Portland, Maine

Commercial Fishing Infrastructure Report

Community Panels Project

Togue Brawn, Coordinator

Principal Investigators:
Dr. Madeleine Hall-Arber, MIT Sea Grant
David Bergeron, Massachusetts Fishermen's Partnership
Dr. Bonnie McCay, Rutgers University

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Portland, Maine:
Historical and Strategic Diversity

The city of Portland, Maine has a well-established, diverse working waterfront. Waterfront activities include a mix of general cargo, petroleum, commercial fishing, and passenger (cruise ship and ferry) activities. The diversity of port activities is matched by the historical diversity of its commercial fishermen. Maine fishermen have traditionally pursued a variety of species within and throughout the years. Doing so allowed them to take advantage of, rather than be hindered by, the natural cycle of many marine species. As federal regulations limit their options, Portland fishermen and associated industries are searching for new strategies to stay in business.

Introduction

In the past 20 years, Maine's fishing industry has undergone a dramatic change. A series of events have resulted in a constriction of the state's non-lobster fisheries so that the majority of activity now occurs out of Portland. These events began with the implementation of the Hague Line in 1984.[1] The northeast corner of Georges Bank was a traditionally important fishing ground for many Maine vessels. When this area became off-limits, large boats that had once focused their efforts there shifted their effort to the inshore fishery. Much of the inshore fishery was closed either seasonally or permanently beginning in the early 1990's. This limited options for the large boats that had recently targeted inshore stocks and the smaller vessels that had fished them all along. With the inshore grounds closed, open and productive grounds were to be found almost entirely in the southern portions of the Gulf of Maine. Due to increased distance from productive grounds, Downeast and mid-coast ports became less attractive, and the bulk of fishing activity became concentrated around Portland.

Just as opportunities to access inshore groundfish were disappearing, the Maine lobster industry began a dramatic upsurge in landings. Maine fishermen have traditionally changed their focus throughout their lifetime and through the seasons. Because lobster stocks were increasing as groundfish stocks were waning, many Maine fishermen chose to either increase their participation in the fishery or begin targeting lobster.

In the mid 1990's, the northern shrimp (*Pandalus borealis*) fishery provided another means for small and mid-sized vessels to remain economically viable. The northern shrimp fishery is highly variable (see "Northern Shrimp" section), and experienced high landings and longer than average seasons in the mid to late 1990's. Many fishermen increased their participation in this fishery, and the record landings allowed them to

[1] The Hague Line was drawn by the World Court across Georges Bank to settle a boundary dispute between the U.S. and Canada. (The northeastern corner of the Bank was designated as Canadian.)

remain profitable despite the loss of the inshore groundfish stocks. Many fishermen also opted to take part in the seasonal urchin fisheries or in the herring fishery to supplement their incomes.

Larger boats that were capable of accessing the productive groundfish areas in the Southern Gulf of Maine were likely to relocate and continue to fish for groundfish rather than switch to other fisheries. The small to mid sized boats typical of mid-coast and Downeast Maine were able to take part in urchin, shrimp and lobster fisheries. However, these fisheries do not require the same support and services as groundfish fisheries. The ice houses, cutting and processing facilities and other businesses that had historically supported small communities along the Maine coast lost business and eventually disappeared.

The construction of the Portland Fish Exchange in 1986 made Portland an even more convenient and attractive port relative to other Maine communities. When the New England Fisheries Management Council implemented an effort reduction program and based each fisherman's days at sea on historic landings information, the majority of groundfish access was concentrated in the southern part of the state. 148 groundfishing vessels listed Portland as a homeport in 2002, compared to 68 in 1992. However, successive regulations have reduced groundfish effort (as measured by days-at-sea) and consequently, there is reduced demand for repairs and new equipment. Many shoreside businesses in Portland have had to diversify to include non-fishing related activities to survive.

Methodology

This report was written by Togue Brawn, who has worked in various capacities on the Portland Waterfront for over 15 years. She currently works at the Gulf of Maine Research Institute (which facilitates and conducts fisheries research) and at J's Oyster Bar, a popular fishermen's hangout. As a result, she knows many Maine lobstermen and fishermen on both a personal and professional basis.

Stacey Wahlstrom assisted with the research by conducting key informant interviews and assisting with project outreach. Ms. Wahlstrom is engaged to a member of the groundfishing community, and has many ties to the industry.

Twenty-six (eighteen by Togue and eight by Stacey) key informant interviews were conducted by Ms. Brawn and Ms. Wahlstrom. These interviews supplemented those already conducted by past project coordinators (Caroline Skindler, Jennifer Brewer and Gena LeDuc-Kuntz). Interviews were based on two sets of questions developed for the project. Interviews with fishermen were based on a "harvester" template, and shoreside business professionals' interviews were based on a "shoreside supply" template. Although some interviews consisted of basic questions and answers, most developed into conversations based on the particular interests and concerns of interviewees. Ms. Brawn and Ms. Wahlstrom also spoke informally with a number of fishermen and fishing-related business professionals during the course of this research. All quotations are used with the permission of interviewees.

Ms. Brawn also attended meetings of the Governor's Groundfish Task Force, which met five times between March 24 and May 24. The Groundfish Task Force was created to identify the most pressing needs of Maine's groundfish industry, and to make recommendations on how to help the industry survive and prosper. Because the Task Force and the Panels Project sought much of the same information, Ms. Brawn and Cindy Smith (coordinator and administrator for the Task Force), shared meeting notes, summaries, and data. Draft reports developed by the Task Force were used for background information for this project. Only one section of the Task Force's report was used directly in this report: information provided by Sue Inches of the Maine State Planning Office provided a large component of the Marketing section of this report, and her permission was obtained to include her data in this report.

Brawn also attended two Working Waterfront Coalition meetings and several meetings at the Maine Fishermen's Forum in March. All of these meetings supplied background information and data on Maine's working waterfront and commercial fishing industry.

Judith Harris of the City of Portland's Department of Transportation and Waterfront, met twice with Ms. Brawn. She provided a variety of data obtained by and for the city concerning Maine's Fishing Community.

Mary Beth Tooley of the East Coast Pelagics Association provided historical information on Maine's herring industry.

A draft report was written based on interviews with fishermen and data obtained by the author (and previous coordinators of the Panels Project). This draft was shared with fishermen prior to a meeting in June of 2004. At the meeting, fishermen shared their thoughts on the report. Based on this meeting and conversations with Madeleine Hall Arber and David Bergeron, a final draft was written, which is contained herein.

The Port of Portland

Portland's working waterfront is an integral part of the community's character. In March 2001, The City of Portland commissioned a study by the Greater Portland Council of Governments to examine the Port of Portland's strengths and weaknesses and identify possible strategies for growth. Portland was compared to 11 other ports along the east coast of the United States and Canada. The report found "The most significant finding is the tremendous diversity contained in the Port of Portland compared to 11 other ports. There is a significant mix of petroleum, container and non-container cargo, commercial fishing, international ferry, intra harbor ferry and cruise ship operations. This is clearly one of Portland's greatest strengths as a competitive seaport."

The majority of the Port's marine activity takes place at four marine terminals on the Portland side of the Fore River, and six terminals in South Portland. The Port of Portland has a number of active marine industries. It is the largest crude petroleum port on the East Coast of the United States, and incurred an eight-fold increase in dry cargo volumes between 1982 and 2000. This diversity is located in a relatively small area. The inner harbor is only one and a half miles in length from Bath Iron Works to Merrill's Marine Terminal.

The majority of Portland's piers are privately owned. Commercial Fishing Vessels incur berthing costs of $178 - $700 per month, depending on the location, size of space and services available (City of Portland Fishing Programs and Policy Berthing and Services Survey, 2003). Some fishermen complain that these costs are too high. However costs are not likely to decrease unless new spaces are made available, or pier owners are able to generate money elsewhere. This is not likely to happen in the near future given the city's restriction on non-marine related waterfront development. These restrictions have been successful in preventing a gentrification of Portland's waterfront. However, they also increase the costs of commercial marine businesses and individuals that use Portland's piers and wharves.

Transportation[2]

Land access to the port is available via rail, highway and air. The Guilford Rail System links the port with major lines to the south at Albany, New York, to the west at Buffalo, New York, and to Canadian lines at Danville Junction and Mattawamkeag, Maine. Three of Portland's marine terminals (Merrill Marine, Sprague Energy and Turner's Island) have sidings linking them directly to Guilford's main line. The St. Lawrence and Atlantic Railroad provides regular service to Merrill Marine Terminal, and connects to Canadian National, one of North America's strongest rail lines.

Interstate 295 connects the port with northern and southern points via the Maine Turnpike (I-95). Three exits (Exits 4, 6 and 7) off I-295 are one mile or less from the port. A connector road is currently being constructed that will link the port directly with I-295. State Routes 1 and 1A also provide access to the port. The Portland International Jetport, which is located on the Portland – South Portland city line, is a 10-minute drive from the port.

Ocean Gateway Project

The city is currently working to increase its marine activities. It's "Ocean Gateway Project" is part of the city's plan to make the port more competitive and increase the capacity and efficiency of its operations. The goals of this project are to:

- Support the long-term enhancement of Portland's waterfront economy.
- Optimize public access to the waterfront.
- Ensure that Port development is environmentally sensitive, flexible and adaptable to changing needs in the maritime industry.

The primary objectives of the project are:

- Conversion of the Bath Iron Works ship repair facility to compatible marine uses in a manner that provides flexibility and opportunities for future growth.
- Consolidation of the Port's passenger and cruise operations to one centralized location that is separate from the Port's fishing and cargo operations.

(GPCOG, 2001)

The Ocean Gateway Project is only the latest example of the city's long history of commitment to maintaining its working waterfront. This commitment began with a waterfront planning initiative in the early 1970's. Waterfront planning increased in 1982 with the initiation of multi-faceted development strategies, including zoning amendments, construction of public facilities, and policies to address berthing and public access (GPCOG 2001). In1987 city residents initiated a referendum placing significant limitations on the development of the water side of Commercial Street. The referendum was fueled by citizens' concern about two luxury condominium complexes built on city piers. The referendum passed by a 2-1 margin, demonstrating the public's commitment to maintaining a working waterfront.

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[2] Note: This section came largely from the GPCOG document, 2001

When the development moratorium expired in 1992, the City worked with waterfront interests to revise the zoning to allow more flexibility while protecting water-dependent and marine-related uses. Although this zoning is widely heralded as being responsible for the maintenance of a "working waterfront", it also has its drawbacks. Although the City and State have invested significant public dollars to support traditional waterfront activities, private property owners have not followed suit. Privately owned piers suffer from a limited return on capital: because they are limited in their abilities to rent or develop their properties, pier owners are often unwilling to invest in their maintenance or improvement. A 2000 Waterfront Task Force Report found that "The piers are in various states of repair or disrepair, and suffer to a greater or lesser degree from obsolescence and disinvestment."

Despite these drawbacks, commercial fishermen working out of Portland are generally pleased with the support they receive from the City. Only one of the fishermen interviewed for this project commented that the city should do more to support its commercial fishing industry. The City hired a Manager of Fishing Programs and Policy in March of 2000, indicating the importance with which the city regards its fishing industry. In general, Portland fishermen are completely satisfied with the City's support, and use this enthusiastic support to state that by comparison, the State "ignores them."

Waterfront Access

Coastal property values in Maine are increasing at a rapid pace. Many people who have lived and/or worked on the waterfront for decades are facing increasing pressures or incentives to sell their properties. Coastal property is at a premium, and individuals and corporations wishing to purchase waterfront property are often able to pay prices that far exceed what commercial fishing businesses can afford. Property owners must also face yearly tax bills that increase dramatically along with property values. As a result, Maine's waterfront is in danger of becoming "gentrified".

The commercial fishing industry relies on access to the water for its livelihood. In 2000, the state legislature proposed an amendment to the Constitution that would allow for the assessment of waterfront land used for commercial fishing purposes based on the current use of the property instead of the "highest and best use" standard. Though in November 2000, Maine voters narrowly defeated the proposal, in November 2005, the Constitutional Amendment won (72% to 28%).

Maine's shoreline zoning law requires all of Maine's organized municipalities to adopt locally administered ordinances that regulate land use activities in the shoreline zone. The law encourages municipalities to give preference to water-dependent uses and allows, but does not require, coastal communities to establish districts to give preference to commercial fishing and other maritime activities. According to the State Planning Office, as of August 2000, 71 out of 139 coastal towns had adopted some type of maritime or waterfront district in their ordinances. These ordinances vary widely; some towns adopted the language suggested by the state for a commercial fisheries and maritime district, and other towns changed the language to suit their local needs (Final Report of the Committee to Study the Loss of Commercial Fishing Waterfront Access and Other Economic Development Issues Affecting Commercial Fishing, December 2001). As a result, the level of protection from gentrification varies widely between municipalities. However, a bond issue passed in 2005 for $12 million to purchase land and conservation easements with $2 million designated for investment in significantly important working waterfront properties in Maine.[3]

Portland began enacting measures to preserve the working waterfront relatively early compared to other Maine towns (see "The Port of Portland" section above), and makes regular efforts to update their policies. A Waterfront Taskforce was appointed by Portland's mayor in the summer of 1999. They reviewed infrastructure along the waterfront in order to identify infrastructure challenges that could adversely affect the economy of the waterfront. They examined 14 wharves, and found that four of the wharves were in good condition and would probably require no immediate (within three years) repairs. Six of the wharves required repairs and maintenance that was estimated to cost between $15,000 and $100,000. The remaining four wharves required short-term investments in repair and maintenance estimated at more than $100,000. Two of the

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[3] Coastal Enterprises, Inc. *Press Releases For Working Waterfront Coalition,* November 29, 2005.

wharves needed maintenance and repairs estimated at nearly $500,000 in the short term. The assessment indicated a total need of approximately $1.4 million in repairs within three years.

When compared to other coastal Maine municipalities, Portland seems successful in maintaining a working waterfront. However the guaranteed waterfront access comes at a cost. The majority of Portland's piers are privately owned. Because pier owners are unable to put their properties to the "highest and best use", they face minimal incentives to invest in the property.

Maine's Working Waterfront Coalition commissioned a report in February of 2004 to determine the contribution of working waterfronts (facilities that are used as boat launching ramps, piers, marinas, etc.) to the Maine economy. The study was conducted by Charles S. Colgan of the Muskie School of Public Service. He found that working waterfront contributes anywhere from $15 million to $168 million more per year to our gross state product than does coastal residential construction.

A 2002 study of port facilities by Coastal Enterprises, Inc. found that of 25 coastal towns studied, 40% of commercial fishing access was provided by private residences and 35% by private facilities. With 75% of commercial fishing access provided by the private sector, rising property values and taxes are an important factor to Maine's fishermen. As pressures to sell increase, it is likely that elected officials will face increasing pressure to relax the restrictive zoning laws that allow fishermen continued waterfront access.

Several fishermen interviewed noted the lack of available space to onload and offload their boats. Although there are "public boat ramps" for launching vessels, there are very few spaces in the Greater Portland area at which commercial fishermen can easily access their vessels with a vehicle. This limits fishermen's options for loading equipment, fuel, supplies, etc., and for unloading supplies, nets, equipment and fish itself. Vessel owners who are able to moor their boats at piers in Portland year round do not have this problem. However, more seasonal fishermen such as lobstermen, shrimp fishermen, and urchin divers complain that lack of access is a serious impediment to their fishing activities.

The Processing Sector

Four processors are located on the Portland Fish Pier, and 17 other processors are located on or near the waterfront in Portland. Sales for these 21 processors were estimated to be roughly $144 million in 1999 (estimate came from reported sales of 15 processors and an estimation of remaining six, GPCOG 2001).

When commercial fish landings began to decline in the mid 1980's, fresh fish processing followed suit. Rising prices pushed revenues higher, but these higher prices generated consumer demand for substitute products. Soon prices for fishery products were limited by the prices of these substitutes (Georgianna and Dirlam, 2000). As a result, the increase in prices that usually accompanies decreased supply no longer occurred, further exacerbating groundfishermen's woes.

The Portland Fish Exchange (see next section) is a major source of groundfish and shrimp for Portland processors. However, the decrease in local product has led most seafood wholesalers and traders to look outside the city for additional supply to stay competitive. The Gloucester Auction, direct deals with boats in Maine and Canada, and Canadian dealers were the most common sources mentioned by the processors interviewed for this project. One processor noted that he "works with all the auctions in the region." Others mentioned the substitution of frozen-at-sea product.

As supply of New England-caught groundfish has decreased, processors have tried to maximize profits by adding value. However, the majority of fish handled in Portland undergoes only limited processing. More than half of the salmon, groundfish and clams harvested in Maine leave the state for further processing. The reasons most cited for this are: lower costs for processing elsewhere, labor shortages, seasonal fluctuations in supply of fish and shellfish and lack of incentives for seafood processors to do business in Maine (Inches, 2001). In addition, wholesalers are unwilling to invest in the often expensive machinery necessary to complete secondary processing in the face of uncertain local product (per interviews). Amendment 13 will certainly change the way fishermen do business and processors will have to adapt to these changes. Currently, little processing is done in Portland beyond filleting and repackaging into smaller containers, or packing and freezing.

The Maine proclivity for small businesses also extends to seafood processing and wholesaling. One key informant mentioned that competition within the industry creates inefficiencies not present in markets "to the south". Individual firms scramble to hire experienced fish cutters away from each other, and to increase their share of the local and regional market. This informant said that the industry would be far more efficient if consolidation of processors were to take place and "territories" established, similar to the situation that exists in the liquor industry. Under the territory system, a number of small companies are replaced or combined into a few larger companies that serve a wider area. Another key informant pointed out that it is difficult to keep skilled labor when their hours are inconsistent (due to fluctuating supply).

The outlook for seafood in the United States is positive, with food service and retail seafood sales increasing from 5-15% annually (Inches, 2004). As American consumers become more health conscious, low fat, high protein items such as fish are increasing in popularity. One fast growing trend within the grocery industry is in the value-added segment of ready-to-eat or quickly prepared items. Seafood items including pre-portioned, marinated, stuffed or breaded items represent a potential for expansion for Maine processors. However Maine processors are unlikely to make investments in the equipment necessary to produce these products. They are also at a competitive disadvantage compared to processors to the south that already perform these functions and are closer to both sources for raw product and buyers for finished product.

The supply of unskilled workers does not seem to be a problem for Portland processors. Turnover rates of unskilled workers can be high, but there is an ample supply. Much of this work is done by Portland's immigrant population. Each of the seafood dealers interviewed identified experienced fish cutters as a bottleneck to expansion.

Portland processors keep a good deal of their frozen inventory in freezers located outside of Portland. A survey conducted by Judith Harris in 2000 indicated that processors prefer to keep their frozen product closer to the markets they serve. At the time of the survey, increased public freezer facilities in Portland could not be justified by the seafood industry's needs alone. Freezer operators indicated that a 10,000 pallet freezer (15 million pounds) is the minimum size to make new freezer construction possible. Best estimates of fishing industry use are 2,500 – 3,000 pallets (GPCOG, 2001).

Boston's proximity to air routes (via Logan airport) and access to the New England regional wholesaling system gives them an advantage over other processing centers. Despite a reduction in its commercial fishery, it retains a thriving "cutting center". Much of the material trucked from Portland ends up in Boston for further processing.

Consolidation within the grocery industry has resulted in large corporate buyers gaining market share. These buyers prefer products that can be purchased in dependable and large amounts. New England-caught groundfish does not fall into this category. New England seafood suppliers must compete with large-scale, low-cost suppliers from around the world. Aquaculture has also become a viable domestic and international source for seafood. Several processors noted the popularity of farm-raised products such as tilapia, salmon and catfish. Their dependability of supply and quality render them more desirable to large scale buyers such as supermarket chains. As these products gain market share, it will be difficult for groundfish to regain its place in the market should it experience the increased landings currently predicted. In addition, the increasing popularity of restaurant chains will make dependability and large-scale availability more important to seafood sourcers.

Due to lack of supply and resulting loss of freezer capacity, the U.S. Military has shifted its procurement to the West Coast (source: John Norton's (of Cozy Harbor Seafood) comments on A-13). The fact that substitutes are available from around the world means that New England-caught fish is no longer guaranteed a market, even in local groceries.

NMFS projections suggest that New England stocks could grow to a maximum sustainable yield of 418 million pounds per year. The current harvest level is 100 million pounds, of which Maine lands roughly 20 million pounds. If the projections are correct and Maine vessels are able to hold onto their market share, or perhaps even increase it, 80 million pounds of groundfish could be landed in Maine once the fishery is completely rebuilt. However, to accommodate and reap the benefits of these additional landings, an investment of $30-$50 million in shoreside facilities would be needed. This investment would need to be made in public and private facilities including vessel unloading, refrigerated trucks, processing plants, and development of new markets to absorb additional product (Inches, 2004).

Sue Inches of the Maine Department of Marine Resources developed an issue statement concerning the Maine Processing Sector, and came up with the following list of "short-term threats and challenges" [4]

- Reduced DAS that may result in consolidation of the fleet and an inconsistent supply of fish.
- Regulatory uncertainty causing reluctance for processors to invest in plants and equipment.
- Increasing vertical integration, meaning processors who own fishing vessels, which assures fish supply to processors who own vessels but reduces opportunities to purchase fish for processors who do not.
- Continued consolidation in the grocery and food service sectors resulting in larger orders to fill and more pressure from buyers to reduce prices paid to processors, putting further pressure on seafood processing margins.
- Increasing competition from imported (mostly farm raised) seafood such as shrimp and salmon that often sell at lower prices than domestic groundfish.
- Required Country of Origin Labeling, scheduled to go into effect September 30, 2004, which would increase processor costs, but may also provide an opportunity for branding or promotion of Maine groundfish.

1) Addressing Consolidation and Vertical Integration[5]
With the reduction of DAS under Amendment 13, some vessels are seeking to buy permits in order to increase their number of fishing days. Some processors may seek to purchase fishing permits as well. More likely, processors may attempt to make private (off-auction) deals with vessels to assure a more consistent supply of product. These strategies make sense from the individual business owner's point of view.

But in the long run, these activities could permanently alter the structure of the supply chain by reducing the diversity of the fleet, threatening the existence of the auction, pushing harvester prices down and making it difficult or impossible for the part-time or occasional fisherman to find an outlet for their product. Processors who "lock in " a private supply of fish to their plants in the short term may find later, if they are seeking additional volume or species, that most of the available fish has been contracted to other processors and is not available on the open market.

The only strategy being pursued to address these issues is acquisition of fishing permits. Some fishermen have or are intending to purchase vessels with fishing permits so they can add more Days-at-Sea to their business. Research is also being done to determine the feasibility of creating a public program that would acquire fishing permits and lease the days to fishermen who agree to land their catch in Maine. Both of these strategies, if successful, would greatly help processors by maintaining or increasing fish landings in Maine.

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[4] Inches, Sue. 2004. ""Seafood Processing: Current Issues and Future Challenges"
[5] Inches, 2004

2.) Investments in Plants and Equipment[6]
In order to prepare for increased fish stocks in five to ten years, financial tools need to be put into place now. Public bond funds take eighteen months to two years to become available, because they have to go through the legislature and a public referendum. Similarly, an investment tax credit can take at least eighteen months to develop, as a program would have to be defined, and then gain the support of the legislature and the governor. Public and private financing will play a significant role in building shoreside facilities and businesses to handle an increasing amount of fish.

3.) New Product Development[7]
There is room in the market to develop a variety of fresh and frozen "value added" seafood products. There are opportunities to enhance shelf life and package and label fish more attractively. Fresh groundfish is being sold at the retail level in much the same way that it has been for over a hundred years: unpackaged on a bed of ice. This tradition remains, despite the fact that many consumers don't know how to cook fish. With mandatory Country of Origin labeling and computer ID tags for grocery products on the horizon, there are now added incentives to package fresh fish. For someone willing to make an investment, there is opportunity to create an attractive, packaged fresh fish product.

In the food service sector, improved freezing technologies have dovetailed with tremendous growth in chain restaurants, cruise ships and resorts. Large food service buyers demand frozen product packaged to exact specifications. The next stage of development from this base of frozen products is to create more value added frozen seafood, for both food service and retail. Marinated, stuffed and prepared entrees for both restaurants and retail are the next step in product development.

Summary: The health of Portland's seafood processing industry and that of the commercial fishing industry are inextricably linked in Portland. Although alternate sources of product are available, Portland's distance from transportation hubs mean that both industries are more reliant on each other than they would be in a more centralized location. The existence of the Portland Fish Exchange allows for a more efficient means of exchange between the two industries, and makes survival in these difficult times more feasible. However, both commercial fishing and seafood processing are currently operating at a "bare bones level". Although many processors were formerly able to rely largely on New-England-caught groundfish, they must now find product elsewhere to survive. Each processor interviewed has reduced the percentage of product sourced in Maine over the past decade. As their dependence on locally-caught product decreases, so does the amount of money flowing to local fishermen. Accordingly, fishermen must increase the amount of money gained for their catch by finding alternate outlets (some are choosing to land in Massachusetts so that lobsters may be landed). This creates a positive

[6] Ibid.
[7] Ibid.

feedback loop of a negative sort: the means by which fishermen and processors survive eventually negatively impacts both industries (one could say it's the Maine fishing industry's own version of a prisoner's dilemma). Any further setbacks to either industry would have a dramatic effect on both.

Portland Fish Pier and Fish Exchange

Commercial fishing vessels are moored at several of the Port's piers and wharves, but activity is concentrated at the Portland Fish Pier. The Pier was constructed on 15 acres of city-owned land in 1983. The pier's terminal has approximately 2500 feet of berthing space that is provided on an annual lease basis and can accommodate vessels up to 80 feet in length. The Pier also houses processing facilities, seafood wholesalers, the Portland Fish Exchange (Auction), Vessel Services (fuel, ice and gear supplier) and a variety of marine-related businesses in its Marine Trade Center.

The Portland Fish Pier is a private pier operated by the Fish Pier Authority (FPA) under a 60-year lease with the City of Portland. The FPA's board of directors provides direction for all activities on the pier, and includes the City Manager of Portland, a representative from both the Portland City Council and the Maine State Department of Transportation, and industry members. The daily operations of the Fish Pier are managed by the City of Portland's Department of Transportation and Waterfront and are the direct responsibility of the Manager of Waterfront Operations and Administration (GPCOG 2001).

The Portland Fish Exchange opened in 1986 as the first all-display auction on the East Coast. Despite some initial hurdles, it soon became the fleet's preferred mechanism for selling its catch. The seafood industry can be a risky business: seafood products are marketed under extreme time pressures. Their short window of opportunity means that many buyers purchase products "sight unseen", and fishermen are forced to ship off product with a verbal commitment of payment. The seafood industry has a widely recognized "cutthroat side," and fishermen are often at the mercy of a market over which they have no control. The Portland Fish Exchange provides a transparent marketplace where buyers and sellers can inspect product before purchasing. The PFE has become accepted as the industry standard, and auctions in Gloucester and New Bedford were modeled on the Portland Fish Exchange.

The PFE originally intended for fishermen to be present to sell their catch personally. However, it soon became apparent that seller's representatives provided a more efficient means of sale. Two seller's reps are regularly present at the auction and represent the majority of fishermen that sell at the exchange. Fishermen (personally or through seller's representatives) are able to remove product from the Auction if they believe bids do not represent fair market value. They can resubmit the product to the auction floor the next day, or attempt to sell it through other channels.

The Exchange acts as a financial intermediary, providing payments to sellers and collecting payments from buyers. Sellers receive payment for their catch within 24 hours of product sale at the Exchange. At the close of each auction buyers receive invoices for products and services received as a result of that day's auction purchases, with 14 day payment terms.

The Exchange is a non-profit organization owned and managed by the City of Portland, and is recognized throughout the seafood industry as a leader in innovation, quality, and integrity. The Exchange's fish handling fees are the lowest of all the major regional auctions. Approximately 200 sellers supply over 20 million pounds of fish each year to 25 registered buyers. In 2001, the Portland Fish Exchange handled approximately 90% of Maine's total catch of regulated multispecies groundfish.

Portland fishermen are extremely supportive of the PFE, and credit it with bringing honesty and integrity to a previously "shady" market. However, it also has its detractors. Fishermen from other areas note that PFE's overwhelming market share has eliminated the smaller buyers they previously did business with. They now have no option but to truck their product to Portland. PFE has certainly added to the consolidation of Portland's fishing and processing industry in Portland. Although fishermen continue to land their catch elsewhere, the majority (90%, according to PFE General Manager Hank Soule) of fish landed in Maine finds its way to the Exchange.

This domination of Maine's groundfish industry increases efficiency, but also increases risk. Many of the fishermen interviewed for this report commented that "If the Exchange goes, so will Maine's fishing industry." Prior to the Exchange, numerous small seafood dealers purchased directly from fishermen up and down the Maine coast. Although seafood dealers continue to work directly with fishermen, only 10% of Maine groundfish is sold outside the Exchange. If PFE were to "go under", it would take some time for seafood businesses and fishermen to adjust to new business practices. In the meantime, most would find it necessary to send product out of state, further increasing the attractiveness of moving south.

Hank Soule is the current manager of the Portland Fish Exchange. He believes the fishing industry is in a "three-year speed bump", and is confident the Exchange and the city of Portland's fishing industry will survive the current crisis. He's particularly optimistic about the large yearclass of Georges Bank haddock that will enter the commercial fishery in three years. Scientists and fishermen alike describe this as a "monster yearclass". Soule states there's every reason to believe these fish will be caught by Maine boats and landed at the PFE in three years. He also believes that other stocks undergoing a recovery will eventually find their way to the Exchange. He has implemented several cost-cutting measures and will continue to make adjustments to survive in the meantime.

Several fishermen expressed concern that the Auction would reduce the number of auctions each week (the Exchange currently holds daily auctions Sunday through Thursday). When asked about this possibility, he said this would be an absolute last resort. He believes cutting back working days would reduce the viability of the Exchange by forcing business elsewhere. Several interviewees for this project suggested that the Exchange start diversifying the species handled. In addition to groundfish and shrimp, they said that swordfish and/or lobsters could provided additional revenue.

Vessel Services, Inc.

In the late eighties, four commercial fishing gear shops were located in Portland (IMP, Gundry's, Harris Co. and Vessel Services). Currently, only one gear shop dedicated to the commercial fishing industry exists (Vessel Services Gear Division). Although Hamilton Marine on Fore Street does a significant amount of business with commercial fishermen, and New England Marine and Industrial will send gear up by truck as needed (the company is based in New Hampshire), Vessel Services is the preeminent gear supplier in Portland.

Vessel Services was incorporated in 1979, and came about through the efforts of the Maine Fishermen's Cooperative and individual fishermen. It provides ice, fuel, and gear from its two locations on the Portland Fish Pier.

In late 2003, Vessel Services split into two separate divisions: ice and fuel; and the gear supply store. Gear supply had always been a small part of the overall business. The split was undertaken in order to allow each entity to adapt to changes in the industry independently. The ice and fuel division retain the "Vessel Services" name, while the gear division is known as "Vessel Services Gear Company"

Vessel Services makes the bulk of its money from ice sales. These sales reached a peak in 1993 with just over 23,000 metric tons sold. The 2003 fiscal year (ending October 31) was the worst yet, with just over 15,000 tons of ice sold.

The increase in fixed costs makes the reduction in ice sales particularly troubling for the company. In 2002, with electricity prices high and on the rise, the company purchased two gas-powered V8 engines to turn the screw compressors. These are the two primary compressors for the company, and are supported by 7 electrically driven compressors to run the company's three ice machines. Gas prices have since increased over 200%, and the company's fixed costs have increased substantially. They may revert back to 100% electrical power in the future.

The company is reluctant to increase the cost of ice at a time few fishermen can afford it. Yet without a cost increase, the company will soon be operating in the red. Although fuel sales are also a significant part of their business, the margins on fuel are very low, and have never been a "money maker" for the company. Groundfishermen make up the bulk of the company's sales. Although a lobsterman might purchase 700 gallons of fuel in a week, a trawler might purchase 8,000 gallons. Trawlers also purchase far more ice. The company also sells ice to local businesses, but these sales are minor compared to the amount of ice sold to groundfishermen and the Portland Fish Exchange.

Interestingly, no fishermen expressed concern that Vessel Services might go out of business. It may be that fishermen believe because the company is run by a board of fishermen, they "wouldn't let it go under". Vessel Services is currently the only company that provides ice to fishermen in the Portland Area.

The company shuts down periodically to perform routine maintenance, but plans for these times well in advance. The plant is shut down for three days once each year. Customers are warned in advance that the plant will be off line, and 15-16 tons of ice are stored in Xactic containers for the Exchange. The plant will also occasionally suffer a machine breakdown. These shutdowns are most often caused by malfunction of components in the bins (machinery in the bins rakes and separates the ice), not the compressors. These shutdowns don't usually last longer than 24 hours.

The company has adjusted to the decrease in sales by reducing business hours to Sunday through Thursday this winter (open on the same days as the Exchange). Most fishermen are able to plan around this schedule. An employee is always on-call, and vessels are able to pay a fee for on-call service at any time. They hope to be open every day this summer, but may have to survey their customers to find out if this is possible. Last summer, many fishermen kept their boats at the dock rather than fish due to low prices. If this trend continues, Vessel Services may keep their reduced schedule.

The Gear Company has also made recent cutbacks. They closed their store at 400 Commercial Street, and are now operating out of one location at the Portland Fish Pier. They have reduced staff (through layoffs and cutbacks on employees' hours), and have implemented a truck sales route to increase business. They have also installed a five-container storage facility to allow for more bulk purchases to cut back on costs. In addition to these measures, they have reduced their inventory geared to recreational fishing that is largely served by Hamilton Marine. However, they have diversified to provide supplies for the municipality and construction companies. By August 2003, the company was 54% industrial supplies to 46% commercial fishing. Cables, custom wire rope for wreckers and soccer backstops are some of the non-fishing related products they handle.

The contraction in the commercial fishing industry has led to a decrease in the diversity of commercial fishing supplies available. No longer, for example, does Vessel Services maintain supplies of longline gear. Furthermore, symptomatic of the contraction of the industry, the gear suppliers have had to limit what supplies they keep in inventory. This can have a negative effect on active fishermen when regulations change, a comment made by both fishermen and suppliers when twine sizes regulations changed more quickly than anticipated.

Work Areas

One section of the Portland Fish Pier is made available for fishermen to work on nets and other gear requiring open space. "The graveyard" or "The Desert" is a large open-air space that can accommodate roughly 10 nets at once. It is rarely full to capacity. The city allows fishermen to use the space for $25 for each 72-hour period. Prior to the construction of the Portland Fish Pier, the Maine State Pier was made available for the same purpose.

Many fishermen also work on gear at D&E Enterprises ("Danny Libby's Place") in Scarborough. He's been in business since 1998, and has a large work area with both inside and outside space where fishermen can tend nets. The fact that inside space is available makes this a popular choice with many Portland fishermen (the location is less than 20 minutes away). Dan works with approximately 90% of the fishing vessels in Portland (personal communication).

Although some of the fishermen interviewed store their gear at home, very few have enough space at their homes to tend their gear. Most do so at one of the locations mentioned above.

Lobster Fishery

The Maine lobster industry is touted around the world as a rare example of successful self-governance in fisheries. It has undergone a dramatic increase in landings in recent years (See Figure 4). This increase has taken place during the same time in which the groundfishery has declined (Figures 1, 2, 5, 6, 7, 8, 9,10, 11, 12, 13). As a result, the lobster industry has absorbed a number of fishermen who traditionally fished a variety of species (exact figures not available).

There are almost 6000 licensed lobster/crab fishermen in the state of Maine. Unlike the groundfish industry, these fishermen are geographically dispersed. Fishermen sell their catch to numerous small cooperatives and pounds found in harbors all along the coast. As the number of lobstermen has increased, some lobstermen are expanding their traditional fishing areas, venturing further offshore than in the past. One interviewee expressed concern over the current fishing pressure, noting the abundance of offshore effort currently in place. Several lobstermen expressed concern over the "industrial fishing" efforts of Shaft Master, a New Hampshire-based company that fishes heavily in the offshore regions of the Gulf of Maine.

The unique "Zone Management" of Maine's Lobster Fishery has allowed fishermen from different areas to participate in the management of their fishery, and tailor this management to meet local needs. This type of management is credited with many measures that would have been difficult to impossible without local involvement (such as trap limits and restricted entry plans). It is often held up as a model by people wishing to implement more local management within the groundfishing industry.

Record landings in the Maine lobster industry have "softened the blow" brought about by declining groundfish stocks. Had the lobster resource been unable to absorb additional effort, many groundfishermen would have had to abandon fishing entirely. However, we do not currently understand why the lobster resource is so healthy. This creates a dangerous situation: no one understands why the resource is so abundant, yet this abundance is responsible for employing thousands of individuals within the state of Maine.

Although their license allows them to harvest both lobster and crab, few lobstermen gain significant income from crab harvests. This means that over 5,000 Maine fishermen are relying exclusively on one species for their livelihood. The dramatic increase in landings in the early nineties led many fishermen to invest heavily in their fishing operations. If the resource were to decline (a possibility scientists have repeatedly suggested is likely), many fishermen, and the pounds, cooperatives and processors that rely on them, would be left without an alternative income. Fortunately, Maine lobstermen have yet to be confronted with significant health threats to the resource.

Although declines in the groundfishing industry have led to an increase in lobster fishermen, they have led to a decrease in bait. In the past, groundfish "racks" were a common and inexpensive (sometimes free) source of bait for lobstermen. As the groundfishery has declined and groundfish processing has become less common, this bait source is less common. Obtaining bait has been a problem in some harbors in recent years, and some lobster pounds/dealers have begun supplying bait as an incentive for lobstermen to land their catch with them. With bait in short supply at certain times, having a guaranteed supply (with or without a reduced rate) can be an important incentive to remain loyal to a particular dealer. Several types of artificial or enhanced bait are available to be used to replace or supplement traditional bait. However the herring fishery provides the majority of bait to today's lobster fisherman.

The Herring Fishery

Herring have been caught in the Gulf of Maine for hundreds of years. Although a fixed gear (stop seines and weirs) took place historically in Maine, herring is currently caught primarily by purse seines and mid-water trawlers. Herring migrate seasonally, and vessels follow these migrations along the coast.

Since 1982, there have been several significant shifts in the coastal fishery (see Figure 3). The Maine fixed gear fishery (stop seines and weirs), which harvested over 44,000 mt in 1981, has averaged only 1,600 mt annually since 1984 and has produced less than 1,000 mt since 1994. Purse seines became the dominant gear in the 1980s and early 1990s, but since the mid-1990s, midwater trawl (single and paired) vessels have dominated the fishery.[8] Another change has been the increase in herring used for bait. Due to the expansion of the lobster fishery, at least half the herring catch is now sold for lobster bait. Some bait herring is also used in the tuna fishery. These shifts in fishing patterns have been reflected in the age of fish being targeted. Estimates of juvenile harvest show a steady decline in numbers during the last ten years (NEFSC 1996).

Another change that has occurred recently in the herring fishery is the development of Internal Waters Processing (IWP) operations in the Gulf of Maine and Southern New England. These operations consist of foreign-owned processing ships that are allowed to anchor in US waters to accept and process herring caught by U.S. fishermen. In addition to the IWP operations, small amounts of herring caught in the Gulf of Maine are transferred at sea to Canadian carriers and landed in New Brunswick. These transfers are part of a larger reciprocal U.S. – Canada trade in which herring move freely across the border between Maine and New Brunswick, supplying canneries and lobster bait in both countries. Although this increases markets for herring fishermen, it also decreases the amount of product landed and processed in Maine.

Although herring vessels use many of the same services for repair and maintenance as groundfish vessels, they are less likely to rely on ice. In recent years, most vessels have installed refrigerated water systems, and no longer purchase ice.

Vessel size range for Gulf of Maine herring boats is approximately 60-125 feet. Although as many as 10 vessels may work out of Portland in the early summer to fall, only one vessel (F/V Providian) works out of Portland year-round. The F/V Providian entered into a cooperative agreement recently with Nancy's Shellfish, and supplies bait (in salted and fresh form) at Holyoke dock. The F/V Providian lands the majority of its herring catch in Portland.

Herring has recently become a source of contentious debate between the direct and indirect users of herring for bait and those who are trying to develop a bigger market for herring for human consumption. Tuna fishermen, in particular, complain that the vessels are catching too much herring, driving away the tuna, whales, and other species that rely on herring as feed.

Northern Shrimp Fishery

The Gulf of Maine fishery for northern shrimp (*Pandalus borealis*) has seen landings ranging from a high of 11,000 metric tons per year in the 1960's to a closure of the fishery in 1978 (See Figure 14). Over the last 22 years, the shrimp fishery has experienced occasional good year classes followed by a drop in landings until the next strong year class grows into the fishery.

[8] Herring Fishery Management Plan, Amendment One, Final SEIS (2006).

As female shrimp migrate inshore to release their eggs, they become available to coastal fishing vessels for harvest. Regulators set the shrimp season each year under advisement of the Atlantic States Marine Fisheries Commission Northern Shrimp Technical Committee. Information for the assessment comes primarily from port sampling (catch, effort and catch at size) and a fishery independent survey conducted offshore during the summer cooperatively by NMFS and the states of Maine, Massachusetts and New Hampshire.

The shrimp season can take place any time between December 1 and May 31. In the late eighties, the fishery extended throughout this entire period, and provided a significant portion of many fishermen's income. Unfortunately, the benefit of long shrimp seasons in the early 1990s was later lamented when the 1990-95 fishing years were chosen as the basis for "groundfishing history" for the allocation of Days-at-Sea. Some interviewees complained that by shrimping, they contributed to the groundfish stocks recovery, but they were ultimately punished since that meant they had fewer days of groundfish landings.

Uncertainty over the health of the Northern shrimp resource resulted in significantly shortened seasons in the early 2000s. The 2000 fishery included 59 days, 2001 lasted 83 days, 2002 lasted 25 days, 2003 lasted 38 days, and 2004 lasted 40 days. Amendment 1 to the Northern Shrimp Fisheries Management Plan was released in 2005, and the six-month season window was removed. However, in November 2004, the 2005 season was set at 70 days and this was doubled for 2006 with a season set at 140 days. It is anticipated the 2007 season will remain at 140 days.

The northern shrimp fishery has provided a valuable source of additional income to Maine fishermen. However, uncertainty over the health of the resource and unpredictable season length and landings make it difficult for fishermen to fully capitalize on the fishery's potential. Processors are unable to fully gear up for an unpredictable and brief season. The 2004 season saw landings much higher than anticipated. However these high landings were tempered by low prices due to lack of market. In 2005 large, high quality shrimp were landed but the price fell as low as 25 cents/lb. With the increase in fuel prices, some fishermen could not make a profit. Nevertheless, a strong 2001 year-class and evidence of strong 2003 and 2004 year-classes has given hope to the industry and managers that the longer seasons of 2006 and 2007 will lead to a rebuilding of northern shrimp markets.

The Urchin Fishery

The Maine Urchin Fishery experienced a "boom and bust" cycle in the 1990's, and is currently a much smaller industry than it was in the late 1990's (See Figure 16). Although the fishery once took place all along the coast of Maine, it has constricted so that the vast majority of urchins are now harvested east of Rockland.

Both divers and draggers harvest urchins. Raking is also allowed, but accounts for only a small portion of harvests. Divers obtain a higher quality product, but draggers are able to harvest larger quantities. Boats used in the fishery range from 14 to 40 feet, and most fishermen are owner/operators of their vessel. The fishery takes place over the winter months, and most urchin fishermen take part in other fisheries as well throughout the year.

The urchin fishery currently operates at a much smaller scale than it has in the past. By 2003 there were only 743 licensed sea urchin harvesters, down from 2,725 licensed divers and draggers in 1994.[9] Eleven buyers and 13 processors were licensed in 2003. Landings fell from a high of 34 million pounds in 1994 to 6.3 million pounds in 2003. Research funded by the industry has shown that a minimum density of urchins is necessary for reproductive success and to prevent further loss of suitable habitat. Shallow beds were harvested earlier in the fishery, so fishermen now must seek product in deeper waters.

Buyers show up at the docks and purchase product from harvesters throughout the winter months. This arrangement is less formal and organized than in the past, when harvesters were able to bring their product to buyers in Portland. Product is processed in Portland, Rockland, and Waldoboro. It was noted that urchin processors tend to be short-lived enterprises, and there are no exact figures available on the number of processors located in Maine over the past 10 years. However, an interviewee did comment that the industry has constricted on the processing side as well as on the fishing side.

The urchin fishery epitomizes changes due to a global market. The rise in the fishery stems from the development in 1987 of a market for urchin roe in Japan. Today, the Maine suppliers compete with Californian and Russian suppliers. However, one interviewee noted that if the Russians experience a cold winter with freezing over urchin beds, the prices for Maine product go up.

Urchin divers must have a supply of air in order to work. Because of constrictions within the industry, the availability of air is of pressing concern to many divers. It is more expensive and less available than in the past, when more people participated in the fishery.

Other Fisheries

Some boats also fish for tuna and swordfish out of Portland, although there is not a large dedicated fishery for these species. Because the Fish Exchange does not deal with swordfish, local businesses do not stock supplies for longliners. Vessel Services used to have supplies of gear for longliners, but now only a minimal amount is kept on stock. The swordfisherman interviewed for this project obtains his supplies from a shop in Pennsylvania. Although he lives in Maine, he fishes internationally due to strict U.S.

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[9] Urchin Report, Maine Department of Marine Resources, July 26, 2004.

regulations concerning swordfishing, and uses Portland only minimally, unloading his catch here for shipment to buyers elsewhere, primarily in Canada and Brazil.

The Fishing Industry Retraining Project

The Fishing Industry Retraining Project began in 1994 as a way to help fishermen dislocated due to increased federal regulations. The Project currently operates out of Rockland, Maine, and trains fishermen, fishermen's wives, and fishing industry employees for work in other industries.

The federal grant that funded the project did not initially allow funds to be used for workers from the seafood processing sector. However, the grant was changed when it was realized that many non-fishermen were impacted by the loss of business brought about by declining stocks and increasing restrictions. The rules were changed so that anyone with at least 65% of their income coming from the fishing industry may participate in the program. The current director of the Project estimates that 75% of today's trainees are fishermen, 15% are fishing industry workers (seafood processing, etc.), and 10% are fishermen's wives.

The average age of people that come to the project for retraining is 37 (according to a recent survey conducted by the project). Participants are geographically dispersed, and come from a wide variety of fishing industries including lobstering, clamming, worming, and groundfishing.

When the project first began, project managers noted anger in the industry toward the government and even the project itself. Some fishermen believed the government was trying to "force them out" of the industry, and viewed the retraining project as one tool through which they could accomplish this. However, the dynamic has changed, and fishermen now view the project in a positive light.

Whenever new restrictive regulations are enacted, the project experiences an upsurge in interest from potential trainees. However, the current project manager commented that they have not seen an upsurge recently due to Amendment 13. This may be because there are so few fishermen left in the groundfishery to begin with. Although there are no figures available concerning the percentages of trainees from different fisheries, both the current and past project managers commented that the majority of fishermen come from the lobster industry.

Some interviewees noted that education in fishing skills is an unmet need. Because of the lack of DAS, captains and crew must be skilled to maximize the vessel's (and therefore, crew's) income. Few captains and/or owners are willing to take on inexperienced crew. "It's getting tougher for people to learn how to fish," one interviewee commented. In addition, some young people are said to be avoiding entering the industry because of a perception of over-regulation and "hassle."

Health Insurance

One in eight non-elderly Maine residents lack health care coverage (Health Insurance Coverage Among Maine Residents: The Results of a Houseold Survey, 2002. Institute for Health Policy, Muskie School of Public Service). The state of Maine is currently trying to address this problem through the development of the Dirigo Health Plan. One of the top priorities of this plan is to enable all Maine residents to be insured by 2009. However, although the plan was implemented in 2002, it is not currently operational. When asked about the plan, many interviewees commented that "I'll believe it when I see it".

A 2002 Survey of Maine groundfish license holders (Market Decisions, 2002) found that a majority of respondents were covered by health insurance (69% of vessel owners, 79% of shore side business owners, and 62% of hired captains). However, this seemingly high number may be the result of an undersampling of crew, who often do not hold licenses and would therefore not have taken part in the survey. The survey did not state whether the health insurance coverage was an inclusive or a "catastrophic" plan. One interviewee said that "health insurance is astronomical in price."

Commercial fishermen are not eligible for state unemployment compensation due to a law passed in 1980. This law states that "the term "employment" shall not include services performed by an individual on a boat engaged in catching fish or other forms of aquatic animal life, unless those services would be included in the definition of "employment" for federal unemployment tax purposes under the Federal Unemployment Act".

Fishing crews are usually paid a percentage of the catch, and are therefore designated as independent contractors by the IRS. The boat owner does not report crew's earnings to the IRS: it is the responsibility of the crewmember to do so.

Lack of unemployment compensation is seen as a major disincentive for crew, and yet another reason that Massachusetts is considered more fishermen-friendly. On the subject of insurance, it was common for interviewees to comment that Maine's commercial fishermen are at a distinct disadvantage when compared to those in Massachusetts. This was seen as yet another way in which the state does not protect the commercial fishing industry.

Several fishermen commented that the state of Maine is also far less flexible with them in terms dealing with unpaid tax bills. Although the federal government is apparently willing to set up payment plans or amnesty for fishermen who did not report earnings, the state is unwilling to do so. State fishing licenses can be withheld for individuals owing back taxes, which hinders the individual's means of payment. The interest and penalties accrued can apparently dwarf the original bill itself. Although these situations admittedly exist because of an initial fault on the part of the individual, it is seen as yet another way that the state of Maine is not willing to "work with or for" commercial fishermen.

Organization of the Fleet

Mainers in general, and Maine fishermen in particular, are known for their sense of individuality and resistance to conformity. This trait presents a formidable challenge for Maine fishermen who seek a unified voice. Several organizations such as the Maine Fishermen's Cooperative, Associated Fisheries of Maine, the North Atlantic Marine Alliance, and IFISH are working to organize fishermen to present a consolidated front. As regulations have increased, so have disagreements and divisions between and within segments of the industry.

Many of the fishermen interviewed for this project expressed dismay that Maine had "so little power" with the New England Fisheries Management Council. However, Maine's representatives are in a weak position to represent the entire state unless its fishermen are able to come together around adequate factual information to clarify a sufficiently clear agenda of what the Maine fishing industry needs as a whole. Until the various groups and individual fishermen can come to a sufficiently united perspective, it will remain difficult for the state's representatives to present a "consolidated front" and negotiate a fair consensus with states to the south.

Part of the problem in achieving unity comes from a "natural division" within Maine's fishermen. A survey commissioned by the Maine Department of Marine Resources and conducted by Market Decisions in 2002 identified two major groups of fishermen in Maine.

The first group

- Tend to own smaller vessels.
- Employ few people besides themselves.
- Have smaller loan balances and are less likely to have made investments in their businesses in the last two years.
- Have fished 88 days or less in recent years.
- Are less likely to have health insurance.
- Are more likely to have income from other marine or non-marine activities.
- Are less likely to have other family members contribute to their income.
- Are less likely to have outstanding loans for their business
- Are less likely to have made investments in their business in the past 2 years.
- Are less likely to have considered relocating their business.

The second group

- Tend to own larger vessels.
- Employ people besides themselves.
- Are more likely to have outstanding loans and have larger balances than the first group.
- Tend to fish more than 88 days and are much more likely to need more than 88 days to break even.
- Are more likely to have made investments in their business during the past 2 years.
- Are more likely to have health insurance.
- Are less likely to have income from other marine or non-marine activities.
- Are more likely to have other family members contribute to their income.
- Are much more likely to have considered relocating.

These two groups were defined in the survey results as “family fishermen” and “commercial fishermen”, and each group has distinct approaches to their fishing business. Each group represented roughly 20-30% of survey respondents, making it difficult to identify a “typical Maine fisherman”. These fishermen face many of the same challenges. However different responses to these challenges can make it difficult to gain a consensus.

However, several key informants noted the value of having diversity in the fleet. A processor, for example, mentioned that small boats can get out to the fishing grounds after a storm and be back in a day or two with enough fish to supply the market, while the large vessels must make longer trips to be efficient. Also, the larger boats tend to tie-up in the summer, retaining their DAS for winter when prices are higher. Small vessels are constrained by winter weather, so they maintain the supply of fresh fish in the summer. On the fresh fish from the day boats, “you can see the iridescence, the people of Maine will be the losers if they miss out on that [due to regulations driving the small vessels out of business.]”

The concentration of Maine’s groundfishing industry around Portland has led many fishermen in Mid Coast or Eastern sections of the state to feel disenfranchised. Many fishermen have been allocated only “C” days under Amendment 13, and see little chance of re-entering the fishery. This disenfranchisement may add to the divisions within the industry.

The author has noted a sense of resignation from many fishermen. Many were initially angry at the regulations they believed unfairly impacted Mainers. But as each successive regulation came along, the anger turned to disbelief and eventual resignation. What resulted is the perception that no one is there to help them, and each fisherman or fishermen’s group must “fend for themselves”. As a result, there is often a sense of fierce independence that can lead to mistrust between individuals and groups. Although the City of Portland’s Taskforce on Groundfish and the Governor’s Groundfish Task Force both worked on similar issues, they did so independently of each other. Although this may have come about for very good reasons, the lack of cooperation is symbolic of

Maine fishermen as a whole, who, although admittedly are "all in the same boat", have not yet been able to develop a unified front from which to pursue their goals.

Cooperative Research

Cooperative Research is an important source of additional income for many Maine groundfishermen. The Northeast Consortium is the primary funding source for this collaborative research. It was founded in 1999, and distributes roughly $5 million each year to fishermen and scientists engaged in collaborative research projects. The Northeast Consortium is funded by federal groundfishery relief funds, and 75% of the direct project costs must be allocated to fishermen. The goals of the Northeast Consortium are:

- To develop partnerships between commercial fishermen and researchers, educators, and coastal managers.
- To enable commercial fishermen and commercial fishing vessels to participate in cooperative research and development of selective gear technologies.
- To help bring fishermen's information, experience, and expertise into the scientific framework needed for fisheries management.
- To equip and utilize commercial fishing vessels as research and monitoring platforms.

The National Marine Fisheries Service also distributes annual funds to fishermen pursuing collaborative research projects. In the Northeast, the NEFMC's Research Steering Committee identifies research priorities each year that help to guide NMFS's annual request for proposals.

The Gulf of Maine Research Institute is located on the Portland waterfront, and works with fishermen and scientists throughout the Gulf of Maine region to advance collaborative research. They are currently constructing a research laboratory on Commercial Street that will increase collaborative research opportunities within the region. (It should be noted that the author is an employee of GMRI.)

Several of the fishermen interviewed for this project credit collaborative research with "keeping them afloat". This funding opportunity has created a "new breed" of fisherman, who is well-versed in project development. However the opportunity can also create animosity amongst those fishermen who do not receive funding for their proposed projects. Some fishermen feel unable to participate in the research due to an inability to outfit their vessels competitively, or to provide adequate insurance coverage for sea samplers. The income that research generates can add to the perception that some fishermen have become professional businessmen as opposed to commercial fishermen.

Although collaborative research has helped many fishermen to "stay afloat" in difficult times, several interviewees noted that this funding has an uncertain future. They welcome it as an additional means of income, but view its future with the same skepticism with which they view that of commercial fishing in general.

Changes and Concerns in the Industry

Maine's groundfish industry has undergone a dramatic reduction in its groundfish fleet. In 1994, Maine had 838 groundfish permits, 201 of which had landings. By 2002, there were 638 permit holders, 141 of which had landings. Landings figures for 2003 are not yet available, but only 540 groundfish permits remain in the state (Maine DMR figures).

In 1996, 108 vessels listed Portland as their primary port, and 66 of these vessels registered landings. In 2002, 96 vessels listed Portland as their primary port, and 56 showed landings (NMFS permit data).

In 2001, the State Legislature Commissioned a "Committee to Study the Loss of Commercial Fishing Waterfront Access and Other Economic Development Issues Affecting Commercial Fishing". This committee issued a report in December, 2001, in which it outlined "Major issues affecting the industry". This list can be viewed in its entirety in the appendices of this document. The issues listed in the 2001 document are largely the same as the issues identified by the Governor's Groundfish Task Force in 2003/04, which are largely the same as the concerns identified in various state and local documents beginning in 1997.

Conversations with interviewees suggest that none of these major issues has been "solved" or even adequately addressed since this report came out. Several fishermen interviewed for this project commented that people seem to be interested in learning what the problems are, but no one does anything to solve them. The author of this project notes that many fishermen were reluctant to be interviewed, and expressed frustration at the number of surveys they're delivered through the mail or phone, without seeing any tangible results.

Following are the issues that came up most often in the author's interviews with fishermen:

Flexibility gone

Without exception, the Portland fishermen surveyed in this project have suffered a loss of flexibility. Maine fishermen would traditionally shift their focus throughout and within the seasons. Their choices would be dictated by stock availability, markets, and personal interests. For many fishermen, groundfishing was a way to fill in the spaces between other fisheries. One fisherman (interviewee) that traditionally focused on groundfish reported that roughly 20 years ago, he took part in a cod/haddock fishery near shore in April, and targeted flounder in May and June. A nearshore groundfishery was then available in early fall, followed by a Downeast scallop fishery in November. Other fishermen mixed lobstering and groundfishing.

The near-shore groundfishery is no longer available, the whiting fishery currently has no market, the Downeast scallop fishery has been severely restricted, the urchin fishery has suffered dramatic reductions, and the shrimp fishery's season and market have been unpredictable.

Ironically, concern over groundfish bycatch has severely limited or removed some of the traditional alternatives to groundfishing (*ie* herring, whiting and shrimp). Fishermen's access to groundfish alternatives have been severely limited just as their groundfish days are also restricted.

Many fishermen feel that the flexibility so intrinsic to Maine fishermen in the past has hurt them in the regulatory process. The National Marine Fisheries Service established baseline DAS based on historic participation in the fishery. Some of the years used were particularly good shrimp years, meaning many Maine fishermen chose to target shrimp for a good portion of the season. As a result, historic diversity in fishing practices may have led to decreased DAS allocations.

Fishermen are no longer able to fish according to weather and availability. Instead, they must maximize the dollar value of every trip. Summer was historically the busiest season for shoreside businesses supporting the commercial fishing industry (per interviewees). Now, winter sees the highest landings as fishermen focus on value rather than pounds. Many fishermen express concern over safety issues: the worse the weather, the fewer the boats fishing. The fewer the boats fishing, the higher the price, which offers a strong incentive to go out at times that would otherwise be avoided. Although several interviewees suggested that fishermen are compromising safety by not spending money on survival equipment, there is no evidence to support this. In fact, the safety industry has experienced good business lately (per interviewees). It should be noted that this increase in business has largely stemmed from the increase in the lobster industry.

The Lobster Issue

Maine fishermen are renowned for their informal territorial systems. According a decades-old unwritten rule, lobstermen had rights to the "hard bottom" and draggers had rights to the "soft bottom". These territories have shifted in the past 15 years as the number of lobstermen and draggermen have dramatically changed. There are currently over 5900 lobster/crab licenses in Maine (active vs. inactive figures not available). There are only 540 groundfish licensees, most of whom are not actively fishing (137 made landings in 2001 per NMFS).

Although trap limits have been put in place, there are still far more traps in the water now than ever before. During the 2004 shrimp season, fishermen complained that their traditional grounds were often not available to them due to the omnipresence of lobster gear. One interviewee stated that in years past, he knew all the lobstermen working in his area, and kept a notebook in his wheelhouse with their vessel names, buoy colors, captains' names and preferred VHS channel. When gear conflicts arose, he was usually able to call them on the VHS and work something out (lobstermen would often move their gear). This same fisherman claims that this is no longer possible, as there are "just too damn many of them to keep track". Other fishermen complain of a "lack of respect" between industries. They assert that many fishermen just leave their gear in the water over the winter rather than hauling it up. The advent of wire traps has also created problems for draggers. One fisherman commented that he believes some lobstermen are likely to cut the traps loose rather than haul them up. Wire traps are not as easily repaired as wooden traps, and can't be disposed of as easily. All fishermen complain of more gear interaction, be it "ghost traps" that litter the ocean floor, or active traps.

As gear conflict grows and Maine fishermen's incomes dwindle, Maine's prohibition on dragged lobsters has become a contentious issue for many groundfishermen. Maine prohibits the landing of lobsters caught in nets. It is also against Maine law for groundfish vessels homeported in Maine to land lobsters outside the state. Groundfish vessels are allowed to land 100 lobsters per day, 500 per trip in Massachusetts. Lobsters are caught in nets offshore primarily from December through April. Prices for lobster in these months range from $5-$6 per pound. Maine fishermen estimate revenues from lobsters could range from $60,000 to $100,000 per year (Inches, 2004). At a time when many fishermen are just barely breaking even, the restriction on lobsters has become a focal point for many groundfishermen recently.

Governor Baldacci commissioned a "Groundfish Task Force" in August of 2003 to examine the problems facing the state's groundfish industry and come up with possible solutions. "The lobster issue" (prohibition on netted lobsters) has repeatedly come up at Task Force meetings and at other industry events (author's personal observation). Maine lobstermen are numerous, and are very well organized through several organizations including the Maine Lobstermen's Association. Any attempt to address the issue in the past was regarded as "political suicide." Now, with their livelihoods on the line, groundfish permit holders believe they have no choice. The issue is believed to have a particularly strong impact on crew, who tend to be less loyal to one particular port and more inclined to relocate toward better opportunity. Maine already suffers from a lack of health insurance for fishermen, a lack of unemployment compensation, and a reduced number of boats and opportunities. All these factors render Massachusetts fishing ports more attractive to crew. One prominent fisherman commented at the Maine Fisherman's Forum that "The lobster issue is the number one issue impacting my opportunities to attract good crew." Crew's income is almost always a percentage of the catch. With an average crew of 2-3 (Market Decisions, 2002), and a daily income from lobsters of $860 - $1290 (figured from 100 lobsters weighing between 1.5 and 2.25 pounds each at a boat price of $5.75) per vessel, the incentive to "move south" is strong. Doing so would result in a roughly 20% increase in income for vessel owners, and a 50% income increase for crew (Inches, 2004).

Increasing regulations, decreasing profits and increasing lobster landings led many groundfishermen to enter the lobster fishery in the 1990's. Many of these former groundfishermen hold inactive groundfish permits, and would like the opportunity to re-enter the groundfishery when recovery occurs. Fishermen at the 2004 Maine Fishermen's Forum commented that these fishermen expect to be able to re-enter the fishery, but are not "giving anything back" to the groundfishery in return. Many groundfishermen expressed (both at the Forum and in personal conversations) dismay and frustration over the continued prohibition on dragged lobsters, especially at a time when the lobster industry is so healthy, and the groundfishery in such dire straits.

The Groundfish Task Force and a similar task force commissioned by Portland Mayor's Office have recently addressed this issue (findings and recommendations have not yet been released). It is widely acknowledged that the size and strength of the Maine lobster industry would make it very difficult to reverse the prohibition on the landing of dragged lobsters in Maine ports. They also acknowledge the possibility that this prohibition has a beneficial effect on the health of Maine's lobster stocks. However, the prohibition results in a significant financial loss to Maine's groundfishermen and the businesses that rely on them (such as the Portland Fish Exchange, Vessel Services, etc.). The Groundfish Task Force is currently investigating several possibilities in which to address this issue.

Marketing/Public Relations

The 2004 Maine Shrimp Season was a recent and dramatic example of how lack of markets can eliminate any benefits to be had from record landings. Competition from similar products and a lack of processing ability (the Northern Shrimp market is almost exclusively restricted to peeled product) combined with record landings to generate the lowest prices seen in over 10 years. Many fishermen worry that groundfish could follow suit.

The availability of substitutes on the world market impacts pricing of New England-caught fish. Many fishermen are keenly aware of the impact farm-raised salmon has had on Alaska's wild salmon fisheries. At several recent meetings, Maine fishermen have commented on the need for a New England or Maine marketing group. This group would be similar to the Maine Lobster Promotion Council (MLPC). The MLPC is supported by a per-pound surcharge levied at Maine lobster dealers. This ready supply of cash has allowed them to confront reports of overfishing in the national press. They are also able to further "brand" the Maine lobster in the world market. New England-caught groundfish does not have a similar cache, and consumers are not willing to pay more for there is currently no large-scale effort to enhance the popularity of local caught fish and shellfish. Some upscale restaurants tout their inclusion of locally-caught fish and shellfish on their menus. However, they also suffer from the perception that New England groundfishermen have destroyed ocean habitat and depleted the oceans (see below). For brokers who rely on the Portland Fish Exchange to obtain high quality supply, the inconsistency in landings attributed to the effects of regulations hamper their ability to retain a "Maine only" source of product. Fishermen interviewees complained that "everything has increased in price by 30 to 50%, except the fish the boats bring in."

The concept of enhanced marketing was investigated as far back as 1981, when the Maine Groundfish Industry Development Team commissioned "Market Development Strategies for Maine Groundfish" (Fisheries Consulting Group, 1981). The Governor's Task Force on Groundfish is currently examining the issue as well.

In addition to marketing Maine seafood products, it would be beneficial to enhance the public's perception of New England fishermen. Many fishermen feel that environmental groups have made a concerted effort to portray them as greedy pillagers of the nation's fisheries resources. Reports of collapsed fisheries resources are widespread, and the public is not fully educated on the complicated factors that led to current conditions. It is much easier to assume that fishermen have simply been too greedy, and this perception is rarely confronted outside fishermen's journals. A public relations campaign could help to educate the public about fishermen's role in the recovery of fisheries resources. It would also enhance the value of New-England caught fish.

Consolidation, DAS Acquisition and Safety

Portland's fishermen have already experienced consolidation first-hand. As Maine's access to groundfish became restricted, the industry consolidated in Portland. The same happened for shoreside businesses and processors. Now, New England's groundfishery is being further restricted. Although Portland was once at the center of a regional fishing industry, it now lies at its outer edge. Portland is currently experiencing the same incentives that led Downeast and mid-coast Maine ports to lose their infrastructure and vessels. Versions of the following statement has been voiced numerous times by fishermen, shoreside businessmen and management officials: "There is currently NO economic reason to fish for groundfish out of Maine. The only reason guys still do it is that they simply WANT to be here."

Ironically, it is the concept of consolidation through DAS leasing that may prevent Portland's fishing industry from being lost. Most Maine fishermen are philosophically opposed to the concept of DAS leasing since it inevitably leads to consolidation and elimination of small fishing businesses because economic principles dictate that DAS leased will flow to those parties who are able to prosecute them most efficiently. However, with many Maine fishermen approaching or below the "break-even" point, some believe that DAS leasing may be the only way fishermen in this state can stay in business. Yet, the average catch per day has already increased, it seems to be the lack of infrastructure especially too few processors and a lack of market that has kept prices depressed. This presents another challenge to Maine's fishing industry, which is already in a crisis state.

Another effect of DAS leasing, some interviewees identified, is that money is being used to lease or buy permits/DAS that would normally be spent on vessel upkeep. Boats are being pushed beyond safe limits before they are repaired. They are also forced by economic circumstances to fish in worse weather when the prices are higher. One interviewee commented, "boats are safer but they are taking more chances."

The State of Maine

Many fishermen interviewed for this project felt the state of Maine does not value the commercial fishing industry. The prohibition on landing lobsters, taxes on fuel and ice, lack of unemployment insurance, unwillingness to work with fishermen on tax bills, and (what is perceived as a) lack of advocacy at the regional level are all viewed as evidence of Maine's disdain for the commercial fishing industry, especially when compared with Massachusetts.

The report of the Governor's Groundfish Task Force released in June 2004 addressed many of these issues. Not surprisingly, the Task Force's report echoed many of the suggestions that interviewees for this project made. For example, interviewees suggested that the State should have a pool of days (i.e., DAS) to allocate to small boats. The Task Force initial recommended step to preserve the fishery reads:

> *Acquire fishing rights and permits that will allow Maine fishermen to stay in business until stocks increase. Over the last several years, many of our small, coastal fishermen have lost their harvesting permits. The loss has been particularly acute in fishing communities east of Rockland. Acquiring fishing rights will ensure Maine retains a diverse, geographically decentralized fleet where the economic benefits of increasing harvests are distributed spread along the entire coast.*

Project participants said the "the industry needs a strong infrastructure, not centralized ownership. . . we need a multitude of owners." The Task Force recommended that Maine voters be sent a Fisheries Bond issue to "*develop infrastructure, reduce loan rates, create a revolving loan fund, improve management and marketing and promote research and product development in Maine's fishing industry*." As noted earlier in this report, the bond bill did pass in November 2005.

Interviewees for the project also suggested that there be better P.R. for the industry, in part so that young people would be attracted. The Task Force recommended:

> *Actively support the creation of an industry coalition of broad-based fishing interests (including representation from a groundfish advisory council) to educate and promote fishing interests to both the public and the state legislature. Members could be drawn from both harvesting and shoreside businesses from the many fisheries conducted from Maine ports.*

Other recommendations of the Task Force address topics raised by participants in Portland's Panel Project and recorded elsewhere in this report. A few suggestions or comments by panel participants and interviewees that were not specifically addressed by the Governor's Task Force include:

- Have a separate auction for by-catch (within the regulatory limits) with a 20 percent tax to be devoted to research
- "Education is the key to sustainability"
- Research other countries' fisheries management.

Summary

Maine fishermen and fishing-related industries have been reduced to a bare-bones level by strict regulations intended to preserve the fishery. Each successive wave of regulations has resulted in losses, so that the remaining individuals and businesses "survivors" in the truest sense of the word. Everyone left now has survived through the flexibility and independence so intrinsic to and characteristic of the state of Maine.

The Maine fishing industry will only survive by continuing this pattern of flexibility: by accepting the concept of DAS leasing, and hopefully by finding a way to hold on to or increase their share of New-England-caught fish. Maine state government could help preserve the fishing industry, and foster a new sense of good will from the industry, by helping fishermen acquire DAS. Both the Governor's Groundfish Task Force and the Portland Mayor's Groundfish Task Force have addressed this issue. A marketing program to aid in the development of value added products and higher prices for high quality could also contribute to the industry's sustainability.

Although Maine fishermen find themselves at the perimeter of the fishing industry, they remain proud of their profession, and committed to doing what's necessary to preserve it. The next few years will determine whether or not this is possible.

Acknowledgements

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Appendix 1: Greater Portland Commercial Fishing Infrastructure Inventory

Fresh Fish/ Shellfish Buyers and Processors

Groundfish

<u>Auction:</u>
Portland Fish Exchange

<u>Auction buyers located in Maine:</u>
AD/JON
Bristol Ray Swetson
Browne Trading
Cozy Harbor Seafood
Douty Bros
Emerald Seafood
Free Range Fish
Fresh Pack Seafood
Harbor Fish
Maine Stream Seafood
North Atlantic
Nova Seafoods
PJ Merrill
Robert J Preble and Sons
Sea Fresh USA
Sebasco Wharf
Tang of the Sea

<u>Not located in Maine:</u>
Channel Fish Processing
Great Eastern Seafood
Legal Seafood Bill Hollar
M.F. Foley Mike Foley
New England Marine Resources
North Coast Seafoods
Sousa Seafoods
Tri State Seafoods

<u>Seller's Representatives</u>
Barbara Stevenson
Avis Leavitt

Lobsters/Crab Processing
Sea Fresh International
Portland Shellfish
Portland Lobster
Nancy's Shellfish
New Meadow's Lobster
CBS Lobster
Cozy Harbor
Douty Brothers
PJ Merrill
Preble Fish

Urchins
ISF Trading

Ice Suppliers
Vessel Services

Fuel

Facilities on the waterfront:
Vessel Services

Oil Trucks/Vessel Delivery:
Portland Harbor Fuel

Fishing Vessel Haul out/ Repair:
Gowen's Marine
South Portland Marine

Engine Repair
Bob Blethem. - Fishing specifically
John Pride (Diesel Engine) specifically fishing
Casco Bay Diesel
Southworth Milton (Jordan Milton)
Detroit Diesel
Cummins in South Portland
Billing's Marine (Stonington)
Westbrook Marine

Equipment/Gear Repair:

D&E Enterprises
Jeff Flagg
Swan Nets (Gloucester)
Trawl Works (Rhode Island)

Gear and Supply Shops:

Vessel Services Gear Company
Hamilton Marine NAPA
Saco Bay Tackle
D&E Enterprises Gear Works
Rose's Marine (Gloucester, MA)
Kennebec Marine
Doug Mayo (has a shop on Hobson's Pier)
New England Marine and Industrial (Portsmouth, NH)
IMP Fishing Gear (New Bedford)
Mike Murray - Nets Plus
NETS (Kittery)
Reidar's (Fairhaven, MA)
Bruce's Splicing and Rigging (New Bedford, MA)
F&B Rubber (New Bedford, MA)
Chase Leavitt
Maine Life Raft
Trawlworks (Rhode Island)

Hydraulics

Professional Fluid Power
Lonnie's Marine (Brunswick)
Pine Hill (New Bedford)
Jordan's Marine and Fishing Vessel Repair
Rose's (Gloucester)
Northeast Hydraulics (Kittery)
Hydraulic Hose and Supply
Rhode Island Engine (Narragansett, RI)
Flow Rig (Scarborough)
Scandia (Fairhaven, MA)
H&H Propeller (Salem, MA)
NAPA (Auto Parts)
Portland Rubber PRC

Electricians:

Tim Caron - Marine Electric

Jim Propp (Brunswick)
Harry Pappy
Seatronics (Gloucester)
Blank Mitchell

Electronics

Sawyer and Whitten Marine Computer Systems
Maartek Marine (New Jersey)
Lew Grant (Rockland)
Jim Propp (Brunswick)
Hamilton Marine (no installations)
Port Harbor Marine

Marine Lawyers

Marine Sea Law
Ed Bradley
Kelly Remmel & Zimmerman
Latti & Anderson LLP
Nicholas H Walsh

Open Space for Working on Gear:

"The Desert" aka "The Graveyard" at Portland Fish Pier
D&E Enterprises (Scarborough)

Divers

Tom Jordan and Steve Malcolm
Diver Down
Tall Doughty
Waterworks Diving Service
Downeast Underwater Salvage
Rollins Scuba Associates
S&S Dye
Rob Odlin

Welders
Robert Gaten
Steve Viola
Timmy Holland
Bob Blethen

Brian Pushard

Marine Agencies

Vessel Documentation
David Fuburg
Tri Nav (purchased Athern Marine)
Davis Consultants
Marci Peters Inc.
Bilodeau Agency

Marine Insurance

Smithwick & Clarke
CM Bowker
Island-Wide Marine Agency
Ocean Marine Underwriters (RI)
Blackadar Marine Insurance (NH)
David Frulla Associates

Air

Johnson’s
Aqua Diving Academy
Rockland Boat
Southwest Boat

Boat Builders

Washburn and Doughty (East Boothbay)
Wesmac (Spruce Head)
Sample Shipyard (Boothbay)
Jonesport Shipyard (Jonesport)
Young Brothers (Corea, ME)

Mooring Space

Long-term

Hobson’s Pier $290 - $700
Widgery Wharf $300 - $600
Custom House Wharf $528
Union Wharf $300
Portland Fish Pier $300 - $900
South Portland Town Dock

Temporary or Transient

Portland Fish Pier $21 - $46.20/day
Dimillo's

Memorial Funds/Services

Maine Fishermen's Cooperative
Maine Fishermen's Memorial

For more on Portland, Maine, check out
http://www.portofportlandmaine.org/

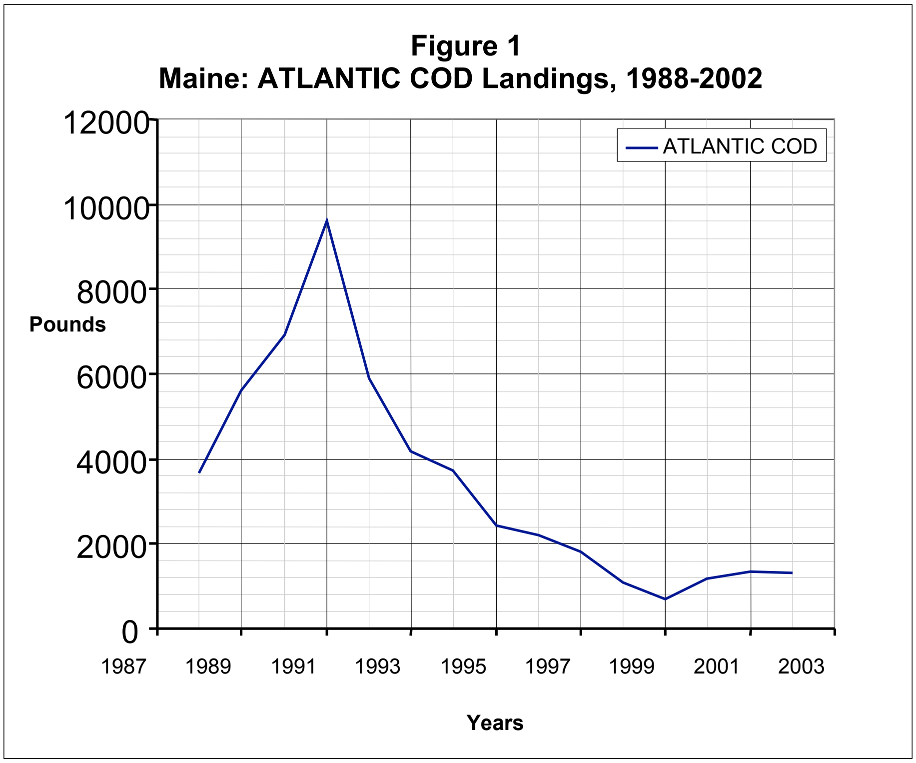
Appendix 2—Major Issues, 2001

"Major issues affecting the industry" from the Final Report of the Committee to Study the Loss of Commercial Fishing Waterfront Access and Other Economic Development Issues Affecting Commercial Fishing, December 2001.

- **Coastal development and infrastructure.** The coast of Maine is undergoing dramatic change. Those communities where the coast is still dominated by commercial fishing are facing pressures from residential development and tourism. The commercial fishing industry is impacted by coastal development through the loss of water access (water access for the public in general is impacted by coastal development), conflicts over waterfront uses, the cost of maintaining necessary infrastructure and in increased cost of doing business.
- **Training and education.** The fishing industry is increasingly becoming a global market and, due to a number of factors, it is becoming more competitive. Increased skill levels in business and management will become vital to the success of the industry.
- **Health care.** The commercial fishing industry in Maine is predominantly a single proprietor industry. As with most small businesses in Maine, the cost of health insurance for people in this industry is extremely high. As a result, many people in the industry do not have health insurance. The Executive and Legislative branches of government should include members of the commercial fishing industry in discussions regarding health insurance for small businesses.
- **New products/new markets/research.** The need for additional research relating to the commercial fishing industry is necessary for the stabilization and growth of the industry in Maine. Specifically, research into new products, new markets and new gear types is essential to the survival of harvesters and processors. Good scientific data is also essential to stabilizing the resource.
- **Processing.** Although seafood processing in Maine provides 2200 jobs, a significant amount of seafood is exported out of Maine for processing. Reasons for out of state processing include lower costs for processing outside of Maine, a shortage of trained workers, a lack of incentives for processors to do business in Maine and a lack of critical infrastructure.
- **Housing.** As a result of the pressures facing the coast, housing for commercial fishing industry workers is increasingly difficult to afford.
- **Stability of the resource and the uncertainty of regulation.** Many of the fishery resources that commercial fishermen depend on are considered over harvested or at the least unstable. As examples: the groundfish collapse in the mid-1990s; sea urchin declines; concerns over the recruitment of new lobsters. Overall, there is general consensus that the fisheries must be managed in a way that will ensure that they provide a sustainable resource. A related issue the industry is faced with, in part due to the instability of the resource, is the uncertainty of already complex fisheries management regulations.

Appendix 3—Landings Data 1998 – 2002

(From Maine Department of Marine Resources)



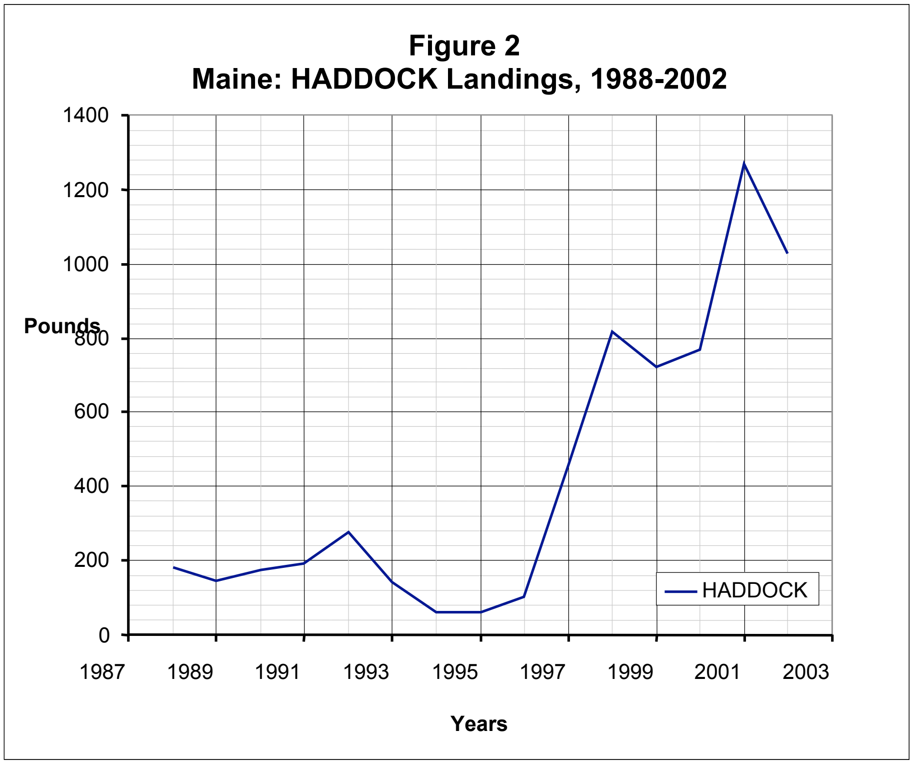


Figure 2
Maine: HADDOCK Landings, 1988-2002
Pounds
1400
1200
1000
800
600
400
200
0
1987
1989
1991
1993
1995
1997
1999
2001
2003
Years
HADDOCK

Figure 3
Maine: ATLANTIC HERRING Landings, 1988-2002

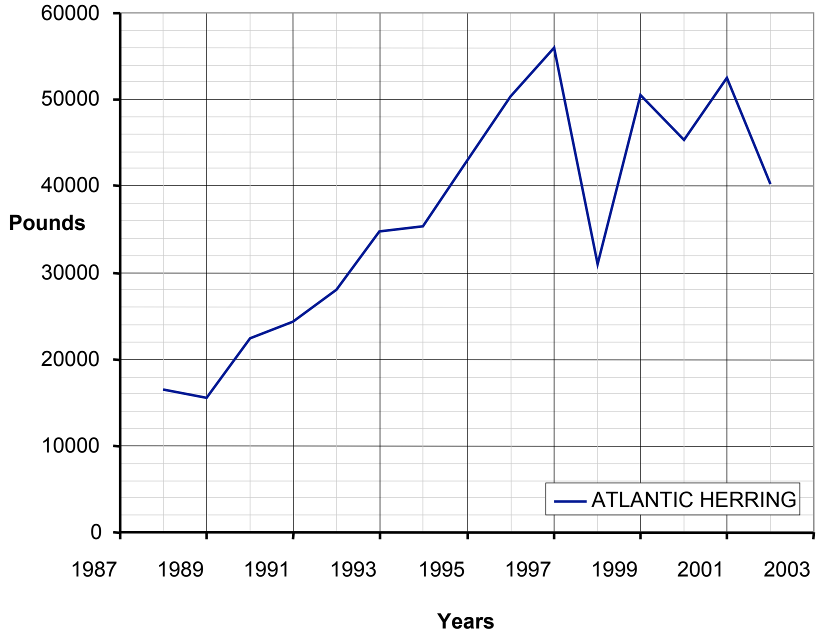
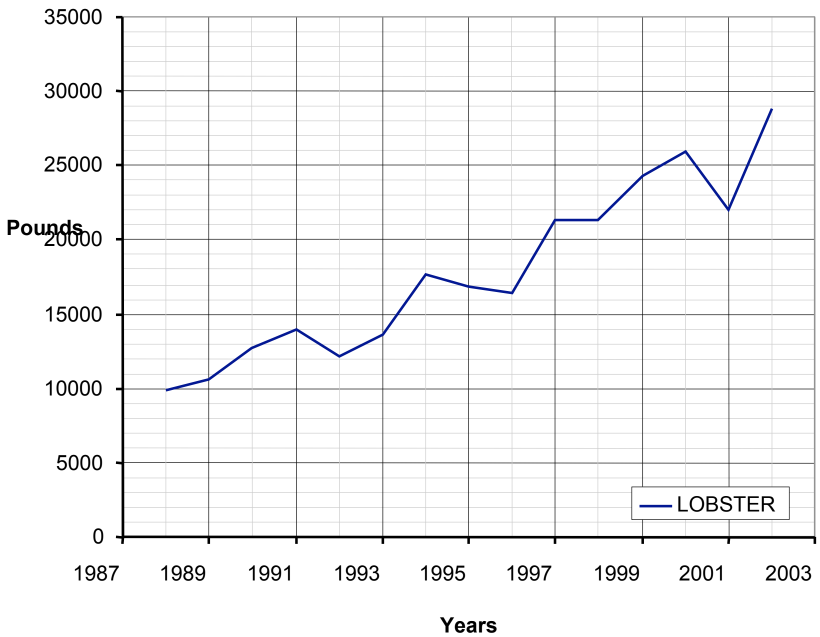


Figure 4
Maine: LOBSTER Landings, 1988-2002



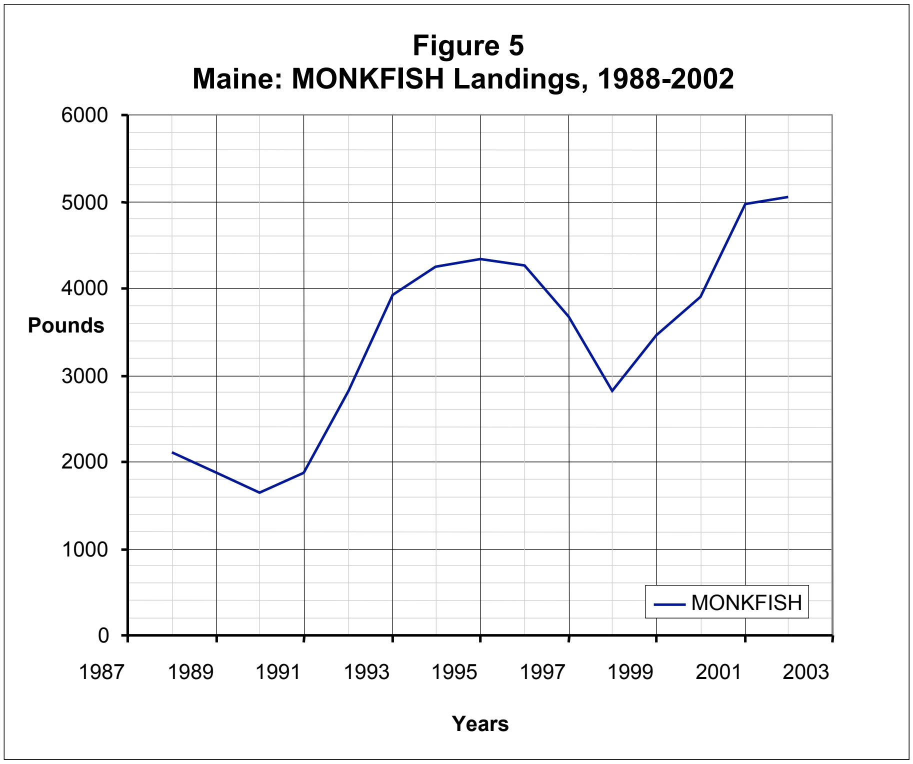


Figure 5
Maine: MONKFISH Landings, 1988-2002
6000
5000
4000
Pounds
3000
2000
1000
0
1987
1989
1991
1993
1995
1997
1999
2001
2003
Years
MONKFISH

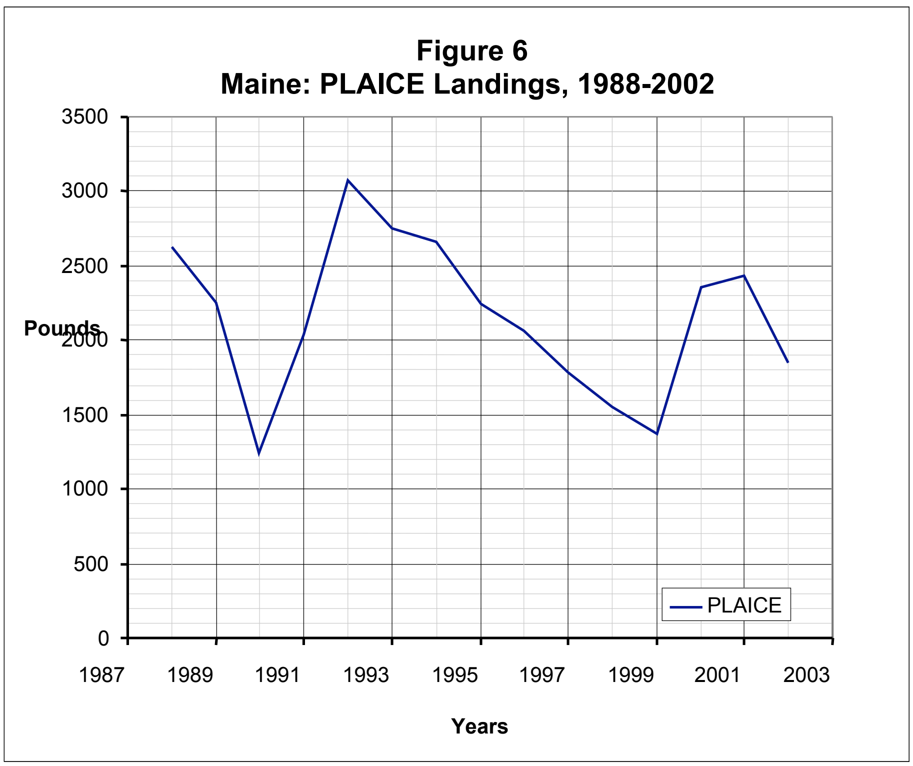


Figure 6
Maine: PLAICE Landings, 1988-2002
3500
3000
2500
Pounds
2000
1500
1000
500
0
1987
1989
1991
1993
1995
1997
1999
2001
2003
Years
PLAICE

Figure 7
Maine: POLLOCK Landings, 1988-2002

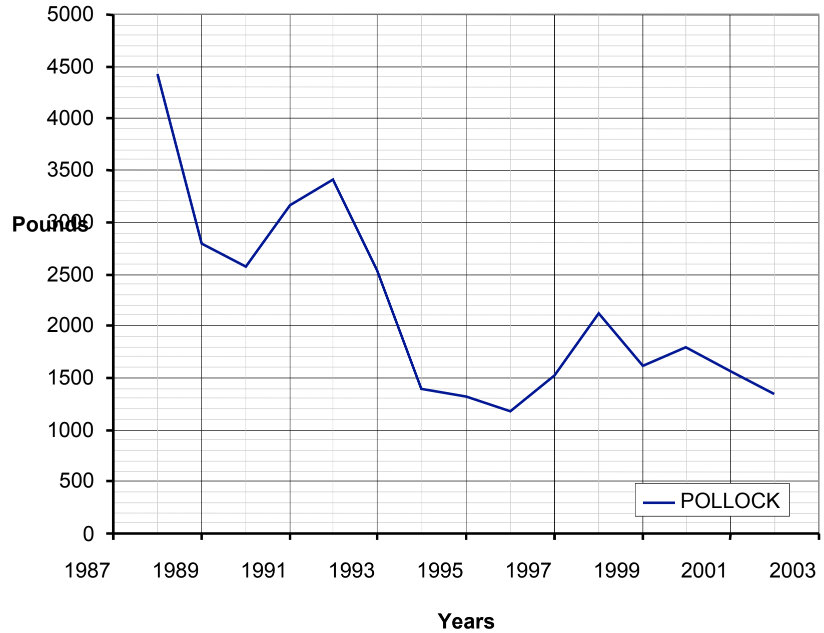
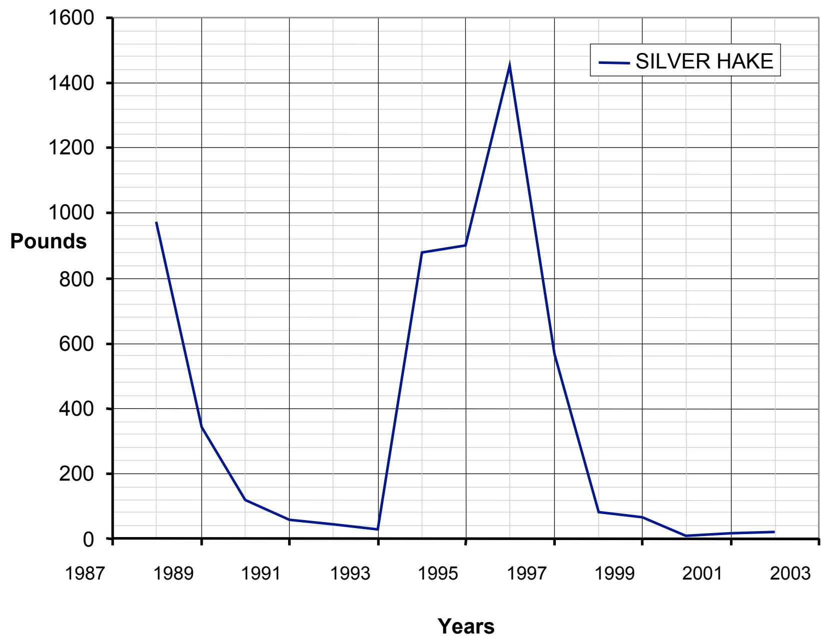


Figure 8
Maine: SILVER HAKE Landings, 1988-2002



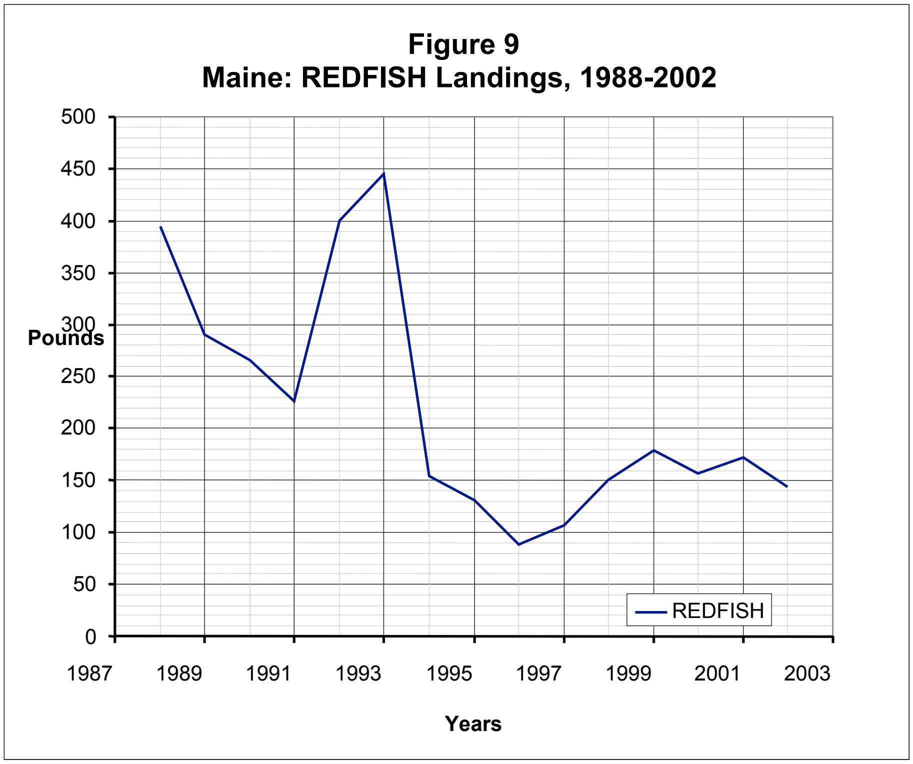


Figure 9
Maine: REDFISH Landings, 1988-2002
500
450
400
350
300
Pounds
250
200
150
100
50
0
REDFISH
1987
1989
1991
1993
1995
1997
1999
2001
2003
Years

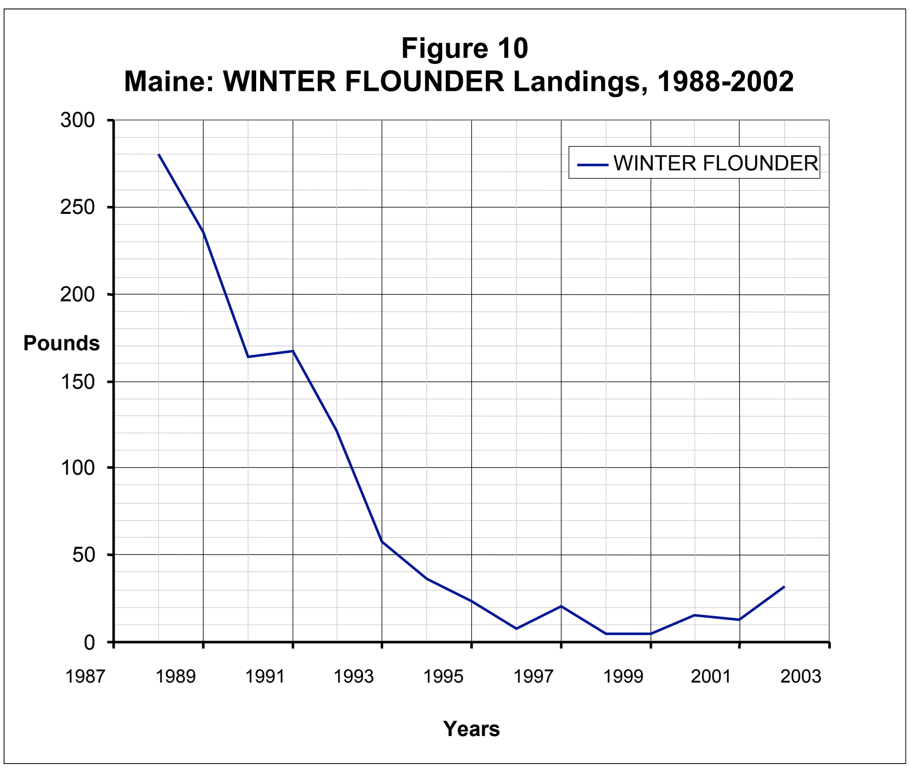


Figure 10
Maine: WINTER FLOUNDER Landings, 1988-2002
300
250
200
Pounds
150
100
50
0
WINTER FLOUNDER
1987
1989
1991
1993
1995
1997
1999
2001
2003
Years

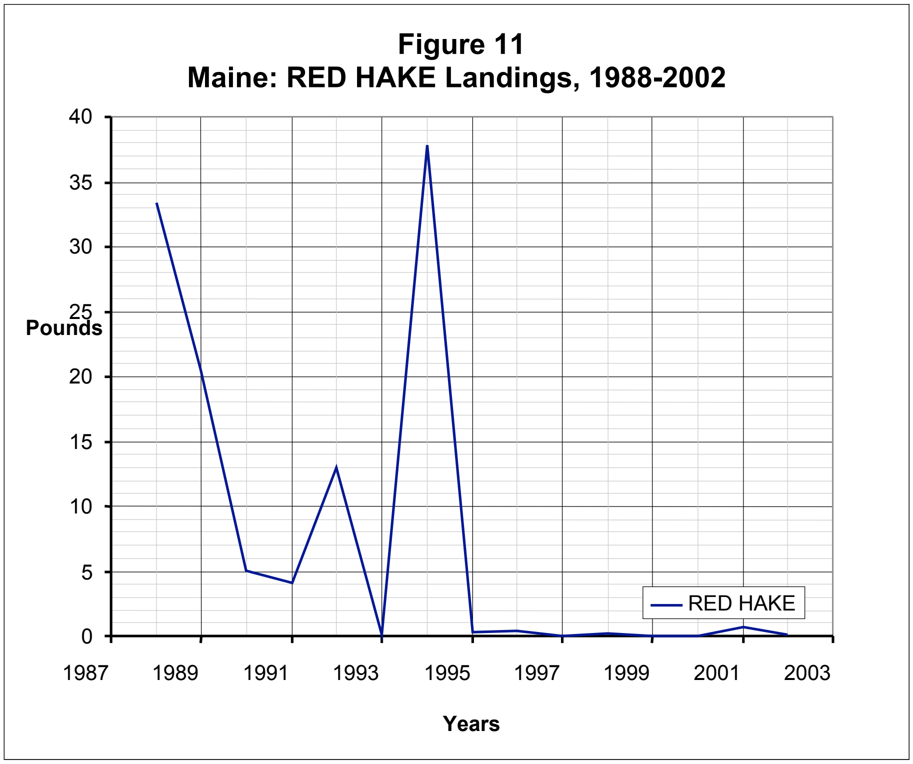


Figure 11
Maine: RED HAKE Landings, 1988-2002
Pounds
40
35
30
25
20
15
10
5
0
1987
1989
1991
1993
1995
1997
1999
2001
2003
Years
RED HAKE

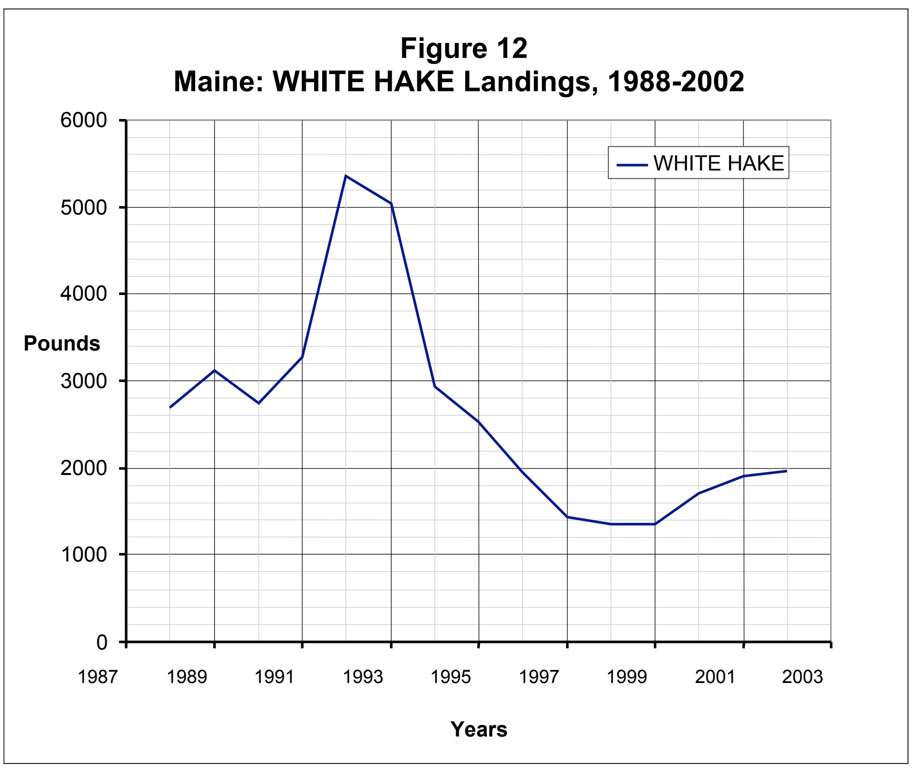


Figure 12
Maine: WHITE HAKE Landings, 1988-2002
Pounds
6000
5000
4000
3000
2000
1000
0
1987
1989
1991
1993
1995
1997
1999
2001
2003
Years
WHITE HAKE

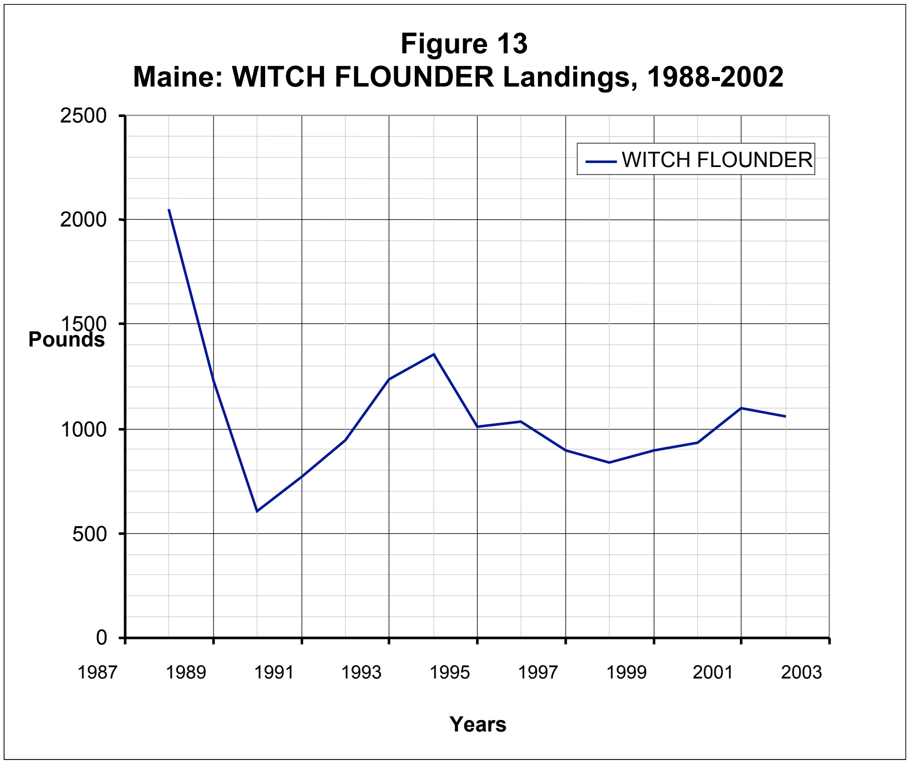


Figure 13
Maine: WITCH FLOUNDER Landings, 1988-2002
WITCH FLOUNDER
Pounds
2500
2000
1500
1000
500
0
1987
1989
1991
1993
1995
1997
1999
2001
2003
Years

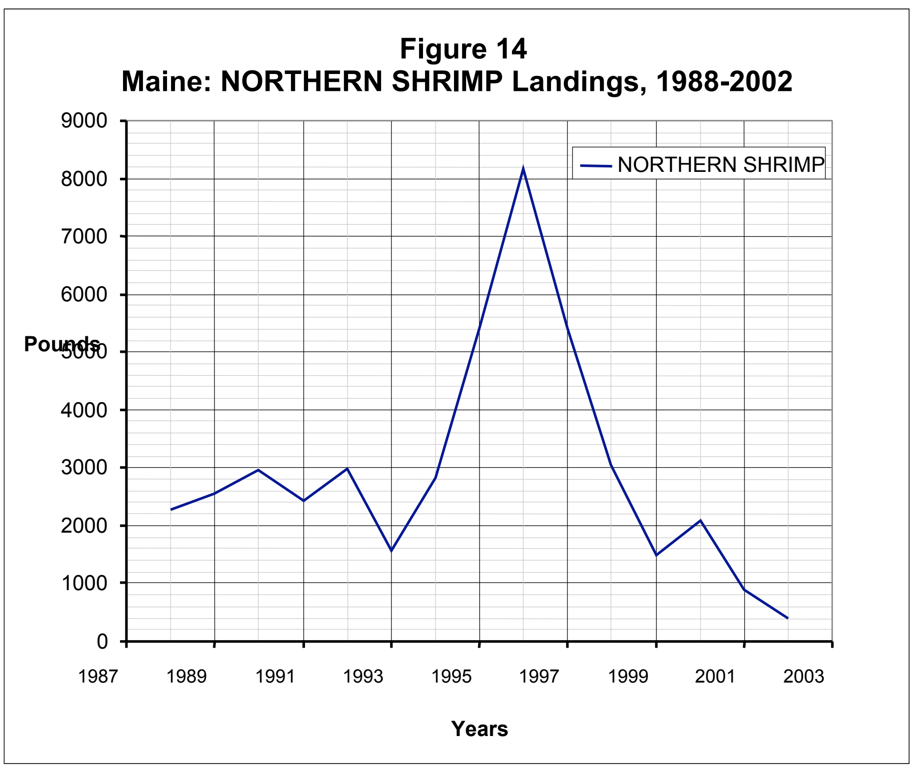


Figure 14
Maine: NORTHERN SHRIMP Landings, 1988-2002
NORTHERN SHRIMP
Pounds
9000
8000
7000
6000
5000
4000
3000
2000
1000
0
1987
1989
1991
1993
1995
1997
1999
2001
2003
Years

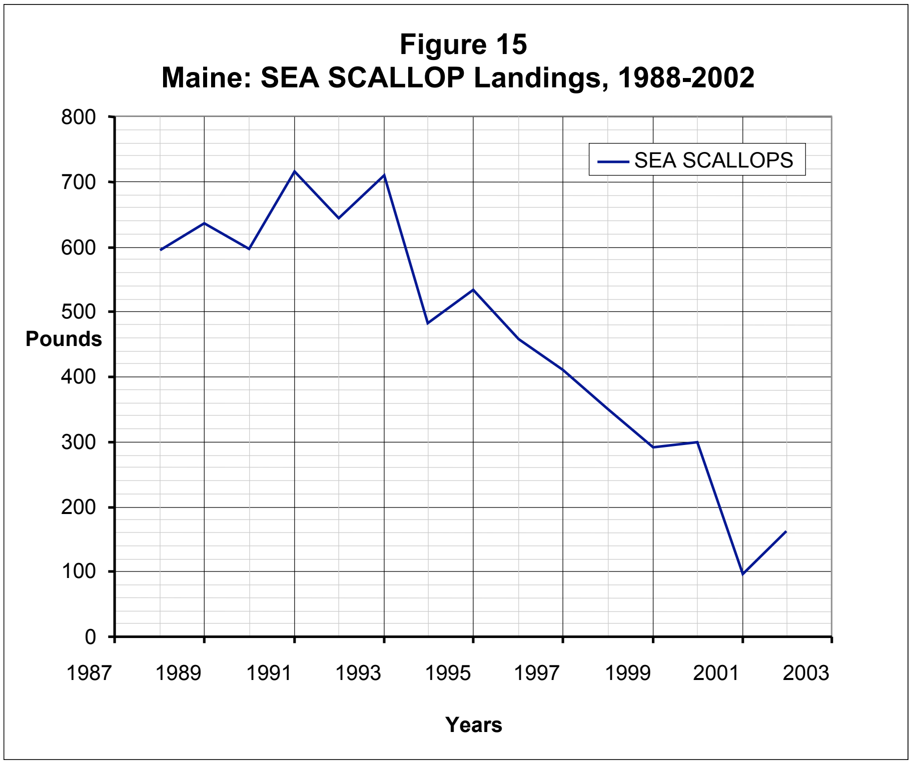


Figure 15
Maine: SEA SCALLOP Landings, 1988-2002
SEA SCALLOPS
Pounds
0
100
200
300
400
500
600
700
800
1987
1989
1991
1993
1995
1997
1999
2001
2003
Years

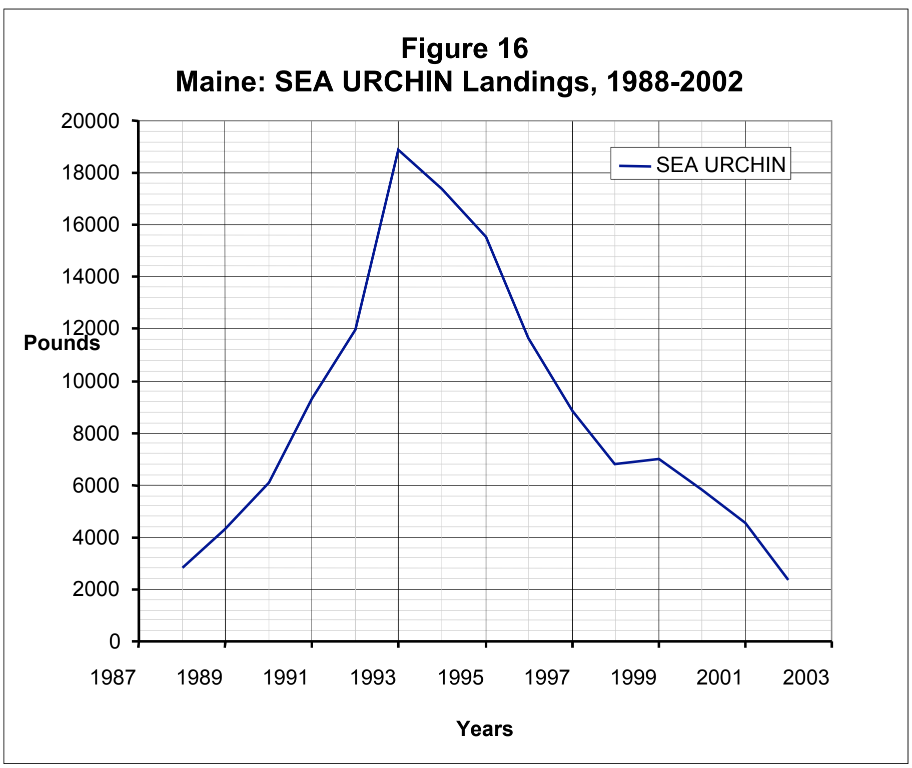


Figure 16
Maine: SEA URCHIN Landings, 1988-2002
SEA URCHIN
Pounds
0
2000
4000
6000
8000
10000
12000
14000
16000
18000
20000
1987
1989
1991
1993
1995
1997
1999
2001
2003
Years