North Carolina Division of Marine Fisheries

A Social and Economic Analysis of Commercial Fisheries in North Carolina

Core Sound

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A Social and Economic Analysis of Commercial Fisheries in North Carolina: Core Sound

INTRODUCTION

The Core Sound area of North Carolina—usually referred to as “Down East” by the residents of Carteret County—offers a microcosm of the North Carolina fishing industry as a whole. The southern and eastern boundaries of Core Sound are defined by the uninhabited islands of Shackleford and Core Banks, which in turn fall under the protection of the Cape Lookout National Seashore. The western border, in contrast, is defined by a series of small coves and bays interspersed with a smattering of towns and hamlets whose principal economic engine has traditionally been fueled by commercial fishermen. As recently as thirty years ago, the poundage of commercial catch in this small area exceeded that of any other region of the North Carolina coast with the exception of the Atlantic Ocean itself. Regulations on catch here are decided by interstate councils such as the Atlantic States Marine Fisheries Commission (ASMFC) as well as the state’s own Marine Fisheries Commission (MFC). Understanding the impacts of these restrictions on the commercial fishing industry as a whole requires knowledge of the social and economic characteristics of the commercial fishermen. This information is important for the development of state fishery management plans as required by the North Carolina Fisheries Reform Act of 1997.

In 2007, the North Carolina Division of Marine Fisheries (DMF) began the seventh 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), and Albemarle and Pamlico Sounds (Crosson 2007).

Study Area

The fishermen in this study all work the area defined as Core Sound, from Cedar Island down to and including the North River / Back Sound area. The NC Division of Marine Fisheries’ trip ticket program divides this into two interconnected water bodies. The boundaries of these water bodies all lay within Carteret County. In all, these water bodies comprise approximately 72,000 acres of water. Some of these fishermen work additional water bodies as well (such as the Atlantic Ocean, Pamlico Sound, and Bogue Sound) but those activities are not the focus of this report.

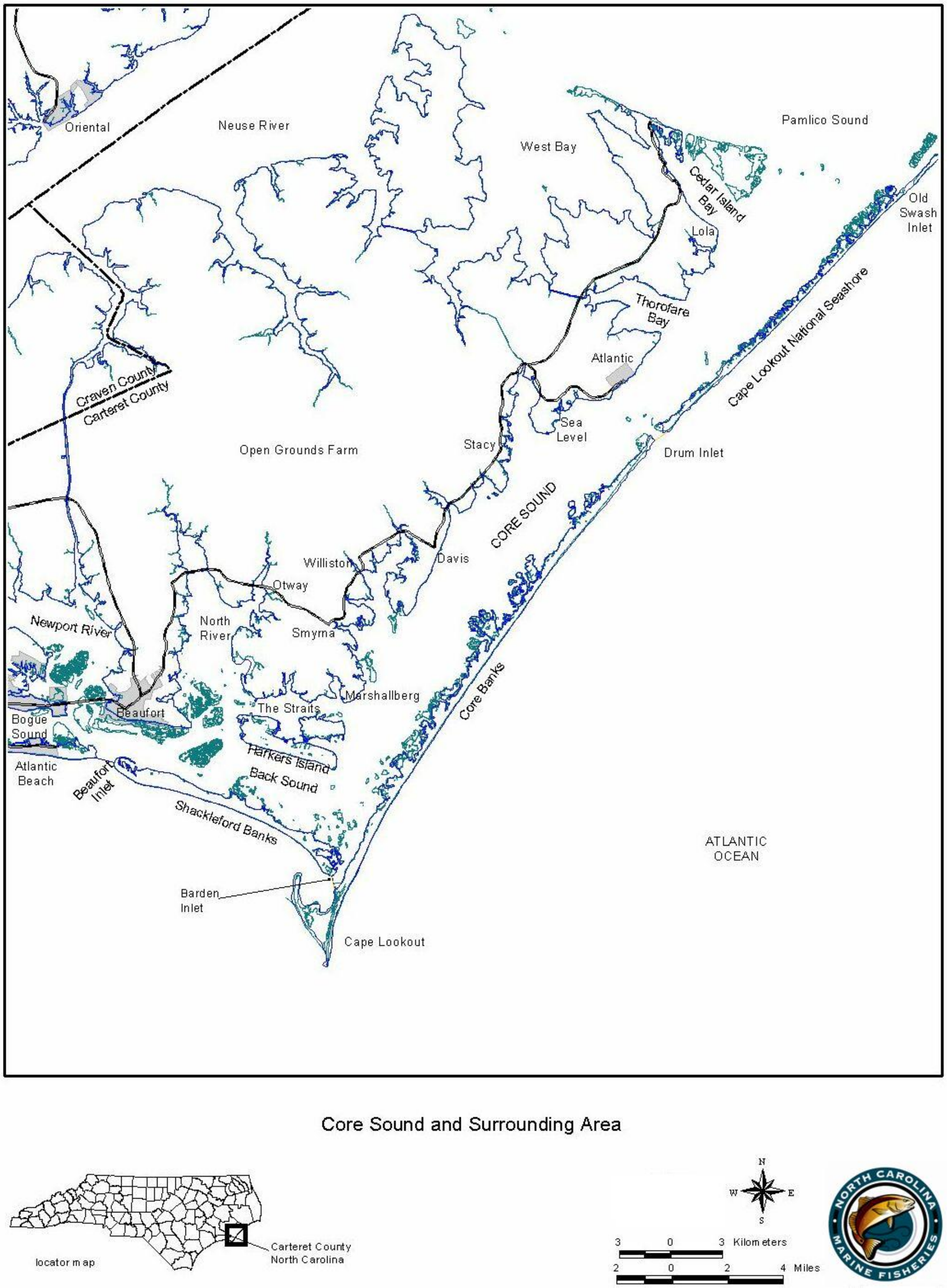

Figure 1. Map of the Core Sound area (NC DMF GIS Program).

Study Objectives

The specific objectives of this study were:

1. To describe the socioeconomic aspects of commercial fisheries in the areas encompassing Core Sound 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 whenever possible to those of Cheuvront (2002).

METHOD

Recruitment and Participation Rates

In 2006, a list of 286 commercial fishing license holders was obtained from the NC DMF license database. Each of the persons or businesses on the list reported at least $1,000 in ex-vessel value of seafood landed from water bodies in the study area during calendar year 2005. Licenses included were the Standard Commercial Fishing License (SCFL), Retired Standard Commercial Fishing License (RSCFL), and the Shellfish License for North Carolina Residents without a SCFL. A project-specific interviewer was able to survey 132 of these fishermen for the project, 57 of whom had previously been surveyed by Cheuvront (2002). Additionally, she was able to contact 33 retired fishermen who had previously worked Core Sound but were no longer active in commercial fishing.

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 five years hence 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. Fishermen's answers are recorded on paper and later entered into a tailored Microsoft Access database.

The data collected in the survey (see Appendix 1) included 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

Core Sound fishermen were surveyed in the first half of 2007. After collecting the data, the interviewer keyed the surveys into a Microsoft Access (2000) data entry program which stores and manages the data. The program checked for "out of range" responses, processed question skips where appropriate, and allowed the interviewer to record notes and comments about the interview. 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 consisted 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 Core Sound fishermen interviewed here were overwhelmingly male (96%) and white (99%), which is in keeping with fishermen up and down the North Carolina coast. They have been fishing, on average, for 27 years, which is only slightly longer than the 25 years recorded by Cheuvront (2002). They range in age from 24 to 79 years old, with a mean age of 50.

Table 1. Demographic Information for Surveyed Fishermen.

Gender	Frequency	Percent
Male	126	96%
Female	5	4%
Racial/Ethnic Background	**Frequency**	**Percent**
White	130	99%
African-American	0	
Asian-American	0	
Hispanic	1	1%
Education	**Frequency**	**Percent**
Less than High School	32	25%
High School Graduate	68	52%
Some College	18	14%
College Graduate	12	9%
Marital Status	**Frequency**	**Percent**
Married	100	77%
Divorced	20	15%
Widowed	2	2%
Separated	6	5%
Never Married	2	2%
# of People in Household	**Frequency**	**Percent**
One	15	12%
Two	58	45%
Three	26	20%
Four	27	21%
Five	3	2%
Six	1	1%

Three-quarters are married, and 86% have 2-4 people in their household; these numbers are also nearly identical to those in the previous survey. They are heavily integrated into their communities, with the average fishermen having lived in his area for 34 years (an increase from 32 years found earlier by Cheuvront). Over 90% are residents of Carteret County.

Fishing currently accounts for 70% of the income of the fishermen on average; for 49% of them, it is the sole source of income. However, the income the Core Sound commercial fishermen receive from their catch has declined dramatically over the past five years. Twenty-three percent of the fishermen responded that they are currently breaking even or losing money from their fishing activities, compared to 5% in 2002. Only 53% made more than $5,000 by fishing last year.

These numbers can be seen in Figure 2, which also includes the amounts earned by retired commercial fishermen in their last year of active fishing. Few of the fishermen in this study earn large amounts of money from commercial fishing; only 6% reported earning over $30K from their fishing business in 2006.

Figure 2. Commercial Fishing Income of Surveyed Fishermen.

Despite this grim news, the household income of the working fishermen in the Core Sound area actually rose from 2002 to 2007—25% of them are now in households with more than $50,000 in total income versus 15% of those interviewed by Cheuvront (2002). Median household income was approximately $40,000, which closely parallels North Carolina's median household income of $40,572 (US Census Bureau 2004). Household income results from both surveys, including that of retired fishermen, are seen in Figure 3.

Figure 3. Household Income of Surveyed Fishermen.

This tracks the economic shift in the Down East area away from commercial fishing and into the economic boom present along the entire North Carolina coast. Two-thirds of the respondents consider themselves to be full-time fishermen, but that does not necessarily preclude them from having additional income. Twenty-eight percent rely on a pension or social security. Many work in other sectors of the coastal economy, most often in non-fisheries maritime such as boat or dock building (23%), construction (17%), government (16%), and fisheries-related jobs (12%).

Characteristics of the Fishing Business

Almost all of the fishermen in the Core Sound Area (98%) run their businesses as the sole proprietorship. Only 27% of the fishermen here worked the water year-round, however. Table 2 shows the fishing participation by month for the fishermen in this study.

Table 2. Months of Fishing Activity.

Month	Frequency	Percent
January	67	51%
February	66	50%
March	78	59%
April	105	80%
May	115	87%
June	121	92%
July	118	89%
August	117	89%
September	113	86%
October	108	82%
November	90	68%
December	79	60%

April through October were the months of highest fishing participation with over 80% spending some time on the water, and December through March were the months with the lowest fishing rates.

Fishing Vessels and Business Expenses

Almost all of the fishermen (94%) owned boats, with 36% owning just one boat, 33% owning two boats, and the remaining 25% owning three or more. Vessels were classified according to size. Twenty-four percent of the vessels were classified as small (less than 19 ft. in length), 66% were medium (between 19 and 38 ft. in length), and 10% were 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.

Table 3. Summary Characteristics by Vessel Size.

Column1	Small (n=44)	Medium (n=127)	Large (n=17)
Length (in feet)	16.4	24.3	43.0
Crew Size	1.1	1.3	2.0
Years Owned	10.0	11.0	14.4
Value	$8,067	$17,730	$35,294

Just as the value of a boat rises with size, so does the expense of running it. The larger boats haul in larger catches per trip, but also incur much larger expenses. Table 4 illustrates the estimated per-trip and annual operating expenses incurred by boat owning-fishermen in the Core Sound area. Estimates include both the average and the median (that of the “middle” fishermen). Note that the mean is somewhat larger than the median; the presence of large ships in the survey raises mean expenditures. However, the difference is small, indicating that most of the fishing is being done on smaller boats. None of the fishermen reported startup costs, indicating a lack of new entrants.

Table 4. Average Estimated Boat Expenditures.

Trip Expenses:	Average	Median
Fuel	$115.11	$80.00
Bait	$18.32	$0.00
Groceries	$2.60	$3.00
Ice	$2.59	$0.00
Other Expenses	$0.04	$0.00
Total/Trip:	$138.66	$83.00
Annual Expenses:	**Average**	**Median**
Capt/Crew (not self)	$371	$0
Pay to Relatives	$269	$0
Insurance	$33	$0
Licenses & Permits	$404	$298
Startup costs	$0	$0
Loan Payments	$83	$0
New Gear	$3,751	$1,000
Repairs	$1,701	$0
Docking Fees	$230	$0
Other Expenses	$186	$0
Total/Annum:	$7,029	$1,298

Twenty-seven of the fishermen reported using some sort of share system during the past year. Before dividing up the profits from the catch, 18 of them deduct the price of fuel from the trip. Six deduct the cost of bait, and four deduct groceries and ice. After these deductions, the net profits were divided between the captain, crew, and boat (the last being a common way to provide for the long-term maintenance of a fisherman's most capital-intensive expenditure). The most common division of shares went to the captain/crew/boat as a 50/25/25 split.

Targeted Species and Gear Combinations

Core Sound fishermen target a variety of species, most commonly flounder (42%), shrimp (39%), and clams (37%). Oystering is also popular in the winter (32%). Flounder are most often pursued with a gill net, and shrimp by pulling a trawl. Twenty-one percent of the fishermen also drop pots for crabs, but these fishermen tend to be more species-specific than the average Core Sound waterman. "Kicking" for clams involves using the wash from a boat propeller to skim clams from the bottom, and is still done by 7% of the fishermen here.

Table 5. Targeted Species and Gear Types Used.

Species	Gears	Percent Using Gear to Target
Flounders	Gill Net	38%
Shrimp	Trawl	23%
Crabs	Crab Pot	21%
Clams	Hand	18%
Clams	Rakes	15%
Oyster	Hand	15%
Shrimp	Skimmer trawl	14%
Oyster	Tongs	10%
Flounders	Gigging	8%
Clams	Kicking	7%
Crabs	Crab Trawl	5%
Flounders	Pound Net	4%
Shrimp	Channel net	3%
Oyster	Oyster dredge	3%
Clams	Dredge	2%

Macroeconomics

The cause of the decline in fishermen's income is apparent after examining the value of landings from the study area overall. The impacts of declining catch and (for species like shrimp) declining ex-vessel prices have caused a dramatic drop in poundage and income over the past decade, with the value of Core Sound landings slashed to half of what it was ten years ago (see Figure 4).

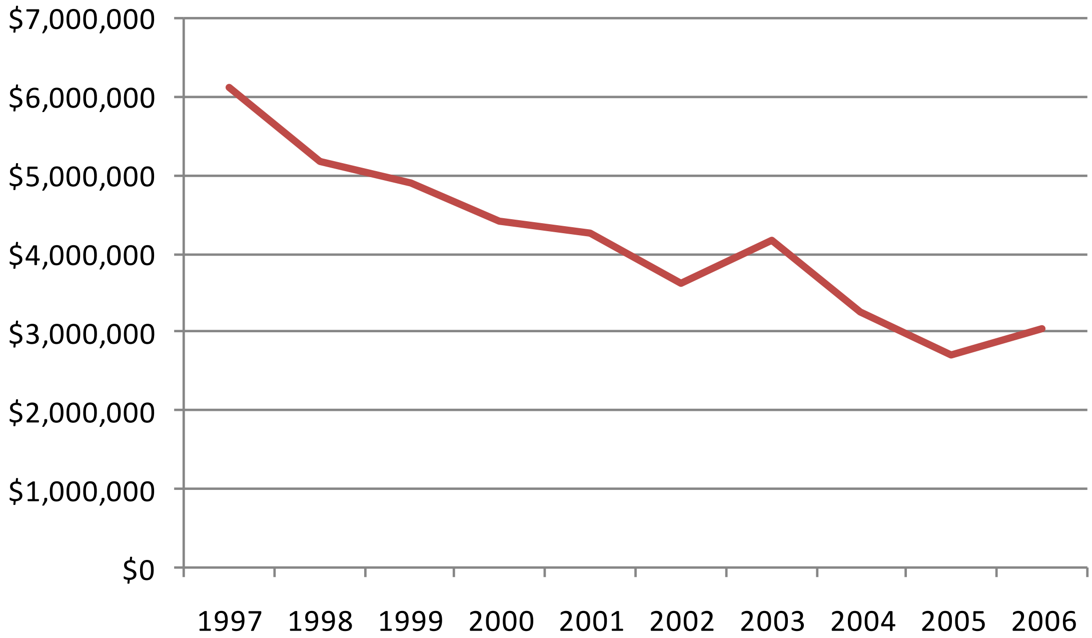

Figure 4. Value of Landings in Study Area (NC DMF Trip Ticket Program).

The causes of this decline are numerous, but fishermen themselves fix the highest blame on the flood of imported seafood that has undermined the price structure of many of the area's biggest harvests, especially shrimp. The cause of the decline in the value of shrimp catches is shown in Figure 5.

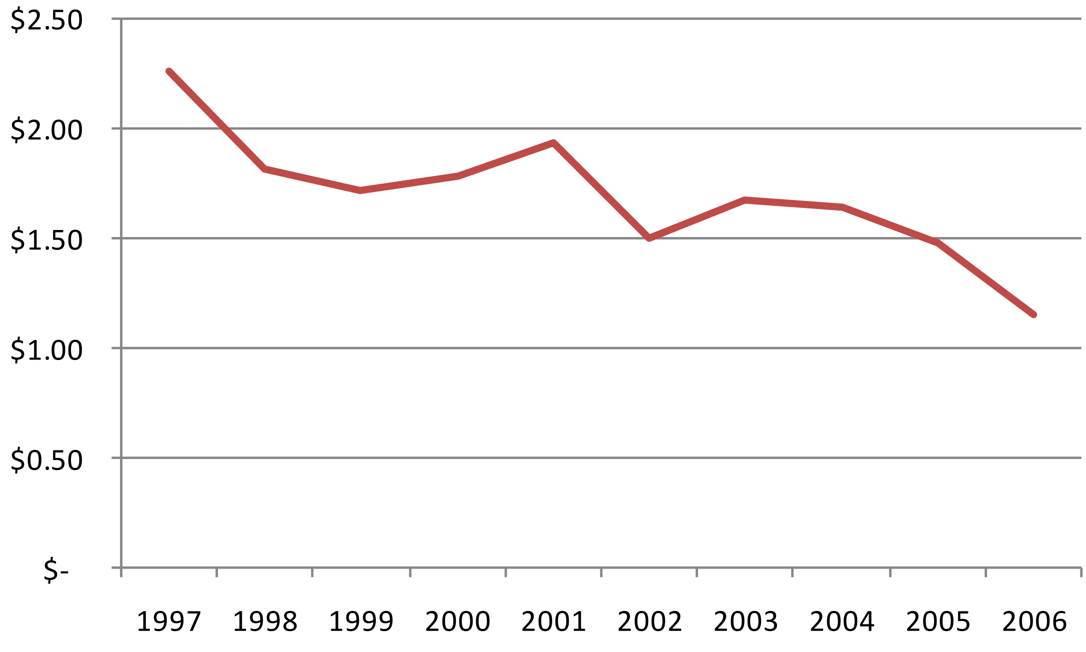

Figure 5. Ex-vessel Price per Pound of Shrimp Landings in Study Area (NC DMF Trip Ticket Program).

These pressures have caused dramatically fewer fishermen to participate in the Core Sound fishery overall, as shown in Figure 6. The number of commercial fishing trips taken has declined from 24,2003 in 1997 to 11, 953 in 2006.

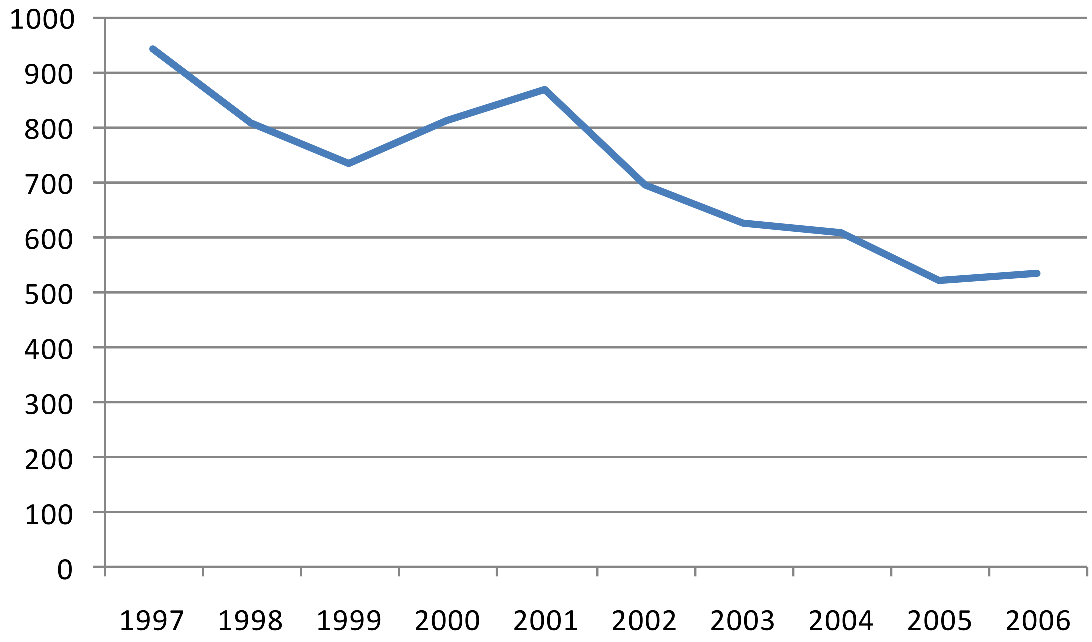

Figure 6. Number of Participants in the Core Sound Fishery (NC DMF Trip Ticket Program).

Perceptions

Fishermen were asked a variety of questions designed to elicit their opinions on the business of commercial fishing, particularly regarding the challenges fishermen face today. Commercial catches and participation rates have declined over the past decade, as shown previously. Every fisherman ranked a variety of different issues on a ten-point scale by "how important [he or she] consider each of these issues to [his or her] fishing business." The results are shown in Table 6. Retired fishermen were asked to rank each issue to the degree to which it influenced their decision to retire.

Table 6. List Of Issues of Concern to Fishermen.

Rank	Active 2007	Retired 2007
1	Fuel Prices	Low prices for seafood
2	Low prices for seafood	Fuel Prices
3	Imported seafood	Imported seafood
4	Development of the coast	Development of the coast
5	Losing working waterfronts	Losing working waterfronts
6	Inability to predict the business future	Too old to fish / health reasons / retired
7	Federal Regulations	Federal Regulations
8	State Regulations	State Regulations
9	Too many areas off limits to fishing	Gear restrictions
10	Seasonal closures are too restrictive	Too much environmental regulation

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 (2007) found an increasing concern over imported seafood. That trend has continued, and regulations were not among the top six issues ranked by the fishermen in this most recent survey. Instead, the combination of high fuel prices, low seafood prices, and development pressure on the coast have

SNAPSHOT: a Longitudinal Follow-up of Specific Fishermen

During the course of this survey, every effort was made to reach fishermen who had been surveyed five years earlier by Cheuvront, with the result of 57 fishermen being present in both the 2002 and 2007 surveys. The results show that the increase in household income in the Core Sound area was not uniform. Figure 7 shows that household income actually dropped for these fishermen. In 2002, 37% of the fishermen were in household making less than $30,000 per year. In 2007, that percentage increased to 49%.

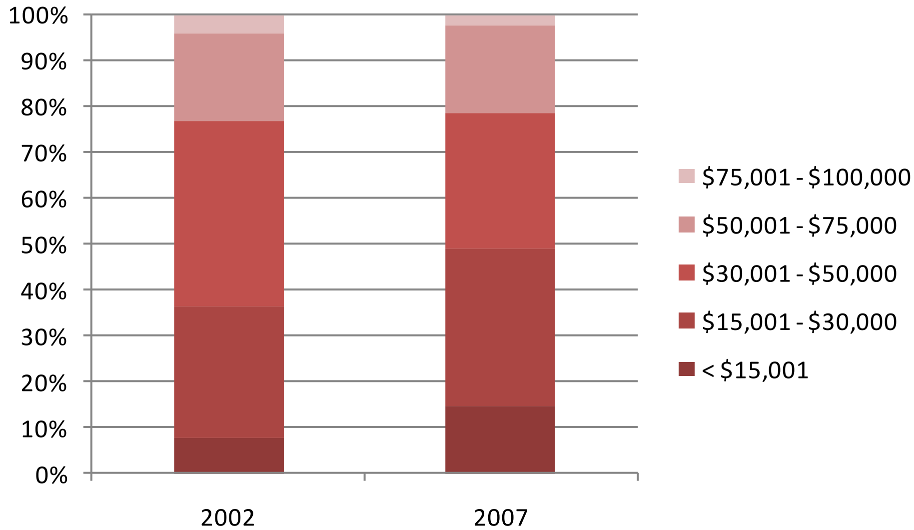

Figure 7. Household Income Changes for Select Fishermen.

As with the other fishermen in the survey, the decline in fishing income has been the primary cause of the decline in household income. The percentage of fishermen making less than $15,000 from fishing soared from 8% to 53%. The percentage of these fishermen who fish year-round declined from 61% to 25%.

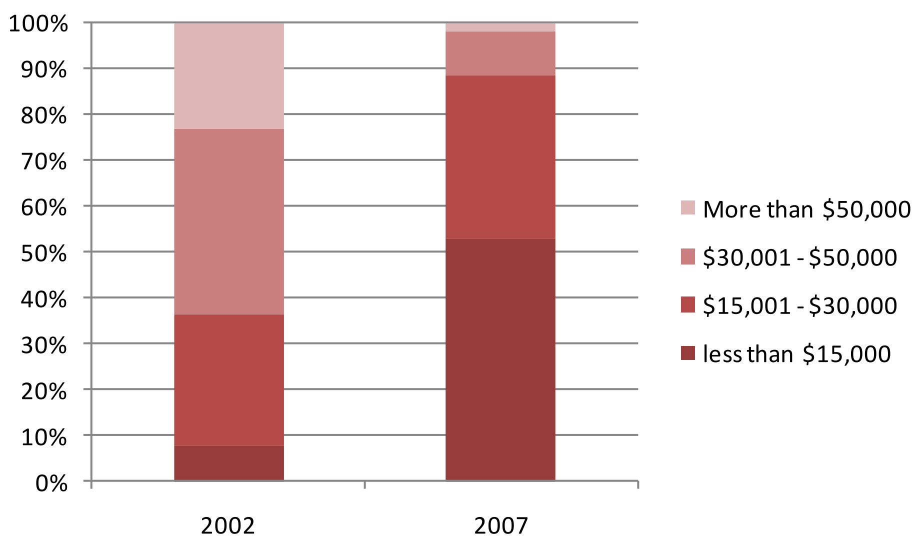

Figure 8. Commercial Fishing Income Changes for Select Fishermen.

painted a grim economic picture for most of the fishermen in this survey. The former fishermen did not list their age and related issues as among the top five influences to retire, which may be surprising considering the wear a lifetime on the water can induce on one's body.

User Group Conflicts

The fishermen were also asked about conflicts with regulations and with other user groups. Relatively few reported conflicts in the previous year. Figure 9 shows that the highest number of conflicts was with recreational fishermen, who sometimes run over commercial nets (accidentally or otherwise) and earn themselves the not-so-flattering label of "dingbatters." Conflicts with other commercial fishermen generally are territorial and between different types of users—trawlers are accused of scooping up pots, or pound netters making their nets too large.

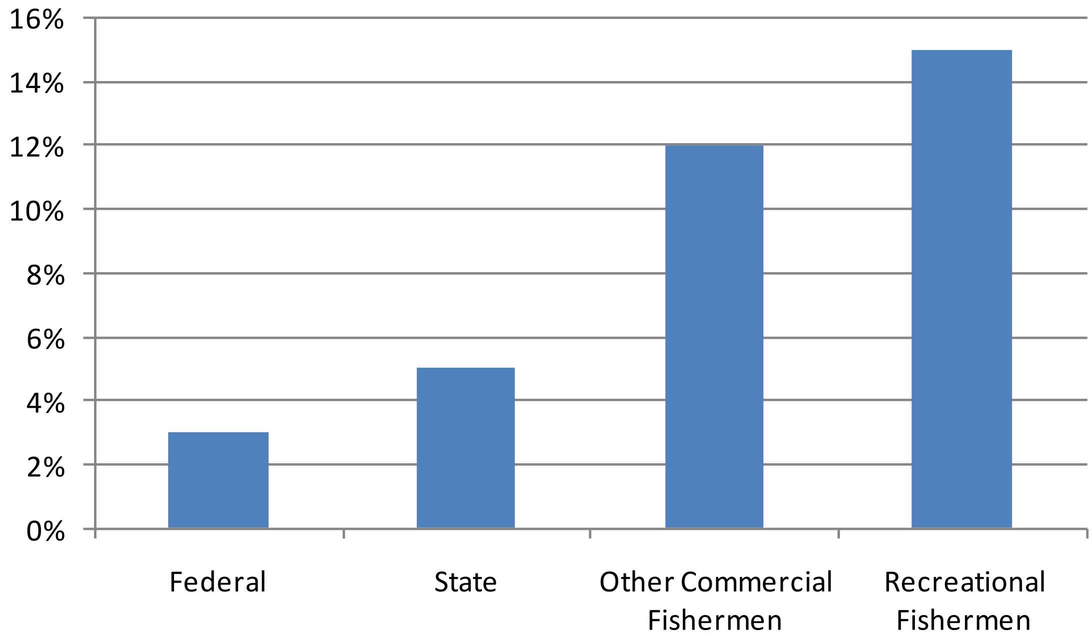

Figure 9. Percentage of Fishermen Reporting Conflicts with Other User Groups in Previous Year.

Respondents were asked whether they expected to still be commercial fishing ten years later. Forty-two percent believed that they would, which is much lower than the 68% of fishermen in the 2002 Core Sound study who affirmed they still would be fishing in a decade.

DISCUSSION

The demographics of the fishermen in this survey were in most ways comparable to those surveyed by Cheuvront (2002, 2003), Cheuvront and Neal (2004), and Crosson (2007). They had been fishing for an average length of 27 years, around the same length as those in the previous Core Sound (25 years), Southern District (24 years), and Albemarle/Pamlico (26 years) surveys. The same percentage (60-67%) of respondents in all of the surveys considered themselves to be full-time commercial fishermen, despite the dropping income from fishing—in fact, identical percentages (67%) of fishermen in the Core Sound area considered themselves to be full-timers in 2002 and 2007.

What is readily apparent, however, is that the business of being a commercial fisherman in the Core Sound area has come under enormous economic pressures in the past five years. Fishing income is down dramatically, both overall and for most of the fishermen. The economic trends impacting them defy simple solutions—there is no government agency that can readily reverse the price trends of higher fuel costs and declining seafood values, nor arrest the growing value of real estate in the coastal market. This latter factor has caused a collapse in the number of readily accessible, waterfront dealers. A recent report (Garrity-Blake and Nash, 2006) noted that North Carolina has lost a third of its fish houses in the past six years, including four in the Down East area.

Commercial fishermen have responded, largely, by finding non-commercial fishing jobs to supplement their incomes. This has led to some increases in household income. They are pessimistic about the future of commercial fishing, however, and the majority no longer sees a future in the industry that will include them.

Conclusion

Fishermen in the Core Sound area are under considerable pressure from economic factors such as development and low seafood prices, and the industry has partially collapsed. The value of landings in the area has declined by 50% since 1997, and the participation rates have dropped 43%. Household incomes are of a level comparable to other rural North Carolina households, but fishing incomes have dropped precipitously. Unfortunately, the pressures brought on by imported seafood are not likely to diminish in the near future. Additional issues like rising fuel costs and the loss of working waterfronts further undercut this historic industry.

Although some fishermen are adapting by picking up landside jobs and continuing to fish as a supplemental income source, the small snapshot of fishermen reached in both surveys indicates that this is not always the case. There is still profit and joy to be found in commercial fishing, and the fishermen who still ply the Core Sound for its catch clearly see benefits in doing so. The recent creation of a state fund to preserve working waterfronts may help lighten at least one of the pressures on the commercial fishing industry, and recent efforts to educate consumers about the benefits of local seafood (such as the Carteret Catch program) may help sustain a local market that is willing to pay more for a fresher, non-farm raised catch. Recent national headlines about tainted imports and the subsequent ban on shellfish from many Asian countries may offer further opportunities. The coming years will tell whether the worst of the commercial fishing industry's losses in the Core Sound have passed or are still to come.

ACKNOWLEDGEMENTS

I wish to thank the commercial fishermen of the Core Sound area for taking the time to answer this long survey. Several other DMF employees participated in this project, and also deserve praise. Catherine Jones worked tirelessly to track down the fishermen, interview them, and enter their answers into the database. Alan Bianchi from the Trip Ticket Program delivered prompt answers to my numerous data requests for further data. Brian Cheuvront originally applied for the NOAA grant that funded the project, explained the reporting requirements, and provided invaluable guidance along the way.

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<u>APPENDIX I - 2007 ACTIVE CORE SOUND FISHERMAN SURVEY</u>

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 & 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.

CFVR	Years Owned	Market Value (incl. all gear)	Length	Crew Size*	Operator Status**

1 2 3

1 2 3

1 2 3

1 2 3

* Include the captain (Minimum crew size for every vessel is 1.)
** 1. Captain/Owner 2. Hired Captain 3. Other

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7. What percent of your fishing income did you earn from fishing in the ocean?
____%

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

□ No □ Yes

If the answer to question #7 above is anything other than 100%, ask the following question:

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

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

OPERATING EXPENSES

11. Please provide the average operating expense for an average inshore Core Sound/Back Sound area fishing trip in 2003 (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 __________

12. 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 Core Sound/Back Sound areas?

□ No □ How do you pay the captain and crew?
(Skip to Question 13)
□ Yes □ Which of the following expenses were subtracted from your gross revenues before calculating the crew and captain's shares?

	Deducted	Not Deducted	N/A
Fuel and oil	1	2	99
Bait	1	2	99
Ice	1	2	99
Groceries	1	2	99
Other	1	2	99

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

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

13. Total annual expenditures for 2003 for the vessel used the most when you are fishing in the Core Sound/Back Sound areas.

Labor - Capt. & crew (not in your household)

Payments to people in your household

Licenses, Permits, Leases

Start up (only 2002)

Vessel loan payments

Vessel/Gear Repairs

Docking fees

New Gear/Equipment

Insurance

Other ProfessionaL Expenditures/Fees

41. Where do you keep the boat you use most often when you are fishing in the Core Sound/Back Sound areas?
- ☐ Don't use a boat in the Core Sound/Back Sound areas
- ☐ 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

14. 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:
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. More than $100,000

99. Refused

DEMOGRAPHIC QUESTIONS

15. How old are you? ________

16. (Don't ask, just mark) ☐ Male ☐ Female

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

18. 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)

19. What is your marital status?
- ☐ Currently married
- ☐ Widowed
- ☐ Separated
- ☐ Divorced
- ☐ Never married

19b. Do you have health insurance?

☐ No ☐ Yes

19c. Who pays for it?
☐ self ☐ other job ☐ spouse's plan ☐ other_____

20. 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.)

21. 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)

22. 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)

23. Which of the following people in your extended family work or 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? _______)

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

25. 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:
Mark here: 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
99. Refused

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

27. Which county is that in? _________________________

28. How many years have you lived in this community? ____

OPINIONS ABOUT COMMERCIAL FISHING

29. Do you think you will be a commercial fisherman 10 years from now?
☐ Yes ☐ No (why?)

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.

30. I believe I will be able to make a living in fishing in the future.

30b. My health is affected by my fishing.

31. Commercial fishing is important economically in my community.

32. Commercial fishing has an important role in the history of my community.

33. Commercial fishermen are respected in my community.

34. My community actively supports commercial fishing with activities like seafood festivals, memorials to fishermen lost at sea, a "blessing of the fleet", etc.

Other community support activities

35. I have to work harder now to land the same amount of fish than I did a few years ago. (If you think there is no difference, your answer should be 5.)

35b. Have you had any trouble finding a dealer to sell your catch to?

- [ ] No
- [ ] Yes

36. Do you have a dealer's license?

- [ ] No
- [ ] Yes

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

- [ ] Is a dealer and he 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:

38. Does the dealer provide you with docking space?

- [ ] No
- [ ] Yes

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

- [ ] No
- [ ] Yes

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

- [ ] No
- [ ] Yes

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

☐ No ☐ Yes ☐ which ones?

In the last year, how many times have you had negative experiences:

43. with other commercial fishermen	______ # x's	(explain, ______________)
44. with recreational fishermen	______ # x's	(explain, ______________)
45. involving federal regulations	______ # x's	(explain, ______________)
46. involving state regulations	______ # x's	(explain, ______________)

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".

47. Overfishing
48. Competition with other fishermen
50. Environmental regulation
51. Keeping up with proclamations or changes in rules
52. Gear Restrictions
53. Areas off limits to fishing
54. Seasonal/area closures
55. Bag limits
56. Size limits
57. Quotas
58. Federal regulations
59. State regulations
60. Seafood prices
61. Imported seafood
68. Weather
69. Predicting the future for your fishing business
71. Fuel prices
72. Losing working waterfronts like docks, marinas, and fish houses
73. development of the coast

70. 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?

APPENDIX II - 2007 RETIRED CORE SOUND FISHERMAN SURVEY

1. How many years were you a commercial fisherman? _____

1b. When did you stop commercial fishing (month/year)
1c. Do you still have a commercial license?

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 were? _________

4. Did you ever change the species you target because of changes in regulations?

☐ No ☐ Yes ☐

If "Yes", record any comments

FISHERY PARTICIPATION

5. What was the ownership type that best described your fishing operation?
- ☐ Sole Owner
- ☐ Partnership
- ☐ Corporation

6. Do you still own any of the vessels that were registered for use in your fishing operation?
How many vessels? ____

Fill this out starting with the vessel used most often.

CFVR	Years Owned	Market Value (incl. all gear)	Length

7. What percent of your fishing income did you earn from fishing in the ocean?

8. For your last year fishing, did you consider yourself to be a full time fisherman?

☐ No ☐ Yes

If the answer to question #7 above is anything other than 100%, ask the following question:

9. What percentage of your total individual income did you earn from commercial fishing in your final year (that is, sale of fish taken with commercial fishing gear)?

10. What kinds of work do you do now instead of commercial fishing?

OPERATING EXPENSES

14. I'm going to read some numbers. When I reach a number equal to or higher than the amount you personally earned in your 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:

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. More than $100,000

99. Refused

DEMOGRAPHIC QUESTIONS

15. How old are you? ________

16. (Don't ask, just mark) ☐ Male ☐ Female

17. What do you consider to be your ethnic background?

☐ Hispanic/Latino (all races) ☐ Asian-Pacific Islander
☐ White/Caucasian ☐ American Indian
☐ African-American/Black

18. 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)

19. What is your marital status?

☐ Currently married ☐ Widowed ☐ Separated
☐ Divorced ☐ Never married

20. 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.)

21. 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)

22. 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)

23. Which of the following people in your extended family work or 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? _______)

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

25. 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:

Mark here:
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
99. Refused

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

27. Which county is that in?

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

OPINIONS ABOUT COMMERCIAL FISHING

On a scale of 1 to 10 and tell me how important each of these issues was to your decision to leave the fishing business. 1 means "it wasn't important or didn't affect me" and 10 means "it was extremely important or it affected my business a great deal".

47. Overfishing
48. Competition with other fishermen
50. Environmental regulation
51. Keeping up with proclamations or changes in rules
52. Gear Restrictions
53. Areas off limits to fishing
54. Seasonal/area closures
55. Bag limits
56. Size limits
57. Quotas

58. Federal regulations
59. State regulations
60. Seafood prices
61. Imported seafood
68. Weather
69. Predicting the future for your fishing business
71. Fuel prices
72. Losing working waterfronts like docks, marinas, and fish houses
73. development of the coast
74. Too old/retired/health reasons
75. other (list)

70. 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?