North Carolina Division of Marine Fisheries

A Social and Economic Analysis of Commercial Fisheries in North Carolina

Atlantic Ocean

Scott Crosson, Ph.D.
Division of Marine Fisheries
North Carolina Department of Environment and Natural Resources
P. O. Box 769
Morehead City, NC 28557-0769

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Contents

Figures and Tables

INTRODUCTION

In 2008 and 2009, the North Carolina Division of Marine Fisheries (DMF) conducted the eighth in a series of studies investigating the social and economic characteristics of North Carolina's commercial fisheries by interviewing fishermen and fish dealers. The previous studies were similar analyses of the Albemarle Sound Management Area (Diaby 2000), Pamlico Sound (Diaby 2002), Core Sound (Cheuvront 2002), Beaufort Inlet to the South Carolina Border (Cheuvront 2003), the Snapper-Grouper Fishery (Cheuvront and Neal 2004), Albemarle/Pamlico Sounds (Crosson 2007a), and Core Sound (Crosson 2007b).

This study surveyed North Carolina fishermen who leave the inlets and work in the Atlantic Ocean proper, and is hence more "statewide" than the previous surveys, which were more regional in scope. Also for the first time, the study surveyed all of the fishermen who work in federal waters, in the Exclusive Economic Zone (EEZ). The fishermen in this study are hence a more diverse group, from near-shore shrimp trawlers to offshore rod-and-reel fishermen who harvest snappers and groupers or troll for king mackerel. Regulations on catch in the EEZ are decided by federal councils (the Mid- and South Atlantic Fishery Management Councils, MAFMC and SAFMC) and the National Marine Fisheries Service (NMFS). The number of restrictive management measures has increased in recent years, particularly in the bottom fishing sector. Understanding the impacts of these restrictions on the commercial fishing industry as a whole requires knowledge of the social and economic characteristics of these commercial fishermen. This information is important for the development of both state and federal fishery management plans as required by the North Carolina Fisheries Reform Act of 1997 and the Magnuson-Stevens Fishery Conservation and Management Reauthorization Act of 2006.

Study Area

The fishermen in this study work in the Atlantic Ocean and land at least some portion of their catch in North Carolina. The NC Division of Marine Fisheries' trip ticket program divides this area into state waters (within three miles of shore) and the EEZ (from three to 200 miles offshore), and again north and south of Cape Hatteras, a natural divide between the waters cooled by the Labrador current and those warmed by the Gulf Stream. Water temperature changes are common as one rounds the Cape, and the point stands as the divider between many different fisheries. Figure 1 displays the North Carolina coast and neighboring Atlantic Ocean.

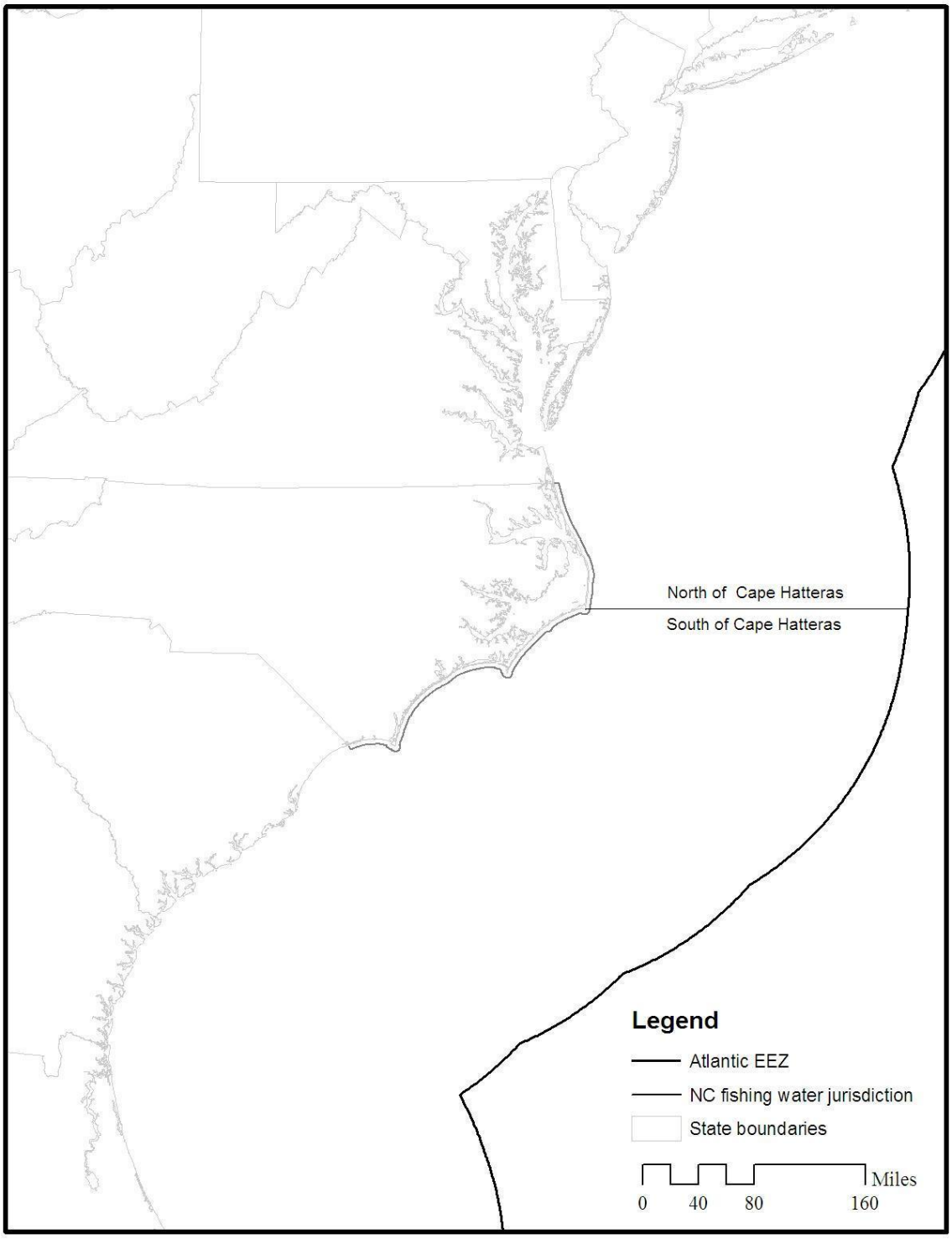

Figure 1. Map of the North Carolina State Waters and the Exclusive Economic Zone (NC DMF GIS Program).

Study Objectives

The specific objectives of this study are:

1. To describe the socioeconomic aspects of commercial fisheries in the areas off of North Carolina's coast, including demographic characteristics of commercial fishermen and dependence on commercial fishing activities,

2. To collect costs and earnings information from commercial fishermen in order to develop estimates of the costs, earnings, and returns associated with commercial fishing,

3. To assess commercial fishermen's perceptions of fishery regulations, conflict, and relevant issues including the future of the industry, and

4. To compare these results to those of previous surveys when appropriate.

METHOD

Recruitment and Participation Rates

In 2008, a list of 714 commercial fishing license holders was obtained from the NC DMF license database. The list reported every person or business which landed at least $1,000 in ex-vessel value of seafood from water bodies in the study area during calendar year 2007. Licenses included were the Standard Commercial Fishing License (SCFL), Retired Standard Commercial Fishing License (RSCFL), and the Land or Sell License (for non-residents landing federally-managed species in North Carolina). Project-specific interviewers surveyed 177 of these fishermen for the project. This response rate (25%) is lower than in previous surveys, due largely to the large number of individuals in the pool who could not be contacted during the time frame despite repeated attempts. It is possible that unlike the estuarine fisheries, many of the ocean fishermen spend large amounts of time out-of-state, complicating efforts to reach them.

Survey Instrument

The Socioeconomic Program of the Division's License and Statistics Section has a goal of continually surveying fishermen on a staggered five-year basis. Fishermen representing an area of the coast are usually being surveyed in any given year, with the goal that the area will be surveyed again in five years for longitudinal purposes. Cheuvront (2002, 2003) and Cheuvront and Neal (2004) refined the survey to the point that the general format is set, with minor modifications made to reflect each area's specific fisheries and industry. Surveying is primarily done over the phone.

The data collected in the survey (see Appendix 1) includes information concerning:

(i) Individual socio-demographics
(ii) Characteristics of the fishing business
(iii) Fishing vessel characteristics and expenses
(iv) Targeted species and gear combinations
(v) Income from fishing
(vi) Financial costs of doing business
(vii) Attitudes regarding fishery management
(viii) User group conflicts
(ix) Perceptions of the fishing industry

The fishermen were surveyed in the second half of 2008 and in the first quarter of 2009. Results were entered into an Excel spreadsheet. The data was analyzed using the Statistical Package for the Social Sciences (SPSS release 12.0.0 [SPSS, 2003]). Final data verification, assigning labels to variables, and additional variable calculations were completed in SPSS along with all data analyses. The primary analyses in this report consists of frequency and simple univariate analyses. Further analyses of the entire dataset or subsets of the data are available upon request from the author of this report.

RESULTS

Fishermen

Demographics

The oceangoing fishermen interviewed here were almost all white (98%) men (100%). They have been fishing, on average, for 22 years. They range in age from 26 to 79 years old, with a mean age of 50. Most (79%) are married. These numbers are similar to those of fishermen working the estuarine[1] waters in previous studies. Demographic information on the respondents is displayed in Table 1.

Table 1. Demographic information of respondents.

Gender	Frequency	Percent
Male	176	100%
Female	0	0%
Racial/Ethnic Background	**Frequency**	**Percent**
White	173	98%
African-American	1	1%
Asian-American	2	1%
Hispanic	0	0%
Education	**Frequency**	**Percent**
Less than High School	26	15%
High School Graduate	62	36%
Some College	40	23%
College Graduate	46	26%
Marital Status	**Frequency**	**Percent**
Married	138	79%
Divorced	18	10%
Widowed	2	1%
Separated	0	0%
Never Married	17	10%
# of People in Household	**Frequency**	**Percent**
One	20	12%
Two	79	46%
Three	35	20%
Four	30	17%
Five	6	3%
Six	2	1%

There are substantial differences between these commercial fishermen and those surveyed recently in Albemarle, Pamlico, and Core Sounds. Half of the oceangoing fishermen have at least some college education, and a quarter completed their bachelor's degrees, including several graduate degrees. These numbers are roughly double those of the estuarine fishermen. Fishing income was not as evenly distributed as for the estuarine fishermen, with a higher percentage making over $30,000 per year from fishing but also a higher percentage not making anything or losing money (Figure 2). They are much less likely to have come from a fishing family; 49% reported being

[1] For the purpose of this study, "estuarine" fishermen are those who work inside the inlets and sounds. "Oceangoing" fishermen are those who work in the Atlantic Ocean.

the first person in their family to commercial fish, compared to 16% of the estuarine fishermen.

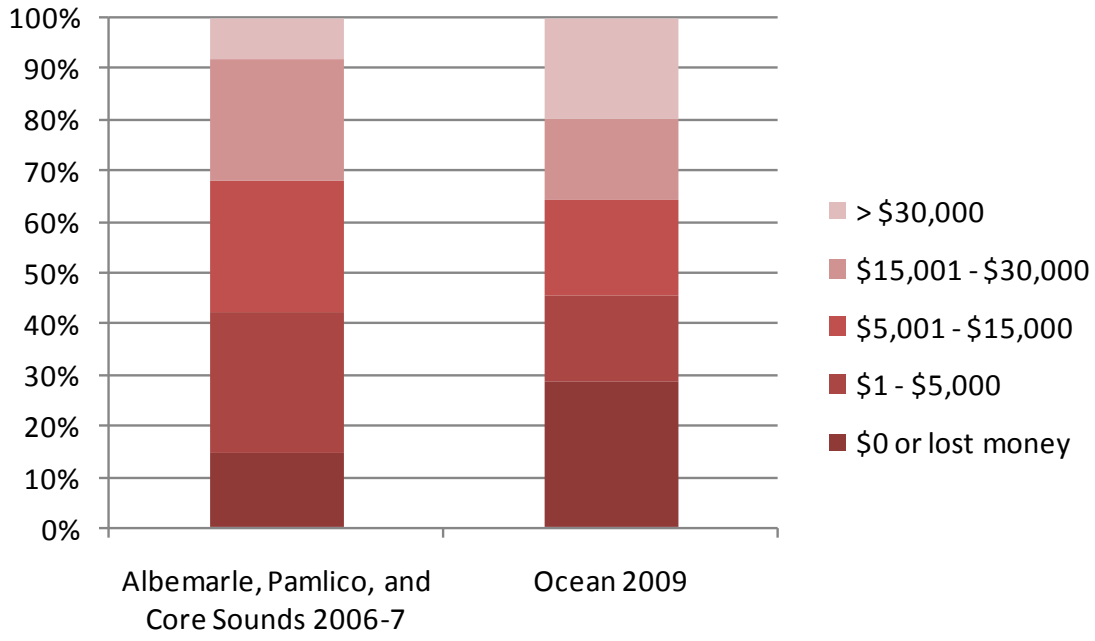

Figure 2. Commercial fishing income of respondents.

Household incomes for the oceangoing fishermen were much higher overall than those of estuarine fishermen as well (Figure 3). Over half of the these fishermen reported household incomes of over $50,000/year, more than double the rate of the fishermen working the other areas.

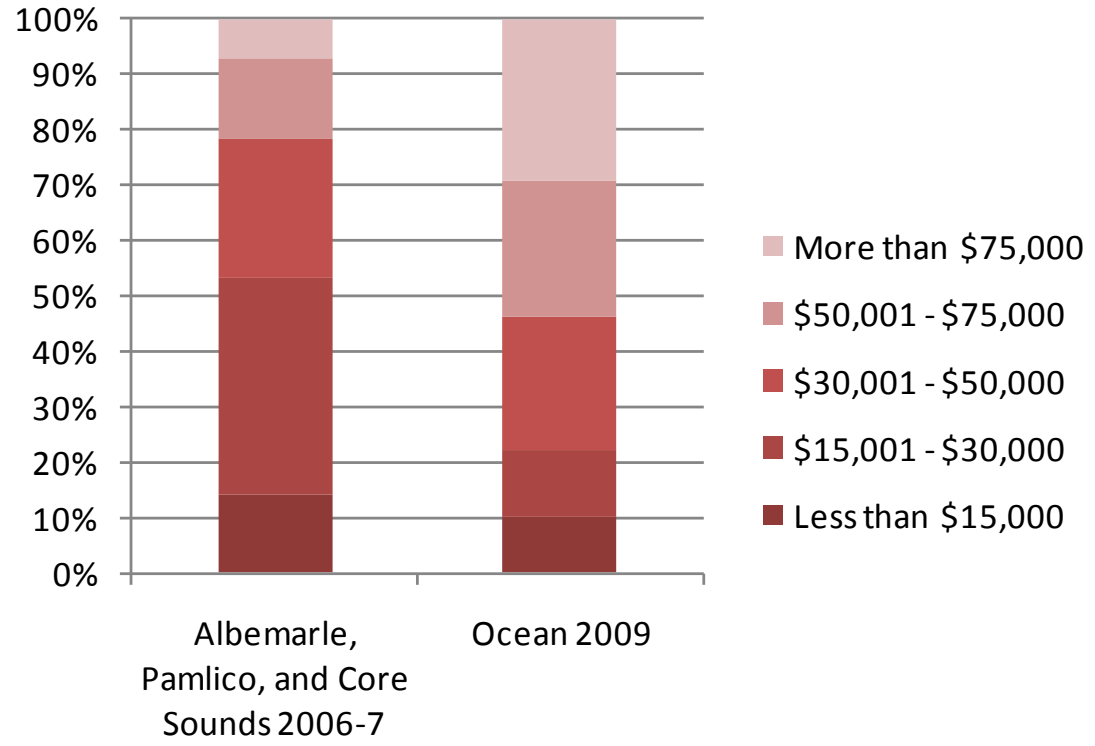

Figure 3. Household income of respondents.

Many of the fishermen surveyed work other jobs beyond commercial fishing. The most common other jobs held are in industry (15%), construction (14%), or other fishing jobs like the charter business (7%). Another 11% receive retirement or disability checks. These numbers are somewhat lower than those found in previous surveys, indicating a higher percentage of oceangoing fishermen rely on that business as their sole source of income compared to the estuarine fishermen. Sixty percent (60%) of the respondents consider themselves to be full-time fishermen.

The most common county of residence for these respondents was Dare (28%), followed by Carteret (19%), Brunswick (15%), New Hanover (12%), and Onslow (6%). Fourteen other counties were also represented, ranging from coastal to inland. The respondents had lived in their communities for an average of 29 years, indicating deep ties to their areas.

Characteristics of the Fishing Business

Most (85%) of the oceangoing fishermen run their businesses as the sole proprietorship, but that is a lower number than that found among fishermen who work other coastal waters. Twelve percent (12%) work as part of a corporation, mostly in Wanchese but almost unheard of in other areas of the state. Fifty-seven percent (57%) worked the water year-round, also higher numbers than in other areas. Table 2 shows the fishing participation by month for the fishermen in this study.

Table 2. Months of fishing activity of respondents.

Month	Frequency	Percent
January	142	80%
February	125	71%
March	122	69%
April	126	71%
May	135	76%
June	127	72%
July	125	71%
August	126	71%
September	136	77%
October	144	81%
November	155	88%
December	149	84%

October through January were the months of highest fishing participation with over 80% spending some time on the water, and summer was the slowest time. Again, these are different peaks than for estuarine fishermen, who seldom work the water during the winter at all except to oyster.

Fishing Vessels and Business Expenses

All but three of the fishermen (98%) owned boats, with 17% owning two boats, and 10% owning three or more. Vessels were classified as small (less than 19 ft. in length), medium (between 19 and 38 ft. in length), and large (over 38 ft. in length). Table 3 shows a summary of vessel characteristics based on vessel size. Value includes gear used on that boat. Fishermen in estuarine surveys owned, on average, more boats than the oceangoing fishermen. Boats are generally kept at their homes (28%), at fish houses (21%), or at a rented slip (45%). Rented slips cost an average of $3,234 per year.

Table 3. Summary characteristics by vessel size of respondents.

	Small (n=7)	Medium (n=127)	Large (n=82)
Length (in feet)	17	29	55
Years Owned	11	8	14
Value	$5,000	$81,664	$240,743

Table 4 illustrates the estimated per-trip and annual operating expenses incurred by boat owning-fishermen in the Atlantic Ocean. Estimates include both the average and the median (that of the "middle" fishermen). Note that the mean is over triple the median; the presence of large ships in the survey raises mean expenditures. The difference is large, indicating that much of the fishing is being done on smaller boats. None of the fishermen reported startup costs, indicating a lack of new entrants in the year of study.

Table 4. Average estimated boat expenditures of respondents.

Trip Expenses:	**Average**	**Median**
Fuel	$1,341	$400
Bait	$168	$50
Groceries	$129	$60
Ice	$83	$39
Other Expenses	$64	$30
Total/Trip:	$1,785	$579
Annual Expenses:	**Average**	**Median**
Capt/Crew (not self)	$44,555	$10,000
Pay to Relatives	$951	$0
Insurance	$7,380	$3,000
Licenses & Permits	$1,470	$0
Startup costs	$0	$0
Loan Payments	$6,912	$4,206
New Gear	$7,775	$3,000
Repairs	$19,617	$5,000
Docking Fees	$3,234	$2,900
Other Expenses	$3,665	$0
Total/Annum:	$95,560	$28,106

Two-thirds of the fishermen reported using some sort of share system during the past year, with the most common division of shares went to the captain/crew/boat as a 25/25/50 split. The boat share here is much higher than in previous surveys, reflecting the higher costs of outfitting and maintaining oceangoing vessels.

The impact of the ocean harvest on North Carolina's economy for 2007 is shown in Table 5. These impacts were calculated using IMPLAN, an economic modeling software. For example, the purchase of insurance for a fisherman's boat helps employ an insurance agency, which must purchase business supplies from another store and pay its employees. IMPLAN tracks these expenditures as money is spent and re-spent until it leaves the state's borders. Commercial fishermen in North Carolina operate almost exclusively as independent businessmen; because of this, the commercial fishing model native to IMPLAN is somewhat imprecise. Using the expenditure data illustrated in Table 4, total expenditures for oceangoing commercial trips for 2007 are as follows:

Total commercial expenditures = (t*Ẽ) + (n*(t/tall)*Ỹ) + (n*(t/tall)*Ĩ)

where t = number of ocean trips, Ẽ=median per-trip expenditures, n = number of ocean fishermen, tall = total trips taken by ocean fishermen throughout the year regardless of water body, Ỹ=median yearly fixed expenditures, and Ĩ=median proprietary income.

Analysis using the IMPLAN model for North Carolina yields the following economic impact from expenditures:

Table 5. Economic impact of oceangoing commercial trips in North Carolina, 2007. DMF Trip Ticket Program, IMPLAN.

Total economic Impact	$47,305,301
Economic inputs	$21,990,525
Proprietary income	$10,561,592
Additional economic activity generated	$14,753,184
Additional jobs generated	378

The other economic sectors most affected by the commercial catch of the fishery are fuel sales, wholesale trade, domestic trade, banks, home building and repair, the federal government, boat building/repair, insurance, real estate, and docking facilities. This model does not include the post-landings economic effect of ocean landings, only the business inputs from the commercial fishermen. The economic effect of ocean landings on dealers, seafood markets, restaurants, and shipping interests requires data that is not currently available, but will be the subject of study in 2009/2010.

Targeted Species and Gear

Species targeted in the ocean waters off North Carolina fit in three general categories: pelagics (king mackerel, dolphinfish, tunas) that spend most of their time in the ocean's upper waters and are targeted with rod and reel or longlines, benthics (black sea bass, snappers, and groupers) that live on the hard bottoms and are usually targeted with mechanized rod and reels (aka bandit reels), and assorted species that are caught in trawls and gill nets such as summer flounder and shrimp. The species most commonly targeted by the respondents are listed in Table 6.

Table 6. Primary species targeted by respondents.

Species	% who land
King mackerel	44%
Bluefin tuna	32%
Snappers/Groupers	23%
Yellowfin Tuna	23%
Croaker	14%
Dolphinfish	13%
Shrimp	13%
Sea Mullet	10%
Spanish mackerel	10%
Black sea bass	8%

Most of these species require special permits beyond a state commercial fishing license, which are often bought from other fishermen. License purchased on "the open market" are listed in Table 7.

Table 7. Species permits purchased by respondents from other fishermen.

Permit	% who purchased
King mackerel	22%
Tuna	15%
Dolphin/wahoo	11%
Snapper/Grouper	10%
Shark	3%
Scallop	2%
Swordfish	2%
License to land flounder	1%
Black sea bass	1%
Monkfish	1%

Most of these permits are limited in number. Although the original price from the federal or state governments were generally $25 or less, individuals who have entered the fisheries since then must purchase the permits at a higher price. Thirteen fishermen reported paying an average of $14,621 to enter the snapper-grouper fishery, with the highest price recorded at $60,000. The average price for king mackerel permits was $3,296 among the 28 fishermen who reported their price, with the highest price recorded at $12,500. The oceangoing fishermen reported spending an average of 3.5 hours per month on federal paperwork and 2 hours on state paperwork.

North Carolina's oceangoing fishermen use rods and reels in much higher numbers than do the fishermen who work the sounds. This category is rather broad, including the use of bandit reels for bottom fishing, multiple trolling lines for pursuing pelagic species, and green sticks. Beach seines, longlines, and fishpots are also comparatively rare or absent in the sounds but common in the ocean. Reported gear use is listed in Table 8.

Table 8. Reported gears used by respondents.

Gear	% who use
Rod and reel	64%
Gill net	22%
Shrimp trawl	7%
Flounder trawl	6%
Beach Seine	3%
Longline	3%
Fish Pot	3%

Several of the respondents in this survey also own commercial fishing licenses in other states, the most common being South Carolina (12), Virginia (11), and Florida (6).

Macroeconomics

After an initial decline in the beginning of this decade, the value of landings from the Atlantic Ocean have stabilized in recent years and appear to be increasing (see Figure 4). This contrasts with declining prices of species caught inside the inlets, largely due to the sharp drop in price for shrimp (Crosson 2007b).

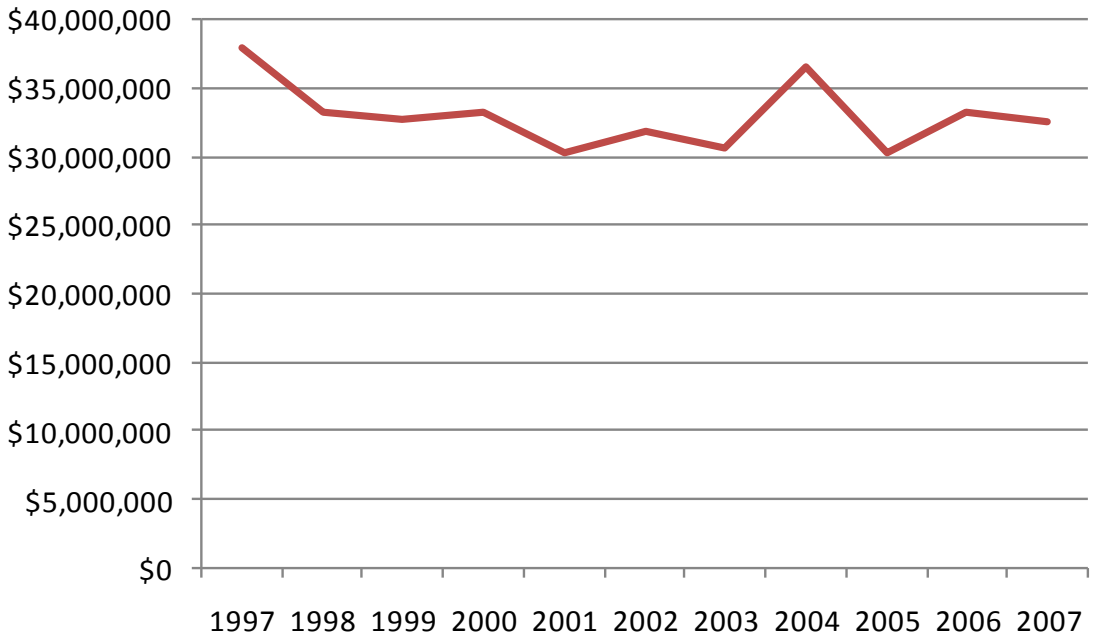

Figure 4. Value of landings in the ocean fishery (NC DMF Trip Ticket Program).

The number of fishermen working in ocean waters has likewise rebounded from an earlier decline (Figure 5).

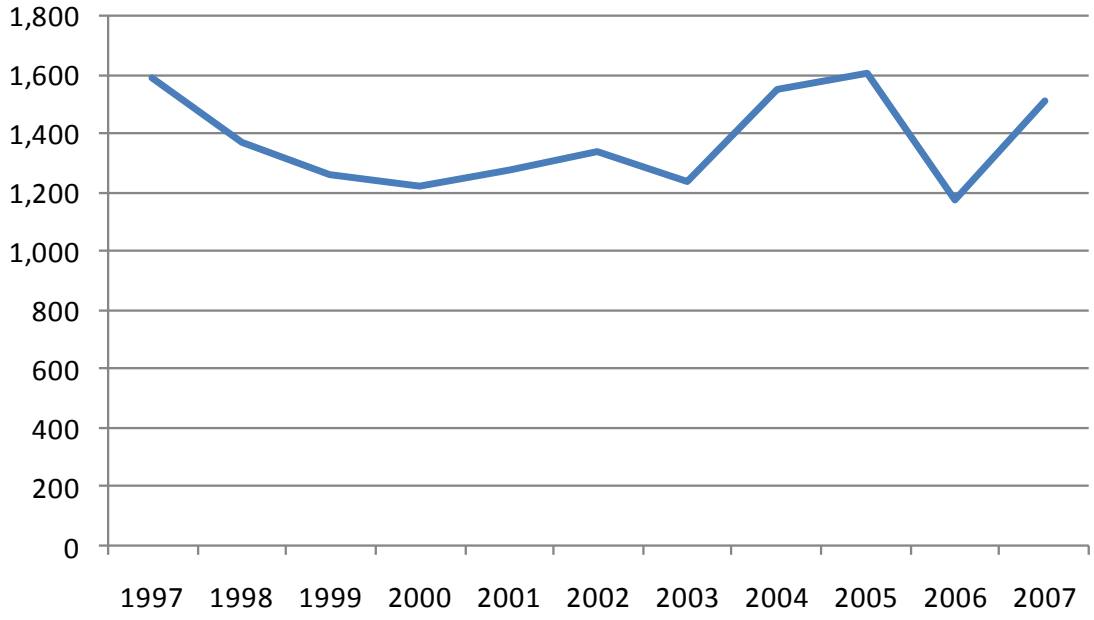

Figure 5. Number of active commercial fishermen working in the ocean fishery (NC DMF Trip Ticket Program).

This is in opposition to the general trend of declining participation in commercial fishing in North Carolina, indicating an increasingly large percentage of fishermen are venturing out of the sounds (Figure 6). The decline in prices for many estuarine fisheries may be driving them to pursue higher-valued species in the Atlantic Ocean. This option may be disappearing, as the South Atlantic Council closes loopholes that allowed the sale of

permitted species such as reef fish and king mackerel without a federal permit (as long as trip limits were kept within the recreational bag limit).

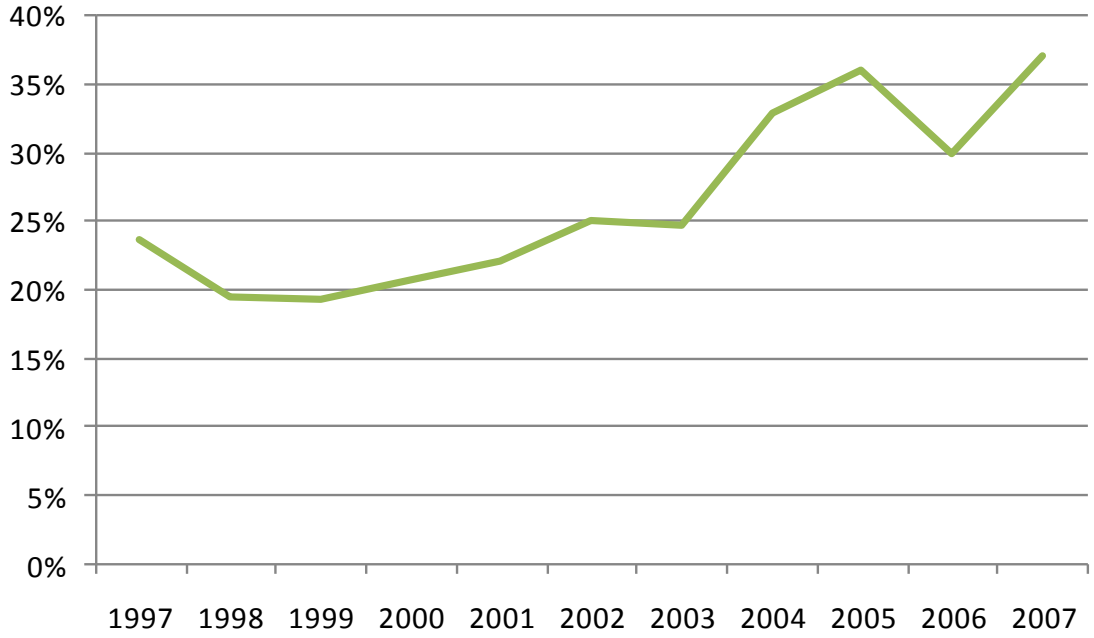

Figure 6. Percentage of active commercial fishermen working in the ocean fishery (NC DMF Trip Ticket Program).

Landings by zone are shown in Figure 7.[2]

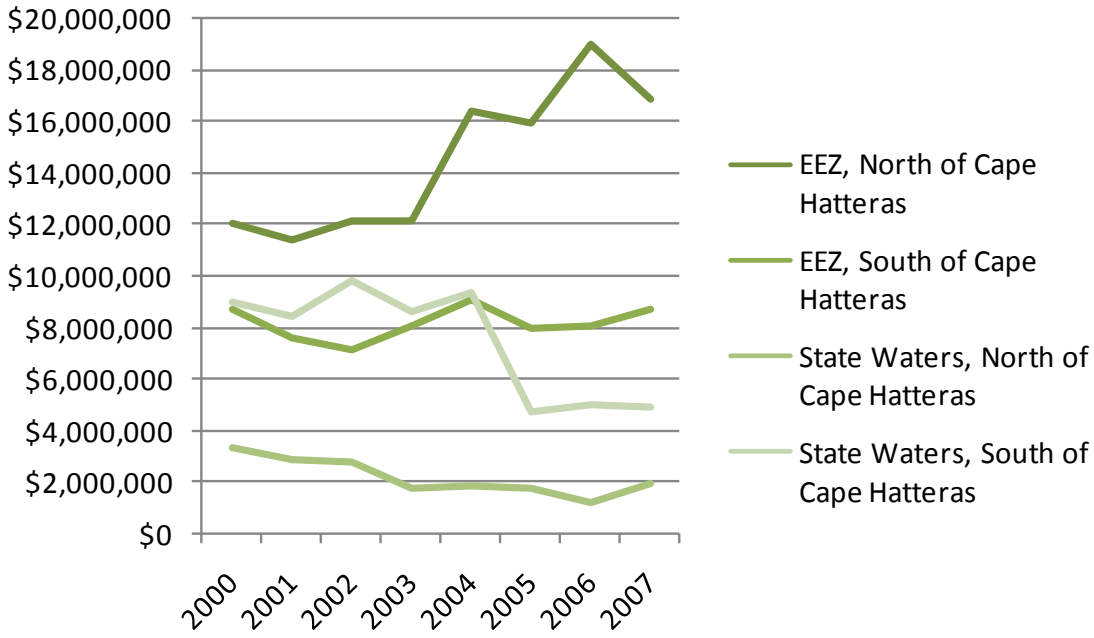

Figure 7. Value of landings in the ocean fishery by zone (NC DMF Trip Ticket Program).

[2] The Trip Ticket did not regularly break down ocean landings into different zones until 2000.

Notably, most of the increases in landings in recent years have been in one area in particular: the EEZ, north of Cape Hatteras. Sea scallops and summer flounder landings have primarily causes this increase, though these may be caught north of North Carolina's coast. The sharp drop in state waters south of Cape Hatteras is due to the decline in shrimp landings and value.

Perceptions

Respondents were asked a variety of questions designed to elicit their opinions on the business of commercial fishing, particularly regarding the challenges fishermen face today. Every fisherman ranked a variety of different issues on a ten-point scale by "how important [he or she] considers each of these issues to [his or her] fishing business." The results are shown in Table 9.

Table 9. List of issues of concern of respondents.

Rank	Issue
1	Fuel Prices
2	Inability to predict the business future
3	Development of the coast
4	Weather
5	Losing working waterfronts
6	Imported seafood
7	Low prices for seafood
8	Federal Regulations
9	Competition with Recreational Fishermen
10	State Regulations

Cheuvront (2002, 2003) and (Cheuvront and Neal 2004) found regulatory burdens to be at or near the top of a list of concerns in previous surveys, but Crosson (2007b) found an increasing concern over fuel prices and imported seafood in the Core Sound area. Fuel prices remain as the top concern for fishermen, as they have for the past several years. The time period during which this survey was administered included the summer of 2008, during which domestic fuel prices approached and exceeded $4/gallon several times. Most oceangoing fishermen reported much higher levels of fuel consumption than did fishermen who work in the sounds, a result of the farther distances which they must travel. The interrelated issues of seafood imports and low prices were comparatively less important, as many ocean species fetch higher prices. Estuarine fishermen do not list weather has a high concern, but oceangoing fishermen ranked it high, since heavy winds will keep them out of the Atlantic altogether. The inability to predict the future is a common concern among all of North Carolina's commercial fishermen, as is the development of the coast which has closed many fish houses.

User Group Conflicts

The fishermen were also asked about conflicts with regulations and with other user groups. Results are shown in Figure 8. The highest number of conflicts was with recreational fishermen, at similar levels to that seen in other surveys. Conflicts with other commercial fishermen were much less common than in the sounds—the ocean is a big place that lacks the territoriality that develops in some areas inside the outlets. Conflicts with state officials were almost non-existent but conflicts with federal officials were somewhat higher than with estuarine fishermen.

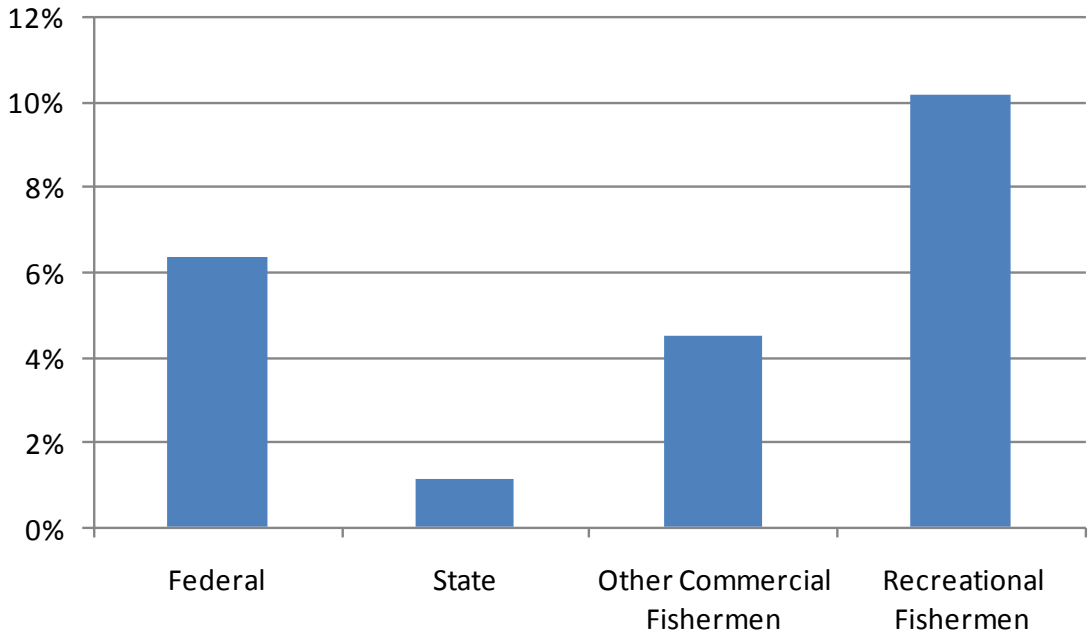

Figure 8. Percentage of respondents reporting conflicts with other user groups in previous year.

Respondents were asked whether they expected to still be commercial fishing ten years later. Fifty-eight percent believed that they would, which is much higher than the 42% of fishermen in the 2007 Core Sound study expected the same.

DISCUSSION

North Carolina's oceangoing commercial fishermen are not as easy to contact as most of their estuarine compatriots. Nonetheless, a large number of them responded to the survey, and several trends were noticeable:

Fishermen who work in the Atlantic Ocean are the most diverse group of commercial fishermen in the state of North Carolina, but also the most specialized. Fishermen interviewed in the sounds (Crosson 2007a, Crosson 2007b) and the intercoastal waterways in the southern district (Cheuvront 2003) most often moved between different fisheries throughout the year, shellfishing or gillnetting or working blue crab pots as the markets and regulations change. The commercial fishermen in the Atlantic Ocean, in contrast, are often specialists in a particular area, such as mid- or deep-water bottom fishing for snappers and groupers, or near-shore shrimp trawling and gill nettings. Others move further north in the EEZ and return with species not commonly occurring near North Carolina's coast, such as sea scallops. They also own fewer, but more valuable, boats than their estuarine equivalents.

They have the highest fishing incomes and household incomes. Although 29% of the fishermen in this study reported breaking even or losing money in the previous fishing year, 20% made over $30,000, higher numbers than seen in previous surveys. A few (4%) even reported fishing income in excess of $75,000 per year; these numbers are not matched by any of the fishermen encountered in estuarine surveys. The oceangoing fishermen consequently reported higher household incomes as well, with 29% bringing in over $75,000 per year. These household income levels are higher than those recorded in the last Census for North Carolina residents overall.[3]

Their numbers are holding steady or increasing. As the number of active standard commercial fishing licenses in the state overall has declined in the past decade from 7,009 in 1998 to 4,076 in 2007, the number meeting the criteria for this survey (over $1,000 in landings in the ocean in the designated year) has risen from 1,374 to 1,511. Oceangoing fishermen have hence nearly doubled their representation in the larger fishing community in percentage terms. They are also slightly younger than other fishermen, with 26% under the age of 40.

Their concerns are somewhat different than those of fishermen who work in the sounds. Oceangoing fishermen primarily work in the EEZ and must travel to get there, with an average trip length of more than two days (and sometimes extending up to a month). Even fishermen working near to the beach are usually pulling a trawl, not the most energy-efficient way to fish. Fuel costs directly impact the profitably of these trips, and the price run-ups of recent years and subsequent collapse make the future difficult to predict.

[3] See http://quickfacts.census.gov/qfd/states/37000lk.html.

ACKNOWLEDGEMENTS

I wish to thank all of the commercial fishermen who took the time to answer this long survey. Catherine Jones worked tirelessly to track down the fishermen, interview them, and enter their answers into the database. Alan Bianchi and Stephanie McInerny from the Trip Ticket Program delivered prompt answers to my numerous data requests for further data. Scott Chappell made the map in Figure 1. NOAA provided the funds, allowing these invaluable surveys to continue to provide topical, up-to-date information on North Carolina's commercial fisheries.

REFERENCES

Cheuvront, Brian (2002). A Social and Economic Analysis of Commercial Fisheries of Core Sound, North Carolina. NC Department of Environment and Natural Resources, Division of Marine Fisheries, Morehead City, NC. Atlantic Coastal Fisheries Cooperative Management Act, National Oceanic and Atmospheric Administration Award No. NA87FG0367-3.

Cheuvront, Brian (2003). A Social and Economic Analysis of Commercial Fisheries in North Carolina: Beaufort Inlet to the South Carolina State Line. NC Department of Environment and Natural Resources, Division of Marine Fisheries, Morehead City, NC. A Report for the NC Technical Assistance to the South Atlantic Fisheries Management Council, Task 5: NEPA Related Activities, Contract No. SA-03-03-NC.

Cheuvront, Brian (2004) and Mary Neal. A Social and Economic Analysis of Snapper Grouper Complex Fisheries in North Carolina South of Cape Hatteras. NC Department of Environment and Natural Resources, Division of Marine Fisheries, Morehead City, NC. A Report for the NC Technical Assistance to the South Atlantic Fisheries Management Council, Task 5: NEPA Related Activities, Contract No. SA-03-03-NC.

Crosson, Scott (2007a). A Social and Economic Analysis of Commercial Fisheries in North Carolina: Albemarle and Pamlico Sounds. NC Department of Environment and Natural Resources, Division of Marine Fisheries, Morehead City, NC.

Crosson, Scott (2007b). A Social and Economic Analysis of Commercial Fisheries in North Carolina: Core Sound. NC Department of Environment and Natural Resources, Division of Marine Fisheries, Morehead City, NC.

Diaby, Souleymane (2000). An Economic Analysis of Commercial Fisheries in the Albemarle Sound Management Area, North Carolina. NC Department of Environment and Natural Resources, Division of Marine Fisheries, Morehead City, NC. Atlantic Coastal Fisheries Cooperative Management Act, National Oceanic and Atmospheric Administration Award No. NA87FG0367-1.

Diaby, Souleymane (2002). An Economic Analysis of Commercial Fisheries in the Pamlico Sound Area, North Carolina. NC Department of Environment and Natural Resources, Division of Marine Fisheries, Morehead City, NC. Atlantic Coastal Fisheries Cooperative Management Act, National Oceanic and Atmospheric Administration Award No. NA87FG0367-2.

SPSS (Statistical Package for the Social Sciences), release 12.0.0. SPSS, Inc., Chicago, IL.

APPENDIX I - 2007 ACTIVE OCEANGOING FISHERMAN SURVEY

2008 OCEAN FISHERMAN SURVEY

1. How many years have you been a commercial fisherman? _____

2. Compare yourself to other fishermen using a scale of 1 to 10. With 1 being "not at all successful as a commercial fisherman" to 10 being "no one has more success than I do", how successful do you think you are? _____

3. What are the main species you land and gears you use each month?

4. Have you ever changed the species you target because of changes in regulations?

□ No □ Yes □

If "Yes", record any comments _____

FISHERY PARTICIPATION

5. What is the ownership type that best describes your fishing operation?
   - □ Sole Owner
   - □ Partnership
   - □ Corporation

6. How many vessels do you own that are registered for use in your fishing operation?
How many vessels? ____

Fill this out starting with the vessel used most often.

Vessels	Years Owned	Market Value (incl. all gear)	Length
7.			
8.			
9.			

10. Do you consider yourself to be a full time fisherman?

□ No □ Yes

11. What percentage of your total individual income do you earn from commercial fishing (that is, sale of fish taken with commercial fishing gear)?

12. What other kinds of work do you do to earn income other than commercial fishing?

OPERATING EXPENSES

13. Please provide the average operating expense for an Ocean fishing trip in 2008 (for the vessel you use the most). Round off your answers to the nearest dollar.

Expense categories	Amount
Fuel and Oil	
Ice	
Groceries	
Bait	
Other	

14. Typically, how long is your ocean fishing trip?

15. What is the average crew size for ocean trips including yourself?

16. Do you use a share system to pay the crew and captain of the vessel you use the most when you are fishing in the ocean?

□ Yes □ No

17. If no, then how do you pay the captain and crew?

18. What percentage of the net share (gross total revenues minus the expenses indicated above) goes to. . .

Boat share: _____ %
Captain's share: _____ %
Crew's share: _____ %

19. Total annual expenditures for 2008 for the vessel while fishing in the ocean.

Expense Category	Amount
Labor-Capt. and crew (not in your household)	
Payments to people in your household	
Vessel loan payments	
Vessel/Gear Repairs	
Docking Fees	
New Gear/Equipment	
Insurance	
Other Professional Expenditures/Fees	

20. Which other permits do you have? Please fill in the permits that you have.

Permit Type	Year Purchased	Amount Paid

21. Are you for or against the sale of federally permitted species (such as king mackerel) caught under the recreational bag limit?

22. What other states do you have a Commercial license in?

23. Where do you keep the boat you use most often when you are fishing in the Ocean?

□ When I fish in the ocean I'm on someone else's boat
□ At my home
□ A rented slip
□ A slip not at my home, but I don't pay rent (e.g. at a fish house)
□ Other place

24. I'm going to read some numbers. When I reach a number equal to or higher than the amount you personally earned last year just from fishing, tell me to stop. Include only profit, that is, after you paid all expenses associated with your fishing business.

Read these numbers: $0 Mark here:
1. $0 or lost money
2. $1 - $5,000
3. $5,001 - $15,000
4. $15,001 - $30,000
5. $30,001 - $50,000
6. $50,001 - $75,000
7. $75,001 - $100,000
8. > $100,000
99. Refused

DEMOGRAPHIC QUESTIONS

25. How old are you? _____

26. (Don't ask, just mark) □ Male □ Female

27. What do you consider to be your ethnic background?
□ Hispanic/Latino (all races) □ Asian-Pacific Islander
□ White/Caucasian □ American Indian
□ African-American/Black

28. What was the highest grade you completed in school?
□ Less than high school diploma □ Some college/technical school
□ High school diploma □ College diploma (or more)

29. What is your marital status?
□ Currently married □ Widowed □ Separated
□ Divorced □ Never married

30. Do you have health insurance?

□ No □ Yes

31. Who pays for it?
□ self □ other job □ spouse's plan □ other_____

32. How many people live in your household? (include respondent, people such as students away at school, someone in the hospital, or currently away on business or vacation, etc., but not someone whose main place of residence is somewhere else.)

33. How many people do you financially support that don't live in your household? (e.g. your parents, students away at college, children who live with a different parent)

34. Of the people who now live in your household, how many of them work at least part time in some aspect of the fishing industry? (Do not include the fisherman)

35. Which of the following people in your extended family work or have worked in commercial fishing?

____ No one
____ Parents
____ Grandparents (How many? _____)
____ Children (How many? _____)
____ Siblings (How many? _____)
____ Aunts or Uncles (How many? _____)
____ First Cousins (How many? _____)

36. How many generations back have there been fishermen in your family?

37. I'm going to read some numbers. When I reach a number equal to or higher than the amount of the total income of everyone who lives in your household, tell me to stop.

If they give an actual dollar amount, write it here:

Read these numbers:

1. $15,000
2. $15,001 - $30,000
3. $30,001 - $50,000
4. $50,001 - $75,000
5. $75,001 - $100,000
6. > $100,000
7. Prefer not to answer

38. What is the name of the community/town/city where you live?

39. Which county is that located in?

40. How many years have you lived in this community?

OPINIONS ABOUT COMMERCIAL FISHING

41. Do you think you will be a commercial fisherman 10 years from now?

□ Yes □ No (why?)

42. Use a scale of 1 to 10, with 1 being "not at all" to 10 being "extremely" and tell me how much you agree or disagree with each of the following statements.

- My health is affected by my fishing.

- Commercial fishing is important economically in my community.

- Commercial fishing has an important role in the history of my community.
- I have to work harder now to land the same amount of fish that I did a few years ago. (If you think there is no difference, your answer should be 5.)

43. Have you had any trouble finding a dealer to sell your catch to?

□ No □ Yes

44. Do you have a dealer's license?

□ No □ Yes

45. How many hours a month do you spend on State paperwork?

46. Ignore this

47. How many hours a month do you spend on Fisheries-related Federal paperwork? (Log books, etc)

48. Do you have a relationship with a specific dealer or are you independent?

□ He is a dealer and sells his own catch
□ Independent (sells to whomever he wishes)
□ Relationship with a specific dealer or dealers

If the fisherman has a relationship with a specific dealer, ask the following questions:

49. Does the dealer provide you with docking space?

□ No □ Yes

50. Will the dealer give you an advance for bait or other necessities?

□ No □ Yes

51. Does the dealer provide you with credit or loans?

□ No □ Yes

52. Are you a member of any fisherman's organizations?

□ No □ Yes (NCFA) □ Other

53. In the last year, have you had any negative experiences: (Yes or No)

* with other commercial fishermen □ (explain, _____)

* with recreational fishermen □ (explain, _____)

* involving federal regulations □ (explain, _____)

* involving state regulations □ (explain, _____)

54. Use the scale of 1 to 10 and tell me how important you consider each of these issues to your fishing business. 1 means “it’s not important or doesn’t affect me” and 10 means “it’s extremely important or it affects my business a great deal”.

_____ Overfishing
_____ Competition with other commercial fishermen
_____ Competition with recreational fishermen
_____ Keeping up with proclamations or changes in rules
_____ Gear Restrictions
_____ Seasonal/area closures
_____ Bag limits
_____ Size limits
_____ Quotas
_____ Federal regulations
_____ State regulations
_____ Seafood prices
_____ Imported seafood
_____ Weather
_____ Predicting the future for your fishing business
_____ Fuel prices
_____ Losing working waterfronts like docks, marinas, and fish houses
_____ Development of the coast
_____ Illegal sale of fish

55. Use a scale of 1 to 10 again. This time the scale ranges from 1 meaning “not at all likely” to 10 meaning “extremely likely”. If a young person came to you and said they wanted to be a commercial fisherman, how likely is it that you would recommend being a fisherman?