DEVELOPMENT OF A COMMERCIAL FISHERIES INDUSTRY STRATEGY FOR THE STATE OF NEW YORK

PREPARED FOR:

NEW YORK STATE DEPARTMENT OF STATE
DIVISION OF COASTAL RESOURCES AND WATERFRONT REVITALIZATION
CONTRACT NO. C001012

SUBMITTED BY:

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DECEMBER, 1989

CONCLUSIONS AND RECOMMENDATIONS

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U.S. DEPARTMENT OF COMMERCE NOAA
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CONCLUSIONS AND RECOMMENDATIONS

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INTRODUCTION

The major tasks of the New York Department of State's Division of Coastal Resources and Waterfront Revitalization (DCRWR) are to:

- Serve as a catalyst to encourage the protection of valuable marine resources;
- Review government actions for consistency with the State's Coastal Zone Management Plan; and
- Promote the formation and expansion of capital investment in waterfront areas for appropriate development.

In keeping with this general mandate, the DCRWR has been charged with implementing the following policy: "to further develop commercial finfish, shellfish, and crustacean resources in the coastal area by encouraging the construction of new, or improvement of existing on-shore commercial fishing facilities, increasing marketing of the State's seafood products, maintaining adequate stocks, and expanding aquaculture facilities."

Although this charter appears direct and succinct, the implementation of this policy is an elusive and complex undertaking. As a result the DCRWR has sponsored, with this report, the creation of a commercial fisheries industry strategy for New York State which will be consistent with the above stated policy and which will assist the Department of State in carrying out its Coastal Management Program. This report presents an overview of marine fishery activities in the State of New York and develops strategy for perpetuating and enhancing the commercial fishing industry there.

Background

Most strategic planning for offshore commercial fishery management is the result of the Fishery Conservation and Management Act (FCMA) and subsequent amendments. In 1976, the FCMA established exclusive U.S. fishery management authority over all fishery resources within 200 nautical miles of the coast. Regional fishery management councils were established, including the Mid-Atlantic Fishery Management Council, which has partial jurisdiction over the fisheries off the coast of New York. The remainder of this jurisdiction has been retained by the New York State Department of Environmental Conservation (NYSDEC), which is responsible for the management of living marine resources within the Marine and Coastal District of New York State.

The Marine and Coastal District consists of the tidal waters of the Atlantic Ocean within three nautical miles of New York's coastline (territorial sea), and all other tidal wetlands within the State. Examples of primary fisheries under State control include hard clams, inshore lobster, inshore surf clams, and striped bass. The State also maintains regulations for the following finfish species: fluke, weakfish, blackback, Atlantic cod, bluefish, weakfish, mackerel, scup or porgy, and black sea bass. For a more detailed explanation of NYSDEC management, please see "Marine Resource Management Needs" and "Managing New York's Marine Fishery."[1] Chapter 6 of this report also contains a summary of many of the key state and federal regulations for 21 fisheries in New York in the biological stock assessment.

Unfortunately, the implementation of the FCMA and other initiatives have failed to provide the commercial fishermen of New York many of the anticipated benefits. For example, since passage of the FCMA the aggregate value of New York's harvest has declined from $46.3 million to $41.7 million (constant 1987 dollars). Declines have been even more dramatic in some of the State's leading fisheries. For example, New York's hard clam harvest has declined by approximately $14 million when measured in constant 1987 dollars. The oyster harvest, for which New York-produced product has a national reputation, declined by $5 million when valued in constant 1987 dollars. Such trends are particularly alarming given that the harvests in the adjacent states of New Jersey and Rhode Island have remained relatively constant.

Declining abundance for many species due to habitat loss, pollution, and over-fishing are often cited as the causes of these drops. Although these are clearly pressing problems, a wide variety of other

factors may be adversely affecting New York's fishing industry. This investigation has been chartered to identify these other factors.

In addition to seafood harvesting, the seafood handling and processing industry has traditionally been an important economic enterprise in New York State. Unfortunately, these activities have also been declining as evidenced by: the drop in the volume of product handled at the Fulton Market; the inability of Fishport to attract interest; and the decline in the value of New York-processed seafood products.

For example, in 1976, 119 million pounds of fresh seafood and 36 million pounds of frozen seafood were handled at the Fulton Fish Market alone. By 1985, less than 90 million pounds of fresh product passed through the facility (reliable statistics on frozen seafood after 1981 are not available--frozen product is of secondary importance in fish markets). State-wide, the value of fishery products processed has declined from $150 million in 1976 to $77 million in 1986 (real 1987 dollars). This reduction in processing activities has resulted in corresponding declines in employment in both processing plants and at wholesale establishments. A secondary requirement of this DCRWR-sponsored study is therefore to identify and define the strengths and weaknesses of the shore-side processing industry and use them to guide the formulation of a stabilization or development strategy.

Industry Structure of Commercial Fishing

Before a strategic analysis of New York's commercial fishing industry can be examined it will be important to identify and explain characteristics of the industry. As a whole, commercial fishing is an inherently fragmented industry, which can be characterized as:

- an industry in which no firm or operator has a significant market share nor can strongly influence industry outcome;
- an industry where there is an absence of market leaders with the power to shape industry events; and
- an industry populated by small- and medium-sized operators.

Two main underlying economic causes to this fragmentation have prevented consolidation of this industry in New York.

Absence of economies of scale. In New York's commercial fishing industry there is an inherently high labor content, and it is intrinsically hard to mechanize. For instance, the unit of production is the individual boat. Having multiple boats does little to lower fishing costs because all boats are essentially fishing in the same waters with the same chance of a good catch. Thus, there are many small operators with roughly equal costs.

Exit Barriers. Aside from economic barriers (i.e., outstanding loans for vessels and gear, low job-skill transferability), managerial exit barriers are common to fragmented industries like commercial fishing. For instance, certain competitors in commercial fishing are not solely profit-oriented. Commercial fishing has a romantic appeal and excitement that attracts people who want to be in the industry despite lower or even non-existent profitability.

Coping with Fragmentation

With the realization that the fishing industry is fragmented there are strategies that can be initiated to, in New York's case, maintain the viability of the industry, and possibly even increase profit potential. Some general concepts of effectively dealing with the commercial fishing industry in New York are briefly explained in the following.

Increased value added. An effective strategy may be to increase the value added of the business. Value added refers to the increase in the value of a product as it moves through industry sectors. For instance, as a fish moves from the harvesting sector to the processing sector to the retail sector its value increases. From the State's perspective, this will be beneficial if the product remains in the State through all of the sectors.

Specialization by product type or product segment. Differentiation of product is another way to maximize the strengths of a particular group's strategy. In the case of New York State commercial fishing, as will be discussed later, there are many differences in New York's seafood products that can be utilized to maximize profitability.

Study Objectives

The primary goal of this investigation is to identify a course of action that will reverse the decline in the New York commercial fishing industry and

better utilize renewable fishery resources as a tool for regional economic development and economic diversification. The following are the specific study objectives:

- Develop a source document which presents a comprehensive characterization of New York's commercial marine fish harvesting and processing industries.
- Undertake an inventory and assessment of the infrastructure supporting the State's fish harvesting and processing activities.
- Assess the biological health of the major fisheries in the region.
- Evaluate the current economic health and long-term viability of New York's commercial fish harvesting sector.
- Identify the competitive position and relative strengths of New York's fishing and seafood processing and wholesaling businesses.
- Compare these relative strengths to the available fishery resources in order to identify prospective opportunities for growth.
- Identify and present a menu of the stabilization and development options available to the industry.
- Synthesize this information to facilitate the development of a comprehensive state-wide action plan which maximizes the economic benefits from the local harvest and resident seafood handling operations.

A further requirement for this document was that it develop and present information supporting the requirements of the various other state agencies which have responsibility for marine resource management and economic development. As such, this document has been prepared as a guide to all parties concerned with New York's commercial fishing industry, including government, industry, and academia.

SUMMARY OF COMMERCIAL FISHERY PRODUCTION IN NEW YORK STATE

Since 1980, the New York commercial fishing industry has maintained its overall proportional share of catch from Mid-Atlantic waters. (For this analysis, Mid-Atlantic water states consist of New Jersey, Rhode Island, and Connecticut). It should be noted, however, that for certain fisheries such as hard clams, New York's relative position has declined relative to Rhode Island and New Jersey. Over the last seven years, the average New York landings value has been approximately 69 percent of New Jersey's landings, 63 percent of Rhode Island's landings, and 306 percent of Connecticut's landings.

The composition of those landings has changed, however, over the last 15 years. Over this time period certain trends, such as the following, appear to be evident.

Traditional fisheries lack opportunities for further growth, and in fact, halting further decline will be the main challenge.

Between 1972 and 1987, the overall volume and value of landings have remained relatively flat with finfish gaining in importance. The total volume of New York landings averaged 38 million pounds between 1972 and 1987. Total exvessel value of landings averaged $52.4 million between 1972 and 1987, with Suffolk County receiving 88 percent and Nassau and King's Counties receiving 11.7 and 0.3 percent of the value of New York harvest respectively. Furthermore, the value of landings has remained relatively flat, but the value of landings has been increasing recently in response to higher unit prices for both the same fish as well as larger harvests for higher value fish. Exhibit ES-1, on the illustrates the volume of the State's landings from 1972-1987.

Exhibit ES-1

COMMERCIAL FISHERY STATISTICS FOR NEW YORK
VOLUME OF FISH AND SHELLFISH IN POUNDS, 1972-1987

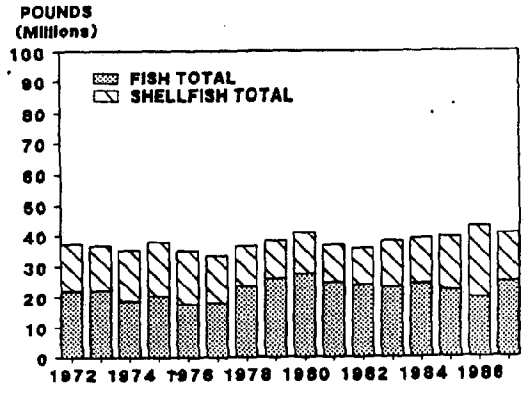
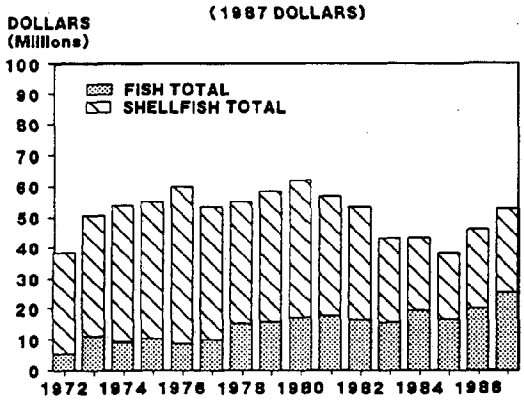


Exhibit ES-2 illustrates the value of the State's landings from 1972-1987.

Exhibit ES-2

COMMERCIAL FISHERY STATISTICS FOR NEW YORK
VALUE OF FISH AND SHELLFISH, 1972-1987
(1987 DOLLARS)



Besides the increasing importance of finfish in the State's overall landings profile, another major trend is the marked decline in the hard clam fishery in the last 12 years. Between 1972 and 1987, the hard clam harvest and exvessel value dropped 76 percent and 72 percent respectively. The reasons for this decline are complex, and include: over-fishing, illegal harvest from uncertified areas, illegal harvest of seed clams, changes in bay salinity, deterioration of water quality and associated increases in closures of harvest grounds, and reduced hard clam reproductive success. Exhibit ES-3 illustrates the decline in the volume of the hard clam harvest.

Exhibit ES-3

LANDINGS OF HARD CLAMS IN POUNDS, 1972-1987

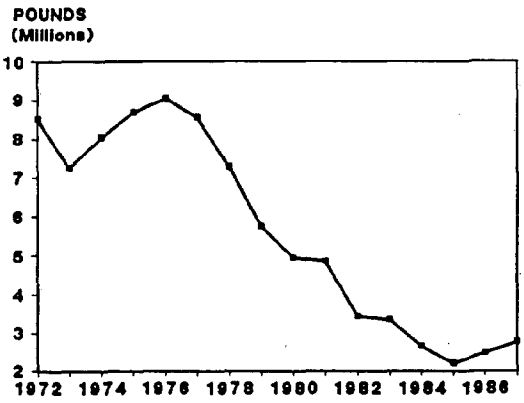
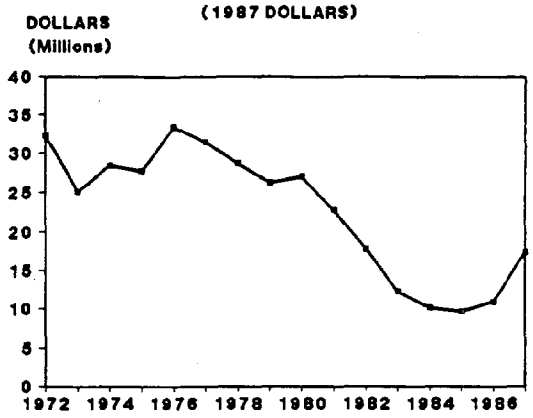


Exhibit ES-4 illustrates the decline in the value of the hard clam harvest.

Exhibit ES-4

EXVESSEL VALUE OF HARD CLAMS, 1972-1987
(1987 DOLLARS)



Fisheries that have sustained high growth in the last 16 years were primarily in offshore and/or high-value finfish such as swordfish, fluke, and tuna.

New York's commercial fishing industry has been dominated by traditional fisheries such as hard clams, lobsters, and oysters. The composition of the profile of New York landings, however, is changing to favor other previously less exploited and more finfish species. Exhibit ES-5 illustrates that revenues from species such as lobster, bluefin, blackback, whiting, swordfish, surf clams, squid, fluke, other tuna (yellowfin and bigeye), and tilefish have been increasing in the last sixteen years.

Exhibit ES-5

GROWTH FISHERIES FROM THE MID-1970'S TO MID-1980'S
(1987 DOLLARS)

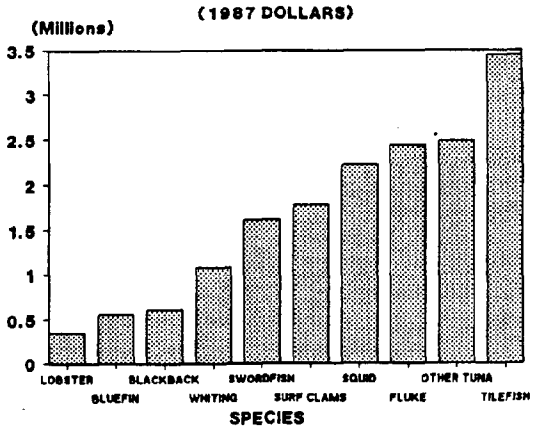
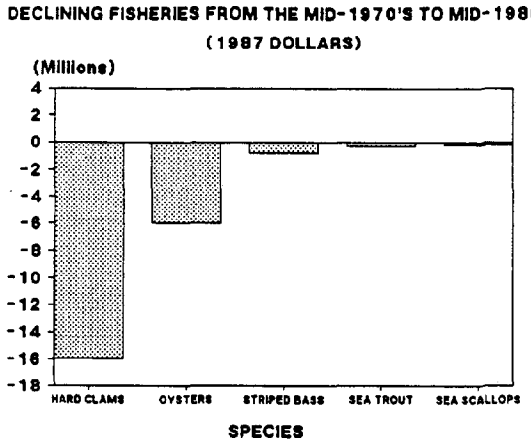


Exhibit ES-6, on the other hand, illustrates that revenue from species such as hard clams, oysters, striped bass, sea trout, and scallops has been decreasing in the last sixteen years.

Exhibit ES-6



The declines in the traditional core fisheries have been virtually offset by landings from previously underdeveloped fisheries.

While harvests of shellfish, and particularly hard clams, have been declining in the last 16 years, harvests of high-value finfish such as swordfish, fluke, and tuna have been increasing. Table ES-1 summarizes the volume increases between average landings from 1972-1974 and average landings from 1985-1987 for four high-value finfish species.

Table ES-1
Average Landings and Percent Increase Between 1972-1974 and 1985-1987, in Pounds

Species	1972-1974 Average Landings	1985-1987 Average Landings	Percent Increase
Fluke	1,804,000	2,503,000	39%
Swordfish	400	481,000	120,158
Bluefin	7,100	193,000	2,619
Other Tuna	9,700	1,089,000	11,132

Table ES-2 summarizes the value increases between the average value from 1972-1974 and the average value from 1985-1987 for the same four high-value finfish species.

Table ES-2
Average Value and Percent Increase Between 1972-1974 and 1985-1987, in 1987 dollars

Species	1972-1974 Average Value	1985-1987 Average Value	Percent Increase
Fluke	$1,666,000	$4,106,000	146%
Swordfish	1,000	1,624,000	156,000
Bluefin	5,300	569,000	10,400
Other Tuna	2,531	2,492,000	98,300

These fisheries have increased to the point, however, where no further significant growth can be biologically expected from these fisheries with the possible exception of "other tuna" (yellowfin and bigeye). Therefore, the challenge will be to preserve New York's position in high-value "non-growth" finfish rather than increasing harvests of these species.

Traditional "underutilized" fisheries offer only moderate opportunity for growth.

Following the 1976 Magnuson Conservation Act that restricted foreign fishing within 200 miles of the U.S. coast, traditional "underutilized" species such as mackerel, whiting, butterfish, red hake, and squid were thought to provide the greatest opportunity for fisheries growth, especially in New York. From New York's perspective, substantial growth was only realized in the squid fishery and to a lesser extent in the whiting fishery. To document the changes in landings of these species, Table ES-3 summarizes the volume increases or decreases in landings between average landings from 1972-1974 and average landings from 1985-1987 for these "underutilized" fisheries.

Table ES-3
Average Landings and Percent Change Between 1972-1974 and 1985-1987, in Pounds

Species	1972-1974 Average Landings	1985-1987 Average Landings	Percent Change
Butterfish	1,161,000	900,633	-22%
Red Hake	315,000	281,000	-11
Mackerel	397,000	447,000	+13
Whiting	2,172,000	3,763,000	+73
Squid	755,100	6,328,466	+738

The substantial growth that was expected for these fisheries has not materialized in New York for a variety of reasons, including:

- domestic markets for these fisheries continue to be small and cannot absorb increases in landings;
- as a result of low demand, the price per pound has remained low;
- there is a lack of specialized infrastructure such as blast freezers and processing plants in New York to handle these types of fish;
- New York is a high-cost producer, and these species have low-margin profit potential; and
- it is unprofitable for New York fishermen to export these low-margin species.

For these reasons, there is only moderate potential for growth in these fisheries in New York in the near future. The only possible exception to this would be further utilization of squid. Other states surrounding New York have successfully exploited the squid resource by developing specialized infrastructure to handle this species. In fact, much of the squid caught in New York is transported to New Jersey for blast freezing and/or processing. In addition, the domestic market for squid is somewhat more developed than for the other traditional "underutilized" species. Therefore, some specialized infrastructure catering to this activity could be considered. Thus, traditional "underutilized" fisheries will not be the panacea for fisheries development in New York as once thought, but can only be relied on to provide moderate growth in the future.

Competition for fishery resources between recreational and commercial fishermen is increasing and will continue to increase.

As available fishery resources in New York waters continue to remain the same, and in some cases decrease, competition for these resources will increase between commercial and recreational fishermen. Table ES-4 illustrates how the competition for resources is affected by biological factors and the landings of these species from the commercial and recreational sectors.

Table ES-4
Exploitation Status, Competition for Resource, and
Landings Between Recreational and Commercial Fishing for Key Fisheries

Species	Exploitation Status	Competition for Resource	1985-1987 Commercial Landings (pounds)[2]	1985-1987 Recreational Landings (pounds)[3]
Bluefish	Biologically fully exploited, opportunity for expansion of commercial catch	Major	1,772,000	NA
Blackback	Fully to over exploited	Increasing	1,132,000	5,000,000
Fluke	Over exploited	Major	2,632,000	6,000,000
Weakfish	Fully to over exploited	Major	358,000	191,000
Striped Bass	Over exploited	Historically Major	694,000	NA
Swordfish	Over exploited	Significant	481,000	NA
Bluefin	Over exploited	Significant	193,000	NA
Other Tuna	Moderately exploited	Increasing	1,090,000	NA

In these fisheries, the potential for conflict will most likely intensify over the next several years. Therefore, it will be important to assess possible programs, such as artificial reefs, that will enhance opportunities for recreational and commercial fishermen.

The general biological outlook for New York appears to be fair to poor with very limited opportunity for growth.

In general, the biological outlook for New York fisheries appears to be fair to poor. Although several traditional fisheries are in decline, it is reasonable to expect that they will recover over the long term. In addition, a number of species that have been thought of as "underutilized" continue to be underutilized, but offer only limited growth potential for the reasons outlined in previous sections.

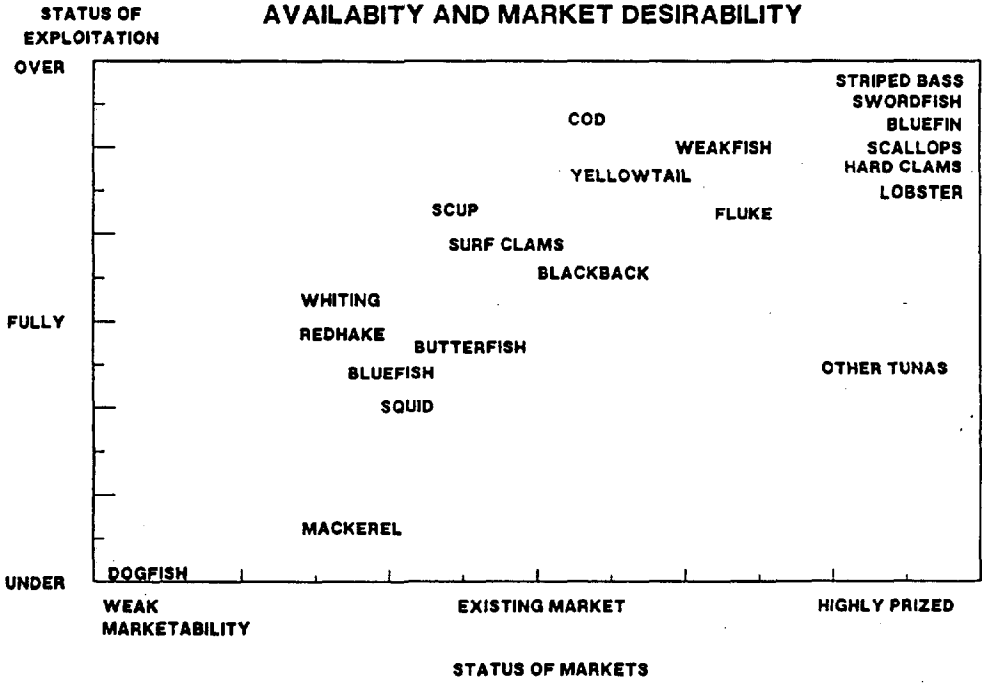
Exhibit ES-7 graphically represents two constraints to fishery development, marketability and availability. This chart confirms the lack of opportunity for increased effort in most fisheries. At this time, with only the possible exception of squid and bigeye and yellowfin tuna, no species can justify a significant increase in effort due to an available stock and markets. In some cases such as bluefish, mackerel, dogfish, whiting, and to a lesser extent, squid, markets will need to be developed before any more effort directed at these fisheries can be justified. It would appear that additional landings would primarily serve to depress prices for the commodity even further. In other cases where markets already exist, the species is already fully to over exploited, and therefore, no increase in effort could be justified.

Conclusions relating to commercial fishery production.

The changing make-up of landings and the biological elements summarized above indicate the necessity of the preservation of New York's position with respect to most species. Increasing effort in one particular fishery, with the possible exception of squid and bigeye and yellowfin tuna, does not appear to be advisable at this time. Even with this in mind, it will be helpful to summarize each species' potential by evaluating factors contributing to opportunities in each fishery for fisheries

Exhibit ES-7

POSITIONS OF TWENTY SPECIES WITH REGARD TO BIOLOGICAL AVAILABITY AND MARKET DESIRABILITY



currently worth over $100,000 in landings. Exhibit ES-8, on the following pages, summarizes those factors contributing to a species' potential. These factors include:

- Species (only species which valued over $100,000 in 1987 New York landings are presented);
- Estimate of demand--measured by change in unit price over the sixteen years of the analysis;
- Total nominal 1987 New York harvest (lbs.);
- Importance of recreational fishery and potential for conflicts;
- Suitability of existing fleet to landings;
- Status of management of the resource; and
- General outlook for commercial fishery.

From this exhibit and the previously highlighted conclusions, it is apparent that halting the decline and preserving New York's position should be the focus of any program.

Therefore, a successful fishery stabilization program should primarily halt the decline in established fisheries and pursue development of one, possibly two fisheries. The following objectives should be pursued in order to address the above apparent trends.

- Preserve traditional shellfishing activities.
- Preserve New York's position in high value, "non-growth" fisheries.
- Preserve and develop fishery-related infrastructure.

Over the years of the analysis, the commercial fishing harvest has remained fairly steady (in many cases New York fishery harvests are declining), and with current stock levels there is no indication of it increasing in the coming years. Thus, it is clear that the major thrust of a commercial fisheries industry strategy for New York State will be the preservation of its traditional fisheries, maintenance of its position and increased market share with respect to high-value fisheries that have sustained substantial growth in the last 15 years, and expansion of one or two underutilized species.

SUMMARY OF FISHERY-RELATED PORT INFRASTRUCTURE

The fishermen on Long Island face an array of continuing and serious problems relating to fishery infrastructure. Many of the constraints on fishermen stem from their conflict with coastal real estate development projects and recreational boaters who have crowded harbors, reduced services available to commercial fishing, and driven up living and operating expenses. Fishermen find themselves squeezed from both an operating and economic perspective.

In general, the main problems for the commercial fishing industry in New York documented in the report continue to be:

- **Space in ports:** Most ports on Long Island are extremely crowded with recreational boats and commercial harvesters. As a result, conflicts grow over the limited amount of dock space in most ports. The problem is so severe that some ports do not have enough space for boats to pack out their catch at a dock.
- **High operating costs:** Most marinas cater to recreational boaters and charge high prices for fuel and repairs. Also, increasing living expenses have made it difficult for fishermen to operate on Long Island.
- **Channel and harbor problems:** Some channels provide excellent access to the ports; however, some severely restrict access and use of the ports on Long Island by fishing boats.

The following documents the number of vessels in the New York commercial fishing fleet and infrastructure problems at various ports.

Number and Type of Boats at Ports on Long Island

There are a total of approximately 304 commercial trap and trawl fishing vessels based in ports on Long Island.[4] There are approximately 126 trawlers, 119 lobster boats, 48 long-line, and 11 shellfish dredges, as well as various gillnetting operations. The trawlers and long-line boats are concentrated

Exhibit ES-8
Commercial Fishery Statistics for New York
Factors Contributing to Opportunity For Major Species Groups

Species	Change in Unit Price Over 16 Years	Total Nominal 1987 New York Catch (lbs.)	Competition for Resource by Rec. Fishery	Suitability of New York Fleet to Landings	Status of Management	Commercial Outlook
Anglerfish	+203%	571,100	NA	NA	NA	NA
Bluefish	+13%	1,564,600	Major	Adequate	FMP in preparation	Markets must be developed before increase in landings is sustainable
Butterfish	-36%	1,008,600	Insignificant	Adequate	FMP since 1979	Domestic markets must be developed before increase in landings is sustainable
Cod	+36%	427,800	Moderate	Inadequate--limited number of offshore trawlers	FMP since 1986	Resource will not sustain increase in fishing effort, NY contribution small
Blackback	+130%	1,226,900	Increasing	Good	Offshore FMP since 1986, inshore in prep.	Resource not likely to sustain increase in fishing effort
Yellowtail	+120%	484,800	Insignificant	Good	FMP since 1986	Resource not likely to sustain increase in fishing effort
Fluke	+60%	2,641,400	Major	Adequate	FMP since 1981 inshore 1988 offshore	Resource not likely to sustain increase in fishing effort
Red Hake	+79%	463,000	Minor	Limited number of offshore trawlers	PMP since 1977	Market could sustain increase in landings
Atlantic Mackerel	-11%	410,100	Minor	Requires larger vessels	FMP since 1979	Market must be developed before increase in landings is sustainable
Scup	+37%	2,008,300	Moderate to major	Requires larger vessels	None	Resource not likely to sustain increase in fishing effort
Weakfish	+133%	329,100	Major	NA	NA	Resource not likely to sustain increase in fishing effort
Shad	-62%	619,082	Minor	Good on Hudson	Local	Market is glutted by time of New York run
Spiny Dogfish	+15%	155,700	Insignificant	Requires larger vessels with refrigeration	None	Market must be developed before increase in landings is sustainable
Swordfish	+460%	531,000	Significant	Limited number of well suited vessels	FMP since 1985	Resource not likely to sustain increase in fishing effort
Tautog	+173%	225,200	Increasing	Good	NA	NA

Exhibit ES-8 (Cont.)
Commercial Fishery Statistics for New York
Factors Contributing to Opportunity For Major Species Groups

Species	Change in Unit Price Over 16 Years	Total Nominal 1987 New York Catch (lbs.)	Competition for Resource by Rec. Fishery	Suitability of New York Fleet to Landings	Status of Management	Commercial Outlook
Tilefish	+106%	4,401,200	NA	Limited number of bottom long-liners	NA	Market could sustain moderate increase in landings
Bluefin Tuna	+324%	203,800	Significant	Good	ICAAT	Resource not likely to sustain increase in fishing effort
Other Tuna	+1122%	1,595,400	Significant	Good	NA	Market could sustain increased fishing effort
Whiting	+58%	4,523,500	Insignificant to minimal	Adequate	NA	Market and resource could sustain some increase in landings
Crabs	+121%	313,865	Insignificant	Using clam boats	NA	Market could sustain increased fishing effort
Lobster	-19%	1,146,700	Minimal	Good	FMP since 1985	Resource not likely to sustain increase in fishing effort
Hard Clams	+34%	2,776,600	Minor	Good	State & town regulations	Resource not likely to sustain increase in fishing effort
Surf Clams	+16%	2,890,800	Insignificant	Adequate	FMP since 1977	Resource not likely to sustain increase in fishing effort
Conch	+12%	153,700	NA	NA	NA	Market could sustain increase in landings
Oysters	-6.5%	174,100	NA	NA	NA	Resource not likely to sustain increase in fishing effort
Sea Scallops	+31%	107,000	Insignificant	Upgrade gear of fleet would be required	FMP since 1982	Resource not likely to sustain increase in fishing effort
Long-Finned Squid	-3%	7,826,200	Insignificant	Good	FMP since 1979	Market must be developed further before increase in landings can be sustained

on the southern and eastern parts of the Island, and the lobster boats are concentrated on the northern and western parts of the Island.

Channel and harbor problems are most severe at Islip, West Sayville, and Shinnecock; and gear storage at all but two ports is inadequate.

Most ports on Long Island have adequate channel and harbor infrastructure, with the notable exceptions of Islip, West Sayville, and Shinnecock. Islip and West Sayville have shallow channels which restrict the use of the ports to small vessels. In Shinnecock, shoaling in the inlet continues to be a serious problem for fishermen. Gear storage is another problem faced by New York's commercial fishermen. With the possible exception of Mount Sinai and Mattituck, no port provides adequate gear storage for fishermen. Gear storage space is a critical component of an efficient on-shore commercial fishing facility. Fishermen have a great deal of gear that requires storage during off seasons and different fishing seasons. They also have gear that they need to store and use year-round such as trawl doors, tow lines, lobster traps, nets, etc.

Competition for docking space and fish landing facilities at many ports on Long Island is intense.

Intense crowding in many of the ports on Long Island has resulted in competition for space and many conflicts between commercial fishermen and recreational boaters. Conflicts have been especially frequent at ports on Long Island Sound. As of now, fishermen in Mount Sinai, Port Jefferson/Setauket, Northport, and Huntington (primarily lobster fishermen) must pack out to skiffs and transport the catch to shore. Also, most vessels in these ports must moor in the harbor because there is no overnight dockage available. On the south shore, Freeport particularly has a severe docking problem.

Only 22 percent of New York processors utilize New York products for a significant portion of their product.

Only 10 sizable processors on Long Island handle primarily local product, including 7 finfish processors and 3 shellfish processors. The 4 largest finfish processors, which were interviewed for this study, are located in Greenport, Montauk, Hampton Bays (Shinnecock), and Islip. Even among these, all except the processor in Montauk rely on out-of-state sources for a substantial proportion of the fish they process. The three shellfish establishments are located in Northport, Greenport, and Point Lookout. It should be noted that there were a total of 37 processing plants in New York in 1987. The seven noted above were singled out because they are the largest to rely on New York product for a significant source of their supply. Other processors, such as a salmon-smoking plant in Brooklyn, rely on out-of-state or imported product for their supply.

This is significant because of the value added associated with the processing sector. With so few processors utilizing New York-landed seafood a large portion of value added is being lost.

There is a lack of marine repair yards and timely fuel service at commercial rates at ports on Long Island.

One of the major problems facing New York fishermen is the lack of marine repair services for commercial fishing vessels. Most marinas on Long Island cater to recreational boaters, and prices for services are very high. For most major repairs, commercial fishing vessel owners must travel to Staten Island, Rhode Island, or Connecticut to get their boat serviced. Greenport has the only extensive repair facilities on the island suitable for large commercial boats. Other ports such as Huntington, Northport, Port Jefferson, Setauket, Mattituck, Shinnecock, Freeport, and Point Lookout have repair facilities, but they are primarily for recreational boats and services are relatively expensive.

Another problem in some ports is the inability to purchase fuel at commercial rates. Many captains, especially in ports like West Sayville, Port Jefferson, and Huntington, must pay full retail prices for their fuel. Some ports even lack dockside fuel tanks, making it necessary to truck fuel in dockside. This can make purchasing fuel inconvenient, and even cut into fishing time because fueling must be scheduled.

Ice capacity and refrigeration and freezing storage is minimal at most ports on Long Island.

There are approximately 8 ice producers that supply ice to commercial fishermen at commercial rates on Long Island. Three ports (Point Lookout, Freeport, and Shinnecock) provide ice storage. The remainder of ice users purchase from a producer--usually Riverhead Ice Company--and truck it in, or they buy from recreational marinas, and in some cases, even buy from local delicatessens.

Although there are approximately 13 major refrigeration and freezing units on Long Island, access to these facilities is sometimes limited. Usually these facilities are tied directly to processors and buyers, so fishermen must go through these agents for access to refrigeration and freezing.

Conclusions in Fishery-Related Infrastructure.

All of the above infrastructure deficiencies are constraining the commercial fishing industry's ability to operate efficiently. To remedy this, the infrastructure solutions that should be considered, include:

- providing dock space in Point Lookout by utilizing unused city dock space;
- providing municipal dock space in Freeport;
- providing improved access to Islip Harbor;
- providing improved access to West Sayville Harbor;
- dredging Shinnecock Inlet (targeted for 1990);
- more accommodation of transient boats in Montauk and Point Lookout;
- utilization of fishing industry infrastructure surplus in Greenport;
- providing water and power hookups in Mattituck;
- resolving local waterfront competition and providing basic services to lobster fishermen in Mount Sinai, Port Jefferson/Setauket, Northport, and Huntington through the Local Waterfront Revitalization Program; and
- Providing gear storage space in Freeport, Montauk, Port Jefferson, Northport, and Huntington.

These are infrastructure solutions that should be considered if New York wants to enhance its competitiveness in the commercial fishing industry. Most of the needs are basic to a commercial fishing operation. Therefore, the preservation and development of fishery-related infrastructure should be a major objective of New York State.

SUMMARY OF ECONOMIC ISSUES IN THE HARVESTING SECTOR

In the course of the field work, three recurring themes were stressed by the operators in the commercial fishing industry. These issues can be analyzed by answering these three questions:

- Have operations become less profitable in recent years?
- Do fishermen in New York receive less for their catch than operators in surrounding states?
- Are operating costs higher on Long Island, and if so, do they significantly affect profitability?

To answer the first question, relative profitability was measured for 6 species by incorporating the value of landings, productivity (based on catch-per-unit-effort), and operating costs into a model that estimated relative profitability over time. From this analysis, it was concluded that the relative profitability of fishermen, for the most part, is declining with increases generally occurring only in extraordinary cases.

The question of whether New York fishermen receive prices for their products comparable to those received by operators in surrounding states was best addressed by comparing landings originating from the same geographic location and for which there were no size or quality differentials in the products landed. When this was undertaken for each of the six primary fishing grounds frequented by Long Island's fishermen, the following conclusions could be drawn:

- New York fishermen routinely receive relatively higher prices for their harvest than fishermen from other states;
- the price differential results from value-added handling operations and the ability to supply specialty fresh fish markets;
- the price differential is more pronounced in low- and moderate-value finfish; and

- situations of lower prices can often be explained by a lack of specialized processing capabilities.

Thirdly, while operating costs are high for all of New England, New York fishermen felt they were paying particularly high prices for their goods and services. In order to assess this, the relative costs of operating a vessel in Long Island were compared to those in an alternate New England port.

The net effect of the model in section 4.3 was not intended to represent absolute profits or losses, but only to illustrate the effect of higher input costs in New York to a fisherman's income relative to the production costs experienced by fishermen with which local fishermen must compete. It was concluded that high costs of operating preclude fishermen from effectively harvesting many low-value species; limit the species appropriate for export; and require harvesters to set higher dockside prices.

Clearly, New York fishermen should continue to perform those activities that add value to their product to combat high operating costs and declining profitability. In order to address some of the economic problems, though, the State should consider pursuing an objective of reducing harvesting production costs.

TRENDS IN THE PROCESSING SECTOR IN NEW YORK

Over the course of this analysis, some trends were detected in the seafood processing sector in New York which primarily reflect the difficult nature of processing in New York. This sector of the commercial fishing industry in New York appears to be the most adversely affected by the operating conditions found on Long Island. This sector is a key element in maximizing the value-added impacts of New York commercial fishery products. Therefore, the strategies developed to combat the following challenges should be seriously considered. In the processing sector the detected trends include:

- processors in New York face a myriad of general constraints;
- the value of processed fishery products is declining in New York;
- processing employment is declining; and
- few New York processors rely on New York harvest.

General constraints that make it difficult and sometimes impossible to operate include, but are not limited to:

- **Energy Costs:** One of the significant operating costs for a processing operation is electricity. New York, and especially Long Island, have some of the highest energy costs in the nation.
- **Transportation Costs:** This is another cost that is particularly high in New York because of delays caused by traffic and the high cost of repairs, maintenance, fuel, and capital to support a trucking fleet.
- **Taxes:** Waterfront real estate values skyrocketing on Long Island have made it increasingly difficult for processors to carry taxation burdens resulting from reassessments at fair market values.
- **Wastewater Treatment Capacity:** Processors use large amounts of water cleaning and processing seafood products. Excess wastewater treatment capacity is scarce especially on Long Island, thus constraining existing and new development of processors.
- **Available workers:** Seafood processing is messy and it is hard to hire prospective employees away from other available jobs in high- employment-rate areas such as New York.

These constraints must be the first considerations made if preserving or expanding processing capacity becomes an option. In addition to these general operating constraints, further considerations will contribute to the strength of a new processing plant:

- Processors may not be able to locate near the source of the product. With the reality of expensive waterfront development at most ports on Long Island, processing facilities will not likely be able to locate near the catch; they might have to consider making pickups of products at ports by truck.

- Processors should be sensitive to the New York market. Much of the catch from New York waters is marketable in New York. Processors should also be sensitive to the extent of processing required. Most New York markets require fresh seafood.

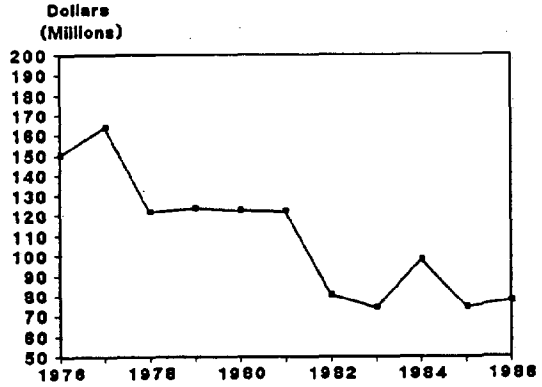
- Processors should react to the changing profile and seasonality of the seafood supply as dictated by the New York harvest. Processors should be sensitive to trends in catch statistics (section 2.4).

- Processors should try to adapt to processing different species of fish and shellfish as the harvest changes.

The value of processed fishery products is declining in New York.

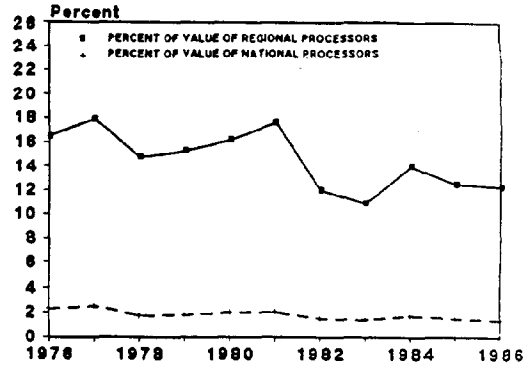
Exhibit ES-9 illustrates that the annual value of seafood products processed in New York declined by almost half between 1976 and 1986, decreasing from approximately $150 million in 1976 to approximately $85 million in 1986.

Exhibit ES-9
VALUE OF PROCESSED FISHERY PRODUCTS IN NEW YORK 1976-1986



Additionally, the value of fishery products processed in New York declined as a percent of both the total value of fishery products processed in the Middle Atlantic region and in the U.S. as a whole. Exhibit ES-10 illustrates this phenomenon. As a percent of the value of regional processed product, New York State declined by 25 percent. As a percent of the total value of processed product, New York State declined by 39 percent.

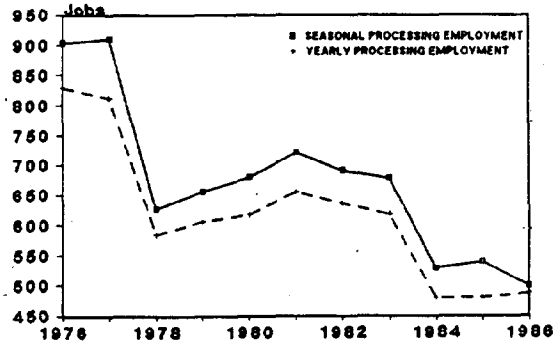
Exhibit ES-10
PERCENT OF VALUE OF REGIONAL AND NATIONAL EMPLOYMENT, 1976-1986



Processing employment is declining.

While the number of processing establishments in New York increased by 12 percent between 1976 and 1986, average annual employment declined by 80 percent. Exhibit ES-11 illustrates the seasonal and yearly processing employment in New York between 1976 and 1978. New York accounted for

Exhibit ES-11
AVERAGE ANNUAL SEASONAL AND YEARLY PROCESSING EMPLOYMENT BEWTWEEN 1976 AND 1986



an average of only 6.3 percent of regional employment in seafood processing and 1.0 percent of national employment during the period. Furthermore, New York employment in seafood processing declined substantially as a percent of both total regional and U.S. employment in the seafood processing industry between 1976 and 1986.

Between 1976 and 1986, approximately 350 full-time jobs were lost in the processing sector.

Few New York processors rely on New York harvest.

Only a very limited number of processors rely on New York landings for a substantial proportion of their seafood needs. Even most of these processors now truck in a substantial amount of seafood from out-of-state. There are only 10 sizable processing establishments (7 finfish and 3 shellfish) on Long Island that rely on New York landings for any significant portion of the seafood they process. The 4 largest finfish processors, which were interviewed for this study, are located in Greenport, Montauk, Hampton Bays (Shinnecock), and Islip. This processing is generally limited to filleting. Even among these, all except the processor in Montauk rely on out-of-state sources for a substantial proportion of the fish they process. The three shellfish processing establishments are located in Northport, Greenport and Point Lookout. All are primarily processors of clams and rely almost entirely on New York landings.

Conclusions in the processing sector.

From the State's perspective, processors should be sensitive primarily to the products they can market in the New York area, and dovetail those with supplies of these species from the harvesting sector. In this way, processors can match the species that the New York market requires with the species that are viable for commercial harvest. Thus, by keeping much of the value-added activity in the State, New York could fully benefit from its commercial fishery resources. To combat the problems of general operating constraints, declining value of processed fishery products, declining processing employment, and little reliance on New York products the State might consider ways to revitalize this important sector of the commercial fishing economy.

TRENDS IN THE WHOLESALING SECTOR IN NEW YORK

Over the course of the analysis, some trends became evident in the wholesaling sector. Generally it was found that the wholesaling sector was the strongest section of the commercial fishing industry in New York with Fulton Market as the anchor. However, this position of strength is being challenged in many areas, which if not corrected could threaten New York's position in this sector. Some of the trends found in the wholesaling sector as a result of the analysis include:

- the regional competitive position of Fulton Market has declined in the last 16 years;
- State-wide wholesaling employment declined between 1976 and 1986;
- total Fulton Market receipts and average annual Fulton market receipts from the New York harvest declined between 1976 and 1987;
- the percent of the total New York harvest going to Fulton Market declined substantially between 1976 and 1986;
- Fishport has not been successful and is slated for permanent closure; and
- imports far outweigh exports passing through the New York customs district.

The regional competitive position of Fulton Market has declined in the last 16 years.

The position of wholesaling activities in New York, primarily Fulton Market, is declining in relation to both regional and national wholesalers and wholesaling employment. Between 1976 and 1986, the number of wholesaling facilities declined 3.3 percent relative to regional wholesaling facilities, and 24.9 percent relative to national wholesaling facilities. Far more importantly, between 1976 and 1986 New York wholesaling annual employment declined 20.7 percent relative to regional wholesaling employment and 24.2 percent relative to national wholesaling employment.

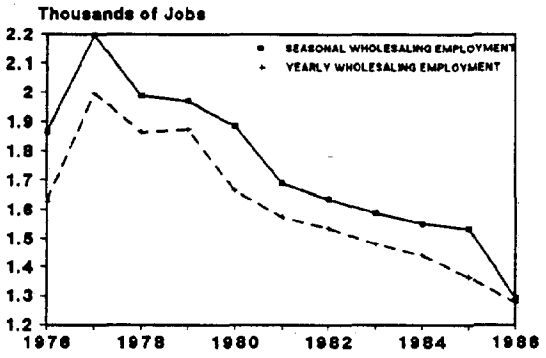
The decline in Fulton Market's relative position as a seafood wholesaler can be attributed to many things, including: the development of other wholesaling markets in Rhode Island, Massachusetts, and New Jersey; poor sanitary conditions; inadequate cold storage and cooling facilities; inconvenient operating hours; and lack of loading docks and adequate parking space. These problems will be compounded by some of the new health and safety regulations currently being formulated by the federal government for the processing sector. Regulations such as these in the wholesaling sector will almost certainly force Fulton and other markets to upgrade their facilities.

State-wide wholesaling employment declined between 1976 and 1986.

The overall decline in Fulton Market receipts has contributed to the decline in wholesaling in New York State. Exhibit ES-12 illustrates that between 1976 and 1986, seasonal and yearly wholesaling employment declined 31 percent and 22 percent respectively. The number of seasonal wholesale employees declined from 1,866 to 1,293 between 1976 and 1986, and the number of yearly wholesale employees declined from 1,627 to 1,275 during the same period.[5]

Exhibit ES-12

STATE-WIDE WHOLESALING EMPLOYMENT, 1976-1986



Total Fulton Market receipts and average annual receipts at Fulton Market from the New York harvest are declining.

Total Fulton Market receipts declined 22 percent between 1976 and 1987. Between 1976 and 1978, the average total receipts were 120 million pounds; between 1985 and 1987, the average total receipts had dropped to 93.6 million pounds. This decline is significant because Fulton plays such an integral part of the make-up of the overall commercial fishing industry in New York.

Annual receipts (volume) of fresh seafood at Fulton Market landed in New York State declined by 32 percent between the annual average for the period 1976-1978 and the annual average for 1985-1987. Annual receipts of fresh seafood landed in New York averaged 15.0 million pounds during 1976-1978, but only about 10.3 million pounds during 1985-1987.

The portion of total New York harvest going to Fulton Market has declined substantially.

Historically, Fulton has been the single most important source of sales of New York-landed seafood. This remains true despite a substantial decline in the percent of total New York landings sold through the market. Between 1976 and 1978, an average of 41.8 percent of the total volume of New York landings were sent to Fulton. Between 1985 and 1987, an average of only 28.4 percent of New York landings were sent to the market.

New York remains an integral part of the wholesaling chain in the Mid-Atlantic. At Fulton Market, however, the role of New York-landed seafood in terms of total receipts at Fulton, and in terms of the portion of New York harvest going to Fulton, is diminishing. Following a long trend, Fulton Market is increasingly relying on seafood trucked in from other states and imports.

Fishport has not been successful and is slated for permanent closure.

In its first year, the Fishport facility handled roughly 500,000 pounds of seafood, the majority of which failed to sell at auction. By comparison, Fulton Fish Market handled 89 million pounds of seafood in 1987. Thus, Fishport has encountered many problems and has not produced any of the desired results.

In retrospect, immediately upon encountering poor operating results Fishport should have implemented an aggressive plan to "reorient" the operation. The initial plan counted on three major developments to ensure the operation's success. The first was the development of underutilized non-traditional resources available in the immediate New York area. The idea was to use Fishport as the focal point for developing domestic and export distribution of these fish. This did not happen for various reasons, but the main reason is that these species are low-value, low-profit-margin fish and New York is a high-cost producer of seafood. These markets were also slow to develop. Reliance on them was highly speculative.

The second expected development was that Fishport planned to have vessels offload catch directly from their boats at Fishport. This was a poor assumption because Fishport is some distance away from productive fishing grounds, which made it difficult to get there easily, especially from eastern Long

Island, and Fishport did not support any local fleet. As an example, Fulton Market has not offloaded directly from vessels since the 1950's.

The third expected development was the moving of wholesalers from Fulton Market to Fishport, but this turned out to be inviable. The problem was that without any supply, buyers would not relocate to Fishport, and fishermen would not supply the market without any buyers. This "catch-22" situation stalled the operation's effectiveness long enough to help put Fishport out of business.

In light of these and other failures, Fishport was slated to be closed only a couple of months after it opened. In a memo to all Commissioners of the Port Authority on the subject of a Fishport Review, the Port Director summarized the recommendations for the future of Fishport.[6] In sum, the memo stated, "Since we have concluded that we will not be able to achieve our original objective of revitalizing the fishing industry, we recommend immediate withdrawal from all fish-related activities at the site."

Among the cited reasons were: delays in construction; the success of Cape May's and Point Judith's capture of underutilized species markets, failure of Fulton Fish Market to move its operations to the Fishport site; and other changes in the fishing industry. Several alternative approaches to the use of the Fishport facility have been set forth including: a boat basin; an intermediate processing (recycling) center; a cold storage facility; and a park-sail (commuter ferry) operation. Thus, while the future of the Fishport facility remains in question, it is unlikely that fishing industry-related activities will again take place there.

Alternative uses within the commercial fishing industry were not examined closely enough. Before it was closed, some possible programs could have been considered, including:

- integration of Fishport with the Port Authority air freight facilities;
- development of a model seafood inspection program;
- integration of the facility with the market for frozen imports of seafood products to other Port Authority terminals;
- development of an available supply of labor through local training programs; and
- modifications to the auctioning system.

All of these or combinations of these scenarios might have been able to save Fishport from failure. If utilized correctly, Fishport could conceivably have been the centerpiece of a new strategy supporting the commercial fishing industry in New York. As a result of the failure of Fishport, the commercial fishing industry in New York has received none of the intended benefits.

Imports far outweigh exports passing through the New York customs district.

The import/export data contained in this report were derived for the amount of seafood arriving and leaving the greater New York Customs District (District 10) for 1987. It is apparent that imports, by far, make up the largest portion of import/export activity in District 10, totaling $818 million in 1987. Total U.S. imports of edible fishery products in 1987 were $5.7 billion. Therefore, approximately 14 percent of all fishery imports to the U.S. come through District 10.

Exports out of District 10 were substantially lower than import activity in 1987. A total of $62.4 million worth of exports left District 10 in 1987. Total U.S. exports of edible fishery products in 1987 amounted to $1.6 billion. Therefore, approximately 4 percent of all fishery exports exit through District 10. From the chapter, it was possible to conclude that the largest exports are of products not widely consumed in the U.S. market such as eels and butterfish. The rest of the export list is widely distributed between high- and low-value products.

This ratio of higher imports to lower exports is consistent with various reports indicating strong demand for seafood products in the New York market and the rest of the U.S. market. In District 10 alone there is a trade deficit of approximately $756 million.

Conclusions in the Wholesaling Sector.

Thus, the wholesaling sector of the commercial fishing industry is crucial to New York State fisheries because it provides a portion of value-added impacts New York product as well as the conduit to more value-added impacts in the processing and retail sectors. By keeping as much of New York's harvest in New York as possible, the State's economy will benefit most from its resources.

To retain the viability of the wholesaling sector in New York, any programs will have to address the aforementioned problems. The main objective in the wholesaling sector will be maximizing the value-added impacts of New York-landed seafood through:

- promoting the upgrading of wholesaling facilities;
- analysis of the distribution patterns of the New York seafood industry;
- developing ethnic markets in New York City;
- improving the competitive position of Fulton Market with other regional markets; and
- development of a wholesale pricing sheet.

If this is accomplished, the full benefit of New York's harvest could be realized.

STRENGTHS AND WEAKNESSES OF NEW YORK'S COMMERCIAL FISHING INDUSTRY

In order to outline a commercial fisheries industry strategy in the next section, it will be important to summarize the strengths and weaknesses of commercial fishing in New York as concluded in the report. From these strengths and weaknesses, a plan of action was formulated for New York's commercial fishing industry.

Some of the strengths of the commercial fishing industry in New York include:

- an increase in landings of high-value finfish;
- harvest of mostly fresh product;
- a reputation for quality product;
- receipt of higher price per pound than other states;
- proximity to productive fishing grounds;
- capacity of the infrastructure at Greenport to sustain many more vessels;
- Fulton Market's position as the largest distribution point in the Mid-Atlantic region;
- excellent access to export facilities;
- access to a number of specialty markets due to concentration of ethnic groups in the local market; and
- access to the large New York market for seafood.

Some weaknesses of New York's commercial fishing industry include:

- little further potential for growth in high-value finfish;
- no natural growth capacity in the hard clam fishery under existing conditions;
- little or no further expected growth in other inshore fisheries;
- high operating costs;
- lack of adequate docking space for commercial fishermen at many ports on Long Island, including: Point Lookout, Freeport, Mount Sinai, Port Jefferson/Setauket, Northport, and Huntington;
- lack of adequate ice capacity and freezing facilities;
- lack of gear storage space in Freeport, Montauk, Port Jefferson, Northport, and Huntington;
- few processors relying on New York product;
- high operating costs for processors in New York;
- lack of people to work in processing plants, and on fishing vessels;
- declining regional competitiveness of Fulton Market because of market conditions, buying practices, and inconvenient location; and

- Fishport's lack of success and planned closure.

Working from these strengths and weaknesses, it is possible to formulate goals for the stabilization and revitalization of the commercial fishing industry in New York.

GOALS AND RECOMMENDATIONS FOR A COMMERCIAL FISHERIES INDUSTRY STRATEGY FOR THE STATE OF NEW YORK

This report identified 17 studies and/or programs applicable to a plan of action for the stabilization and revitalization of New York State commercial fishing industry. The 17 programs were distributed under six general categories, including: 1) traditional shellfishing activities; 2) "non-growth" finfish fisheries; 3) infrastructure; 4) harvesting efficiency; 5) processing in New York; and 6) wholesaling in New York.

Exhibit ES-13 summarizes the goals and recommendations for a commercial fisheries industry strategy for the State of New York. These project summaries distill salient points from the more detailed project descriptions in Chapter 8 of the report. From the summary table it is apparent that the projects are distributed fairly evenly between the six major categories noted above.

One notable exception to this is the importance of the plans of action in the wholesaling and distribution sector. The results of this study indicate that the most crucial aspect of a commercial fisheries industry strategy for New York will be in the wholesaling and distribution sector. The main benefit of effectively developing this sector of the commercial fishing industry will be to maximize the value-added impacts provided by New York's fishery resources.

All indications point to landings remaining the same or declining slightly in both the long and short terms. Therefore, the effective use of the resource by keeping as high a percentage as possible in the State will be crucial to maintaining the viability of the commercial fishing industry in New York.

Summary of Proposed Actions

In order to formulate an appropriate development plan for commercial fishing in New York, it will be important to summarize the relevant components of the proposed actions. Exhibit ES-14 summarizes the parameters, costs, level of effort, benefits (some of the non-quantifiable benefits that increase the monetary impacts of a particular program), and priority associated with each of the proposed actions. High-priority issues should be initiated in year 1 of a program. Priority issues should be initiated in year 2 to 3 of the program. Long-term priorities should be initiated in year 3 or 4.

The proposed actions have been organized so the highest-priority issues are first and lower-priority issues come later. From this summary table it is apparent that certain proposed actions should be initiated in the first year. These include:

- promote upgrading of wholesaling facilities;
- a distribution study of the wholesaling and processing sectors;
- ethnic market research;
- a Fulton Market feasibility study; and
- preserving processing capacity.

A description of these programs follows.

Promote Upgrading of Wholesaling Facilities in New York

Proposed Action: Not only is the distribution of the product important, but also the quality of the product at the wholesale level. Seafood is no longer a low-cost source of protein. It is becoming increasingly more expensive, and therefore, the requirements for quality have become more stringent. Thus, the promotion of upgrading wholesaling operations through information programs outlining the benefits of upgrading is needed. An in-house person should be assigned to familiarize himself/herself with issues such as the forthcoming regulations that are part of the Hazard Analysis Critical Control Point System (HACCP).[7] This person would then be able to educate wholesalers and coordinate the State's ability to comply with these forthcoming regulations. The promotion should address factors such as the following.

- **Basic sanitation:** This includes the building in which the operation is housed, any surfaces that come into contact with the fish, cleanliness of the display and storage areas, and personal hygiene of

EXHIBIT ES-13
SUMMARY OF GOALS AND RECOMMENDATIONS FOR A COMMERCIAL FISHERIES
INDUSTRY STRATEGY FOR THE STATE OF NEW YORK

Goal	Recommendation	Proposed Action
I. PRESERVE AND ENHANCE TRADITIONAL SHELLFISHNG ACTIVITIES	IMPROVE UTILIZATION OF EXISTING RESOURCES BY PROMOTING CLEANING OF UNACCEPTABLE PRODUCT	-Conduct a study to determine the financial feasibility of a clam depuration facility. The study would assess: -whether depurated clams depress the market for hard clams; -economic viability; -liability; -constraints due to plant requirements; and -availability of specific sites
	RESOLVE BOTTOM OWNERSHIP ISSUES	-Review state and local laws governing underwater land allocation to encourage mariculture activities.
	IMPROVE MANAGEMENT OF SHELLFISH BEDS	-Design program to evaluate and implement different aspects of shellfish management that analyzes -stock assessments; -alternative openings and closing of harvest grounds; -restriction on the number of shellfish permits; and -stricter enforcement of poaching laws.
II. PRESERVE NEW YORK'S POSITION IN HIGH-VALUE "NON-GROWTH" FINFISH	STANDARDIZATION OF EXPORT PROCEDURE FOR BLUEFIN BY IMPROVING DISTRIBUTION PATTERNS BRING TO MARKET QUICKER WITH BETTER QUALITY	-Standardize procedure for exporting tuna to Japan. -Develop brochure for sport and commercial fishermen detailing the steps in exporting tuna to Japan, and the rigid quality standards set in the Japanese market.
	USE OF ARTIFICIAL REEFS TO ENHANCE OPPORTUNITIES FOR COMMERCIAL AND RECREATIONAL FISHERMEN	-Further support NYSDEC's artificial reef program and continue research on: -permitting procedures; -reef maintenance; -liability concerns in artificial reef materials; and -funding sources for artificial reef materials. Include implementation in analysis--purchase and deployment of the artificial reef.
III. PRESERVE AND DEVELOP FISHERY RELATED INFRASTRUCTURE	MAKE BETTER USE OF EXISTING INFRASTRUCTURE	-State should mediate local waterfront usage conflicts through LWRP process.
	DEVELOP NEW INFRASTRUCTURE	-Conduct a feasibility study to locate specialized shore-side freezing facilities that includes analysis of: -locations available for facility; -freezer plant construction costs; -operating costs; and -fee schedules, projected revenues, and utilization rates.

EXHIBIT ES-13
SUMMARY OF GOALS AND RECOMMENDATIONS FOR A COMMERCIAL FISHERIES INDUSTRY STRATEGY FOR THE STATE OF NEW YORK

Goal	Recommendation	Proposed Action
IV. REDUCE HARVESTING PRODUCTION COSTS	INCREASE PARTICIPATION IN MULTI-DAY FISHING TRIPS	-Financial demonstration project to compare productivity and returns of day trip operation versus multi-day trip operations.
	ESTABLISH TRAINING PROGRAMS FOR COMMERCIAL HARVESTING CREWS	-Training programs for commercial fishing crews through vocational programs that include instruction in: -vessels safety; -commercial fishing gear and rigging; -species of fish in New York; -operating a vessel; and -value-added handling operations.
	FOCUS ON OFFSHORE FISHERIES BY MOVING TO LARGER VESSELS	-Facilitate gradual transition of larger offshore vessels through extension activities and making use of Federal Vessel Loan programs.
VI. REVERSE TREND OF DECLINING PROCESSING CAPACITY IN NEW YORK	PRESERVE EXISTING PROCESSING CAPACITY ON LONG ISLAND	-Work with key existing processing plants such as Cooper's Seafood in Greenport to assure they continue to operate. Individual plants have various operating problems and concerns--state may be able to mediate local problems with individual communities.
	DEVELOP PROCESSING CAPACITY ON LONG ISLAND	-Conduct detailed financial feasibility study of economic viability of seafood plant in Suffolk County. Evaluation needs to address: -economic viability; -constraints due to plant requirements (i.e. water and solid waste treatment capacity); -availability of specific sites; -sites located in pockets of unemployment; and -potential for sharing time with agricultural processor.
VI. MAXIMIZE THE VALUE ADDED BENEFITS OF NEW YORK LANDED SEAFOOD	ASSESS DISTRIBUTION PATTERNS OF NEW YORK SEAFOOD INDUSTRY	-Conduct study to analyze detailed distribution patterns including analyzation of: -source of product; -modes of transport; -distribution points; and -end users. -Assess these criterion in regard to Fulton Market, local wholesalers, and processors.
	DEVELOP ETHNIC MARKETS IN NEW YORK CITY	-Conduct a study to assess specialty and ethnic niches for New York produced products. Factors to consider include: -identification of ethnic groups; -consumption patterns; -New York substitutes; and -reaching consumers.
	PROMOTE UPGRADING OF WHOLESALING FACILITIES	-Coordination of wholesaling activities to comply with new seafood inspection laws. These factors will have to be addressed: -basic sanitation; and -critical control points.

EXHIBIT ES-13
SUMMARY OF GOALS AND RECOMMENDATIONS FOR A COMMERCIAL FISHERIES
INDUSTRY STRATEGY FOR THE STATE OF NEW YORK

Goal	Recommendation	Proposed Action
	IMPROVE THE COMPETITIVE POSITION OF FULTON MARKET WITH OTHER REGIONAL MARKETS	-Conduct detailed financial feasibility study of economic viability of upgrading, expanding, and/or relocating the Fulton Market facilities. The study needs to assess: -sanitation facilitates; -cold storage capabilities; -refrigerated displays; and -loading docks. -The competitive position of Fulton must be reversed or facility will continue to lose market share to other regional markets. Other factors that must be assessed are: -improvement of sales mechanisms at Fulton Market; and -expansion of role of Fulton Market in the distribution of produced imported and exported through New York.
	WHOLESALE PRICING SHEET	-Produce a wholesale pricing sheet that documents wholesale prices twice-weekly.

EXHIBIT ES-14
EVALUATION OF PROPOSED ACTIONS

Proposed Action	Program or Study Parameters	Method or Cost	Level of Effort	Benefits	Priority
PROMOTE UPGRADING OF WHOLESALING FACILITIES (SEAFOOD INSPECTION)	-Unloading/receiving -Storing/display -Weighing/packing -Shipping -Pending regulations	Support Extension Program	3 person-months	Higher quality products Early compliance with regulations	High Priority
DISTRIBUTION STUDY	-Source of product -Modes of transport -Distribution points -End users	$70,000	9 person-months	Determine ways to maximize value-added benefits	High Priority
ETHNIC MARKET RESEARCH	-Identification of ethnic groups -Consumption patterns -New York substitute -Reaching consumers	$35,000	5 person-months	Better penetration and utilization of New York product	High Priority
FULTON MARKET FEASIBILITY STUDY	-Viability of upgrading, expansion, and/or relocation -Improved sales mechanisms -Time and temperature abuse -Handling and packing -Optimal size of market	$25,000-$75,000	5 person-months	Higher quality product Better utilization of out-of-state product	High Priority

EXHIBIT ES-14
EVALUATION OF PROPOSED ACTIONS

Proposed Action	Program or Study Parameters	Method or Cost	Level of Effort	Benefits	Priority
PRESERVING PROCESSING CAPACITY IN NEW YORK	-State mediation of local conflicts	$10,000	2 person-months	Retaining value-added benefits in state Help diversify economic base of communities	High Priority
REVIEW STATE AND LOCAL LAWS TO ENCOURAGE MARICULTURE	-Resolve bottom ownership issues -Land rights	Legislative $15,000	3 person-months	Encourage private firms to take responsibility for shellfish beds	Priority
FINANCIAL FEASIBILITY OF PROCESSING PLANT	-Constraints due to plant requirements -Availability of sites -Sites located in pockets of unemployment -Potential for sharing time with agricultural processor -Tax and land buy incentives	$25,000	5 person-months	Keeps product in NY for another sector of the product cycle Help relieve unemployment in economically depressed area	Priority
CLAM DEPURATION FEASIBILITY STUDY	-Determine if depurated clams depress market for natural clams -Economic viability -Liability -Constraints due to plant requirements -Availability of specific sites	$40,000	6 person-months	Utilize restricted clams and insure quality of product	Priority

EXHIBIT ES-14
EVALUATION OF PROPOSED ACTIONS

Proposed Action	Program or Study Parameters	Method or Cost	Level of Effort	Benefits	Priority
DEVELOPMENT OF FREEZER CAPACITY	-Proximity to landings -Capital costs -Operating costs -Fee schedules -Utilization rates -Projected revenues	$20,000	3 person-months	Harvest wider variety of species Increase harvest of species like squid More control over price	Priority
STATE INVOLVEMENT IN LOCAL WATERFRONT COMPETITION	Support LWRP process	Through existing LWRP	No additional manpower	Relieving of tensions Ensuring continuance of commercial fishing	Priority
TRAINING PROGRAMS FOR COMMERCIAL HARVESTING CREWS	-Set up program through local community college -Coordination with Job Service	$5,000	2 person-months	More efficient harvesting operations	Priority
CLAM BED MANAGEMENT	-Stock assessments -Evaluation of openings and closures of harvest grounds -Restriction of shellfish permits	Legislative $35,000 Full program: $250,000-$500,000	5 person-months	Enhanced recovery of hard clam stocks	Long term
UTILIZATION OF ARTIFICIAL REEFS TO ENHANCE OPPORTUNITITIES FOR COMMERCIAL AND RECREATIONAL FISHERMEN	-Permitting procedures -Reef maintenance -Liability concerns in artificial reef materials -Funding sources for artificial reef materials	$20,000 $150,000 to install	4 person-months	Enhance opportunities for commercial and recreational fishermen	Long term

EXHIBIT ES-14
EVALUATION OF PROPOSED ACTIONS

Proposed Action	Program or Study Parameters	Method or Cost	Level of Effort	Benefits	Priority
FINANCIAL DEMONSTRATION PROJECTS OF MULTI-DAY VS. SINGLE DAY TRIPS	-Log of expenses, fishing time, and volume of catch -Financial demonstration model outlining most efficient operation	$15,000	3 person-months	Improvement in operating efficiency will improve profitability	Long term
MOVEMENT TO LARGER VESSELS	-Facilitate gradual transition to larger vessels through extension activities making use of Federal Vessel Loan programs	$5,000	1 person-month	Harvest on a regular more efficient basis	Long term
BROCHURE DETAILING STEPS OF EXPORTING TUNA TO JAPAN	-Landing, icing, bleeding, unloading, packing, timing, markets, and selling on consignment	$15,000	3 person-months	Better quality tuna and more tuna being utilized	Long term
WHOLESALE PRICING SHEET	-Twice-weekly update of wholesale prices mailed to subscribers	$20,000	4 person-months	Keep fishermen and wholesalers informed about prices	Long term

those coming in direct contact with the fish.

- **Critical control points:** In the wholesaling sector, the critical control points that will most likely be affected include unloading and receiving, storing and display, weighing and packing, and shipping. The type of effect these regulations will have on wholesalers varies by the condition of the facilities. At this point, these proposed regulations will affect some wholesalers more than others.

The advantage of this promotion for New York would be initiating this process now to expedite the process once it becomes law.

Distribution Study

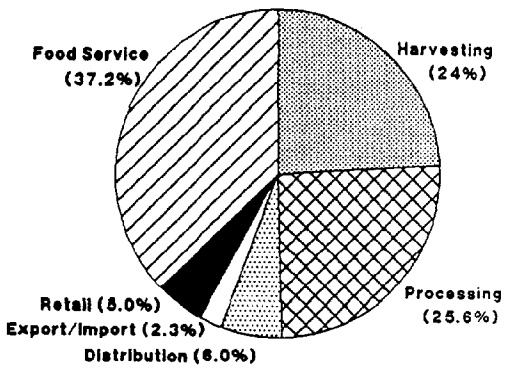
Proposed Action: Conduct a study to analyze distribution patterns of New York-landed seafood, imports, exports, and out-of-state product through local markets, Fulton Market and processing plants. Included in this analysis should be a determination of the source and flow of product, modes of transportation, distribution points, and end users. Prior to undertaking the specific analysis, research of general seafood product flows would be helpful.

Such a study will track the movement of seafood products through various sectors of its product cycle and will be extremely important in determining the current value-added impacts of New York landed-seafood. This study will also identify ways to maximize the value-added impacts of New York-landed seafood.

Once these patterns have been established, it will be possible to proceed with developing local marketing channels for New York State-landed seafood by informing fishermen about niche markets and utilizing New York products in processing plants. This study could serve as a basis for further marketing initiatives and programs, such as updating the *New York State Fish and Seafood Suppliers Directory.*

Exhibit ES-15 illustrates the distribution of total impacts by sector for U.S. product only. This exhibit shows that the longer the seafood product stays in New York the more the State benefits economically. For instance, the harvesting sector receives 24 percent, processing receives 26 percent and wholesalers receive another 6 percent of the total impacts associated with the product's final price. Restaurants and retail trade retain the rest. Thus, knowing distribution patterns will make it easier to redirect catch to local New York markets to maximize value-added impacts.

Exhibit ES-15
DISTRIBUTION OF TOTAL IMPACTS BY SECTOR, U.S. PRODUCT ONLY



Research on Development of Market Niches for Seafood in Regional Ethnic Communities

Proposed Action: In conjunction with the distribution study should be an analysis detailing consumption patterns of the extremely large ethnic markets in New York City. The study would need to consider the following.

- **Identification of ethnic groups:** Specific data on demographics of ethnic groups such as population, location, and income levels should be determined. From this basis, the magnitude of the markets, and any trends in the markets, could be determined from secondary sources.

- **Consumption patterns:** Different ethnic groups have different seafood consumption patterns and preferences. Factors to consider include: types of seafood consumed, frequency of consumption, reasons contributing to the desirability of certain species and/or ways of preparing seafood, and purchasing sources.

- **New York substitutes:** This study should attempt to determine the local products that have already been substituted for

traditional seafood as well as those New York products that could be substituted for traditionally ethnic species. This task could include interviews, focus groups, and taste preference tests in the various communities.

- **Reaching consumers:** Once these markets and patterns have been established, it will be important to document the best way to reach these consumers.

This study will essentially be an export market analysis, but the advantage is that the product will stay in New York and retain all of the value-added impacts locally.

Feasibility Study of Fulton Market

Proposed Action: To improve the regional competitive position of Fulton Market a detailed financial feasibility study of the economic viability of upgrading, expanding, and/or relocating the Fulton Market facilities should be undertaken. Upgrading the facility would take into account a program to improve the sales mechanisms, display improvements, health rules relating to time and temperature abuse, and handling and packing procedures.

Because of its geographic and economic position close to the New York market Fulton is well positioned as a critical component of wholesaling on the East Coast. Realistically though, Fulton has been losing market share at a rate of about 10 percent a year. Therefore, the primary need is to stabilize and recapture lost market share, not necessarily expanding its operations. The need will be to look for ways to recapture its market or New York will lose the existing facility. Possible ways to recapture market share might be further expansion of Fulton Market in the distribution of import/export product. Also, the feasibility and profitability of relocating Fulton Market should be assessed. Markets similarly situated on the waterfront in large eastern cities have relocated to less crowded more easily accessible locations. At one time Fishport was supposed to be the alternative, but failed for various reasons. Learning from this experience, an astute policy towards upgrading those facilities or relocation could be executed.

Preserving Processing Capacity in New York

Proposed Action: One of the main goals in revitalizing commercial fishing in New York will be the preservation of processing capacity on Long Island. Processing capacity has been declining in recent years (see Chapter 7) and in order to realize all of the value-added impacts associated with processing, it must be preserved.

One of the ways to reverse this declining trend is to have the State mediate local conflicts as appropriate through the Local Waterfront Revitalization Program (LWRP), and permitting required by the State. The State might also help with tax breaks and/or tax incentives for existing processing plants. By allowing the State to help mediate some of the local conflicts the overall economic perspective will be retained as well as taking local problems into account. It will be critical to retain this sector of the seafood industry and the State should have an overall plan to deal with the pressures these businesses are under in their local communities.

Proposed actions to be considered to be initiated in the second or third year would include:

- reviewing laws to encourage mariculture;
- a study to determine the financial feasibility of a processing plant;
- a clam depuration feasibility study;
- development of freezer capacity;
- further support for State involvement in local waterfront competition (Local Waterfront Revitalization Program already in effect); and
- training programs for commercial crews.

Review State and Local Laws to Encourage Mariculture and Clam Relays

Proposed Action: Currently, most private firms will not pursue mariculture activities in New York because they would not have exclusive rights to harvesting the product. To resolve bottom ownership issues, state and local laws governing underwater land allocation should be revised to encourage mariculture activities of hard clams. Of course, there are criticisms to such an approach to

Important factors to assess would include: liability; construction costs; operating costs; financing; optimal volume; health and/or regulatory issues that could make this type of operation prohibitively expensive in New York; arrangements with harvesters; and policies for selling the product.

Additional considerations that must be addressed to persuade fishermen to support such a project include: volume of product suitable for purification; access to depuration plant; abuse of depuration plant as a holding tank awaiting favorable prices; ownership alternatives; and "taking pressure off" of sewerage companies for cleaning up waters.

Development of Freezer Capacity

Proposed Action: An infrastructure development that would benefit New York commercial fishing would be development of freezer capacity in a central coastal location. Increased freezer capacity could be utilized by fishermen who do not currently have access to any freezing capacity. There is approximately 32,000 square feet of freezer space in New York used for fisheries products. Most of this space is not available to commercial fishermen, however, because these facilities are tied to wholesaling and/or processing facilities. Also, this type of facility would tie in well with a specialized processing plant that utilized New York's squid resource.

A blast freezer would be the most logical choice for expanded freezing capacity because they are designed for fast freezing of unfrozen products. With species like squid, quick freezing of the product is critical to quality control and quick handling of large volume products. Also, in order to be effective these freezers should be located dockside or near landings.

The study would have to analyze parameters such as available locations, freezer plant construction costs (site preparation, all plant construction, loading docks, and refrigeration equipment), operating costs (primarily electrical costs), fee schedules and projected revenues to ensure the success of any attempt to increase freezer capacity.

State Involvement in Local Waterfront Competition Issues

Proposed Action: Support should be given for the State's role in the LWRP. In ports such as Huntington, Northport, Port Jefferson/Setauket, Mattituck, and Freeport, waterfront competition is fierce and the State can do much through its LWRP process to ensure the continuance of commercial fishing on Long Island. For example, in the case of Freeport, the State has taken a leadership role in preserving the character of the waterfront through the LWRP process, thereby, helping to preserve the commercial fishing industry. A study was conducted to assess the viability of finding a new site for the commercial fishermen in the main waterfront area. More ambitious approaches would include "right to fish" zoning and property tax breaks for aquatic industries. Other projects that should be considered include:

- providing dock space in Point Lookout by utilizing unused city dock space;
- more accommodation of transient boats in Montauk and Point Lookout;
- utilization of fishing industry infrastructure surplus in Greenport;
- providing water and power hookups in Mattituck; and
- resolving local waterfront competition and provide basic infrastructure[8] to fishermen in Mount Sinai, Port Jefferson/Setauket, Northport, and Huntington through LWRP process.

Infrastructure problems the State can take the lead in include:

- consideration of providing improved access to Islip Harbor and West Sayville; and
- dredge Shinnecock Inlet (targeted for 1990).

Training Programs to Develop Trained Crews for Commercial Fishing

Proposed Action: A continuing problem for commercial fishermen is finding reliable crew for their boats. In some cases boats sit idle for lack of crew. In others, captains take the boats out themselves--sometimes with tragic consequences. One way to increase the number of crew is to train them through programs at community colleges or vocational schools. New York Sea Grant and Suffolk County Cooperative Extension agents have such a program. Another example is Kingsborough

Community College in Brooklyn. However, this program is oriented towards charter and party boats. Redoubling the efforts of these programs towards commercial fishing would be beneficial to the commercial fishing industry in New York. Also, more accessibility to people on eastern portions of Long Island should be considered. These programs could cover such topics as vessel safety, commercial fishing gear and rigging, species of fish in New York, operating a vessel, and value-added handling operations at the harvesting level.

Another program to supply more trained crew would be a program to match a captain's crew needs with an applicant's skills and knowledge at the State Job Service. Some accommodation of fishing crew needs by the Job Service would be very helpful in matching any experienced crew with captains in need. Some of the recent immigrants in New York come from countries where fishing is a main industry, and they have crewed on vessels previously. The Job Service might consider a small promotional campaign with posters highlighting the opportunities in commercial fishing. This two-pronged approach, training programs and support form the Job Service, could help alleviate some of the crew shortages experienced by the fishermen on Long Island.

Lastly, programs to be considered for year 3 and beyond include:

- clam bed management programs;
- development of artificial reefs;
- a financial demonstration project of multi-day vs. single day trips;
- movement to larger vessels;
- a brochure detailing steps of exporting tuna to Japan; and
- a wholesale pricing sheet.

Evaluation and Implementation of Alternative Management Mechanisms for Clam Beds

Proposed Action: Programs should be designed to evaluate and implement different aspects of shellfish management. This evaluation would take the form of considering other successful programs and case studies from other states as well. It should also assess the potential economic and biological impacts of alternative management techniques. Programs to be considered for full implementation include:[9]

- **Stock assessments:** An effective hard clam management program will need to have reliable information regarding the population dynamics of the resource. Therefore, all towns should be encouraged to expand, continue, or initiate hard clam assessment surveys.

- **Alternative openings and closing of harvest grounds:** Some of the options open for closing an area for management purposes include: 1) closing areas that have high concentrations of seed clams until the clams reach legal size; 2) closing areas on a rotational basis where an area is closed after a minimum population level has been reached and opened after stocks rebuild due to natural recruitment which could be supplemented by seed clam planting; and 3) establish "winter grounds" that are closed during the summer to reduce harvest pressure incurred during adverse winter weather conditions.

- **Restriction on the number of shellfish permits:** A program such as this would contribute to the maintenance of a higher level of landings over time, elimination of a landings profile characterized by extreme peaks and valleys, and the stabilization of catches per permit. In this program the number of licensed baymen would be determined on the basis of projected harvestable stocks in any given year, and the objectives of hard clam management for the fisheries in question.

- **Stricter enforcement of poaching laws:** Stricter enforcement of clamming in closed areas should be initiated. The continuing recurrence of human illnesses from contaminated shellfish will continue to jeopardize the existence of the New York shellfish industry. Therefore, it is imperative to eliminate this illegal activity.

It should be realized that these issues and problems are not new to New York. The main issue is water quality, a problem not soon to be remedied in New York, therefore, smaller, more realistic solutions will have to be employed if the goal is to preserve and possibly enhance the existing shellfish resource for all New York residents.

Artificial Reefs

Proposed Action: The use of artificial reefs as fish aggregators is one of the few options available to increase recreational and even commercial fishing opportunities. Designation of certain artificial reefs for recreational, commercial, or even sanctuary reefs would not necessarily reduce conflict between these groups, but would increase benefits to the respective groups by enhancing fishing opportunities in certain designated areas. With the long-standing recreational/commercial conflict in New York, any effort to increase recreational and perhaps commercial opportunities would be helpful.

Artificial reefs would not be a new phenomenon in New York. As early as 1916, the Boatmen's Association of the Great South Bay, built fishing grounds within the Great South Bay. More recently, an innovative reef construction using blocks of coal combustion waste products as reef material was deployed off Long Island in 1980 with 500 tons of these blocks. Thus, continued effort should be directed at the potential for more artificial reef development in New York.

Therefore, further encouragement of NYSDEC's artificial reef program should be supported. Essentially, this task would require continued research on the best utilization and placement of artificial reefs; permitting procedures; artificial reef maintenance, liability concerns in artificial reef materials; transportation costs of artificial reef materials; economic valuation of artificial reefs, a review of funding sources for artificial reef development, and potential sources for artificial reef materials.

Financial Demonstration Projects

Proposed Action: Research for, and preparation of, financial demonstration projects to compare productivity and returns of day fishing operations to multi-day trips should be developed. Some type of comparison analysis that used a log would have to be kept comparing the same or similar vessels doing single- and multi-day trips. Once the log has been completed, a financial demonstration model would have to be written up in such a way that a fisherman would be able to understand the effect increased efficiency from multi-day operations would have on his profitability. At these demonstrations, other issues related to offshore fishing such as social factors and the additional crew needed on multi-day trips would need to be addressed.

Moving to multi-day trips would also allow fishermen to access fishing grounds further offshore. The sample principle of reduced travel time to and from fishing grounds is augmented the farther a fishermen moves offshore.

Movement to Larger Vessels

Proposed Action: One of the major factors inhibiting the efficiency of the commercial fleet in New York is its day trip orientation. Because of the proximity of the resource, day fishing has been the standard practice. The trend recently, though, has been to larger vessels that perform well in multi-day trip situations. Using the financial demonstration projects as supporting evidence, the State should encourage the movement to larger vessels that are able to harvest the changing nature of the harvest and its distance from shore.

The strategic future of New York's commercial fishing industry is tied to the various offshore fisheries. As Chapters 2 and 6 pointed out the inshore fisheries are continuing to decline, whereas, the offshore fisheries have been growing in recent years and are in a better position to sustain this level of effort than inshore fisheries. Therefore, fishermen should be encouraged to continue to shift to larger vessels, and fishermen should not be encouraged to move into inshore fisheries.

Under this program actual movement into larger vessels would take place through the use of federal vessel loan programs and other sources of funds. By making larger vessels more feasible to local fishermen harvesting efficiency would be improved. A potential danger in a program such as this is over capitalization of the fleet. This phenomenon would have to be monitored very closely if such a program were put in place.

Standardization of Export Procedure

Proposed Action: One high-value "non-growth" finfish that has the potential to be utilized more is bluefin tuna. Two ways of accomplishing this are standardizing the procedure for exporting bluefin tuna to Japan, and developing information dissemination programs (brochure, video, poster, etc.) for sport fishermen[10] and commercial fishermen detailing the steps in exporting a tuna to Japan. Included in this would be an explanation of the rigid quality standards set in the Japanese markets. It should be noted that work has already been done

in this area, but continuing support for this program may be warranted.

One of the main reasons the bluefin harvest does not maximize its value in the Japanese markets is because of the poor quality of the product when it reaches Japan, and even when it reaches Japanese buyers in New York. For a commodity this valuable, minutes count in determining the price of the product. Therefore, a standardized procedure detailing steps at critical control points (i.e., landing, icing, bleeding, unloading onto dock, and overall timing of the operation) would be extremely helpful.

Some sort of cooperation between the Japanese and the New York State Department of State should be agreed upon to outline the best procedures. A summary of these procedures in a pamphlet distributed to fishermen would maximize the benefits of this resource. In addition, portions of this brochure may be considered for bringing species such as swordfish to local markets with better quality.

Wholesale Pricing Sheet

Proposed Action: For years the National Marine Fisheries Service (NMFS) has produced a twice-weekly "green sheet" documenting wholesale prices by species and location. Recently, it was learned, federal sponsorship of the "green sheet" is likely to be stopped and information may no longer be available to New York fishermen, processors, and wholesalers. A pricing sheet of wholesale prices will be critical to the commercial fishing development program in New York because it will track the wholesaling industry. In order to reasonably fund an undertaking such as this it would most likely have to be prepared by one of the extension programs operating on Long Island.

Essentially this would mean obtaining price quotes from the major wholesalers on Long Island twice-weekly. These quotes would then be summarized into a standard format and mailed to subscribers for a nominal fee. Some consultation with NMFS would be required to coordinate the specific content of the newsletter; contacts in the industry; and previous subscribers. Recent developments, however, indicate that NMFS has already taken steps to transfer this activity to a private organization and has issued an RFP to that effect.

A strategic plan, to be effective, will have to have a balanced mixture of studies, programs, and information dissemination plans. Clearly, the proposed actions are a balanced mixture that can produce results.

Consequently, these proposed actions are designed to effectively deal with the three main objectives New York should be focusing on with regard to its commercial fishing industry:

- Preserving its position in the harvesting sector; possibly developing one or two underutilized species.
- Preserving and developing fishery-related infrastructure.
- Maximizing value-added impacts from New York-landed seafood in the processing, wholesaling, and retail sectors of the New York State economy.

Thus, this three-pronged approach should provide the State of New York with a realistic approach to pursuing a comprehensive fishery development plan for the State of New York.

The full report, *Development of a Commercial Fisheries Industry Strategy for the State of New York*, is approximately a 500 page study that assesses a full range of factors associated with commercial fishing in New York. The report was broken down into the following sections:

- **Section 2:** Profile of Commercial Fishing Activities;
- **Section 3:** Port and Infrastructure Inventory and Assessment;
- **Section 4:** Economic Issues in the Harvesting Sector;
- **Section 5:** Overview of Wholesaling and Processing Activities;
- **Section 6:** Biological Status and Outlook for Key Commercial Species;
- **Section 7:** Summary and Identification of Strengths and Weaknesses; and
- **Section 8:** Goals and Recommendations for a Commercial Fisheries Industry Strategy for State of New York.

Copies of the full report or sections of the report can be obtained by contacting:

Ms. Nancy Kunz
New York State Department of State
Division of Coastal Resources and Waterfront Revitalization
162 Washington Avenue
Albany, NY 12331

(518) 474-2121

ENDNOTES

1. New York State Department of Environmental Conservation, "Marine Resource Management Needs," Stony Brook, New York, May, 1984; and Colvin, Gordon C., Hogan, Barbara, and Weber, Alice M., "Managing New York's Marine Fishery," reprinted from *The Conservationist*, September-October 1987.

2. Statistical Services Branch, NMFS, special computer run of New York landings provided by Dick Schween in August 1988.

3. Statistical Services Branch, NMFS, special computer run of New York recreational landings provided by Dick Schween in February 1989. It should be noted that the data for recreational fisheries is even less reliable than it is for commercial fisheries, primarily because the numbers must be estimated based on statistical samplings. The data in this table for blackback, fluke, and whitefish should be treated as estimates that reflect the magnitude of catch in these fisheries. "NA" in this table represents data that were not available. However, it is widely known that there is significant conflict between commercial and recreational fishermen for these species.

4. The 304 commercial trap and trawl vessels differ from the remainder of the approximately 2,000 vessels on the commercial fishing license list primarily in the nature and intent of the use of the vessels. The 304 commercial trap and trawl vessels are larger vessels specifically geared to commercial harvesting, which is the primary use of these vessels. The remainder of the 2,000 vessels licensed to sell fish commercially are a mixture of sport boats, clam diggers, and small gillnetters.

5. This wholesaling employment includes Fulton and all associated wholesalers at the market, numerous processors that do not handle New York products, and other small wholesalers throughout the State.

6. Summarized from a memo to all commissioners of the Port Authority on the subject of a Fishport Review from the Port Director on March 24, 1989.

7. The HACCP system is part of the Model Seafood Surveillance Program (MSSP) that has developed 18 models for different seafood products from the harvesting sector through to the retail sector that essentially ensure the quality and integrity of the seafood product.

8. Ideally, this would include dockspace, water and power hook-ups, gear storage, and working space. If basic infrastructure items could not be provided, then the next best alternative would be provide pack-out times for these vessels.

9. These program have been summarized from *Strategies and Recommendations for Revitalizing the Hard Clam Industry in Suffolk County*, prepared by the Suffolk County Planning Board, 1987.

10. Sport fishermen must have a commercial license to sell fish.

MAIN REPORT

DEVELOPMENT OF A COMMERCIAL FISHERIES INDUSTRY STRATEGY FOR THE STATE OF NEW YORK

PREPARED FOR:
THE NEW YORK STATE DEPARTMENT OF STATE DIVISION OF COASTAL RESOURCES AND WATERFRONT REVITALIZATION

PREPARED BY:
KEARNEY/CENTAUR
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