a consequence, there will be increased pressure on the coastal recreational fishery. Sportfishing in general can be substantially increased without damage to fish stocks. Offshore fishing, in particular, is in the early stages of development, and facilities are needed in many areas. Access to fishing grounds must be increased. The outlook for sportfishing, therefore, is good, with prospects of an increased catch by a greater number of anglers. Sciaenids (e.g. drums, croaker, spot, weakfishes) are and should continue to be the most popular species. Most sport fishes are important commercial species as well, and conflicts between sportfishermen and commercial fishermen may arise. Industrial and recreational development will adversely affect sportfishing by denying access to fishing grounds in some areas and by causing the destruction of important spawning, feeding and nursery habitat by siltation and various forms of pollution.

It is unlikely that the sportfishery of the Southern South Atlantic Subsection will change greatly in forthcoming years. There is intensive fishing pressure for most inshore and offshore game fishes.

Competition between commercial and recreational fishermen for desirable species should continue. Some important game species have already received protection from commercial fishing, and it is likely that additional species will be given protective status. Sportfishing is and will continue to be of maximum economic importance to the area. Heavy industrial development is discouraged, and most development is for tourist and residential purposes. As a result, many of the pollution problems faced by other coastal areas are conspicuously absent, even though the area is not totally free of pollution-related problems. However, environmental conditions should remain favorable for the continued abundance of most popular game species.

IV. DEVELOPMENT OF RECOMMENDATIONS FOR ATLANTIC COAST FISHERIES

On June 1, 1975, the Atlantic States Marine Fisheries Commission (ASMFC) undertook a contract with the U.S. Department of Commerce/NOAA for the implementation of Senate Concurrent Resolution 11, commonly referred to as the "Eastland Fisheries Survey" as directed by the U.S. Congress.

In August, 1975, a project director, William G. Mustard, was hired by ASMFC. Headquarters in Washington, D.C. were established and staff was hired.

It was determined that town hall-type meetings would provide the best forum for participation from all sectors of the fishing industry. Field interviews would be utilized for broader coverage and analysis. It was suggested that the services of existing fishing trade associations, State Fisheries Administrations and Sea Grant Universities should be employed whenever appropriate.

From September, 1975, through February, 1976, hearings and investigations were conducted in the Mid-Atlantic States of New Jersey, Delaware, Maryland and Virginia. Tom Wieland of the Maryland Watermen's Association; Don Webster, University of Maryland and William F. Sieling of the Maryland Department of Natural Resources functioned as project coordinators and consultants for the Mid-Atlantic section (ASMFC contract #9-24-100).

The Mid-Atlantic section was surveyed by means of meetings and questionnaires. Fourteen major hearings were held. In addition 29 small group interviews were conducted by the project staff. Exhibit booths were set up at two major trade shows to facilitate talk with attendees and exhibitors. A total of 233 people participated in the hearings, 65 people were interviewed, and 120 people were contacted at the trade shows.

From February, 1976, to June, 1976, hearings and investigations were conducted in New England. The states included were Maine, New Hampshire, Massachusetts, Rhode Island, Connecticut and New York. The program coordinators and consultants were Nat Barrows of Maine Commercial Fisheries Inc. (ASMFC contract #2-4-102) and Robert Barlow of the Massachusetts Lobstermen's Association, Inc. (ASMFC contract #2-10-103). As in the Mid-Atlantic survey, assistance was also provided by several state agencies, Sea Grant Institutions and commercial and sportfishing organizations.

Dr. Robert Taber, University of Rhode Island; Senator George Gunther, Bridgeport, Connecticut; Chris Weld, National Coalition for Marine Conservation, Boston, Massachusetts; and Al Ristori, Emergency Committee to Save American Marine Resources, Englewood Cliffs, New Jersey, assisted in organizing hearings and meetings in their respective areas. Fifteen hearings were conducted, attracting more than 900 attendees. One-hundred seventy-five additional people attended 30 small meetings. Private interviews were arranged with 27 leaders of industry and state government. An interested media provided newspaper, radio and television coverage throughout New England.

The survey was conducted in the South Atlantic Section from June through September, 1976. The survey area included the states of North Carolina, South Carolina, Georgia and Florida. The program coordinators and consultants were Norman Angel, North Carolina Fisheries Association (ASMFC contract #5-14-76); Mat Howell, Marine Consultants, Mount Pleasant, South Carolina (ASMFC contract #5-6-105); Dave Harrington, Georgia Sea Grant, Brunswick, Georgia (ASMFC contract #5-11-76); Dr. Frank Carlton, National Coalition for Marine Conservation, Savannah, Georgia (ASMFC contract #5-7-106); and Dr. Thomas A. Herbert, Natural Resources Consultant, Tallahassee, Florida (ASMFC contract #5-5-104). Additional assistance was provided by state natural resource agencies, Sea Grant Universities and others. Twenty public hearings were held, with 750 individuals attending. Sixty-eight personal interviews were conducted, and an additional 75 people attended 21 small meetings.

A total of 49 hearings were held in the three sections which were attended by 1,900 people. One hundred-fifty interviews were conducted, and 80 small group meetings attracted an additional 350 people. Commercial fishermen and related tradespeople represented 80% of the attendees at all hearings. To stimulate participation by recreational fishing interests, special recreational fisheries hearings were held. Hearings were held in Annapolis, Maryland; Boston, Massachusetts; Bridgeport, Connecticut; New York, New York; Savannah, Georgia; Charleston, South Carolina; and Palm Beach, Florida. The interests of the general public were represented by representatives of the press, consumer group advocates, and spokesmen for environmental groups such as the National Wildlife Federation and the Izaak Walton League.

Several state administrators or members of their staff attended the meetings and provided clarification of local and national issues. State agency personnel were frequently interviewed by the project staff and consultants; a list of recommendations was compiled by utilizing the field survey data and consultant reports.

V. RECOMMENDATIONS

The following recommendations were developed by the project staff and participants in attendance at the hearings held along the Atlantic Coast. Recommendations focused on specific issues whenever possible. Many of the recommendations represent the combined opinions of commercial, recreational and other concerned interests. However, some recommendations reflect the concern of a particular group.

1. *Increase research on species of importance to recreational anglers.*

Sportfishermen stated that Federal fisheries research programs addressed only species of commercial value, resulting in a scarcity of information on species of recreational interest.

2. *Develop a program to provide funds for access facilities for recreational fishermen.*

Lack of adequate access facilities (e.g. boat ramps, piers, bridge walkways) for shore and boat fishermen was cited as a serious problem in many coastal areas. It was suggested that a portion of Dingell-Johnson funds derived from tax on sportfishing equipment could be made available to acquire access sites and provide necessary facilities even in states with no marine sportfishing license.

3. *Request that the Commerce Department compile a list of all available sources from which funds could be obtained for recreational access needs.*

State and local planners were concerned about the lack of centralized information on available sources of funds for recreational access needs. It was requested that the Offices of Coastal Zone Management at the Federal and State levels work cooperatively with the planners to address recreational access needs. Lack of access facilities in areas where highways intersect with navigable waterways was considered by many to be an issue which deserves immediate attention.

4. *No salt water sportfishing licenses should be required unless certain criteria are met.*

It was suggested that sportfishing licenses should be species specific, or should be confined to a limited group of species. The licenses should be similar to those issued for hunting. Licenses should be issued at the state or regional level. Money derived from such licensing should be used to provide access to fishing areas, and for research and maintenance of the licensed species. An advisory group should participate in the administration of such funds. If possible such funding should be under the auspices of the regional councils created by Public Law 94-265.

5. *Dingell-Johnson funds should be administered in an equitable manner for the benefit of salt-water anglers.*

Dingell-Johnson monies obtained from taxation of salt-water fishing tackle, bait, and other equipment should benefit salt-water anglers. State fish and game agencies responsible for enhancing fisheries presently use Dingell-Johnson funds for the benefit of licensed fresh-water

fishermen. Such funds are not used to benefit unlicensed salt-water anglers. Section 777c of 16 U.S.C. should be amended to enable state agencies responsible for marine sport fishes, or the regional councils to be eligible for funds based on the number of identified marine anglers.

6. *Request that the Commerce Department compile a list of all federal financial sources for commercial port and harbor development.*

It was stated that a major constraint to the utilization and development of the fishery resources in the Mid-Atlantic region is the inadequate port and harbor facilities for recreational and commercial fisheries. Inlets and channels which provide access to ports and harbors are inadequately maintained and unsafe. The competition for waterfront property and dock space will become more intense as a result of offshore oil and gas development. A list of all federal assistance programs which relate to public and private port and harbor development should be assembled by the National Marine Fisheries Service, Office of Coastal Zone Management, or other responsible agency and distributed to interested parties. The document should include a step by step approach to funding, a simplified explanation of procedures, forms, and addresses of information centers. The document should be made available also through the National Technical Information Services.

7. *Develop a special port and harbor fund to provide additional financing of projects benefiting commercial fishermen.*

If existing funds for projects benefiting commercial fishermen are inadequate, a special fishery development fund should be authorized for administration by the responsible fishery agency, or by the regional management councils. Long-term loans or grants should be made available to assist fishermen in reaching fisheries utilization objectives. Money for the fund could come from Saltonstall-Kennedy funds, general appropriations, or an amended Dingell-Johnson Act.

Legislation for a specific fishery utilization and development fund should contain the following provisions:

- A. Loans to individuals and municipal governments
- B. Grants to augment other federal loans
- C. Terms — 30 years maximum
- D. Interest — government cost of money
- E. Coverage of the cost of public and private dredging and harbor maintenance performed in emergencies, such as immediately following damage or alteration by major storms.

The program could provide coordination for state and industry for the many emergency assistance programs not specifically related to fisheries or to harbor and channel maintenance. The program should be administered by the agency responsible for fisheries utilization and development.

8. *Safety requirements should be developed by the Coast Guard with the cooperation of the fishing industry.*

It was recommended that safety requirements be developed and administered by the Coast Guard and industry, not the Occupational Safety and Health Administration (OSHA) or the National Marine Fisheries Service (NMFS). Placing fisheries safety under Coast Guard jurisdiction would remedy contradictions in existing law. OSHA should not regulate maritime activities.

aboard vessels and should be restricted to shoreside activities involving 10 or more full-time employees. It was stated that maritime safety legislation is not required at this time.

9. *Safety education programs should be developed and the information disseminated by the National Marine Fisheries Service and the Office of Sea Grant.*

Safety education relating to fisheries could be provided through the National Marine Fisheries Service and the Office of Sea Grant, with the assistance of trade associations and the National Safety Council.

10. *Maritime labor standards should be modified to exempt independent fishermen.*

Generally only those fisheries with high accident rates have liability insurance. Many fishermen and small boat operators do not carry insurance. Several organizations provide member coverage under Blue Cross/Blue Shield or other similar plans. Other groups provide income protection plans or other similar forms of common insurance, including workman's compensation and state unemployment insurance. However, many common or group carriers, concerned with liability under the Jones Act and the Longshoremen's and Harbor Workers Act, have terminated policies covering fishermen and fish-house workers. A solution to the problem would be to exempt those fisheries workers not working under an employer/employee or union contract from the Jones Act or provisions of the Longshoremen's and Harbor Workers Act.

There was general agreement that adequate insurance coverage could be obtained from group plans or common carriers at a rate below that of maritime insurance. Less than 2% of the U.S. fishing industry now operates in offshore waters under maritime standards or employer/employee contracts. This percentage may drop as a result of problems confronting U.S. registered vessels on the high seas (e.g. in the tuna and shrimp fisheries). Therefore, approximately 98% of the fishing industry is required to adhere to maritime labor standards which do not apply to them. Shoreside plant operators requested that fish-house workers employed in the handling and processing of aquatic products be exempted from wage and hour laws. Such an exemption is now provided to similar handlers and processors employed in agriculture.

11. *Strengthen laws and enforcement of existing laws relating to the discharge or dumping of pesticides, heavy metals and other toxic substances.*

Harmful pollution of the marine environment by pesticides, heavy metals and sewage sludge should be reduced or discontinued. Many expressed the opinion that although numerous federal and state laws existed, interpretation and enforcement varied widely from state to state or within the same state. It was noted that the disposal of treated sewage often resulted in levels of pollution intolerable to many commercial and recreational species of fishes and shellfishes.

12. *Streamline the enforcement and regulatory functions of agencies which have authority over activities relating to fish production.*

Involvement by the Environmental Protection Agency (EPA), the Food and Drug Administration (FDA), the U.S. Corps of Engineers, state environmental protection agencies, natural resources agencies, state public works agencies and county health agencies has created a con-

fusing array of overlapping and conflicting regulations. Consequently, the effectiveness of those regulatory agencies is reduced. The situation could be corrected by federal reorganization and the creation of one management regulatory body within the responsible department. Similar reorganization could be accomplished at the state level.

13. *Special consideration should be given to seafood waste products which can enhance the marine environment.*

Biological waste products are often treated in the same manner as are heavy metals, toxic substances, and other industrial wastes. Such substances include fish and shellfish wastes, seaweed, and sea-water used in processing aquatic products. Biological and readily bio-degradable substances can be discharged under conditions in which impact is neutral or beneficial to the environment. Crabs, catfish, eels, and other useful marine organisms feed upon many such substances. Regulations should be flexible enough to allow for limited disposal of such substances into the marine environment.

14. *The Fisheries Vocational Training Act (16 U.S.C. 760d) should be amended and transferred to the Division of Vocational and Technical Education within the Department of Health, Education, and Welfare to encourage vocational training.*

Programs that encourage large numbers of new entrants should be limited. Training should be encouraged at the technical level for new entrants and existing industry personnel. Instruction should be made available within the localities where fishermen live and work. Instructional programs should cover areas of business and tax management; electronic installation, maintenance and use; engine repair and maintenance; and hydraulic repair and maintenance. Such activities could be offered through the Office of Sea Grant. The Department of HEW could institute such programs through Federal and State departments of vocational education. The Fisheries Vocational Training Act could be amended to promote the vocational training of employers, employees and self-employed persons engaged in the seafood and seafood-support industries. An alternative would be to develop a special seafood training act for administration by the Division of Vocational and Technical Education with yearly funding of \$550,000 to \$750,000. Such programs could be patterned after existing programs such as those at the University of Rhode Island.

15. *Agricultural authorizations should be expanded to include aquatic products.*

Although technology relating to the harvest of seafood is available, there is little information relating to the marketing and distribution of seafood products. It is suggested that by inclusion of the definition of aquatic products under the general term agriculture in the various agricultural acts, those responsible for the marketing and distribution of seafood products could receive technological information through the marketing and informational services of the Department of Agriculture. Such services would augment those currently performed by the National Marine Fisheries Service.

16. *A list of incentives and benefits for the fishing industry should be compiled by the agency responsible for fisheries.*

The rural nature of many fisheries makes it difficult for some members of the fishing industry to receive information and counsel on tax benefits available to them. A list of tax incentives and benefits could be compiled by the agency responsible for fisheries and distributed throughout the industry.

17. *Fishermen who haul their own products should be exempted from the Federal Highway Use Tax or taxed at a lower rate than other common carriers.*

Fishermen who haul their own products to market should be exempt from the Federal Highway Use Tax, or should be taxed at a lower rate than other common carriers, since the irregular and seasonal nature of fish production restricts their full-time use of the highways.

18. *Tariffs on fish nets and netting should be substantially reduced.*

A reduction of the tariff on imported nets and webbing by as much as 80% and the elimination of the 25 cents per pound plus 32.5% ad valorem tax will help American fishermen and will result in little harm to United States netting manufacturers. The passage of legislation similar to Senate bill 3270 of the 94th Congress containing provisions to allow for a gradual reduction in tariff rate amounting to 80% over a two-year period will permit distributors and dealers to dispose of high-priced inventory.

19. *Investigations should be conducted by the responsible agency on the effects of imported fish products on the domestic industry.*

Special attention should be paid to direct and indirect subsidies made to foreign fishing industries; the relative costs of production of domestic and foreign fish products; and the effects of existing tariff structures. Results of such investigations should be made available to all affected parties, and a program of affirmative action should be developed and implemented as soon as possible to permit the domestic industry to compete on an equitable basis in the domestic market. Many foreign countries heavily subsidize their fishing industries. It is alleged that many products from foreign countries are sent to U.S. markets aided by export subsidies which is in violation of the Trade Act of 1976.

20. *United States participation in international aid programs should be investigated.*

It was noted that many international aid programs which are funded partly or totally with U.S. capital through the international banking system aid the development, promotion or maintenance of foreign fishery operations. Products of such operations often compete with American products in United States markets. It was recommended that Congress conduct an investigation to reveal the effects of such programs on the American fishing industry.

21. *A system should be developed to continually monitor international aid programs.*

International aid programs should be monitored, and the United States domestic fishing industry should be advised of grant or loan applications for programs which might affect adversely

any segment of the domestic industry. The United States should not provide funding for programs which would be harmful to the domestic industry.

22. *Programs of fishery utilization and development should be removed from the Department of Commerce and placed in an agency created for that purpose within the Department of Agriculture.*

It was recommended by all sectors of the industry that they be considered as farmers of the sea. It was maintained that if commercial fisheries were established by the Department of Agriculture, all sectors of the industry involved would have access to information, assistance, and other services which are now available to agricultural food producers. It was stated that "aquabusiness" or "maribusiness" should be treated on a par with "agribusiness." It was argued that development of the United States fishing industry has been retarded by the present government structure which has neglected the fishing industry.

23. *Access to all financial assistance programs which have an impact on fisheries should be facilitated.*

Federal financial assistance programs which could benefit the fishing industry are administered by several federal agencies. Access to such programs by the various segments of the fishing industry would be greatly facilitated by the establishment of a single federal agency which would compile information on such programs and distribute it to the industry. The agency could use an extension service similar to the Agricultural Extension Service to distribute information locally.

24. *A comprehensive financial assistance program to improve shoreside commercial facilities should be developed.*

Fish processing is a capital and labor-intensive business. The lack of low-cost, long-term capital has deterred modernization and economic growth in many coastal areas. Existing financial assistance programs do not adequately meet the needs for shoreside facilities and processing plants. Additional capital investment will be required to encourage expansion of shoreside facilities. Federal stimulus in the form of low-cost loans, mortgage insurance or extended repayment periods is recommended.

25. *A comprehensive financial assistance program should be developed to encourage exploitation of underutilized species.*

Congress should enact legislation to provide financial assistance in the form of grants or long term loans to fishermen who will exploit underutilized species. Fishermen should be encouraged, through the availability of such funds, to re-rig their vessels for harvesting underutilized species. Funds should also be used to aid the production and marketing of underutilized species.

26. *Legislation should be enacted to fund and organize Aquatic Production Credit Associations.*

Congress should establish a credit system for fisheries similar to the Production Credit Associa-

tions for farmers, to be administered by the Farm Credit Administration. The financing system could provide specific terms, flexible payback periods based on production, and access to low-cost sources of money.

27. *Industry and government should establish standards regulating the size and quality of fresh and frozen seafood products.*

Industry and government, acting jointly, should establish standardized manufacturing practices for the handling and processing of fishery food products, including quality control and mandatory inspection. All imports into the United States must meet these standards.

28. *Formation of fishery cooperatives should be encouraged.*

The formation of producing and marketing cooperatives should be encouraged. Producing and marketing sectors could benefit from increased organization and efficiency. The Farmers Cooperative Service, an educational and technical branch of the Department of Agriculture has served land based food producers and has experience in matters relating to the fishing industry.

29. *Educational programs, staffed by home economists and nutritionists, which inform the public in the preparation of all types of fresh and frozen seafood, should be increased.*

Industry and government should expand marketing programs to include the promotion and advertisement of fisheries products in addition to consumer education. The programs should be jointly funded. Educational and promotional programs which have benefited other food commodities such as dairy, poultry, and beef should be evaluated for use as models for programs benefiting the fishing industry.

30. *Floor prices for designated underutilized species should be established.*

It was recommended that floor prices for underutilized species be established by the responsible agency to encourage the harvest of low-value species.

31. *Alleged price-fixing and other market restraints by the major domestic market centers should be investigated by the Department of Justice.*

Many requests were made to investigate allegations of price-fixing at the large fresh fish markets.

32. *Free market news information by the National Marine Fisheries Service should be distributed to the fishing industry.*

Many fishermen requested that the market news service information be provided them free of charge.

APPENDIX A

Maine-New Hampshire Regional Survey Report

INTRODUCTION

A special combination of resources, people, and economics in Maine has produced a way of life which is unique to this state and perhaps to the nation. Of the 18,000 Maine residents now licensed by the Department of Maine Resources to handle seafood, approximately half make most of their living from harvesting or handling seafood in some way. Through a combination of laws and traditions, the remaining license holders have access to the marine resources of the state to supplement their incomes and activities.

The map distance of the Maine coast is less than 300 miles from Kittery to Eastport. The total shoreline distance including the peninsulas, coves, and bays, is over 3,000 miles. Along these 3,000 miles and in the adjacent offshore waters of the Gulf of Maine exists a unique combination of features producing one of the richest marine resource areas, for its size, in the world. The "drowned" Maine coastline contains thousands of islands, coves and marshes which provide, with this flow of nutrients, ideal growing areas for a rich variety of marine life. The Maine coast faces south. As a result direct sunlight enters the water of the coves and inlets to supply the energy for high levels of productivity. Several relatively unpolluted rivers discharge basic nutrients into the estuaries and into the coastal waters. During three seasons the coastal waters flow counter-clockwise along the coast and in the Gulf of Maine. This movement circulates the nutrients and energy throughout the immediate offshore waters and spawning grounds of the major commercial fish species found on the offshore banks in the Gulf of Maine. Because of its geographical location and the pattern of ocean current the Maine coast is at the southern limit of many northern species of fish and at the northern limit of many southern species of fish.

The Maine coast did not go through the heavy industrialization which devastated the marine resources of the states to the south. The marine resources of the state have not escaped all forms of pollution, but the present levels have not drastically affected the marine harvest in most areas. However, in some areas, pollution has resulted in grave depletion of marine resources. Herein lies a serious inconsistency. On the one hand, millions of dollars are being spent by industries, towns, and individuals to control the discharge of pollutants into the marine environment; on the other hand, incompatible industrial complexes, such as nuclear power plants and oil refineries, are being considered. The beauty of the natural system is that, free of pollution, marine resources are renewable with no effort by man.

Overfishing also threatens to deplete Maine's marine resources. If too much effort is expended by man in harvesting the most desirable commercial species, the reproductive capacity of these species, despite the carrying capacity of Maine coastal waters, will be adversely affected.

Fishing is big business in the Maine economy, based not only on direct landings, but also indirectly through handling, processing and marketing of seafood products, and support services. The primary landings figures, or money paid directly for seafood, was \$48,487,431 for a total of 138,134,964 pounds of finfish and shellfish landed in Maine ports in 1975. Shellfish accounted for 41 million dollars of the total landing, while finfish accounted for the remaining 7 million dollars. Over the last 15 years landings of finfish have consistently declined. Much of the decline is attributed to foreign fishing. It is alleged that foreign fishing has not only seriously reduced stocks of some species but that lower-priced, subsidized foreign fish products have also flooded the domestic market.

Maine, which contains over half of the total number of licensed fishermen in New England, produced only 29% of the catch landed in 1975. Less than 20% of the total landings were processed in

Maine. In 1975, well over half of Maine's fish landing brought less than 4 cents per pound to the fisherman.

Under contract with the Atlantic States Marine Fisheries Commission, Fisheries Communications Inc. of Stonington, Maine, a chartered nonprofit, communications, education and research organization which publishes *Maine Commercial Fisheries*, arranged a two and a half week intensive schedule of events to ascertain the needs and concerns at all levels of the fishing industry in Maine and New Hampshire. The goal of Fisheries Communications was to provide as much input as possible from these states concerning their special needs in the way of federal legislation to revitalize their fishing industries.

To provide the maximum diversity of input to the Eastland Fisheries Survey, a mix of open, public town meeting gatherings and private, small group interactions were organized. Seven public meetings were conducted in Maine and New Hampshire with an approximate total attendance of one hundred and fifty people. In addition, twenty-five small group meetings were scheduled with selected fishermen, legislators, state planning and environmental groups, processors, distributors and other industry personnel. Nearly all levels of the industry were represented in meetings ranging from interviews with the Commissioner of Marine Resources, to interviews with lobstermen fishing only a few traps in the summer. In all, approximately two hundred and fifty industry representatives participated.

To publicize and heighten interest in the survey, two news releases were compiled. The first was mailed prior to the survey to the 137 news media in Maine and New Hampshire and to over 545 industry personnel and described the project and schedule of meetings. The second release was mailed to Maine and New Hampshire media to describe the progress of the survey. In addition, in response to requests of the Maine Congressional Delegation, a copy of scheduled meetings was sent to all offices. During the two and a half weeks, Mr. William Mustard, Project Director of the Eastland Fishery Survey was in Maine and New Hampshire and attended three radio interviews, a radio talk show, a television interview, and a half hour television talk show.

Three major areas of concern were brought out in the meetings: financial assistance, port facilities and marketing. Problems in these areas were thought to be the most crucial handicaps to fuller utilization of marine resources. Other concerns included education and communications, pollution, tariffs, and the definition of an independent fisherman. The following is a discussion of these and other suggestions gleaned from the meetings.

FINANCIAL ASSISTANCE

Financial aid, in some form, has been recognized as necessary to help fishermen get to the point where they can effectively utilize the 200-mile extended jurisdiction zone. Few in the fishing industry want an easy money situation. It is felt that this would only entice new entrants into the industry, entrants with little knowledge of fishing, which is deemed hard on the industry and the resources. There was much negative reaction to programs such as Farm Credit Loans that only lend to those who have been refused by all other sources. Any mildly successful fisherman is not eligible for these programs but sees an inept neighbor having a new boat built and letting it rot in the door yard. But there is seen a need to loosen up some of the funds already available and make them more accessible to the fisherman. The typical comment regarding loans has been "You can't get a loan if you have any of your own." The terms of most bank loans are prohibitive to the majority of fishermen, not only do they require the putting up of inordinate amounts of shore-side collateral, but the interest rates are high, and the repayment times short, considering the seasonal and cyclical changes in the fishing stocks. The collateral requirements alone, for a boat capable of fishing even the inside area of Georges Banks is prohibitive for all but a few fishermen in Maine and New Hampshire.

Direct Loans and Loan Guarantees

Specifically through the meetings, two types of loan programs were seen as viable: direct loans and mortgage insurance or loan guarantees. The direct loan program would be a revolving program with a maximum of \$60,000 at prime interest rates. This would be for the financing of vessels, gear and equipment to bona-fide, full time fishermen. The collateral requirements would be in an inverse relationship to experience, thus the fisherman with ten years experience would be able to obtain a loan with less shore-side collateral than a man with little experience. The maximum limit of \$60,000 would insure that these funds not be eaten up by the funding of half a dozen large boats as has been seen in the past.

A minority expressed the opinion that the government should not be in the lending business in any capacity. These people, however, still saw the necessity for fishermen to be more easily able to obtain loans, but would prefer loan guarantee programs, or bank incentives, to direct government loans.

The other program seen as viable to the majority of fishermen would be a mortgage insurance or loan guarantee program to encourage local banks to lend money to fishermen by taking the risk out of such ventures. This program would encourage the lending of money for vessels, gear, and shore-side facilities. There would be no maximum on this program. This is seen as a way to minimize the constraints on the bank to lend money, but still keep the loan decisions in local hands where the participants are known. Both loan programs would be for a period of 14 years with production deferrals to insure against poor seasons or years.

Other suggestions included tax incentives for banks, whereby profits that banks made from loans would be retained as tax exempt and would thus encourage banks to lend monies more easily to fishermen.

Insurance

Insurance was not singled out as a major problem; the attitude has been primarily one of "give us the markets, we'll make the insurance payments." But the realities have been that very few fishermen are fully covered by insurance. Fishermen in Maine especially have been very slowly evolving from the attitude that "the best insurance is a good mooring chain." Many fishermen carry hull insurance, but the costs of Protection and Indemnity (P&I) are prohibitive to many. At one meeting in Eastern Maine, P&I was not considered cost prohibitive to single owner small boat operators due to favorable local rates, but still many at the meeting were not covered. Fleet owners are hit the hardest by the cost of P&I. One noted that he would like to see the cost come down by putting some sort of level on the amount that could be claimed and the elimination of the many, as he saw it, fraudulent claims. Particularly unfavorable was the off-the-boat coverage provided by these policies, making it possible for a man to collect for his own negligence. It was suggested that this kind of coverage could be provided for by an increased voluntary workmen's compensation. To prompt more people to carry insurance, some sort of tax break was suggested, perhaps a double exemption for those covered.

Other

Other suggestions included a program similar to the Canadian "buyback," where obsolete vessels are taken out of the fishing industry. The boat could be traded in to the government as a down payment on another vessel.

Some people voiced concern that the financial aid programs were all designed for the financing of new boats; these representatives suggested that programs be extended for used boats since financing an older boat is thought to be even more difficult than a new one.

Many people felt the present gear damage fund program should be revamped so that funds would be made immediately available for those suffering damage and allow the fishermen to be back on the water without extended tie-ups.

MARKETING

Traditionally, the northern New England market road goes to Boston, and it carries whole fresh fish. Because of the small volume of fish landed in the winter and few cold storage facilities, dealers and co-ops do not possess the consistency of supply that would enable them to play the markets well and demand a higher price for the fish they bring in. Since in most cases there are no facilities to hold the fish until a good market situation arises, it becomes a matter of either selling the fish for the price offered or not selling them at all. New Hampshire fishermen saw few problems with the present marketing system, but did mention, however, that with any great amount of fish, price became a problem.

Competition with cheap imports is a major sore point for fishermen. Most fishermen would like to see the marketing system put on an equal basis for both domestic and foreign fleets. Suggestions included completely excluding fish subsidized by foreign governments, putting tariffs on imported fish in direct relationship to the amount of subsidy they receive from their own government; and requiring that foreign fishermen play by the same rules that domestic processors have; minimum wage, OSHA and FDA regulations.

Maine distributors in many cases would prefer to buy Maine fish, but because of the difficulty of obtaining a constant supply and price over long periods of time, they are forced to go to Canadian suppliers.

Regional Marketing

One solution to the present problem is a regional marketing system with processing facilities fed by scattered buying stations. Increased landings in the fresh fish arena would only produce a glut on the already poor market. It was noted that the market for whole fish does not exist now. Regional marketing ventures would have enough volume to be able to establish a good price for its fish; and with cold storage facilities, combined with the few boats that are capable now of fishing year round, these ventures could sustain a year round supply to processors. Concerns were voiced about possible monopoly situation in these regional facilities.

Underutilized Species

Some of Maine and New Hampshire's marine resources are only partially or totally untapped. It is not because there is no market for such species as sea urchins, mussels and dogfish, because they are utilized in some areas, but rather that the fisherman has extreme difficulty plugging into those markets through lack of knowledge. It was also pointed out that it does little good to popularize underutilized species at this time because the general market channels from Canada are so well established.

One of the major problems brought out was the lack of knowledge of the marketing structure, consumer preferences, and absence of adequate information sources. To deal effectively with these markets, fishermen must have some knowledge of how they work and of how to best take advantage of them. Small fish co-ops can't afford to send a man to Boston to assess the situation, and they have nowhere to begin in any effort to utilize foreign markets.

Uniform market quality of products is a major problem. Due to widely differing practices of quality control, round fish arriving at the market broker and/or auction, vary greatly in both size and quality grading. Suggestions of federal size standards were offered with caution. Paramount was concern of possible over-inspection and regulation.

Another suggestion concerned the construction of an east-west highway in Maine. Presently, it is easier to go through Boston to supply any western market than to attempt to take a truck over the poor road system to the west.

PORT FACILITIES

If, through the management opportunities provided by the 200-mile limit, stocks are restored through conservation, and Maine and New Hampshire fishermen are able to bring in two or three times as much fish as they do now, there is nowhere to land them on most areas of the coast. New Hampshire is now in the process of rectifying this situation for its own fishermen with the construction of a port complex in Portsmouth.

Fishermen were able to put a \$750,000 port development bill through their state legislature in which the state of New Hampshire expropriated land from the city of Portsmouth.

The proposed Portsmouth fishing complex, hoped to be in operation by early summer of 1977, will provide facilities for the landing of fish and shellfish, and for the purchase of supplies. The port complex will include a 325 ft. pier, refrigerated building for bait storage, a warehouse and parking for 50 vehicles. The complex is located to allow for future expansion to three times its initial size. It is still in the planning stages, and officials are considering the enlargement of buildings, and provisions for ship's stores and suppliers on the site. Provisions for processing groundfish are also being considered. In many areas it is hard, if not impossible, to obtain diesel fuel, ice or cold storage facilities. Almost all of the wharves capable of unloading fish in northern New England are privately owned. In the southern areas especially, the competition for waterfront is intense with tourists and recreation interests. In many areas there is little land available upon which a dock complex could be built. Those who have tried have often become entangled in a labyrinth of federal and state environmental regulations.

Local Docks

There was seen the need for construction or improvement of existing docks. It was felt that local docks should be able to provide at least minimal services for fish unloading, dockage, fuel and ice. Ice is seen as especially important as ice equals better quality of fish and the higher price that eventually may be demanded. Almost the entire fleets of Maine and New Hampshire at this time have no dockage facilities. Since there are existing federal funds, the need was seen for some way for interested areas to find out about such funds and assistance through the paperwork process. The construction of breakwaters and dredging to improve existing harbors was important to some areas.

Regional Facilities

Also seen necessary were regional dock complexes with full facilities for operation, maintenance and repair. The full service facilities would encompass unloading facilities, fuel, ice, dockage space, cold storage, etc., with rental space available for boat service businesses and processors. It was felt that two or three such regional complexes, on the New Hampshire example, could provide services for a wide area, encouraging more intensive fishing operations in the area itself and fill the necessary

occasional needs of outlying areas. Restrictions against the monopolization of regional facilities by large interests were seen as essential.

Other

Much concern was expressed over the effect that oil exploration and drilling will have on ports in existence and any to be built. Many fishermen feel they will be locked out of port facilities if drilling commences in Georges Banks, and that accommodations for oil must be figured into any plans for regional port complexes. Construction of an offshore, artificial island for an oil/fisheries harbor of refuge was suggested.

EDUCATION AND COMMUNICATIONS

One of the problems brought up at the meetings was that there are few places for a fisherman to turn to get information. A farmer needs go only so far as the local county court house or University Extension Service to find anything from pruning to horse shoeing. Information in the fishing industry travels primarily by word of mouth and it's usually not entirely correct by the time it reaches the end. Few fishermen had any idea how to use existing federal programs like the Capital Construction Fund or where to go to obtain the information. It was suggested that the Department of Agriculture could direct fishery information programs since they have the channels for delivery set up, especially in the home economics, promotion areas.

Communication of administrative management regulatory decisions was felt to be inadequate. It was wryly noted that, "fish don't read the Federal Register."

Education

High School vocational education programs and short skills-oriented adult education programs were thought to be of use. There was considerable resistance to any programs that might add new entrants into the fishing industry, but programs designed to upgrade the skills of practicing fishermen were deemed important. Many expressed interest in courses in such areas as the mending of gear, electronics and maintenance and repair, for those already in the industry.

In addition to technical training for fishermen, it was felt that the increasing complexity of the business of fish handling and marketing required greater management expertise. Psychologically, the attitude of fishermen towards management, whether cooperative or private, has been one of mistrust. This is part of the communications/education problem. One manager noted, "a manager to a fisherman is like a fire hydrant to a dog." Training in this area, other than on the job, is non-existent in the two states.

Weather Services

Downeast, weather prediction services appeared to be a considerable problem. Only a month prior to our meeting in eastern Maine, the area had been hit by a major storm. Up to three hours prior to the full blast of the storm with over 100 mph winds and tides running 20 feet higher than normal, the weather service reported a light-moderate storm. One fisherman commented, "doesn't seem so they track storms after they go by Cape Cod. After they go by Cape Cod, they figure they go out to sea."

POLLUTION

Pollution was not one of the major problems facing the Maine fishermen. New Hampshire fishermen were slightly more concerned, but still have not been affected substantially. Some concern was voiced on oil drilling on Georges Banks, but it was primarily concern with competition from oil tankers for wharf facilities. Questions were also raised on the effects of thermal pollution, but as yet there have been few problems in either Maine or New Hampshire.

TARIFFS

One of the major sore points for Maine and New Hampshire fishermen has been the extremely low tariff rate on fish brought into the country. Through the years fishermen have seen it become almost unprofitable to fish when so much subsidized fish is imported. At the same time, the gear that is necessary for them to fish, often not even manufactured in the United States, carries extremely high tariffs. The nearly unanimous opinion of northern New England fishermen is that the tariffs on twine and webbing should be abolished. One processor spoke of allowing people the option to buy all equipment, boats, gear, etc. where it is the best made and least expensive.

INDEPENDENT FISHERMEN

One of the problems plaguing the mostly small vessel, owner-operated Maine, New Hampshire fishing fleet is the legal problem of defining the "independent fisherman." Recent IRS audits of the Maine lobster fishery changed many practices of the fishermen. One result has been the laying off of a large number of sternmen. Because of the administrative ruling that sternmen are employees, many skippers are not taking them because of the attendant compensation and insurance problems with an "employee." Although the state of Maine has passed several laws relating to this problem, the situation needs to be clarified by Congress. What is needed is a clear, legal definition of just what an independent fisherman is, not merely having the definition vary according to bureaucratic whim. Existing laws relating to seamen do not and should not, by the nature of the operation, pertain to fishermen. The Maine Lobstermen's Association is currently working on legislation to achieve this goal with Maine's second district Congressman William Cohen.

FEDERAL GOVERNMENT IN FISHERIES

Industry personnel in both states had two distinct and negative opinions about governmental involvement of any sort in the industry. They fear loss of independence through government control in all areas from management to finance, and they are unimpressed by the delivery of services by government agencies currently "serving" the fishing industry.

This was especially true in New Hampshire. Squeezed between two relative giants of the fishing industry, these fishermen believe that they may not have adequate representation on the extended jurisdiction management councils.

Most representatives favored as little government intervention as possible in the fishing industry. Many large processors and distributors felt that if there was money to be made in the fishing industry, there would be private capital forthcoming. Others foresaw unfair competition with the extension of loan programs to shore-side facilities.

A remark by one fisherman, to the investigative team, sums up the attitude of many Maine and New Hampshire fishermen:

"Ask not what the government can do for you; ask that it stay out of your business."

Basically there was general agreement that if industry could accomplish desired results with their own initiative and capital, they should. They want the government to give them a fair shake under the law, with the creation of incentives so "the individuals could do it themselves." Such an example was cited in the situation of Fisheries Communications, publishers of *Maine Commercial Fisheries* newspaper. The organization was set up in 1973 as a non-profit communications, education and research organization to provide information services to the Maine fishing industry as other organizations do for the agricultural industry. As the organization progressed, it found itself stymied by a complete lack of appropriate bureaucratic support from either the Postal or Internal Revenue Services. Simply, where there was a whole set of standards and enabling sections for similar activities directed at the agricultural industry, there were none for the fishing industry. After reorganization and numerous appeals, Fisheries Communications, which only wanted a fair shake under the law, found it had nowhere to go but to Congress. Currently members of the Maine delegation are working on the problems.

MEDIA INTERVIEWS

- 3/22 MPBN-TV — Orono, Statewide Educational Television, 1/2 hour interview
- 3/25 WDEA-Radio — Ellsworth, interview
- 3/29 WHEB-Radio — Portsmouth, interview
- 4/1 WLOB-Radio — Portland, 1/2 hour interview
WLSH-Radio — Portland, interview
WLSH-TV (NBC) — Portland, interview

FISHERMEN'S OPINION SOUGHT FOR LEGISLATION

News Release/Data Sheet
From Fisheries Communications
Publishers of *Maine Commercial Fisheries*
Box 37 Stonington, Maine 04681 Tel. 367-5590
Contact: Nat Barrows

It is often said and felt by fishermen that the Federal Government doesn't care about them or their industry, or worse, it exists to make life miserable for them whenever they do come into contact.

What should the Federal Government and Congress do to save, protect and revitalize the fishing industry of this country? This basic question is the subject of a year long, nation-wide project involving a series of grass roots meetings and informal discussions. To find out the opinions of Maine and New Hampshire fishermen and industry personnel, six local meetings have been planned for March and early April.

With the specific goal of producing workable, acceptable legislation, Congress authorized this special nation-wide program of over 200 grass roots meetings with fishermen. The meetings have been undertaken to find out their ideas — what they want or don't want in the way of new federal legislation.

It all started with the unanimous approval by both houses of Congress of Senate Concurrent Resolution 11 in December of 1973. Introduced by Senator James Eastland, the resolution has come to bear his name. The resolution calls for "a nation-wide program to save our commercial fishing industry . . . It is the policy of the Congress that our fishing industry be afforded all support neces-

sary to have it strengthened and all steps be taken to provide adequate protection for our coastal fisheries against excessive foreign fishing."

The nice words turned into action when Congress appropriated funds for a "national synthesis of grass roots input from every corner of the nation."

To seek the "advice and guidance" of the fishing industry, the marine fisheries commissions of America's three coasts were contacted. The Atlantic States Marine Fisheries Commission hired William Mustard as director for this project. A fisherman with both inshore and offshore experience and former Executive Director of the National Federation of Fishermen, Mustard will be making a one year investigation in order to come up with recommendations for legislation to be drafted this fall and introduced in the next session of Congress in 1977.

How does all this relate to Maine? To implement the grass roots fact finding efforts in Maine and New Hampshire, Fisheries Communications of Stonington has been contracted to hold six local meetings, the first of which will be held in conjunction with the Fishermen's Forum in Rockport on March 20. The meetings are being held over a broad geographical area to enable everyone interested to attend. Chaired by Bill Mustard, the meetings will be open to all for ideas and thoughts on whatever people feel should be done by Congress. In previous meetings subjects have run the gamut from marketing, to financial assistance to federal/state cooperation. All opinions are welcome, Mustard said, noting that complete records will be kept on all suggestions. In addition to these meetings, Mustard will be in Maine and New Hampshire from March 20 through April 3 to meet with any individuals or associations.

Fisheries Communications President Nat Barrows, commenting on the project, urged industry personnel to "make your feelings known now, before legislation is drafted. Bill Mustard is not a bureaucrat, coming to tell the fishermen what to do, but, having been a fisherman and a fisherman's organizer, he knows the industry and is making a determined effort to get ideas and draft workable legislation." He urged all industry personnel to attend the meetings or to contact Fisheries Communications in Stonington if they or their organizations would like to have a special meeting with Mustard while he is in the area.

Eastland Fisheries Survey Meetings Schedule

- Rockport — March 20, Fishermen's Forum, Samoset Hotel, 3:30 p.m.
- Machias — March 23, U. of M. at Machias, Science Bldg., lecture room, 7 p.m.
- Ellsworth — March 25, City Hall, 7 p.m.
- York — March 25, Town Hall, 7 p.m.
- So. Portland — March 31, S.M.V.T.I., New Building, Room 14, 7 p.m.
- Boothbay Harbor — April 3, Fishermen's Festival, High School, 10:30 a.m.

possible for the fisherman to repay his loan during the height of the fishing season when his income is at its peak rather than struggling through the conventional twelve-month repayment plan. A seasonal repayment plan appears to be the most logical one for the area for two reasons. First of all, the New England Coast is known to have one of the most intense weather systems in the world, and this makes fishing, particularly during the winter months, extremely hazardous and unpredictable at best, disastrous and virtually impossible at worst. The second reason that favors seasonal repayment is the nature of the inshore fisheries themselves. Many species that are taken during the course of the spring, summer, and fall, are simply not available during other times of the year.

A great deal of discussion at the Regional Hearings was directed toward eligibility requirements if low-interest government sponsored financial assistance programs were made readily available. The fishermen felt that the first requirement for such a program should be availability only to bona fide, full-time fishermen [what constitutes a full-time commercial fisherman is a question that has been debated over and over again, but for the purposes of the discussions held at the Hearings, the fishermen agreed that it was one who derived 75% to 100% of his earned income from commercial fishing] who had proven themselves through experience either as a boat owner, boat operator, or crew man. The second requirement was that a "reasonable" amount of down payment (i.e., not too low) should be made in order to insure the sincerity of the investor and to eliminate speculators who might be encouraged to venture into the fishing industry with the advent of extended jurisdiction.

Along these same lines, concern was expressed that the independent character of the New England fisheries could be lost. The fishermen feared that a situation similar to what happened in Canada, when the government made large sums of money available to the fishermen and most of it was grabbed up by big business, would be created. They felt that the greatest benefit to the industry would come from money being made available to the individual fishermen for the upgrading of their equipment rather than to the larger companies whose primary purpose would be expansion.

Some fishermen felt that there should be an obsolescence feature written into a government assistance program. Either at a specified age or at a time determined by a biennial inspection program during which a boat was found to be unsafe, the boat should be traded in to the government as the major part of a down payment on a new boat. This would essentially be a buy-back program similar to one that was in effect in Canada.

A minority opinion with regard to loan programs for fishing vessels was that the crux of the problem was not newer and larger boats, but rather more successful fishermen who could manage their own businesses without direct government financial assistance. To this end, it was suggested that the government liberalize tax laws and enable the fishermen to take accelerated depreciation or tax credits. Currently these options are not available to the fishermen but would, if in force, allow a fisherman with a small operating capital to accumulate more capital to invest in a larger or more sophisticated fishing operation. Reducing or minimizing income tax through the liberalization of existing tax laws would create the opportunity for fishermen to accumulate more capital for investment despite their high operating costs. This money could then be set aside in the existing Capital Construction Fund which requires that fishermen be operating at a profit.

It was also suggested that once the fishermen gain control and management over the various fisheries as they should under the Regional Council Management concept mandated in the new extended jurisdiction legislation, the possibility of the fishermen obtaining private monies will increase. This would, in the long term, be preferable to having government supply new monies, and would help to preserve the small independent business nature of the New England fisheries.

However, it must be realized that the fishing industry is going to have to compete with other industries for both equity and bank funding which are expected to become increasingly scarce. Another fact which must be considered is that banks lend money based on past experience rather than future expectations. Consequently, the expectations of increased availability of private monies must not be seen as the immediate solution to the problem of the fishermen obtaining financial assistance.

APPENDIX B

Southern New England Regional Survey Report

INTRODUCTION

Under the direction and supervision of William Mustard, Project Director, Eastland Fisheries Survey for the Atlantic States Marine Fisheries Commission, three public hearings were held in Massachusetts in an effort to ascertain the needs and concerns of primarily the inshore fishermen and related industry personnel. On Monday, February 16, 1976, a hearing was held at Gloucester City Hall in Gloucester; on Tuesday, February 17, 1976, at the Visitors Center, Wampatuck State Park, Hingham; and on Wednesday, February 18, 1976, a third hearing was held at the Fishermen's Union Hall in New Bedford. Two additional hearings were held on Long Island, New York. The first was held in conjunction with the Annual Meeting of the Long Island Fishermen's Association in Hampton Bays on February 27, 1976. The second was held during the New York Fishermen's Forum and Exposition on April 3, 1976, in Southampton, New York. Approximately four hundred fishermen attended the hearings. Special recreational fishing hearings were held in Boston, Massachusetts and Bridgeport, Connecticut.

The hearings were publicized in the Boston Globe and the Boston Herald-American, the Gloucester Daily Times, the Quincy Patriot Ledger, the New Bedford Standard Times, the Cape Cod Standard Times, the New England Market News Report (blue sheet), several fishermen's associations' newsletters, and radio stations in Boston, Plymouth, New Bedford, and Cape Cod. The Long Island hearings were publicized in conjunction with the Long Island Fishermen's Association and the New York Fishermen's Forum and Exposition.

Following the hearings, news coverage was provided by all of the major newspapers and radio stations along the coast. Tape-recorded interviews with various fisheries representatives were also carried by many radio and television stations.

A wide variety of the smaller inshore fisheries were represented including lobstermen, draggers, gill netters, trap fishermen, long liners, and seiners. Basically these operations are conducted by a single fisherman-boat owner, and in some cases with the additional help of one or two crew members. Generally these are one-day fishing operations that work out of a single port year round. With the change of season in some areas comes a change in type of fishing, but the majority of those speaking at the hearings were full-time commercial fishermen.

FINANCIAL ASSISTANCE

The majority of fishermen in the Southern New England Region felt that one of the most crucial steps that needed to be taken in order to revitalize their fisheries would be to make more financial assistance available to them at reasonable rates. This financial assistance could take the form of direct low-interest government loans or mortgage guarantees for the construction of new boats and the upgrading and improvement of boats currently operating. Many fishermen reported difficulty in obtaining mortgages on their fishing vessels unless they were able or willing to use their homes, cars, and other shore-side property as collateral or guarantees on their boat loans. Even when these conditions were met, many fishermen reported that they had to pay excessively high interest rates.

In some areas, notably the southern coast of Massachusetts and the New Bedford area, the well-established, successful fishermen reported favorable experiences in obtaining financial assistance from local banks and the Farm Credit Bureau. One distinct advantage of the Farm Credit Bureau's plan was the availability to the fishermen of a seasonal repayment plan. This, in effect, makes it

There was a great deal of controversy on the question of where these new federal assistance monies might come from. Some fishermen felt that the current allocation of 30% of the Saltonstall-Kennedy Funds to the fishing industry should be increased to 100%. Other fishermen felt that all license fees, fines, and penalties from foreign fishing within the 200 mile limit should be set aside into a federal Marine Fisheries Fund to directly aid and promote the American fisheries. Some felt that fines and penalties should go to law enforcement (a portion of the above-mentioned Marine Fisheries Fund could be allocated for this purpose), and still others felt that any violation of fishing agreements should mean automatic removal of the privilege of fishing in United States waters, and that this type of policy would be more beneficial to the American fisheries than any funding the fines and penalties might generate.

POLLUTION

Pollution problems faced by the Southern New England fishermen are three-fold. First of all, there is a very serious problem arising in New York caused by industries along the Hudson River dumping their effluent into the River. This has raised the amount of PCB (polychlorinated biphenyls) content in the eels and striped bass to a level (over five parts per million) inconsistent with safe FDA levels. [In Canada, the safe limit is just half that of the United States, two and a half parts per million]. This problem has caused the closing of the Hudson River and all commercial fisheries located therein.

Needless to say, conditions such as these have a seriously detrimental effect on the specific fisheries involved, and, in fact, on the sale and consumption of all fishery products in the area.

Aside from the immediate effects of such pollution is the long term problem caused by the reduction in fertility of those fish affected by the PCB pollution. The fact that the Massachusetts sport fishermen report that there has not been a good spawn since 1971 has been attributed to the PCB problem, as New York waters are on the migratory path of the striped bass. Inasmuch as PCB is a non-biodegradable substance, there is much concern that this problem which is currently confined to New York and mid-Atlantic waters may spread northward, carried by migratory fish stocks.

There is a definite need for the Federal Government to set more effective standards for the disposal of materials containing PCB and other non-biodegradable chemicals which are destroying our natural environment and to foster the research to develop the technology to clean up what is already in the environment.

[As this report was being prepared for printing, the following article appeared in the Sport Fishing Institute Bulletin No. 274, May, 1976: "According to an item in a recent issue of CANADA WEEKLY (Vol. 4, No. 8:3-4; February 25, 1976), Ottawa, a new technique for rendering polychlorinated biphenyls (PCBs) 'virtually harmless' was announced recently by Environment Canada. Dickson Liu, a research scientist at the Canada Centre for Inland Waters, was credited with developing a strain of bacteria which feeds on PCBs. Application of the discovery is likely to be in treatment of PCB rich industrial wastes and in the disposal of items containing the chemical compounds." This article raises hope that at least a partial solution to the PCB problem is close at hand.]

The second area of concern with regard to pollution was the disposal of sewage. This problem was the most apparent in Boston where "treated sewage" is dumped into the Harbor. According to the fishermen, even the dumping of treated sewage causes a pollution level that is intolerable to many species of fish, some of which are commercially harvested, and others which are all important links in the food chain.

Another problem related to sewage disposal, and again most pronounced in the Boston area, was the creation and expansion of sewage treatment plants in the Harbor areas. Current EPA personnel have not opposed the expansion of an existing sewage treatment plant by the filling of areas around Nut Island, yet the fishermen feel very strongly that filling there, or anywhere else along the coastline destroys marshland and estuarine areas that are essential breeding and feeding grounds for many of our commercially harvestable fish and lobster stocks.

The third area of concern regarding pollution problems was the possibility of oil drilling on or near Georges Bank, one of the United States' prime fishing areas. The possibilities, and some are most certain, of oil spills from wells or tankers could certainly spell disaster for the Region's fishing industry. In terms of daily operations, the possibility of trawlers hanging up on pipelines or capped wells is an issue that causes great concern. The weather situation off New England is so different from areas where oil and fishing currently co-exist that no accurate analogies can be drawn. One good North-East storm moves fishing gear for miles and drastically changes ocean bottom configuration. One must assume, then, that it would also uncover pipelines and other gear that the oil companies claim to bury. The fishermen felt that all these facts must be taken into consideration in the setting of adequate standards and requirements before any oil drilling is begun. This is one area where the Federal Government could prevent a pollution problem before being asked to spend millions of dollars to solve a problem.

INSURANCE

The high rates of insurance for fishermen, particularly for Protection and Indemnity (P&I), are historic and constitute a major portion of their operating costs. Some fishermen have found that they can obtain much more reasonable rates by banding together into associations and obtaining insurance on a group basis. However, there are still a significant number of fishermen who do not carry adequate insurance because of the high cost.

There were not many or varied opinions with regard to insurance, but there was a general consensus that the ability to obtain insurance for hull, P&I, and gear on shore was a high priority among the fishermen.

UNDER-UTILIZED SPECIES

Opinion with regard to under-utilized species was two-fold. One group of fishermen strongly objected to the name "under-utilized." They felt that species such as herring, mackerel, crabs, squid, and hake were not so much under-utilized as they were under-harvested, and rightly so because of the important part they play in the ocean's ecosystem and food chain. Consideration of an increase in their landings and the establishment of an optimum sustainable yield must take their relative importance as food for other fish into consideration.

Most fishermen felt that the more acceptable manner of dealing with the under-utilized species was to make it more economically feasible for the American fishermen to catch them rather than license the foreign fishermen to catch them. One way in which this might be done would be to develop the domestic ethnic markets for a fresh product. There was some question as to how wide a market this might prove to be, but most felt that the idea warranted at least a preliminary market survey.

In order to develop a domestic market, or an export market of processed products, there would be a need to develop the technology necessary to process these species, and to do so in a way that would allow a reasonable price for both the fishermen and the consumer. For example, there is now a market for dogfish, but they must be skinned, a long and tedious project, and the fishermen still receive an average of only ten cents per pound. Another similar problem exists with regard to the grading of squid.

Another way of dealing with the low price now being paid to the fishermen for these under-utilized species would be to permit the American vessels to directly off-load onto foreign vessels. This would also pose a temporary solution to the expected problem of shortage of freezer and storage space with the advent of extended jurisdiction, and the problem of reasonably priced processing.

Throughout the discussions concerning future market development and needs ran the underlying belief that if the government, through implementation and enforcement of extended jurisdiction, could improve the condition of the stocks, then the fishermen and the industry could themselves handle market expansion.

There was unanimous agreement among the fishermen that the "blue sheet" (Federal Market News) should be available free of charge to members of the fishing industry.

SHORE SUPPORT FACILITIES — PORT DEVELOPMENT

There was general agreement among the fishermen throughout Southern New England that there was a need for a comprehensive national plan to establish permanent funding for the revitalization and continuing improvement of shore support facilities. This would include fish landing space, tie up and overnight space, and dock security. One major problem is the high price of shoreside land which must be purchased to build new facilities. Another problem is that the smaller port towns are not oriented to the commercial fisheries. Consequently, there is difficulty getting financial aid from towns to repair existing facilities because of the small percentage of the population using these facilities and the need for the town to provide funding through the Town Meetings.

There is a great need to emphasize the interest of the Federal Government in some categories of revenue disbursement among the municipalities specifically for shore facilities to be constructed by the local towns on behalf of the commercial fishermen. This would have a beneficial effect on the perceptions of the people who control the town's purse strings.

Based on the premise that extended jurisdiction will in time increase the landings of fresh fish, the fishermen expressed concern that there would be inadequate rapid freeze and storage facilities. Therefore, they could foresee the need to increase such shore-support facilities. Inasmuch as this projected increase in landings would most probably occur over a period of time, it was thought that dealers and processors could keep up with the demand for such facilities in terms of their own economic investment except for the problem of obtaining shore front property. The fish dealers and processors are simply not in the economic situation where they can effectively compete with hotels and motels for choice waterfront property. One suggested solution for this problem was to create more shore frontage through dredging. Another possible solution was government subsidy or low-interest mortgage programs to support shore front expansion of related fish industry.

EDUCATION AND COMMUNICATION

Some of the fishermen felt that a revitalization of the fishing industry should include the setting up of training schools for future fishermen. It was generally agreed that these should be organized along regional rather than national lines because of the variety of types and fishing.

The Sea Grant Program was the program involved in research and the development of advanced technology with which the fishermen were most familiar. The fishermen felt that Sea Grant had developed some good projects but that there was a need to work more closely with the fishermen and to work on projects that had more immediate and practical applications.

Of more immediate concern to the fishermen with regard to education and communication is the passage of legislation which has already been introduced in the Congress which deals with postage. This legislation would place marine fishing organizations in the same category as agricultural organizations and permit them to mail at the non-profit bulk rate of 1.8 cents as opposed to the regular bulk rate of 7.7 cents.

MARKETING

The current marketing situation in Southern New England was seen as a serious stumbling block to increased production because of the inverse relationship between price and volume of fish landed. Steps need to be taken in order to stabilize the price of fish over the entire season.

One way in which the government could help would be to impose tariffs on imported fish. The current situation, without tariffs or restrictions on imported fish, puts the American fisherman in the extremely difficult position of putting his product in direct market competition with products of fishermen whose operations are directly subsidized by foreign governments.

Another way in which price fluctuations could be stabilized would be through the development of regional co-operatives. Such co-operative arrangements would expand the market area and enable the fishermen through the co-op manager to find the best market for a higher volume of fish. Although it is virtually impossible for the individual fisherman to hold over his catch in hopes of locating a more favorable market, it is feasible for a co-op arrangement to undertake the construction of rapid freezer and storage space in order to do just that. Government support in this area was seen as being very beneficial, particularly in the area of funding the initial organization.

A second major problem in the present marketing situation is the great distance between the price of fish paid to the fishermen and that charged the consumer. One Long Island fisherman reported that at one time he was receiving six cents per pound for bluefish which was retailing for a dollar per pound. And the fishermen feel that they have no recourse or mechanism either through state or federal laws to realistically deal with this type of situation. Even a co-operative arrangement wouldn't solve this problem entirely because the retail price rises in direct proportion to the price paid the fishermen. What this does, in effect, is price fresh fish right out of the average consumer's pocketbook.

Many of the other marketing concerns expressed by the fishermen during these hearings were based on the premise that extended jurisdiction would, in fact, increase the landings of fish within the states. Almost all the fishermen agreed that there would be a definite need for government assistance to expand on-shore processing plants and to increase freezer storage capabilities once landings were increased. From this point opinion was divided as to whether this increased product would be put into the domestic market, or whether the fishermen would be fishing for an export market.

Those who favored expansion of the domestic market (because they believed the European buyer was unreliable) felt that there needed to be a rebirth of the fresh fish industry for a well-balanced and successful New England fishery. This would necessitate a high-powered consumer oriented program from which the consumer could learn to handle the fresh product and which, in addition, would increase the sophistication of the fish user. The feeling was also expressed that there would be a considerable American ethnic market if it could be developed. The development of this type of market would also require the establishment of consistent size, grade, and quality standards.

Some felt that an entirely new industry would be created when the American boats began to increase their catches. The fishermen would then be landing a fresh product to be processed instead of the current situation where frozen blocks of fish are imported and then processed into convenient food packs. If this situation occurs, then there will be a need for new facilities to directly process the fresh product into convenient food packs and eliminate the middle step of freezing the fish into blocks.

Those fishermen who felt that there would be an export market saw a definite need for new on-shore facilities for processing for this new market. It was the general feeling that there would be a need for the government to become involved in the development of machinery and technology that would be needed if the industry were to develop a market for processed under-utilized species, particularly squid and dogfish. One reason that the fishermen are not now catching these fish is that the current price available does not make it economically practical for them to do so. Some fishermen felt that if this potential market were to be utilized, they would need to be guaranteed a certain price or wage to land them.

FISHERMEN AND GOVERNMENT

The most important thing the government could do for the United States fishermen and the fishing industry is to establish a Department of Fisheries with its own Secretary of Fisheries at the Cabinet Level. This country is big enough, the industry (especially if you consider the import and export part of it) is productive enough, the fisheries dollar is important enough. Up until a few years ago the United States was the second largest fishing nation. Now we are fifth. Perhaps if we had had a Department of Fisheries ten years ago, we wouldn't be in the situation in which we find ourselves today.

The fishermen also felt very strongly that the time during which the voice of the commercial fishing industry could be overlooked or ignored has passed. One of the extremely vital concerns of the fishing industry is that when rules and regulations, particularly with regard to management schemes under extended jurisdiction, are finally developed and promulgated, the fishermen will not have had sufficient input. Any agency of the Federal Government that is going to create rules and regulations for the users of fishery resources must have the fishing industry as an equal partner.

Although most of the fishermen felt there was a role for the government to play in the revitalization of the American fisheries, they expressed skepticism that the government would come through with a program that was actually beneficial and at the same time permitted each fisherman to retain his own independence and run his own business. All too often, they feel increased government participation means increased red tape, bureaucracy, and regulation incompatible with the personalities of the fishermen and the nature of the fisheries.

Of major concern to a number of fishermen was the manner in which the 200-mile limit would be enforced. Almost all agreed that the states should retain their jurisdiction over the first three miles, and that there must be rigid enforcement of all provisions throughout the entire 200 miles. In conjunction with these concerns regarding extended jurisdiction were two concerns regarding our associations with the foreign fishing vessels. First, there is the problem with the larger foreign boats interrupting our smaller boats during a tow. When this happens there is no way for the American vessel to contact or communicate with the foreign vessel, and consequently, the American boat must give way. The second concern was that there should be more flexible negotiation sessions. A mechanism needs to be developed so that a problem can be dealt with as it arises, and not submitted to an agenda for some meeting to be held in future months.

APPENDIX C

Mid-Atlantic Regional Survey Report

INTRODUCTION

In September 1975, the Maryland Watermen's Association accepted a contract with the Atlantic States Marine Fisheries Commission to conduct meetings in New Jersey, Pennsylvania, Delaware, Maryland, and Virginia. This mid-Atlantic study was directed by Tom Wieland, business manager of the Maryland Watermen's Association with the assistance of Don Webster of the University of Maryland Cooperative Extension Service and Bill Sieling, Department of Natural Resources Fisheries Extension Agent.

Through the efforts of the project staff and local watermen in Maryland (mainly Board members of the Maryland Watermen's Association), a preliminary meeting program was developed (See Attachment A). This outline proved satisfactory and was used throughout the survey with minor variations.

In order to maintain the proper orientation for discussion, a list of topics was developed and made into a large display sign which was exhibited at all meetings.

During each meeting, discussion notes were taken by Bill Sieling, D.N.R. recording the participants' verbal concerns. A full record of these notes is on file at the M.W.A. headquarters and is available upon request.

Before beginning the regional meetings, two staff members attended the meeting of the Atlantic States Marine Fisheries Commission in Rhode Island. They discussed with the participants of this meeting the objectives of the survey and the need for the assistance of each state's personnel. Through this and other personal contacts, key fisheries and media personnel were identified to help set up the various state meetings.

Through further correspondence and meetings with state personnel, the primary meeting sites were identified and set up (for a partial listing of key personnel, see Attachment B; for a list of the meeting sites, see Attachment C). These key contacts were invaluable in publicizing the meetings, both as to the purpose, place, and time.

A major effort was made to arrange a meeting in Pennsylvania, particularly in the Philadelphia area and particularly for sportsfishermen. However, that state's representatives indicated that there was little if any interest in such meetings. Special recreational fishing hearings were held in New York City and Annapolis, Maryland.

It was obvious from the project's inception that written answers would be beneficial in analyzing the results of the survey. For this reason (and in order to get the names and addresses of the participants), staff members drafted a questionnaire which was used at several of the first meetings (see Attachment D). Later, the form was improved by slight modification (see Attachment E).

In order to summarize, consolidate, and arrange in order of priority the findings of the individual survey meetings, a regional meeting was held in Ocean City, Maryland, during the annual Maryland Watermen's Association Trade Show. At the show a free booth was provided, giving even more visibility to the survey. Attendees from the previous survey meetings were extended personal invitations to attend the regional meeting. Their participation provided the survey staff with a clear picture of the overall fisheries problems. The names and addresses of key participants were compiled for future use.

The following is a brief description of the fisheries of each of the states surveyed under the Eastland Fisheries Mid-Atlantic Survey. All information is based on personal knowledge and the most recent information available on fisheries statistics from the U.S. Department of Commerce National

Marine Fisheries Service. These facts and figures are provided so that the overall information gained from the survey may be better understood within each state's individual fisheries situation.

The major fishing ports for New Jersey are Port Monmouth, Atlantic City, Wildwood, and Cape May. Over 1200 men work on vessels (five net tons and over) in the off-shore fisheries. Almost 1800 watermen work on smaller, state licensed boats. In 1975 (see Chart A), 44.1 million pounds of shellfish were landed with an exvessel value of \$11.2 million. Surf clam landings accounted for 35.5 million pounds and were worth \$4.7 million. Also in 1975, over 99.5 million pounds of finfish were landed and valued at \$8.6 million. Trawling and purse seining fishing were the major methods used for fishing with menhaden and whiting accounting for the largest portion of the landings.

The major ocean fishing ports of Delaware are Lewes and Indian River Inlet. In 1974, (the latest year for accurate statistics) over 8.5 million pounds of shellfish were landed worth \$1.5 million. This is down from 1972 when over 12 million pounds valued at \$2 million were landed. Surf clams accounted for the largest portion of the landings (5.8 million pounds) and declining clam landings are responsible for overall decreases in landings. Finfish landings accounted for less than a million pounds (.8 million pounds) and were worth only \$200,000. There are 14 vessels operated by 62 fishermen with 479 part and full time operators using 238 state licensed boats. There is little or no trawling done mainly due to the lack of easily accessible markets or port facilities. Also, the absence of large, fish buying operations in Delaware may result in the accumulation of inaccurate statistical information.

The major fishing ports in Maryland are Annapolis, Tilghman, Crisfield and Ocean City. In 1975, almost 15 million pounds of finfish worth \$2.1 million, and 52.6 million pounds of shellfish worth over \$20 million were landed. Oysters accounted for 80% of the value of shellfish landed (\$16 million), but only 30% of the total poundage. Hard crab landings were 24.3 million pounds, and were valued at \$4.3 million. Rockfish landings accounted for over half of the value of finfish landings, but totaled only 2.7 million pounds. In excess of 1500 watermen were employed on 930 vessels. More than 10,000 full and part time operators used 7622 state licensed boats. Many varied types of fishing gear were used in the finfishing, crabbing, clamming and oystering industries. The surf clam industry has increased since 1972, with landings of 5.4 million pounds worth over \$1 million. In general, Maryland watermen received higher prices for their product than those in Virginia or Delaware.

The major ports in Virginia are Reedville, Hampton, and Chincoteague. Finfish landings in 1975 totalled over 360 million pounds, worth more than \$13 million. Shellfish landings were 84.8 million pounds, and were valued at \$19.8 million. The largest portion of the finfish landings were menhaden caught in purse seining operations (315.8 million pounds). The menhaden catch was worth over \$7.7 million. Oyster landings of 6.2 million pounds worth over \$5 million accounted for 25% of the total shellfish value. The surf clam industry, which had become important in the late nineteen sixties, declined with landings of 39.1 million pounds in 1975 (down from 58.2 million pounds in 1974). In Virginia there were 2634 watermen employed on 790 vessels, and almost 3000 full and part time operators utilizing 2120 boats. Virginia had the largest number of fish and oyster processing plants of the four states surveyed.

The following is a summary of the major points of discussion and other topics which watermen felt were of great concern. While there was discussion of individual state management programs, this is not included.

FINANCIAL ASSISTANCE

There was a great deal of discussion on the present loan programs which appeared to many watermen to be assisting the large corporations (such as the "Sea Freeze" venture) and not the little fellow. This problem was exemplified by the lack of financial help for boats under five net tons.

In direct contrast to this opinion, in some of the large fishing vessel areas (i.e. New Jersey and Ocean City, Maryland) watermen were pessimistic about larger (\$300,000-400,000) loans for new

vessels. Some appeared to be confused about the financing programs available to them but everyone knew the National Marine Fisheries Service (NMFS) direct loan program was defunct. It was also widely suggested that seafood processors should be aided in some ways so that more domestically harvested fish can be processed.

While financing was the topic of greatest concern at most meetings, most watermen were not asking for grants or handouts. Instead, they felt that low interest, long term (14 years or more) loans would be very beneficial for the industry. Delaware, New Jersey and Virginia participants expressed concern that charter boats (boats carrying sportsfishermen for a day) were not included in any of the loan programs. They felt that a charter boat captain made his living off the sea just like others and therefore he should be included in any assistance programs.

Recommendations:

1. Immediate re-opening of the direct loan program under the direction of NMFS;
2. Provide tax incentives such as investment credits for new vessels or gear;
3. Increase loan coverage to seafood processors, charter boat operators, and full-time fishermen on boats under five net tons.

ADVANCED TECHNOLOGY

There was not a great deal of discussion on this topic. Most of the watermen's concern was expressed on the lack of available sources for information on advanced technology. Only one state (Delaware) had a central person who was recognized for being able to provide this information. While other states had agencies oriented to providing this type of information, most watermen learned of information on advanced technology from one another or through trade magazines.

Recommendation:

1. That more information on advanced technology be spread through watermen's organizations and trade journals.

INSURANCE

While this subject was recognized to be important by many watermen, most were pessimistic about the government providing any control. The watermen agreed that vessel and crew insurance was very important, but few carried any and those that did were appalled at the exorbitant costs. One waterman pointed out that if he bought a new vessel, the interest rate for the loan would probably not be under 10% and hull insurance rate would be 10%. The 80% remaining for boat expenses and crew share left little or no money for profit.

Recommendations:

1. Provide relief from exorbitant hull insurance rates;
2. Find some kind of solution to crew (or Jones Act) insurance coverage.

SAFETY

Most participants recognized and praised the Coast Guard for the good job they are continuing to do in the area of vessel safety. The project staff pointed out the possibility of the Occupational and Safety Health Administration becoming the major agency concerned with vessel safety and this was unacceptable to everyone concerned.

Many watermen, including charter boat captains, were dissatisfied with the Coast Guard's practice of changing standards every year or so, thus making existing equipment obsolete and necessitating the purchase of new equipment. However, they recognized and accepted the need for safety improvements.

Recommendation:

1. Permit the Coast Guard to continue and improve its role as safety inspector for the fishing fleet.

MARKETING

"Who controls prices?" was the question many watermen asked when the subject of fish prices was discussed. Many processors who attended the meetings related experiences and stories regarding the New York or Baltimore fish market and their past experiences. The general feeling among the harvestors was that a monopoly existed, and that many watermen were financially hurt as a result. Many suggested that improved marketing through increased local outlets (and thus more competition) would help them.

Many watermen recognized that processing was the key to their future and that the more processing facilities there were, the better off the seafood industry would be. They felt that the housewife today does not like to handle messy, fresh fish, but would rather use a well-packaged frozen seafood product. It was frequently mentioned that most imported seafood was in this form already, proving that a broad and profitable market existed for such products. It was also pointed out that there are only a few large, competitive processing plants in this region, and that the initial capital investment needed to start plants was tremendous. Joint ventures among small producers; in addition to government financial assistance for development of regional processing facilities; and guaranteed price for fish were the main recommendations made by the majority of fishermen, to modernize processing capabilities.

Recommendations:

1. Investigate large fish markets for price fixing and unfair business practices;
2. Support large marketing efforts for domestically processed fish products;
3. Provide financial assistance for large new processing facilities.

PORT DEVELOPMENT

Some watermen were concerned about the deterioration of their dock facilities and with the seeming lack of attention by the Corps of Engineers to keeping channels open. Particular problems were noted in New Jersey, Ocean City, Maryland, and Chincoteague, Virginia. Port expansion programs had been requested but little response had been forthcoming.

Recommendation:

1. Begin immediate study of port potential and development under each respective state's Economic Development Association.

RESEARCH

There was little discussion of this topic other than a few comments on the general impracticality of much research. Watermen related stories about how scientists seemed to be always saying they

needed to learn more about the species. Yet the regulatory agencies were regulating on the basis of this incomplete information and consulting little, if any, with the watermen.

Recommendations:

1. Require scientific research to become more practical and "solution" minded;
2. Disseminate research results more through trade journals.

CONGRESSIONAL HELP

Many watermen expressed deep and profound concern with "government" in general. Some felt that there was too much paperwork, too much intervention and too much help for those who didn't really need the help (i.e., non-professional watermen). Most expressed the belief that since the state fishery management programs affected them the most, the states should receive federal assistance in improving and developing their own programs. Many thought that the states were doing a good job already, although there was plenty of room for improvement.

Conversely, some watermen and sportsfishermen called for improved control over coastal migratory fish. They felt that stricter enforcement was needed to protect the fish stocks under existing laws and regulations. They were unaware that the 200 mile limit bill established a regional management planning council which will direct this effort.

Many expressed disappointment with the fact that the price/landings reports had been dropped. This was an area in which the Government had directly aided them, but now the reports have been discontinued. Some knew about and appreciated the National Oceanic and Atmospheric Administration's (NOAA) weather service and praised that effort. They requested that, if possible, more radio stations be established along the coast.

Recommendations:

1. Publicize the efforts of the Congress to show its active side;
2. Aim federal assistance to state fisheries regulatory agencies for improved species management;
3. Place watermen's representatives on state and federal management advisory panels for improved guidance.

PRICE OF FISH

Many of the watermen expressed cynicism concerning the price they received for finfish. Incidents were related such as the shipping of fish at one price and the receipt of some entirely different price or the receipt of no money at all. The price rise between the harvester and the consumer was questioned.

Although the New York market received particularly harsh treatment, other markets also received criticism. Generally it was felt that the few existing markets controlled the overall fish market and that anytime a lot of fish are caught, the bottom drops right out of the price. Many believed that a freezing or processing plant would alleviate some of this problem and also increase the competition among buyers.

Recommendations:

1. Investigate allegations of price fixing and antitrust activities;
2. Investigate the price rise for seafood as it goes through the market place to the consumer.

RECREATIONAL ACCESS

At the meetings held for sportsfishermen (held individually so that sportsfishermen would not be inhibited by the presence of watermen), much attention was given to the distribution of Dingell-Johnson funds. Most of this money was believed to be going to fresh-water fisheries. It was requested that more money be spent on habitat improvement for marine species (artificial reefs, etc.) and to improve access to waterways (public landings, docks, fishing piers, etc.). On the whole, there was only one species which caused conflict between sportsfishermen and commercial fishermen — striped bass. Sports people felt that there should be more control of the spawning grounds while commercial men felt that the fish had cycles and in the bad slumps, this cry was expected.

Recommendation:

1. Seek a more equitable distribution of Dingell-Johnson funds.

TRASH FISH

There was little discussion of the topic of trash fish. Most watermen said that almost every species they catch is used. Some offshore trawlers reported that at times better markets could be created for species such as squid and sea robins. However, they appeared satisfied with the current attention given to this problem.

Recommendation:

1. Develop a better marketing structure for all fish landed.

FOREIGN FLEETS

"Get them out" was the phrase heard most often. Though the words changed somewhat, the overall point made was that American fishermen were tired of being underpriced by subsidized fleets catching fish off their own coast by vacuum trawlers. While some were pessimistic about the United States being prepared when the 200 mile limit happens, most called for strict enforcement of the limit.

A related issue was the request for lowering or removing the tariffs on imported fishing gear. It seemed unfair that foreign fish could flood our markets while foreign fishing gear was taxed at more than twice its value.

Although many watermen felt that passage of the 200 mile limit bill was imminent, they apparently knew little about the bill itself and the accompanying management legislation. They also expressed little forethought concerning their plans once the foreign fleets were denied access to the resource.

Recommendations:

1. Passage of a 200 mile limit bill;
2. Study the feasibility of removing the tariffs on fishing gear.

POLLUTION

Following financial assistance, pollution was the topic of greatest interest. Many watermen felt that the Federal Government was one of the major polluters, mainly because of its many military installations and ships. The participants were unsure which agency to turn to for assistance. Much

pessimism was expressed about the apparent ease with which "big guys" (such as petro-chemical processors) get away with discharging pollutants, while many smaller plants (such as seafood processors, whose by-products are natural and are bio-degradable) were stringently regulated. Many expressed concern over the blanket use of chlorine as a purifier, noting that the chemical has an adverse effect on marine life.

The concern about pollution was expressed by offshore fishermen as well as inshore and estuarine fishermen. Part of the concern appeared to result from public concern that pollutants concentrate in certain species of seafood thus making marketing of uncontaminated members of such species much more difficult.

Recommendations:

1. Improve enforcement of pollution restrictions on large polluters, including municipal sewage plants;
2. Hold oversight hearings on present pollution laws to see what can be done to tighten up regulation;
3. Study effects of chlorine on the marine environment;
4. Outline assistance for seafood processing plants for correcting seafood waste problems.

SPORTSFISHERMEN

Most proponents for sportfishing seemed to be defensive about their importance to the economy. While many expressed concern over state fisheries management programs, they seemed evenly divided over the need for a saltwater fishing license. Those who were opposed could not see what benefits they would derive from the license fee, in contrast to benefits derived from freshwater licenses, where funds are used for stocking, habitat improvement, etc. Those who were in favor of a license saw it as a better method for gathering accurate statistics and economic impact information. They felt such statistics would show the large economic impact that sportsfishermen have.

Some felt that "Dingell-Johnson" monies could be better spent on fishing reefs, boat ramps, and waterways improvement.

ORGANIZATION

It was abundantly clear from most of the meetings that many watermen did not participate in fishermen's organizations and they lacked political clout as a result. Some proposed organizing, and pointed to the need for more cooperation, particularly in the areas of marketing and fishing technique. Some also expressed pessimism over the responsiveness of university and research agencies in providing useful information, although several watermen commended particular institutions for their efforts.

It was suggested by some watermen that better insurance programs, marketing methods, and government response to problems would result from joining together in formal organizations. It is interesting to note that while many supported this, over a third of meeting participants did not belong to any fisheries oriented organization.

Recommendations:

1. Assist in the formation and support of fisheries organizations for improved communications;
2. Provide tax and postage benefits for fisheries organizations similar to those provided for agricultural organizations.

ANALYSIS

Local management problems seemed to be foremost in everyone's mind. However, when discussing Congressional help, the conversation focused immediately on some type of loan program. The watermen insisted that neither Congress nor the public understands the value of fishermen and the seafood industry to this country. It was noted that if watermen could get adequate return on their capital, the industry would revive, placing the U.S. in its former high level position as a seafood producer.

Another broad category that received a great deal of attention was marketing-pricing-processing. It was clearly recognized that without the necessary market and marketing effort, the watermen would not increase their profits, no matter how many fish they harvested.

Pollution was considered to be the next most important issue. At every meeting the participants expressed concern over pollution of their fishing grounds. Although they heard about alleged reduction of marine pollution they noted little improvement.

Pollution and foreign fleets were the two biggest threats to many watermen. They felt that the foreign fleets were literally vacuuming fish stocks from the sea. The watermen were optimistic about future conservation under a United States 200 mile limit.

Most participants seemed pleased with the opportunity to express themselves on many issues including state as well as federal programs. Many were pessimistic of the good it would do them to speak at all, with over 40% expressing lack of confidence in the Federal Government's ability to help the fishing industry. Whether this was due to past failures of the government or to the general pessimism about the future of the industry is unclear.

Recommendation:

1. Programs similar to the Eastland Survey should be sponsored by the government at intervals to gain more exposure for present and potential federal programs.

ATTACHMENT A

Proposed Program Outline

Meetings will begin around 7:30 in the evening at places determined in advance with state government personnel and seafood industry representatives. The meetings will be moderated by Mr. Mustard, or, in his absence, by Mr. Wieland. At the head table will be a representative and, if possible, a local government official. One of these will introduce the moderator.

As individuals enter the meeting hall, they will be handed a pre-meeting questionnaire as well as a brief statement of our purpose. The questionnaire will be collected before the meeting begins and used in the final analysis.

The program will start with a brief background statement by Mr. Mustard. His remarks will end with a restating of the overall purpose of the meeting (i.e., to find out from the fishing industry how Congress can best assist them), and several leading statements which will hopefully begin the general discussion.

While the discussion will be broad in coverage and general in nature, an attempt will be made to include the following issues:

- 1.) Domestic assistance (primarily financial)
- 2.) Advanced technology (attitude and utilization)
- 3.) Insurance
- 4.) Safety
- 5.) Marketing
- 6.) Port Development
- 7.) Research
- 8.) Congressional help
- 9.) Price of fish
- 10.) Recreational access
- 11.) Trash fish

Following the discussion, the moderator will briefly review the major points upon which there was agreement.

ATTACHMENT B

List of Key Personnel

William Stevenson, Jr.
President, Delaware Watermen's Association

William Perry
Sportswriter and Md. Department
of Natural Resources

Joan Youngblood
Virginia Seafood Council

Don Ward
V.P.I. Extension

George Flick
V.P.I. Extension

Russell A. Cookingham
N.J. Div. Fish, Game, and Shell Fisheries

Howard Seymour
University of Delaware, Marine Extension Agent

Dave Garten
V.M.I.S.

Larry Simns
M.W.A.

Dave Sayre
St. Mary's County Waterman

William Hall
Calvert County Organizer

Charles Lesser
Resource Management, Delaware

Robert Rubelmann
Fisheries Administration, Maryland

Jim Baker
Eastern Shore Waterman, Virginia

Mason Sheehan
Chief of Extension Services, Maryland

William Brey
N.M.F.S.

William King
N.M.F.S.

Ralph Williams
University of Delaware

Brice Barber
Electronic firm, N.J.

Paul Hamer
N.J. Dept. of Environmental Protection

John Ritgers
N.M.F.S.

Robert Prior
Chesapeake Bay Seafood Industries Association

William Hargis
Virginia Institute of Marine Science

James E. Douglas, Jr.
Virginia Marine Resources Commission

ATTACHMENT C

Meetings Held and Partial Breakdown of Attendees

KEY

() Total number of attendees

M Management personnel

S Sport interests

C Commercial interests

MEETING PLACE	DATE	ATTENDANCE
Lewes, Delaware — University of Delaware	11 Nov. 1975	(38) 5-M 4-S 17-C
Dover, Delaware — Natural Resources Bldg.	13 Nov. 1975	(12) 3-M 1-S 2-C
Pt. Pleasant, New Jersey — Commercial & Sport Fisheries Conference	19 Nov. 1975	(20) 3-M 1-S 11-C
Cape May, New Jersey — Court House	5 Dec. 1975	(13) 2-M 2-S 3-C
Somers Cove, New Jersey — Court House	4 Dec. 1975	(12) 2-M 2-S 4-C
Rockhall, Maryland — Firehall	10 Dec. 1975	(4) 1-M 0-S 3-C
Berlin, Maryland — Firehall	12 Dec. 1975	(5) 1-M 0-S 4-C
Annapolis, Maryland — Department of Natural Resources	15 Dec. 1975	(5) 1-M 0-S 4-C
St. George's Island — Community Center	17 Dec. 1975	(8) 1-M 0-S 4-C
Annapolis, Maryland — Department of Natural Resources, Tawes State Office Building — SPORT FISHING	18 Dec. 1975	(16)
Warsaw, Virginia — Rappahannock Community College, North Campus	7 Jan. 1976	(34) 6-M 4-S 7-C
Saluda, Virginia — Rappahannock Community College, South Campus	8 Jan. 1976	
Hampton, Virginia — Thomas Nelson Community College	14 Jan. 1976	
Accomack, Virginia — Court House	15 Jan. 1976	(66) 4-M 4-S 18-C
Ocean City, Maryland — SPORTFISHING MEETING	13-14 Mar. 1976	(16) 1-M 11-S
Ocean City, Maryland — REGIONAL WRAPUP MEETING — Maryland Watermen's Trade Show	1 Feb. 1976	(45)

ATTACHMENT D

Pre-Meeting Questionnaire

Name: _____ Phone: _____

Address: _____

Organization or Affiliation: _____

Type of Fishery: _____

On the questions below, please indicate your opinions.

1. Do you have confidence in the Federal Government to help you?
2. What are some topics which you would like to see discussed (list in order of preference)?
3. What are your long-range concerns about the fishing industry?

ATTACHMENT E

Questionnaire

1. Do you have trouble selling all of your catch?

Type of catch?

How could the present marketing system be improved?

2. Is pollution a problem in your area?

If so, how is pollution hurting you?

What would you do to correct this?

3. Is money for your fishing business readily available at reasonable interest rates?

What would be a good alternative for financial help?

4. Would your community benefit from regional cooperation in:

a) Resource Management

b) Fishery Product Processing

c) Regional Marketing

5. In what ways do you think the Federal Government could assist you?

OTHER COMMENTS

ATTACHMENT F

Responses to Questionnaires

	DE	NJ	MD	VA
CONFIDENCE IN FEDERAL GOVERNMENT TO HELP				
Yes	11	16	18	28
No	7	8	7	29
CONCERNS:				
Fisheries Jurisdiction (200 mile)	9	4	7*	10
Pollution	2	2	4	8
Species Deterioration	0	5	5	13
Federal Regulations	1	3	3	6
Financial Assistance	5	4	2	4
Marketing	5	10	4	3
Prices	2	6	1	1
ORGANIZATIONAL MEMBERSHIP				
Yes	17	14	25	21
No	4	11	3	31
INDUSTRY REPRESENTED				
Commercial	12	20	13	25
Sport	11	3	11	8
Management	6	3	3	8
FUTURE OF INDUSTRY				
Excellent	0	2	0	2
Good	0	1	2	2
Fair	0	0	1	0
Poor	0	1	2	9
Very Poor	0	7	0	13

*All sport fishermen

CHART A

Landings and Values for 1974 and 1975*

State & Year	Total	Species													
		Shellfish	Finfish	Surf Clams	Oysters	Menhaden	Hard Crabs	lbs.	\$						
N.J.	74	166.6	9.3	31.7	7.3	135.3	2.9	22.7							
	75	143.6	19.8	11.2	44.1	8.6	99.5	4.7	35.5			2.7	107.3		
Del.	74	9.2	1.7	1.5	8.5	.2	.8	.8	5.8						
	75														
Md.	74	67.4	22.4	20.7	52.6	1.7	14.8	.9	5.4	12.7	18.3		4.1	24.7	
	75	64.5	22.5	20.3	48.6	2.1	14.9	1.0	5.4	16.0	12.9		4.3	24.3	
Va.	74	530.4	35.7	19.7	110.8	16.0	419.6	6.8	58.2	4.8	6.7	11.2	379.2	4.3	40.8
	75	444.8	33.1	19.8	84.8	13.2	360.0	5.7	39.1	5.0	6.2	7.7	315.8	5.0	34.8

*These figures were graciously provided by Mr. William Brey, Easton Office of the Statistical Section, National Marine Fisheries Service. There may be changes in certain figures as up-dating is done to the 1975 statistics.

APPENDIX D

North Carolina Survey Report

INTRODUCTION

In cooperation with the Atlantic States Marine Fisheries Commission, four public hearings were held to obtain direct input from the fishermen and seafood industry to assist in the development of a National Fisheries Policy.

The hearings were held in three widely separated locations in the state:

June 22, 1976 — Dare County, N.C. Marine Resources Center at Manteo, on the Airport Road

June 23, 1976 — Carteret County, N.C. Marine Resources Center at Bogue Banks on Salter Path Road

June 24, 1976 — Brunswick County, Brunswick County Court House, Southport, N.C.

June 25, 1976 — Carteret County, N.C. Marine Resources Center at Bogue Banks on Salter Path Road (Sports Fishing)

Publicity for the meeting was provided through six coastal area newspapers and three TV stations. A direct mail announcement went to 800 members of the industry and 1500 posters were printed and distributed. With all of this publicity effort the attendance was considered mediocre. However, the persons who did attend participated well.

In reviewing the reports of hearings conducted in the other Atlantic regions, it has been determined that North Carolina's problems are by no means unique. We all have the same problems and are having just about the same amount of success in solving them.

One relatively young fisherman put it pretty well; he said, "The fisherman is his own worst enemy." To a great extent this has been true, but it is changing — slowly — but changing. The individual producer is better informed than he was five years ago. He is taking a harder look at his options.

The young fellows coming into the business at all levels are looking down the road a few years. They have witnessed the rape of the resources and are doing what they can to support good resource management policies. They are becoming increasingly active in their association, serving on committees, study groups, etc. They are participating in joint marketing efforts, an endeavor unthinkable a few years back.

All in all, the industry is healthy and viable. During the recessionary period 74-75, North Carolina's fishing industry went quietly on doing its job, making small and major plant expansions, buying new trucks, upgrading equipment, etc.

The following information is included to provide a brief perspective on the size and activities of the industry:

North Carolina Manufactured Products 1974

Crabs	\$11,700,000
Scallops: (Bay & Calico) 79,147 gal.	889,607
River Herring	1,515,862
Menhaden: 121,200,000	4,810,938
*Edible finfish and shellfish	44,453,000
	\$63,369,407

Documentation:

Source of information:

Crabs: (Dr. F.B. Thomas, N.C.S.U.)

Scallops, River Herring, Menhaden (NMFS)

Manufactured Fishery Products \$23,664,000 (NMFS)

*Formula for figuring finfish and shellfish (NMFS) Ken Harris (Ex-vessel price) + (20% wholesale fresh) + (mfg. products \$23,664,000) = Total

$$(17,324,000) + (3,465,000) + (23,664,000) = \$44,453,000$$

Employment in Fisheries (N.C.)

Carteret County used as basis of calculations.

Population of county:	32,000
Survey of full time fishermen (Hill, 1972)	447
% fishermen	1.4
Estimated population on N.C. coast	600,000
Estimated fishermen on N.C. coast 600,000 x .014 =	8,400
Dockside employees	2,450 (NMFS 73)
	10,850
10% allowance for growth	1,085
Total	11,935
Persons/household	x 4.5
Total	53,708

QUANTIFICATION

Finfish and Shrimp Processing

The following information resulted from a survey of 33 plants, located along the North Carolina seaboard, which have expanded or constructed totally new processing facilities since 1971. Such industry changes are occurring at an increasing rate, with six new plants being planned, with a total value of \$2 million. Data concerning expansions during the past four years is summarized as follows:

Total Facilities Added (1972-1975)

No. plants involved	33
Handling and/or Processing rooms, sq. ft.	115,261

Ice rooms, cu. ft.	42,640
Ice machines, tons/day	167
Cold rooms, cu. ft.	116,428
Compressors, horse power	102
Blast freezers, cu. ft.	30,668
Compressors, horse power	78
Frozen storage rooms, cu. ft.	237,812
Compressors, horse power	331

Some of the above facilities are located in 15 new handling or processing plants, costing approximately \$2,569,000 and supplying 132 new jobs. The remaining facilities are located in 18 handling or processing plant expansions, costing approximately \$879,000 and supplying 69 new jobs.

Blue Crab Processing

New constructions or renovations occurred extensively between 1973 and 1975 at an estimated cost of \$200,000. The value of enterprises and products within this spectrum undoubtedly exceeds \$200 million.

The logging of impressive gains in handling and processing capabilities, as well as jobs created, provides justification for the emphasis being placed on handling and processing of seafoods in North Carolina.

Probably the best thing that could be done for the industry by the Federal Government would be to leave it alone. If the State and Federal agencies will do a good job of controlling and managing the resources with the help of the regional councils, the industry will continue to improve and develop new markets and the product forms to satisfy these markets.

The increasing concern and involvement (attempted involvement) by every organization from HEW to the WCTU in the commercial fishing industry is alarming. The proliferation of downy cheeked agents running up and down the coast passing out calling cards and telling old, salt encrusted fishermen what he is doing to "help the fishermen" has reached the point of ludicrousness. As one fisherman put it, "They're wearin' badges to keep from handin' cards to one another."

The National Marine Fisheries Service and The North Carolina Division of Commercial and Sports Fisheries are completely capable of providing all of the resource management and control functions necessary given sufficient money and personnel.

The farm commodity marketing and distribution systems were not developed overnight. It is felt that it would pay us to take a leaf or two from their book and apply some of their knowledge and expertise to our industry. Granted, they are now to the point where the tail is starting to wag the dog, but they have certainly been effective.

MARKETING

The market is in a constant state of flux, there is no reason for many extreme price fluctuations. Much of our fish is shipped on consignment and the price which will be received has not been established.

The retail price of fish is entirely too high. The fishermen see fish selling less than 100 miles from the coast for over a dollar a pound and they have received 10-12 cents for it.

A standard weight and size should be established for all species throughout the industry, since there is currently wide variation from state to state and from buyer to buyer.

A sound seafood consumer education program should be started and supported, not only by the government marketing agencies, but by the industry. The fisherman who is used to cleaning his own fish forgets that many young housewives have never seen a fresh fish; therefore, he is reluctant to put a few dollars into marketing efforts. One dealer/processor put it well when he stated, "We are putting 90% of our effort in production and 10% in marketing. We need a better balance of effort."

There is a need for new markets for table-ready seafood products produced in North Carolina. The dollar value should be added to the product and profit potential realized and retained in North Carolina. The state has been, for too long, a low-cost source of supply for out-of-state processors.

FINANCIAL ASSISTANCE

A major concern has been the lack of long term, low interest loans to help finance purchases of new boats, particularly those under five net tons.

The small fisherman has difficulty obtaining financing through conventional sources. Legislation should be introduced to modify the Fisheries Loan Fund, The Fishing Vessel Obligation Guarantee Fund, and the Capital Construction Fund to permit loans to smaller vessels. An effort should be made to forestall such ill-advised loans as those made on the two "seafreeze" projects.

The Production Credit Associations in some areas are doing an excellent job of working with the seafood industry. The amount of their involvement with the seafood industry is a direct reflection of the amount of information the managers of the local offices have been provided by the industry and its trade associations.

The minimum term needed on a boat loan is 14 years. The fishermen feel that they are not getting the same treatment at local lending institutions as the farmer, who has land to put up for collateral. It was not felt that money for processing plants or plant expansions is as hard to get as vessel money.

POLLUTION

The fishing grounds, particularly the shellfishing areas, are in danger of being destroyed by pollution. The incident of Kepone pollution in Virginia should be vigorously investigated and prosecuted. The big companies get tapped on the wrist for poisoning a whole estuary system, yet the small operator gets crucified for much smaller levels of pollution.

The water and air resources inspectors are living in the crab processing plants. Yet, ninety percent of the small amount of solid waste being pumped over the side in a crab processing plant is consumed by the small fish feeding around the dock.

The inconsistency of inspection procedure is another area of extreme concern to the packers. Inspection agencies send a different man every time; each must be briefed on what the last one did. Consequently, the operator spends too much time filling out forms and going over the same ground with new and untrained inspectors. All seafood plant and pollution control inspection responsibilities should be vested in one state office and one staff of inspectors.

The large land-clearing operations in Eastern North Carolina are seriously harming the nursery areas of immature finfish, crustaceans and shellfish. The cutting of land drainage canals is allowing large amounts of fresh water to invade the traditionally salt or brackish water areas, altering the salinity patterns and reducing the nursery areas to the point of seriously endangering both commercial and sport fishing in those areas.

This situation has been brought to the attention of the appropriate agencies, yet the canal digging goes on and the nursery areas continue to suffer.

RESOURCE MANAGEMENT

The management laws on the books need to be more strictly enforced; when the inspectors ticket a violator he is given only an insignificant fine by the courts.

The commercial fishing license regulations in North Carolina need major overhaul. The fee for a commercial license is much too low. Many people who are not commercial fishermen are buying a license and selling their catches without reporting the sale. The commercial fishing license is being abused.

The North Carolina Marine Fisheries Division should be given adequate funds to hire sufficient inspectors to cover all problem areas. The resource management control and research personnel should have sufficient funds readily available to permit immediate in-depth investigation of problem areas or emergency situations.

The mesh size on fish traps should be established by law at a minimum of 2" x 2" to permit small fish to escape. The fishermen in the southern part of the state claim that the black bass fishery has been ruined by the use of small mesh wire.

Fisheries management should be kept at the state level, with the new regional councils providing the guidance for regulation, and for the standardization of state regulations where two or more states are involved in the same fishery.

DOCKSIDE HANDLING FACILITIES

As the coastal areas come under more and more pressure for recreational and residential development, the need for planned fishing vessel unloading/servicing complexes becomes more apparent. This sort of operation will not lend itself well to incorporation into large general cargo ports.

The planned port at Wanchese is a giant step in the right direction. Serious thought should be given to a facility of this type in at least three other locations on our coast.

INFORMATION/EDUCATION

The transfer of information from the regulatory and research agencies has improved greatly over the past few years. Much of the credit for this improvement can be given to the North Carolina Sea Grant Program.

One of the principal problem areas in the information exchange effort has been the difficulty of inducing individual fishermen to participate in meetings and conferences.

After several abortive attempts to get a commercial fisheries training program off the ground in North Carolina, Cape Fear Community College in Wilmington is finally starting such a program. It is felt that this will be a well received educational program. The program director is soliciting input and active participation by members of the industry; the program deserves support at all government levels.

FISHING VESSEL SURVEY AND INSPECTION

It has been rumored that OSHA will be involved in the survey and certification of fishing vessels, rather than the Coast Guard. This is viewed with considerable apprehension by boat owners who believe that OSHA does not possess the background or expertise to do the job properly. They know and respect the Coast Guard and have been dealing for years with men who know boats and their requirements. They feel that it should remain this way.

APPENDIX E

South Carolina Survey Report

COMMERCIAL FISHERY

The commercial fishery in South Carolina is comprised of finfish, blue crabs, shrimp, clams, oysters, and squid. A total of 20,078,904 pounds valued at \$13,117,477 was landed in South Carolina in 1975. The percentage of selected fishery products were as follows: finfish, 4.8%; blue crabs, 6.4%; clams, 1.7%; oysters, 4.7%; and squid, .1%. The squid landings were incidental catches of the shrimp fishery. Most of the finfish were caught by shrimp fishermen during the off-season.

An estimated 2,288 commercial fishermen were employed in South Carolina during 1975. Shrimp trawling employed 1,900; crab trapping, 190; and oyster harvesting, 198. The commercial fishery supports an estimated 6,000 shore-side workers involved in the handling of fresh seafood products.

FINANCIAL ASSISTANCE

- Little need for government backed financial assistance in the area of loans. The commercial banks and the Production Credit Association are liberal enough and make adequate loans on vessels.
- Need financial assistance for emergencies and hurricanes.
- Need financial assistance for processing plants and freezer plants. A government backed loan program on frozen shrimp would help fishermen to avoid being at the mercy of a few big buyers.
- Need financial assistance to develop a fishery for under-utilized species such as rock shrimp and red snapper. The cost of rigging a boat for the under-utilized species keeps fishermen from exploring a potentially large offshore fishery.
- Taxes are unfair on fishermen. They have to pay unemployment taxes on workers who can only work a limited number of days a year by state law.
- Fishermen need to be classified with farmers for tax purposes and should not have to withhold taxes and social security when crews are paid on a share system.

MARKETING

- Shrimp fishermen are at the mercy of a few markets in the Gulf. Need an investigation of markets and shrimp price fixing.
- Need more information on prices and markets. A list of all shrimp buyers is needed so that the shrimp fishermen will not be at the mercy of a few buyers.
- Need to develop processing and freezer plants in South Carolina so that shrimp won't have to be shipped to the Gulf, processed and then returned to the state to the consumer.
- Need the same kind of marketing assistance as provided to agriculture.

INSURANCE

- Hull insurance and P&I is too high.
- Coast Guard should be the regulatory and inspection agency for fishing vessels.
- Boat crews and dock crews should be classified as agricultural workers and should not come under the Jones Act and Longshoremen and Harbor Workers regulations.

POLLUTION

- The pollution laws and regulations are adequate.
- There seems to be a lack of enforcement by the regulatory agencies.
- Some influential individuals seem to be able to fill marshlands.

RECREATIONAL — SPORTFISHING

South Carolina has 2,876 miles of tidal coastline, including 500,000 acres of tidal shorelines and 500,000 acres of tidal marshlands. In addition, offshore there are 10,000 square miles of Continental Shelf area. This large area of marine habitat provides an almost infinite number of salt water fishing opportunities.

Generally, salt water sportfishing in South Carolina can be broken down into the following categories: shore fishing; pier and bridge fishing; inshore fishing; offshore trawling; and offshore bottom fishing. The offshore trawling segment is fairly well organized into various clubs. In 1973, 2,800 private boats and some 28,000 residents engaged in offshore trawling. There are fourteen ocean fishing piers in South Carolina and 200,000 angler days were spent on piers last year. An estimated 45,000 persons participated in shore fishing last year and an estimated 130,000 residents engaged in small boat angling. A hearing on recreational fishing was conducted by the Eastland Survey in Charleston, South Carolina. The following comments and suggestions were derived from that hearing.

COMMENTS AND SUGGESTIONS

- Great need for marine space and wet storage for offshore fishing boats.
- State restrictions on building in wetlands prohibit marina development. The permit system is too complicated and inadequate.
- Need financial assistance in the form of loans to encourage private development of marinas.
- Do not want a salt water fishing license under any conditions.
- Need to build offshore fishing reefs.
- Need information as to what agencies regulate various phases of sportfishing.
- Need better charts of the offshore fishing area.
- Need more research on bill fish and bottom fish.
- Weather reports are inadequate — need to be updated more regularly. Weather bureau requires additional incoming phone lines.

APPENDIX F

Georgia Survey Report

INTRODUCTION

Under the direction and supervision of William Mustard, project director of the Eastland Fisheries survey for the Atlantic States Marine Fisheries Commission, four public hearings were held in Georgia. Several individual and small group interviews were also held. These hearings covered all aspects of Georgia's fisheries: fishermen, packers, processors, marine suppliers, wholesale and retail dealers as well as sportfishermen.

The University of Georgia's Marine Extension staff in Brunswick arranged all meetings; written advertisements and radio and television announcements were disseminated through campus headquarters in Athens. Much of this task, however, was undertaken by Dr. Wayne Bough of the Brunswick staff. Jack Rivers and Susan Tabbot taped and transcribed the majority of the meetings.

Dr. Frank Carlton co-chaired the Sportfishing hearing with Bill Mustard in Savannah. Jim Whitted and Mike Dowdy taped the hearing. Dr. Carlton wrote a report of the hearing which is included in this report.

FINANCIAL ASSISTANCE

The majority of fishermen in Georgia felt financial assistance was the most crucial factor in revitalizing their fisheries. However, it was unclear as to how financial institutions could provide the most help to fishermen.

The most frequent points brought out were:

1. Lower interest rates.
2. Longer maturity on loans.
3. Permission to use existing vessels as collateral.
4. Obviating the need for homes, land holdings, cars, and other shoreside property as guarantees on loans.
5. Reduction of red tape in obtaining loans which would result in faster returns on money. This item was unanimously endorsed mainly for the ability to buy used boats.

There seemed to be general agreement in PCA's recent involvement in vessel loans. The majority of Georgia fishermen would just as soon come under the Department of Agriculture and receive the benefits that the farmers receive. PCA and its seasonal repayment plan fits well into this picture. Whatever the answer, Georgia fishermen want easily obtainable loans; whether PCA, loan guarantee programs, or individual incentives, as opposed to direct government loans. They agreed that when a good loan program is worked out it should not encourage or assist casual or part-time fishermen.

Special financial assistance such as grants should not only be considered for offshore fisheries development, but for inshore fisheries such as oysters (once quite productive) and soft shell crab.

It was suggested that the cost of fuel, insurance, equipment, and vessel construction could be subsidized.

RESOURCE MANAGEMENT

Resource management was discussed at all meetings. Even though most of Georgia's fisheries are inside the three-mile limit, the need for federal knowledge of the problems, and possible federal control were discussed.

Georgia's sounds are the rearing grounds for shrimp. The majority of Georgia fishermen are in favor of closing all sounds permanently to all shrimp fishing. It was felt that an exception should be made for bait dealers. However, laws concerning them should be strictly enforced. Of greater concern was the outlawing of individual bait fishing using 10 foot nets. It is common knowledge that considerable violations occur with this gear. Law enforcement agencies are understaffed, and consequently cannot fully carry out their job.

Georgia has an overabundance of sport shrimp fishermen referred to as "weekend warriors" and sport bait fishermen.

Some felt that too many boats are engaged in shrimp fishing, and the subject of limited entry was discussed. This may not be necessary, however, if the problem is resolved by permitting access only by full-time fishermen.

The protection of roe shrimp, which are normally caught in May and whose spawn make up the major fall production, was of major concern. The majority of fishermen would rather not fish for them. However, since most are caught outside of the 3 mile limit, the state is unable to protect them. It was hoped that the regional councils could address the problem of controlling this fishery. The fishermen feel that those fishing are hurting themselves, especially since each female spawns 500,000 to 1,000,000 eggs each.

MARKETING

Marketing of shrimp presented no major problems. The problems discussed included varying prices along the coast and differences in prices between states at any one period of time. Most fishermen felt that southeastern shrimp are superior in quality to Gulf of Mexico shrimp and therefore should demand a premium price.

The development of the offshore finfishery is causing a serious marketing problem. A definite need exists for a major marketing program. Historically, much of Georgia's catch is shipped to New York. Although at times fishermen are happy with the prices and handling procedures, at other times the opposite is true.

DEVELOPMENT OF NEW FISHERIES

Because of the relatively successful results of six commercial boats out of the Savannah-Sunbury area on offshore trawl fishing during this past winter, considerable interest was shown all along the coast.

This was a first for Georgia. These boats were substantially assisted by the University of Georgia's Marine Extension Sea Grant Program. University vessel support also assisted in locating stocks of fish.

The fish are there, and several more vessels are expected to trawl this winter. Several problems are apparent. The dependence of too many boats on University help would obviously spread its budget, manpower and gear too thin. Government help in this matter is greatly needed.

Several fishermen in the Savannah-Sunbury area asked the University for more money for this project.

POLLUTION

Many fishermen expressed concern over pollution along the Georgia coast.

Georgia's EPD seems to be concentrating its efforts in the Brunswick area. There doesn't appear to be equality among those people required to meet Georgia EPD regulations. Certain packing houses are being forced to drain their domestic sewage into sewage pipes, while at the same time the City is pumping raw sewage into the river adjacent to shrimp boats which pump water on board to wash their shrimp. The EPD office in Brunswick has a sunken septic tank which overflows during high water.

SHORESIDE FACILITIES

There are few facilities for handling fish, other than for packing and shipping. This is understandable since the finfishery recently developed. Reasonable production forecasts warrant the need for modest facilities.

In most areas shrimp facilities are insufficient. In Sunbury fishermen are trying to solve this problem by forming their own co-op.

The unavailability of ice, as well as dockspace, has always been a problem. Federal money should be made available for dock facilities, where needed, along the coast. Access to railways should also be provided.

SAFETY

Fishermen felt that the Coast Guard should have jurisdiction over safety aboard fishing vessels.

STATEMENT OF GLYNN COUNTY SEAFOOD PROCESSORS FOR EASTLAND FISHERIES SURVEY

SENATE CONCURRENT RESOLUTION 11

This statement is being submitted on behalf of the Seafood Processing Plants located in Glynn and McIntosh Counties, Georgia, whose names are listed at the end of the statement.

We are grateful that after many years of almost "benign neglect" there is the evident interest in the state of and the future for our American Fishing Industry.

We are somewhat overwhelmed by the several inquiries, assessments and planning activities which seem to be going on at nearly the same time. We urge that the data assembled for each of these inquiries into the state of health of the seafood industry and the recommendations for improving the place of the seafood industry in the American economy be studied carefully, both individually and collectively. We recommend that the best ideas and plans of each of the studies be incorporated finally into *one* overall plan. The plan will be used by all who wish to provide the political and legislative climate and the financial support in those areas where government support is justified and necessary if we are to develop the American seafood industry to its potential, and if we are to properly utilize the increased fishery stocks available to U.S. fishermen as a result of the Fishery Conservation and Management Act of 1976 which extends U.S. control of our Coastal Fisheries to 200 miles.

The studies referred to above include:

- I. National Plan, National Marine Fisheries Service
- II. Eastland Fishery Surveys

III. National Plan for the Commercial Development of the Oceans

IV. G.A.O. Study of U.S. Fisheries and Costs to Revitalize the Commercial Fishing Industry

V. Assessment of the Status and Needs of Technology in U.S. Fisheries

After careful study of various plans recommended for the development and expansion of the U.S. Commercial Fishing Industry, we feel that the following deserve highest priority and should be started as quickly as possible, and be adequately funded to permit early completion of the work necessary for implementation:

1. *Development of Underutilized Fishery Resources.*

It is estimated that this program could get underway immediately and make a major impact in 5 to 10 years. Federal funding required is estimated at \$4.5 million in year 1, \$6.5 million in year 2 and \$8 million per year in years 3-10. It is estimated that private industry would invest, over the same period, \$200 million for new and replacement vessels and \$175 million in shoreside facilities.

2. *Establish a Revitalized and Adequately Funded Fishery Loan Fund for Fishing Vessels.*

This would be a revolving type fund and, with adequate government loan guarantees, would be expected to be self-supporting.

3. *Expand, Evaluate and Follow-up Research on the Effects of Environmental Factors on the Living Resources of the Oceans in the Estuaries of the United States.*

This would include the effect of natural conditions, general environmental effects, and specifically, the impact of agricultural chemicals, microbiological agents and organic compounds on the living creatures which spend all or part of their lives in our estuarine waters.

At this time data is not available to show the magnitude of kills of marine life in our estuaries when these animals are in their early stages of life. Such stages are too small or insignificant to gain the publicity or public awareness which follows a fish kill resulting in fish carcasses floating on our rivers or on our beaches. Not only are we often unaware of kills of very small marine organisms, but we cannot accurately assess the causes so that we may prevent them.

Work should start immediately; completion time is estimated at five years. Costs would be \$800 thousand in year 1, \$1.8 million in year 2, \$3.8 million in year 3, and \$4.0 million each in year 4 and year 5.

4. *Insure High Quality and Continued Safety of Seafood Products.*

The seafood industry has a good record of product quality and safety. There are now on-going inspections and continuous surveillance programs in effect, on a voluntary basis, in the seafood industry. These cover a large percentage of the seafood products on the market. Those programs now under the National Marine Fisheries Service should be expanded to cover all vessels, product unloading facilities and all processing facilities on a *mandatory* basis. Mandatory, continuous inspection programs under the Department of Agriculture are federally financed in the red meat and poultry processing industries. Although the nature of seafood products does not require continuous inspection as in red meats and poultry, a federally financed *mandatory seafoods surveillance* program should be started as soon as possible, with licensing of all vessels and establishments. Inspection should begin at whatever rate necessary to insure a continuous supply of wholesome and safe seafood products. Comparable quality control surveillance and licensing of facilities should be required of foreign countries shipping seafoods to the U.S. market.

The estimated costs for the federal inspection program would be \$500,000 in year 1 and \$1.5 million per year thereafter. In addition, it is estimated that U.S. industry will spend at least \$500,000 per year in supportive quality control programs.

5. *Improve Methods of Living Marine Resource Management.*

This should be pursued by a combination of two vital information sources:

(1) Forecasts of abundance of fish stocks and related vessel productivity under alternative management strategies, and utilization of these forecasts for planned and orderly investment.

(2) The compilation of catch and fishing effort statistics and inventory reporting on a *mandatory* basis. Regular economic analyses of these factors should be made for proper management of fishery resources.

The estimated costs (all federally funded) of sub-item (1) are estimated to be \$5.2 million per year for at least the first five years, plus development of information systems estimated to cost about \$300 thousand per year for the first 5 years and then require a low continuing budget.

The cost of compiling *mandatory* inventory reports of fishery products, which is to be an ongoing program of the National Marine Fisheries Service, plus the publishing of data, is estimated to cost about \$675,000 annually.

The above programs are judged to be the most important of all programs considered. It should be borne in mind that these programs are in addition to NMFS programs now funded, and should be considered to be programs of the type Congress had in mind when it provided for federal expenditure under the "Fishery Conservation and Management Act of 1976." The Act extended control of and management of those stocks of fish within 200 miles of U.S. shores for the primary benefit of the U.S. Fishing Industry and the U.S. public. Government funds are necessary to provide research and government services which, because of economics or other factors, cannot be provided by private industry. However, when one considers that about 20% of the world's fishery resources lie within 200 miles of U.S. shores, the value of these stocks as long-term U.S. food and their economic significance is apparent.

We urge prompt consideration of these proposals by industry and government as the means of improving and expanding the American Fishery Industry, and urge prompt funding and implementation.

Respectfully submitted,

KING SHRIMP CO., INC.
Employer of 710 in Brunswick, Ga.

SEA PAK CORPORATION
Employer of 760 in Glynn Co., Ga.
Employer of 351 in Brownsville, Ga.

LEWIS CRAB COMPANY
Employer of 125 in Brunswick, Ga.

SEA HARVEST PACKING CO.
Employer of 110 in Brunswick, Ga.

GOLDEN SHORE DIVISION
KING SHRIMP CO., INC.
Employer of 90 in Brunswick, Ga.

SEA GARDEN PACKING CO.
Employer of 75 in McIntosh Co., Ga.

APPENDIX G

Georgia Sportfishing Report

INTRODUCTION

A recreational fisheries hearing was scheduled for Monday, July 26, 1976, at the Savannah Science Museum. Two weeks prior to the meeting all the recognized sportfishing organizations located in coastal Georgia, including the Savannah Sport Fishing Club, Georgia Offshore Anglers, and the Golden Isles Rod & Reel Club (Brunswick) were notified by mail. In addition marina operators active in launching and supply of recreational fisheries boats were contacted and asked to attend. Two articles were published in the morning and evening paper several days apart and follow-up telephone calls were made over the Thursday and Friday prior to the Monday meeting. Individuals and organizations represented demonstrated a true cross-section of recreational fisheries' interests in the south Atlantic region. These included those whose interests were predominantly offshore for big game species, those who fished inshore for species such as spanish and king mackerel, and estuarine fishermen whose primary interests were trout, bass, whiting and shellfish (e.g. shrimp, oysters, and clams). There were thirty-eight attendees, not including state and federal professionals.

The discussion format was structured on four major headings, including:

- Research
- Finances
- Pollution
- Management

RESEARCH

It was strongly felt that there is a paucity of marine science relevant to recreational fisheries. That which does exist is not translated into local management programs or is not reflected in any educational programs directed at the anglers themselves. Anglers were specifically concerned about decreasing catch ratios and a lack of knowledge as to what contributed to apparent declines in abundance. Fears were expressed concerning insecticides, heavy metals and fresh water intrusion in estuarine areas.

Concern was expressed over commercial and recreational waste of females, particularly during reproductive periods, and more especially with no indication of the impact of these practices on total stock numbers.

The point was made that local area institutions (e.g. Skidway in Georgia) should be concerned with research programs related to local fisheries. The need for basic research of wider significance was also recognized, but it was pointed out strongly that education and cooperation is essential for improving the overall management process.

FINANCIAL ASSISTANCE

Most comments concerning financial assistance dealt with access. Several anglers had direct negative experiences in attempting to finance state/federal projects for piers, bridges, and ramps. The location of artificial reefs off the Georgia coast was criticized for nearness to the state fisheries

lab in Brunswick rather than being placed along the coast according to the highest densities of angler population.

Funds should be available for the development of recreational charter boats and head boats. Programs should be identified as to those benefitting purely commercial fisheries enterprises and those also benefitting recreational fishing. Such programs should be arranged to equitably represent both interests.

Questions were raised concerning the use of funds collected from boat registrations and marine gasoline tax. The general opinion was that these funds went into a general counting and that there was no redistribution to recreational fisheries.

POLLUTION

Most anglers felt that estuarine and coastal river pollution had diminished during the last ten years and that angler criteria of pollution (i.e. edibility, acceptable catch effort ratio, and normal size and growth patterns) materially reflect this improvement. Specific concern was expressed with regard to special toxic substances and heavy metals. Several participants pointed out that "changing labels" did not change the lethal quality of toxic substances and heavy metals; further, that despite a decrease in industrial contamination from petroleum products and raw sewage, there was evidence to support the case of increasing levels of poly-chlorinated organic compounds and heavy metals like lead and mercury.

Most anglers expressed the need for more state control of water quality and land use planning, and emphasized that the federal approach was more imaginary than real (changing labels without changing content for example).

MANAGEMENT

The issues of participation in Regional Councils, the distribution of Dingell-Johnson funds and the pros and cons of a salt-water license program were thoroughly discussed.

Concern was expressed that recreational fisheries would not be equitably represented on the Regional Councils. There was concern that the representatives themselves, as well as the advisory portions of the councils, would not have sufficient and timely information on recreational fisheries to produce fair and reasonable management programs. The specific fear expressed was that a real threat existed in the inability of a council to suggest a management plan, and of the Secretary to approve it, in the absence of actual stock assessment studies.

Specific criticism was leveled at the present use of Dingell-Johnson funds. It was alleged that considerable money, some fifty million dollars, has been collected and not distributed. Further, it was stated that most coastal states receive no benefit from monies generated by marine recreational fishing. This suggests that the Dingell-Johnson Act should be amended immediately to equitably reflect the number of marine anglers and to specifically distribute an appropriate share of the funds to marine recreational fisheries.

The subject of a salt-water license was discussed. Although there was general agreement that sport fishermen would be happier if they did not need a license, everyone agreed that management conditions existed which required: A) a mechanism for establishing the number of marine anglers; and B) some realistic measure of their catch. With these reservations no angler was adamantly opposed to the idea of licensing, but 100% of those present insisted that: (1) there should be a specific state or regional *management program* with defined goals, angler participation, and review process; (2) the monies collected would not be contributed to the general funds of the state but would be considered *dedicated* funds to be *specifically* applied to recreational fisheries programs; and (3) that licensing and management should be a *state* rather than a federal responsibility.

Concern was expressed that even with the advent of the 200 mile bill there would still be a lack of interagency cooperation at the state and federal level, and continued lack of cooperation between state and federal agencies operating in the marine area.

Concern was expressed that there was no perspective of offshore safety relevant to recreational fisheries programs. It was specifically mentioned that artificial reefs are placed in areas offshore that are actually unsafe for utilization by small craft, thus encouraging anglers to place themselves in jeopardy.

The necessity of sufficient enforcement was mentioned in several different contexts (i.e. in relation to management programs, licensing, waste, stocks, and pollution).

All the recreational anglers present strongly supported a recreational "right to fish" and insisted that United States fishermen, both commercial and recreational should have primary access to United States offshore resources, and that these needs should be considered before those of foreign fishermen. It was also noted that food, per se, was a more vital consideration than recreation, per se, but it was also pointed out that most recreational fishermen receive significant nutrition from their catch.

One of the most important comments related to the concept that licensing and the limitation of access to fisheries for management purposes is necessary to continue enjoying the benefits of living resources. A comparison was made between the farmer's investment of owning or renting and caring for his land and the absence of such participation by fishermen.

APPENDIX H

Florida Survey Report

INTRODUCTION

The development of United States fisheries policy and subsequent legislation carrying out that policy is of vital importance to the fishing industry in its utilization of marine resources. Many examples can be cited of specific fisheries that have withered because of over-exploitation and lack of strong federal policies to protect the resource. The fate of United States fisheries resource development programs in large measure will be directed by the implementation of specific recommendations developed by the Eastland Survey teams.

Senator Eastland in the *Congressional Record* spelled out the purpose of Senate Concurrent Resolution 11, "We do not propose to tell commercial and sportfishing industries what they need. Our purpose is to learn from leaders and participants in both industries what they need." He further stated, "If we are to succeed in the mission, we must reach a broad spectrum of Americans engaged in fishing in the formulation of our program."

To carry out the intent of Senate Concurrent Resolution 11 along Florida's Atlantic Coast, the Atlantic States Marine Fisheries Commission contracted with Dr. Thomas A. Herbert, a resource development specialist on leave from the Florida Legislature, to conduct Florida's portion of the survey.

After consultation with William G. Mustard, Project Director of the Eastland Fisheries Survey for the Atlantic States Marine Fisheries Commission, in July of this year, a total of nine meetings were scheduled for the first two weeks in August. The first meeting took place on August 2 in Fernandina Beach, Florida, at the State's northern border. Subsequent meetings were held at 7:30 p.m. on weekday nights over a period of ten days, terminating in Marathon, Florida, on August 11. Additional informal hearings were held on a follow-up basis in Fort Pierce, Stuart, and Marathon during the latter part of August.

The hearings were publicized through newspapers with statewide circulation such as the *Jacksonville Journal*, *Jacksonville Times Union*, *Orlando Sentinel Star* and the *Miami Herald*. Press announcements were also sent to each television and radio station in the areas to be covered. Press releases were issued prior to the meeting dates to insure adequate background information.

Atlantic Coast members were selected from the combined mailing lists of the Organized Fishermen of Florida and the Southeastern Fisheries Association, and individual meeting announcements were mailed to them. Announcements were sent also to Chambers of Commerce in each of the localities where meetings were to be held. State senators and representatives for the Atlantic Coast districts received information packets similar to those mailed to the press and Chambers of Commerce. Journalistic coverage and accounts of the hearings were generally good. The turnout at the meetings was spotty, with as few as ten persons in attendance at several of the meetings and as many as sixty in attendance at two of the meetings. The average attendance numbered from 25 to 30 fishermen and interested individuals. It was soon obvious after the second hearing in St. Augustine that insufficient notice in some areas had been given. Telephone calls to radio and television stations, to fishhouses, to leaders in the organized fishermen's groups, and contact by citizen's band radio were utilized "to get the word out" to the fishermen about the day, time, and location of the meetings.

A cross-section of fishermen from Fernandina Beach to Key West was represented in the meetings. In the Fernandina Beach area, for example, shrimpers, blue crabbers, bait shrimpers, and hook and line offshore fishermen were all present. Farther south, shrimpers, scallopers, offshore hook and line fishermen, inshore hook and line fishermen, spanish mackerel and king mackerel

fishermen, net fishermen, lobstermen, and stone crabbers were all present. In addition to the commercial fishermen, sport fishermen were also in attendance, with the majority of the sportfishermen attending the West Palm Beach meeting. Members of The Florida Skindivers' Association also attended, representing the sport divers' interests in Florida. Underwater spearfishing and catching lobster by hand is gaining in popularity in the warmer and clearer waters of Florida. Most of the commercial fishermen were small boat owners and single entrepreneurs working out of various fishhouse facilities scattered along the coast. Many fishhouse owners were also in attendance. The sport-fishing group included charter boat operators, head boat operators, and individual interested sportsmen.

Many boatbuilders and fishhouse operators could not attend the evening sessions, therefore, afternoon interviews were held to obtain their views. Several large boat manufacturing plants and boatyards were visited, and the goals and objectives of the Eastland Survey were explained and discussed.

In conclusion, a broad range of fishing interests ranging from commercial and sport fishermen to background facilities operators and boat builders attended meetings or were contacted individually. Although attendance was not large, industry and sporting interests who were concerned about the fate of the industry or their sport attended.

The Organized Fishermen of Florida insured the success of the survey by seeing that there was adequate attendance. In addition, the Southeastern Fisheries Association graciously provided their membership roster, which was used to make up a direct mailing list. The Florida Department of Natural Resources' Marine Patrol also assisted in publicizing the meetings and posting notices in the fishhouses and on the docks.

FINANCIAL ASSISTANCE

Without exception, the area of financial assistance by the Federal Government was the single most important discussion topic at the meetings. The full range of possibilities for federal financial assistance was discussed. These included guaranteed loans for large facilities, direct loans for the purchase of boats and shoreside facilities, and production credit arrangements similar to those in agriculture. Many fishermen reported continuing difficulty in obtaining mortgages on fishing vessels unless they were able to use shoreside collateral, such as homes and property to guarantee their vessel loans. Even when proper conditions were met for collateral, many of the fishermen reported that they had to pay excessively high interest rates over short payoff periods.

Those fishermen present at the meetings who were generally well established and successful reported that they had established good lines of credit and could borrow money at reasonable interest rates with reasonable collateral. On the other hand, the smaller independent fishermen often expressed concern that they would not be able to obtain any money at all were they to have an engine breakdown, lose gear in a storm, or have gear stolen or swept away by other fishing activities. Many of the fishermen reported that they had tried existing federal loan programs administered by the National Marine Fisheries Service, using farm credit plans that are already in existence.

While a number of the fishermen had looked into the farmers' credit system for sources of capital, they reported that the overall reluctance of the farmers' credit associations to lend money to fishermen made this source of credit unavailable to most of them.

The fishermen suggested that in any future legislation the payment structure should be designed so that balloon payments could be made to take into account the seasonal nature of the fishery similar to the farmers' crop production periods. The program should be structured to allow fishermen to repay the loan during the height of the fishing season, rather than during the entire year, including the off season.

For larger capital investments, such as large freezer plants or large vessels, the possibilities of loan or mortgage guarantees by the Federal Government were discussed. Most of the meetings were

dominated by smaller operators who expressed concern over the need for larger facilities and sources of investment capital. Larger operators expressed an interest in supporting legislation for a mortgage guarantee program.

For smaller capital needs, production credit associations (PCA's) were discussed. The fishermen agreed that production credit in the fishing industry would be helpful. It was noted that agriculture has for over 30 years had generally good experience with the lending capabilities of production credit.

The subject of credit unions was brought up at one meeting. It was pointed out that existing federal and state laws already allow for the formation of credit unions and that it was simply a matter of contacting the proper federal and state representatives to gain further information on procedures to establish credit unions.

Eligibility requirements for fishermen to participate in the various financial assistance programs were discussed at length in each of the meetings. The fishermen felt that the first requirement for programs of financial assistance should be one that assures that only bona fide full-time fishermen would be eligible for the loan program. At this time it was emphasized that it is often difficult to identify *who* is a bona fide full-time commercial fisherman. The extended fisheries jurisdiction regulations scheduled to go into operation March 1, 1977, may have provisions for identifying and licensing fishermen. Federal licensing programs under extended jurisdiction, however, may not be implemented in all fisheries for several years. State regulation of fishermen under various commercial licensing programs was discussed as an alternative for helping to identify the bona fide full-time commercial fisherman. Being licensed will not automatically qualify a commercial fisherman for federal assistance in the form of guaranteed low interest loans, but will be only one requirement. The fishermen generally agreed that in order to qualify, an individual should derive no less than 75 to 80 percent of his income from commercial fishing, and should have proven himself through several years of experience.

Most fishermen considered the loan programs to be incentives, not giveaway programs. Therefore, as a second requirement, a reasonable amount of down payment should be required to insure good faith on the part of the fisherman-investor. It was pointed out that too often in previous attempts to develop similar types of loan programs, inexperienced speculators have been encouraged to venture into the fishing industry to the detriment of those already in the established fisheries. At several of the meetings, examples of previous giveaway programs were cited as the way "we don't want to go" in future legislation. Other federal assistance programs in the past benefited only a few of the larger, well organized and well funded sectors of the industry, who could afford to hire the lawyers and accountants to work through the red tape.

In general, under the area of financial assistance the fishermen supported federal involvement allowing them reasonable access to risk capital to expand their operations, with a minimum of federal involvement or "strings" attached to this money. The post World War II history of other nations in the fishing industry has shown that governmental involvement has led to the expansion of those nations' fishing efforts and ultimate competition with United States fleets. Many of the fishermen felt that, given the opportunity, U.S. fishermen could compete effectively with the heavily subsidized foreign fleets if given reasonable financial assistance through the low interest loan programs, mortgage insurance, production credit, and other programs brought about through federal legislation.

INSURANCE

High rates of insurance for fishermen are particularly troublesome and have contributed to their inability to obtain credit and financing on new boats and facilities. Some fishermen acknowledged that they were fishing with neither hull insurance, nor protection and indemnity insurance. In such cases one serious accident could put a fisherman out of business and make him liable for long-term claims against his property and future income. Many of the fishermen complained that their friends who fished "commercially" out of sport boats had a decided advantage, since they could obtain their

financing and insurance at much lower rates. On larger boats rates of 5 to 10 percent were stated as not being uncommon for adequate hull insurance to protect the lender when the boat itself was used as security. There are a significant number of fishermen in the State of Florida who, through the "Organized Fishermen of Florida," have found lower rate group insurance. Such lower insurance rates provide encouragement to purchase adequate hull and liability.

There remains a significant number of fishermen in the State of Florida who do not carry adequate insurance because of the high cost, and the general consensus is that there are few experienced agents who are willing to write such insurance. Most fishermen agreed that the furnishing of adequate insurance deserves high priority.

MARKETING

The long-term instability of the price paid for fish landed has been a major stumbling block to revitalizing or maintaining a stable fishing economy in the State of Florida. Fishermen along the Atlantic Coast of Florida expressed a great need for price stabilization for each species of fish over the entire season. Many stories were told about high prices at the beginning of the fishing season (e.g. for kingfish or shrimp) and progressively lower prices during the season. It was pointed out that similar problems have been faced by the agricultural sector for many years.

The solution found by the agriculture sector has been the creation of marketing associations to stabilize prices over the entire year. The fishermen generally agreed that if such a system were available to the fishermen, they would fare better. Not only could prices be stabilized through the use of production agreements, but restrictions could be placed on fish imported from other countries in competition with the products of domestic fishermen. This type of structure would address directly the problems faced by U.S. fishermen who are in competition with government subsidized foreign fishermen.

Competition by cheap imports was a sore spot with all fishermen. Size and grade standards, in addition to quality control standards, were deemed extremely important as marketing tools. These tools would be significant in combating the influx of low-quality imports. Fishermen's cooperatives were discussed as a method of pooling the marketing efforts of individual fishermen, allowing them to hold their catch long enough to locate favorable markets.

The Treasure Coast Fisheries Cooperative in Fort Pierce, Florida, is an example of a successful fishing cooperative. This cooperative consists of 100 active fishermen who have joined together to build and develop docking facilities and shoreside facilities needed to hold and market their catch. Fishermen all over the State of Florida knew something about the activities of the Treasure Coast Fisheries Cooperative and were interested in learning more about their activities, and how they could set up similar groups in their own respective areas. Discussion also centered on how cooperatives or marketing associations could utilize federal economic development and small business loan programs not geared directly to the fishing industry. When cooperatives have been started, agricultural extension agents, given the proper authorization by federal legislation, could be used to aid in the marketing and development programs of the cooperatives.

Product marketing in the fishing industry can learn much from the agribusiness sector of our nation. Fishermen along Florida's Atlantic Coast seem to have started thinking more in these terms. As one fisherman commented, perhaps the term "maribusiness" ought to be used to describe the industry just as the term, "agribusiness" has grown in popularity in the agricultural sector.

PORT FACILITIES

The comments on improving port facilities generally followed the theme that in many coastal communities, sport and recreational boating has held the attention of local planners. Several

instances were detailed illustrating how plans for new dock and harbor facilities were designed totally around the recreational boater. Recreational boaters with 50-foot pleasure craft generally have adequate dockage facilities at regular intervals along the entire coast. Commercial boats are often found rafted three abreast off a back bay slough tied to rotting pilings or trees on the bank. Florida's tourist orientation has, unfortunately, relegated commercial boats to this status in many areas.

On the other hand, the port facilities at Fernandina Beach, for example, generally have adequate dock space, but a number of the facilities are in disrepair. The reasons given for this deterioration were related to state-level problems involving permits to rebuild.

The Port Canaveral harbor facilities are modern and ample because of the federal investment in the space program during the past 20 years. At present there is not extensive fisheries development at Cape Canaveral, but good dockage facilities and land are available to meet future expansion in the Canaveral Port Authority area.

In the Florida Keys shore facilities development has been halted by environmental action taken at the state level. The entire area of the Keys has been declared an area of "critical state concern" by executive order. This order has stopped nearly all development, improvement, or expansion of shore areas into needed boat basins and harbors.

EDUCATION

Training in the fishing industry is carried out "on-the-job." Most of the education in the industry is by "self-teaching," trial and error, and word of mouth among the individuals fishing for a particular species. A few fishermen stated that vocational instruction in engine repair and use of electronics would be worthwhile to those fishermen already in the industry, but they did not want a vocational program to turn out more competition in times which already were tight.

The available information for "self-education" was a topic stressed at all meetings. The agricultural extension service of the State university system was pointed out as a good model for what is needed in fisheries. The fishermen agreed that they would take advantage of help at the local level given by field agents of the university or the federal agricultural department. The fishermen in attendance expressed a willingness to learn what has been tried in other areas of the country. They were unwilling to wade through a bureaucratic maze to find out something new.

COMMUNICATIONS

The area of communications is a varied category, and the responses ranged from inquiries on new LORAN C installations to market data. The fishermen operating on a small scale reported generally that they used the market "green sheets" on prices put out by NMFS several years ago while they were free, but they discontinued using them after a fee schedule was imposed. Most larger operators working out of fishhouses had timely price information available through their wholesale dealer.

Florida's coast is not covered by LORAN C installations, and inquiries were made at several meetings on the timetable for installations along the Gulf and Florida Atlantic Coast. It was brought up at several meetings that precise navigational systems for hook and line fishermen and bottom trawlers are badly needed to locate bottom formations and to avoid hanging up gear.

POLLUTION

The present status of coastal marsh protection by the U.S. Army Corps of Engineers was discussed at one meeting where shrimp nursery areas were close at hand. Industrial pollution from

paper mills in the Fernandina Beach area was blamed for reduction in the shrimp production of that area. However, at that same meeting, bait shrimping was also blamed for depletion in shrimp stocks.

Pollution legislation on the books has affected the fishermen directly by making it more difficult to obtain permits to build and repair docks, to provide maintenance, to dredge, and to dispose of fish wastes. Most of these problems were related to interpretation and understanding of existing state and federal laws and were discussed at length in all meetings.

Many of the South Florida spiny lobster fishermen displaced from the Bahamian banks have recently been refitting to long-line for swordfish. Rulings by the Food and Drug Administration on trace metal concentrations of mercury and recent enforcement have forced additional hardships on an already distressed area. The majority of these fishermen are in the Miami and Florida Keys areas.

RESEARCH AND DEVELOPMENT

Agency efforts by the Federal Government in the field of research and development were criticized for lack of final information reports, for not being accurate in the findings when they were available, and for being "too scientific" rather than capable of being applied to immediate needs. Fishermen said they knew of fisheries research vessels working in their areas, but did not know where the research reports were sent after the work was finished. It was suggested that the communications effort of marine extension workers would aid in this situation.

One operator with four deep water hook and line bottom fishing boats stated that he would not be making any money at all if he had followed the reports of exploratory deep water fishing off Cape Canaveral by federal researchers. He claims his four boats daily pull from 500 to 1000 pounds of tile-fish off bottom that was listed as unproductive by researchers.

In the area of applied research it was brought out that good fishermen in specific geographic locations should be used to test gear and do exploratory fishing. It was hoped that some mechanism could be used to provide research money to make use of local talent in developing new equipment and assessing new areas. Following this approach a new non-profit organization was chartered in Tallahassee, Florida, on September 9, 1976, called the "Gulf and South Atlantic Fisheries Development Foundation, Inc." The aim of the foundation is to provide industry research using federal, state, and local funds, as well as donations from other foundations and associations.

SAFETY STANDARDS

The thought of new federal intervention in the industry in the area of fishing vessel safety standards was repugnant to most fishermen. Many of the shoreside operators described their experience with federal safety inspectors who insisted on hard hats, guards on equipment, and yellow stripes on the floor. One fisherman noted that hard hats and yellow stripes on the deck would not make his fishing vessel safe when seas were running eight to ten feet. When given the option, the fishermen unanimously voted for Coast Guard inspection in lieu of any other agency's involvement in their business.

RECREATIONAL FISHING

The Atlantic Coast sportfishing industry is extremely important to the economy of the State of Florida. Seasonal visitors and local residents alike make extensive use of boat launching ramps, marina facilities, charter boats, and fishing piers all along the Atlantic Coast. The charter boat and head boat operators, as well as representatives from fishing clubs, attended several of the meetings in South Florida, especially at West Palm Beach, to voice their opinions.

The sportfishing effort between Stuart and Miami has increased in the past ten years as greater numbers of small trailered boats arrive on the scene. The pressure has led to a serious decline in sportfishing success in the last few years. The "mosquito fleet," as it was called by commercial operators, takes large quantities of king mackerel and other species that enter the commercial market.

Pelagic species, such as the billfishes, are also under great pressure. Florida Department of Natural Resources researchers at the West Palm Beach billfish research facility who attended the West Palm Beach meeting noted breakthroughs in understanding the population dynamics of the billfishes. The recent emphasis on longlining along the Atlantic Coast for swordfish and bluefin tuna will be detrimental to the sportfishing industry.

Bottom fishing, long the bread and butter of sportfishermen, has also declined seriously along the coast in the near shore areas accessible to the small boat fleet and charter boats. To aid this fishing a program of building artificial reefs was started several years ago, and surplus "Liberty" ships were bought by the State for this purpose. Since the reef program has been extremely successful, more localities and fishing clubs have tried to "get into the act" and secure reefs for their own areas. Expansion of this program was encouraged at the federal level by the sportfishing interests.

The question of funding for saltwater sportfishing research was considered at a number of meetings. It was brought out that federal funds are available from the Dingell-Johnson monies collected on excise taxes on sporting goods. The Dingell-Johnson funds, however, are allocated on a formula based on the number of licensed sportsmen in the State. The State of Florida presently has no licensing program for saltwater sportfishing. Mixed feelings were voiced on the need for a saltwater fishing license, and it was suggested that a modified allocation plan should be enacted to permit states such as Florida to take advantage of these funds.

CONCLUSIONS

The following is a list of conclusions which details the significant points developed from interviews with Florida Atlantic Coast fishermen.

1. A refurbished, direct federal loan program is needed to finance small boats and facilities, as well as large operations. The red-tape involved in making the programs should be minimized, but the requirements should insure that bona fide full-time fishermen should be the only ones eligible.

2. A new program of mortgage guarantees for large boats and shoreside facilities should be started with requirements similar to 1. above.

3. Production credit associations should be authorized for the fishing industry. Federal guarantees and seed money should be provided through legislation to provide fishermen with the same financial opportunities that farmers have now.

4. New programs in marketing should be developed and old programs should be strengthened to insure that help filters down to the fishermen on the docks.

5. An extension service program specifically for fishing should be developed to bring all forms of technical and market help to the docks where it can be used.

6. A review of pollution standards for heavy metals should be made. Continued strict enforcement of existing pollution laws was stressed.

7. Research and development should utilize the knowledgeable fishermen who are working specific fisheries to aid in carrying out gear research and exploratory fishing.

8. The Coast Guard should remain the safety inspection agency for the fishing industry.

9. A mechanism for allowing Dingell-Johnson monies to be disbursed without saltwater fishing licenses should be developed.

