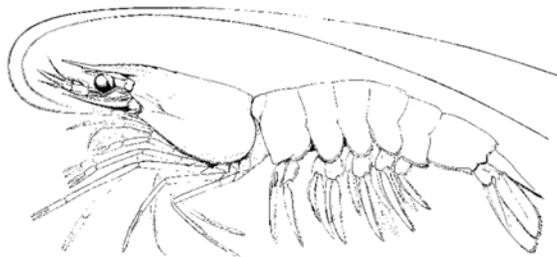
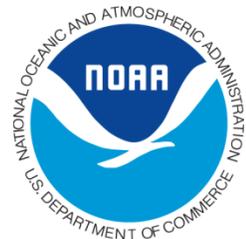


2011  
Economics of the Federal South Atlantic Shrimp Fisheries  
Annual Report



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December 2013



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## Federal South Atlantic Shrimp Fisheries

This report presents results of the Annual Economic Survey of Federal South Atlantic Shrimp Permit Holders for the calendar year 2011. The report provides fishermen, fishery managers, other constituents, and the public with an overview of the financial and economic health of the United States South Atlantic (SA) shrimp fisheries.

### Shrimp Landings and Revenue

Total landings of penaeid and rock shrimp in South Atlantic ports were 21.5 and 1.0 million pounds (live weight), respectively, in 2011 (Table 1). Total ex-vessel revenue approached \$53 million. Rock shrimp were caught exclusively by federally-permitted vessels, while 28% of penaeid shrimp revenue was generated by vessels without federal permits (Table 2).

**Table 1: SA Shrimp Landings and Revenue**

	Total Landings (lbs)	Total Revenue (\$)
Penaeid Shrimp	21,457,189	51,452,807
Rock Shrimp	1,036,687	1,373,178
<b>Total</b>	<b>22,493,876</b>	<b>52,825,985</b>

**Table 2: Share of Revenue by Permit Status**

	Non-Federal Permit Vessels	Federal Permit Vessels
Penaeid Shrimp Rev.	28%	72%
Rock Shrimp Revenue	0%	100%
<b>Total Shrimp Revenue</b>	<b>27%</b>	<b>73%</b>

### Permits and Vessels

The commercial shrimp fleet that operates in federal waters off the coasts of North and South Carolina, Georgia, and the east coast of Florida is managed under the Fishery Management Plan for the Shrimp Fishery of the South Atlantic Region. Fishing vessels are required to have the federal SA Penaeid Shrimp permit (the open-access SPA permit) for the commercial catch of penaeid shrimp, or one of two permits for the catch of rock shrimp (the limited-access RSLA permit south of the SC-GA border or the open-access RSCZ permit to the north; the latter is primarily for the incidental catch of rock shrimp). There were approximately 658 vessels that held one or more SA shrimp permits in 2011. Vessels in this fleet are, on average, 60 feet long, powered by 466 hp motor(s), and 31 years old. One-third (34%) of the vessels have steel hulls and 34% use a freezer for refrigeration. Vessels with RSLA permits are, on average, larger, more powerful, and newer. Most are made of steel (88%) and have freezers (85%).

### Fishing Revenue by Permitted Vessels

Vessels with federal South Atlantic shrimp permit(s) are active in a wide variety of shrimp and non-shrimp fisheries in the SA region and elsewhere. As a result, SA shrimp landings are responsible for about \$38 million of permitted vessels' total revenue (24%). Gulf shrimp landings (all species) accounted for 35%, while 41% are derived from non-shrimp landings (with Northeast scallops being important). Table 3 shows the total revenue derived from different fisheries for vessels with different South Atlantic shrimp permit(s) configurations.

**Table 3: Total Fishing Revenue (\$) by Fishery and SA Shrimp Permit Type**

	<u>Vessels with SA shrimp permit type:</u>				Total
	SPA-only	SPA & RSLA	SPA & RSCZ	RSLA or RSCZ	
Number of Vessels	396	96	133	33	658
SA Penaeid Shrimp (\$)	17,859,668	10,986,298	7,567,728	55,355	36,469,049
SA Rock Shrimp (\$)	0	1,531,106	554	0	1,531,660
Gulf Shrimp (any) (\$)	23,515,311	23,420,889	5,127,279	4,059,145	56,122,624
Non-Shrimp Landings (\$)	10,769,702	14,761,414	31,342,792	8,658,080	65,531,988

# Annual Economic Survey of Federal South Atlantic Shrimp Permit Holders

## Data Collection

A two-page, self-administered, mail survey (OMB Control # 0648-0591) is sent annually to 33% of the population of permit holders. The survey collects annual expenditures grouped into categories of variable costs (e.g., fuel, crew) and fixed costs (e.g., insurance, overhead). When combined with revenue from other data collections, the financial and economic status and performance of the industry can be documented. A technical memorandum (NMFS-SEFSC-601) describes in detail the data collection methodology and should be consulted for details about the survey design, data processing, and definitions. The memorandum and the survey questionnaire are available at: [www.sefsc.noaa.gov/socialscience/shrimp.htm](http://www.sefsc.noaa.gov/socialscience/shrimp.htm)

The population of interest is composed of all vessels with an SPA, RSLA, or RSCZ permit, including active and inactive vessels. In 2011, 266 vessels were randomly selected, stratified by state, from the population of approximately 658 vessels with permits to shrimp in federal waters of the South Atlantic. Of the 266 surveys that were sent out, 184 completed surveys were returned (another 13 remained incomplete after multiple telephone attempts). After adjusting for 19 vessels that were deemed ineligible because their permits were sold or terminated, a response rate of 74% was achieved (184/247). Due to problems linking cost and revenue datasets, the final number of observations used in the analyses was 171 (64% of the sample; 26% of the population).

## Results

The financial and economic analysis is based on an accounting framework of money flows and values associated with the productive activity of commercial shrimping. The results presented are vessel averages which apply to a typical or representative vessel in a given fleet. Results based on different fleet definitions provide different perspectives on the fishery. Most vessels owning South Atlantic shrimp permits are engaged in multiple fisheries, with less than half (44%) actually reporting SA shrimp landings in 2011. In this report, economic results are presented for five fleets (which are not mutually exclusive!):

- A: Vessels holding a penaeid shrimp permit (SPA)
- B: Vessels holding a limited access rock shrimp permit (RSLA)
- C: Vessels reporting penaeid shrimp landings in the South Atlantic in 2011 (active SPA)
- D: Vessels reporting rock shrimp landings in the South Atlantic in 2011 (active RSLA)
- E: Vessels, for which penaeid shrimp revenue exceeded 50% of total revenue (“shrimpers”)

Results for other groups are reported in the appendix, including for 27 inactive vessels not engaged in commercial fishing, 28 vessels not harvesting any shrimp, and 44 vessels only harvesting shrimp in the Gulf of Mexico. In the appendix, results are presented in a standardized table format that links vessel characteristics and operations to simple financial statements, including balance sheet, cash flow, and income statements.

# **Economics of the Federal South Atlantic Shrimp Fisheries**

## A: Economic Status of the SPA-permitted Fleet (penaeid shrimp permit)

In 2011, approximately 624 vessels had a South Atlantic penaeid shrimp permit (SPA). The results below are based on 165 complete and usable surveys randomly sampled from this population. Tabulated results for this fleet can be found in Table 5, column 1, in the Appendix. The sample's vessel characteristics are not materially different from the SPA population and all vessels with SA shrimp permits (page 1). The geographic distribution of the permit owners' residence is provided in Figure A1, and indicates that 23% of the SPA permits were held by vessels outside the SA region (Northeast U.S. and Gulf of Mexico).

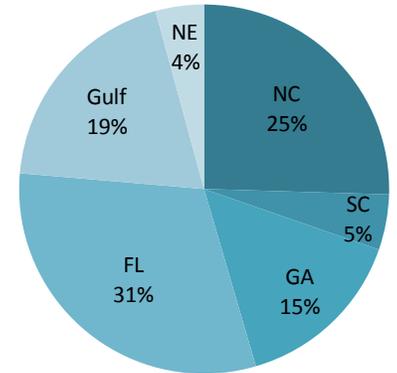


Figure A1: State of Residency of Owner

### Balance Sheet

The average market value of a vessel was \$188,639 in 2011, only about \$3 thousand less than the original purchase price. The average vessel has \$28,727 of liabilities, and only 24% of the vessels have an outstanding loan. This implies an average equity of \$159,912 for each owner and a debt to equity ratio of 18%. This is a small amount of leverage. Only 42% of the vessels had hull insurance. However, because newer, more valuable vessels are much more likely to have insurance, 64% of total asset value is insured. The average implicit value of a vessel's fishing permits is \$137,603. The high value reflects the ownership of valuable Atlantic scallop permits by some of vessels in the sample. The value of the limited access rock shrimp and Gulf shrimp permits might account for a fraction of the total.

Table A1: Landings, prices, and revenue by (fishery) category

	Landings (lbs, head-off)	Price (\$ per lbs)	Revenue (\$)
Shrimp - Atlantic - Penaeid shrimp	18,791	3.58	67,248
Shrimp - Atlantic - Rock shrimp	1,907	2.24	4,281
Shrimp - Gulf - Any shrimp	30,718	3.65	112,112
Non-shrimp species	-	-	120,263
Government payments (shrimp related)	-	-	5,005
DWH-related payments	-	-	3,752

### Landings and Revenue

Of the vessels with SPA permits, 44% landed SA penaeid shrimp, 5% landed SA rock shrimp, and 33% landed Gulf shrimp. In 2011, the average vessel landed 19, 2, and 31 thousand pounds of SA penaeid, SA rock, and Gulf shrimp, respectively (Table A1). SA penaeid shrimp averaged \$3.58 per pound, while a pound of SA rock shrimp yielded \$2.24. In 2011, average annual revenue from all sources was \$312,660. As a percentage of revenue, non-shrimp landings accounted for 38%, Gulf shrimp for 36%, SA penaeid shrimp for 22%, shrimp-related government payments for 2%, SA rock shrimp for 2%, and DWH-related payments for 1% (Figure A2). We estimate that the fleet generated fishing revenue of \$12.15 (of which \$7.34 was from shrimp) for each gallon of fuel used (a measure of fuel efficiency).

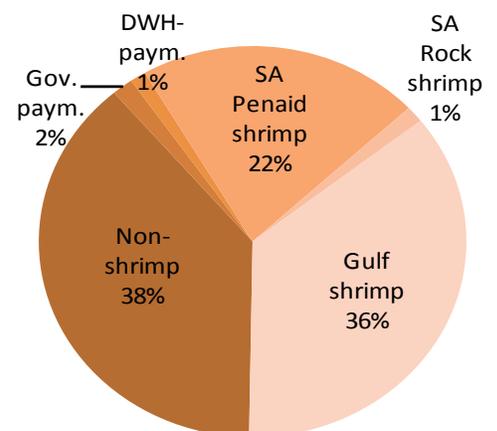


Figure A2: Revenue by Fishery

## Costs

In 2011, average annual expenses for operations were \$265,959, where operations refer to commercial fishing. Operating expenses include both variable costs, usually paid on a trip basis, and fixed costs, such as insurance. The average vessel used 25,021 gallons of fuel, and the average gallon of fuel was purchased for \$3.17 in 2011. Fuel accounted for 30% of operating expenses, and other supplies accounted for 8% (Figure A3). The expense for hired crew and captains is on average \$99,724, or 37% of expenses, which indicates the importance of the industry as a source of wage income. Of the vessels, 48% are owner operated, and we estimate that the average owner operator's contribution *as captain* is about \$17,000 per year ("opportunity cost of time"---based on data from owners paying themselves a captain's share). Overall, labor accounts for 40.6% of operating expenses. Fixed costs account for the remaining 22% of operating expenses, themselves split among maintenance (30%), major repairs (18%), estimated depreciation (17%), insurance payments (13%), and other overhead (22%).

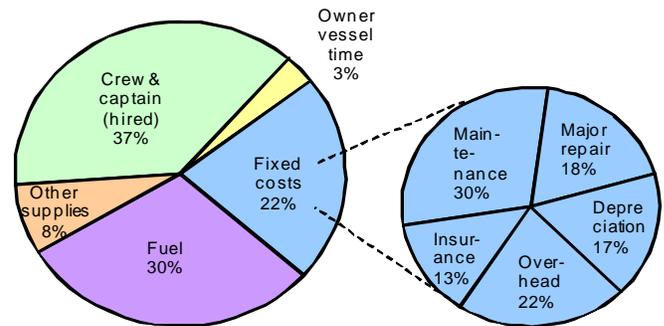


Figure A3: Percentage Breakup of Total Costs and Fixed Costs

Additional expenses in 2011, not counted as operating expenses, include interest payments of \$1,976 (financing costs), principal payments of \$6,577 (paying down debt), and new investment of \$3,965 (beyond maintenance and repair). Tabulated results for this fleet can be found in the Appendix, Table 5, column 1.

## Financial Performance

For the average vessel, the difference between total revenue and total expenses---the net cash flow---is on average \$52,536 (Figure A4). This is a measure of the industry's liquidity and should usually be quite positive in an established industry. It does not account for owner operators' labor contribution or the vessels' depreciation. The difference between revenue from commercial fishing operations and operating expenses---net revenue from operations---is on average \$37,944, which accounts for all costs of production. Finally, when financing costs are subtracted and non-operational income (government and DWH-related payments) is added, the average profit for each owner is \$44,725.

Figure A4: Net Cash Flow, Net Revenue, Profit

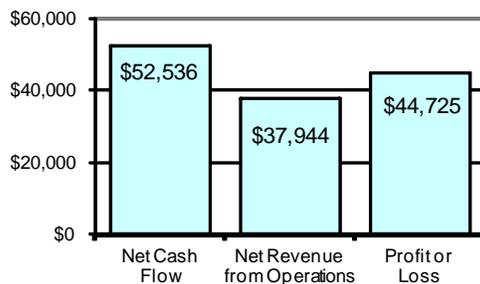
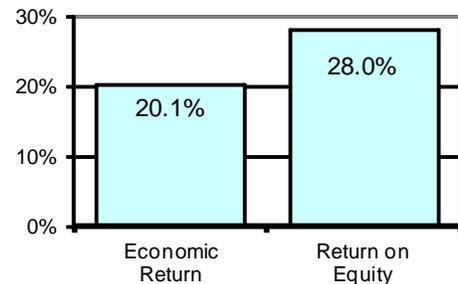


Figure A5: Financial Returns



An average economic return of 20.1% is calculated by dividing net operating revenue by the value of vessel assets (Figure A5). Economic return quantifies the productivity of a shrimp vessel's production from a societal perspective. In contrast, the return on equity is the primary concern of the individual owner. The return on equity of 28% is calculated by dividing the profit by the equity currently invested by the owner in the vessel.

## B: Economic Status of the RSLA-permitted Fleet (rock shrimp permit)

In 2011, 108 vessels had a South Atlantic rock shrimp permit (RSLA). The results below are based on a random sample of 41 permits with complete and usable surveys from this population. Tabulated results for this fleet can be found in Table 5, column 2, in the Appendix. The sample's vessel characteristics are not materially different from the RSLA population, but are larger, more powerful, and newer compared to all vessels with other SA shrimp permits only. The geographic distribution of the permit owners' residence is provided in Figure B1, and indicates that 49% of RSLA permits were held by vessels outside the SA region (Northeast U.S. and Gulf).

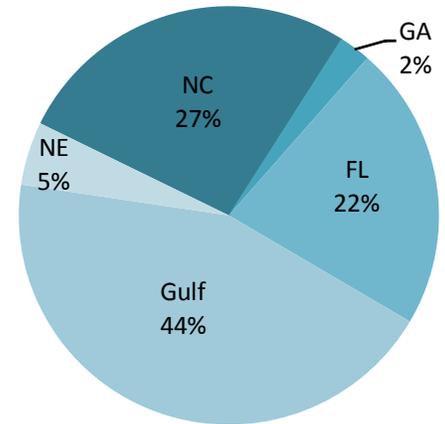


Figure B1: State of Residency of Owner

### Balance Sheet

The average market value of a vessel was \$430,238 in 2011, about \$2 thousand less than the original purchase price. The average vessel has \$53,165 of liabilities, and 32% of the vessels have an outstanding loan. This implies an average equity of \$377,073 for each owner and a debt to equity ratio of only 14%. Most vessels (83%) had hull insurance. The average implicit value of a vessel's fishing permits is \$293,431. The high value reflects the ownership of valuable Atlantic scallop permits by some of vessels in the sample. The value of the limited access rock shrimp and Gulf shrimp permits might account for a few thousand dollars of the total.

Table B1: Landings, prices, and revenue by (fishery) category

	Landings (lbs, head-off)	Price (\$ per lbs)	Revenue (\$)
Shrimp - Atlantic - Penaeid shrimp	24,741	3.97	98,331
Shrimp - Atlantic - Rock shrimp	7,675	2.24	17,228
Shrimp - Gulf - Any shrimp	75,286	3.80	286,256
Non-shrimp species	-	-	298,505
Government payments (shrimp related)	-	-	5,359
DWH-related payments	-	-	10,060

### Landings and Revenue

Of the vessels with RSLA permits, 44% landed SA penaeid shrimp, 22% landed SA rock shrimp, and 61% landed Gulf shrimp. In 2011, the average vessel landed 25, 8, and 75 thousand pounds of SA penaeid, SA rock, and Gulf shrimp, respectively (Table B1). SA penaeid shrimp averaged \$3.97 per pound, while a pound of SA rock shrimp yielded \$2.24. In 2011, average annual revenue from all sources was \$715,737. As a percentage of revenue, non-shrimp landings for 42%, Gulf shrimp accounted for 40%, SA penaeid shrimp for 14%, SA rock shrimp for 2%, and government and DWH-related payments each about 1% (Figure B2). We estimate that the fleet generated fishing revenue of \$11.81 (of which \$6.78 was from shrimp) for each gallon of fuel used (a measure of fuel efficiency).

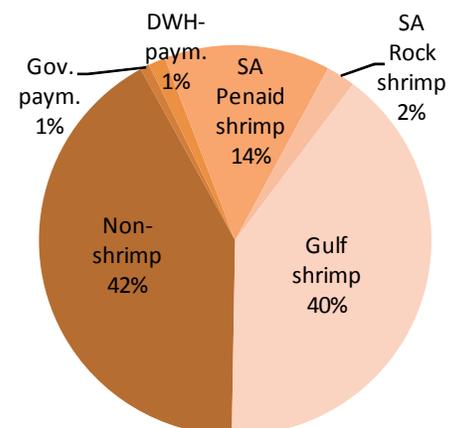


Figure B2: Revenue by Fishery

## Costs

In 2011, average annual expenses for operations were \$700,319, where operations refer to commercial fishing activities. Operating expenses include both variable costs, usually paid on a trip basis, and fixed costs, such as insurance. The average vessel used 59,279 gallons of fuel, and the average gallon of fuel was purchased for \$3.09 in 2011. Fuel accounted for 30% of operating expenses, and other supplies accounted for 8% (Figure B3). The expense for hired crew and captains is on average \$235,245, or 38% of expenses, which indicates the importance of the industry as a source of wage income. Of the vessels, 27% are owner operated, and we estimate that the average owner operator's contribution *as captain* is about \$55,000 per year ("opportunity cost of time"---based on data from owners paying themselves a captain's share). Overall, labor accounts for 40.5% of operating expenses. Fixed costs account for the remaining 22% of operating expenses; themselves split among maintenance (29%), major repairs (19%), estimated depreciation (16%), insurance payments (15%), and other overhead (21%).

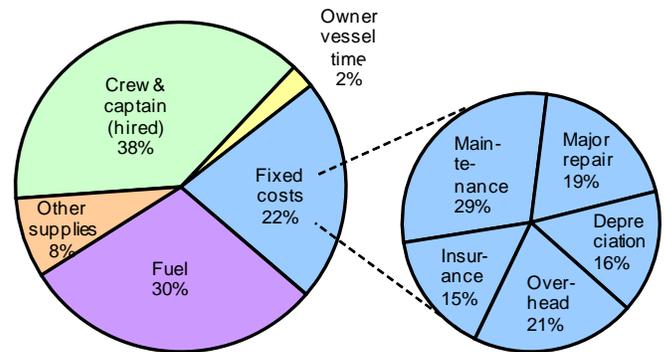


Figure B3: Percentage Breakup of Total Costs and Fixed Costs

Additional expenses in 2011, not counted as operating expenses, include interest payments of \$4,318 (financing costs), principal payments of \$15,463 (paying down debt), and new investment of \$5,161 (beyond maintenance and repair). Tabulated results for this fleet can be found in the Appendix, Table 5, column 2.

## Financial Performance

For the average vessel, the difference between total revenue and total expenses---the net cash flow---is on average \$109,753 (Figure B4). This is a measure of the industry's liquidity and should usually be quite positive in an established industry. It does not account for owner operators' labor contribution or the vessels' depreciation. The difference between revenue from commercial fishing operations and operating expenses---net revenue from operations---is on average \$83,499, which accounts for all costs of production. Finally, when financing costs are subtracted and non-operational income (government and DWH-related payments) is added, the average profit for each owner is \$94,599.

Figure B4: Net Cash Flow, Net Revenue, Profit

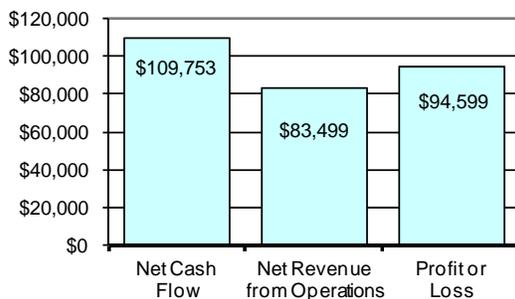
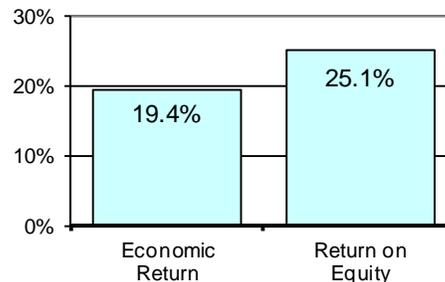


Figure B5: Financial Returns



An average economic return of 19.4% is calculated by dividing net operating revenue by the value of vessel assets (Figure B5). Economic return quantifies the productivity of a shrimp vessel's production from a societal perspective. In contrast, the return on equity is the primary concern of the individual owner. The return on equity of 25.1% is calculated by dividing the profit by the equity currently invested by the owner in the vessel.

## C: Economic Status of the Active South Atlantic Penaeid Shrimp Fleet

In 2011, approximately 285 vessels landed SA penaeid shrimp who had an SPA permit---the active SA penaeid shrimp fleet. The results below are based on 72 complete and usable surveys randomly sampled from this population. Tabulated results for this fleet can be found in Table 6, column 1, in the Appendix. The sample's vessel characteristics are not materially different from the SPA population and all vessels with SA shrimp permits (page 1). The geographic distribution of the permit owners' residence across the Gulf of Mexico, the Northeast U.S., and the individual South Atlantic states is provided in Figure C1, and indicates that owners of active SPA permits mostly reside in the SA region.

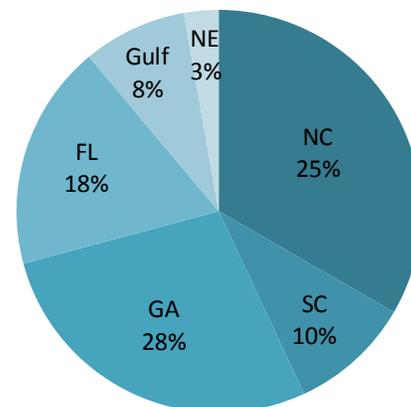


Figure C1: State of Residency of Owner

### Balance Sheet

The average market value of a vessel was \$152,381 in 2011, about \$36 thousand less than the original purchase price. Since only 24% of the vessels have an outstanding loan, the average vessel has \$21,382 of liabilities. This implies an average equity of \$130,999 for each owner and a debt to equity ratio of only 16%. Only 40% of the vessels had hull insurance. However, because newer, more valuable vessels are more likely to have insurance, 63% of total asset value is insured. The average implicit value of a vessel's fishing permits is \$47,925. The high value reflects the ownership of valuable Atlantic scallop permits by some of vessels in the sample. The value of the limited access rock shrimp and Gulf shrimp permits might account for a few thousand dollars of the total.

Table C1: Landings, prices, and revenue by (fishery) category

	Landings (lbs, head-off)	Price (\$ per lbs)	Revenue (\$)
Shrimp - Atlantic - Penaeid shrimp	43,063	3.58	154,109
Shrimp - Atlantic - Rock shrimp	4,370	2.24	9,810
Shrimp - Gulf - Any shrimp	15,981	3.54	56,639
Non-shrimp species	-	-	47,468
Government payments (shrimp related)	-	-	6,492
DWH-related payments	-	-	2,096

### Landings and Revenue

Of vessels in the active SA penaeid shrimp fleet, 100% landed SA penaeid shrimp, 13% landed SA rock shrimp, and 17% landed Gulf shrimp. In 2011, the average vessel landed 43, 4, and 16 thousand pounds of SA penaeid, SA rock, and Gulf shrimp, respectively (Table C1). SA penaeid shrimp averaged \$3.58 per pound, while a pound of SA rock shrimp yielded \$2.24. In 2011, average annual revenue from all sources was \$276,614. As a percentage of revenue, SA penaeid shrimp accounted for 56%, Gulf shrimp for 20%, non-shrimp landings for 17%, SA rock shrimp for 4%, government payments for 2%, and DWH-related payments for 2% (Figure C2). We estimate that the fleet generated fishing revenue of \$10.49 (of which \$8.63 was from shrimp) for each gallon of fuel used (a measure of fuel efficiency).

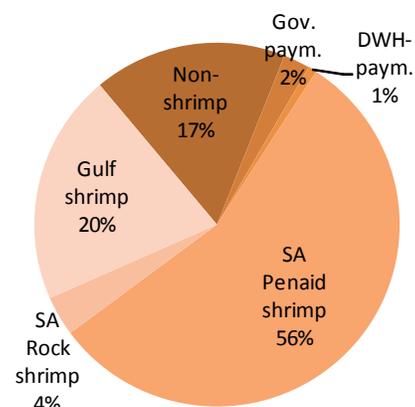


Figure C2: Revenue by Fishery

## Costs

In 2011, average annual expenses for operations were \$241,584, where operations refer to commercial fishing activities. Operating expenses include both variable costs, usually paid on a trip basis, and fixed costs, such as insurance. The average vessel used 25,543 gallons of fuel, and the average gallon of fuel was purchased for \$3.11 in 2011. Fuel accounted for 33% of operating expenses, and other supplies accounted for 9% (Figure C3). The expense for hired crew and captains is on average \$71,512, or 30% of expenses, which indicates the importance of the industry as a source of wage income. Of the vessels, 57% are owner operated, and we estimate that the average owner operator's contribution *as captain* is about \$19,000 per year ("opportunity cost of time"---based on data from owners paying themselves a captain's share). Overall, labor accounts for 34% of operating expenses. Fixed costs account for the remaining 24% of operating expenses; themselves split among maintenance (28%), major repairs (22%), estimated depreciation (17%), insurance payments (11%), and other overhead (22%).

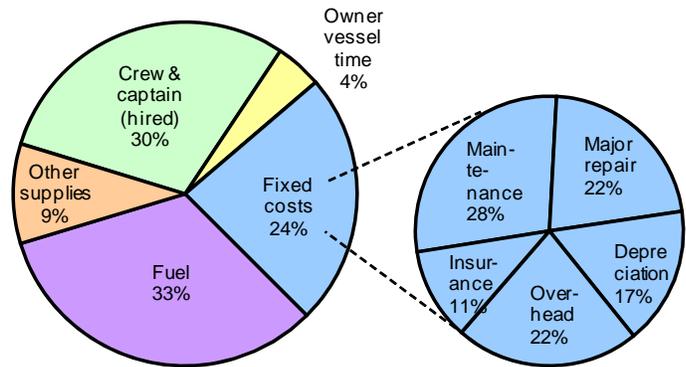


Figure C3: Percentage Breakup of Total Costs and Fixed Costs

Additional expenses in 2011, not counted as operating expenses, include interest payments of \$1,646 (financing costs), principal payments of \$5,449 (paying down debt), and new investment of \$4,367 (beyond maintenance and repair). Tabulated results for this fleet can be found in the Appendix, Table 6, column 1.

## Financial Performance

For the average vessel, the difference between total revenue and total expenses---the net cash flow---is on average \$43,722 (Figure C4). This is a measure of the industry's liquidity and should usually be quite positive in an established industry. It does not account for owner operators' labor contribution or the vessels' depreciation. The difference between revenue from commercial fishing operations and operating expenses---net revenue from operations---is on average \$26,442, which accounts for all costs of production. Finally, when financing costs are subtracted and non-operational income (government and DWH-related payments) is added, the average profit for each owner is \$33,384.

Figure C4: Net Cash Flow, Net Revenue, Profit

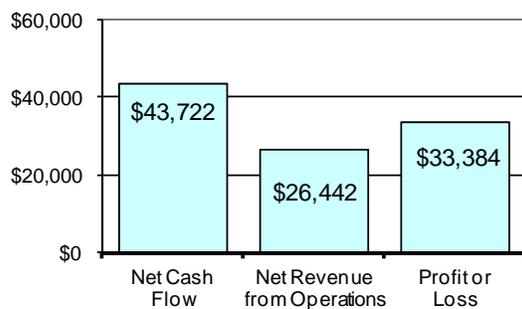
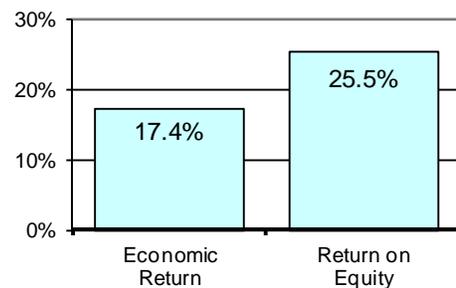


Figure C5: Financial Returns



An average economic return of 17.4% is calculated by dividing net operating revenue by the value of vessel assets (Figure C5). Economic return quantifies the productivity of a shrimp vessel's production from a societal perspective. In contrast, the return on equity is the primary concern of the individual owner. The return on equity of 25.5% is calculated by dividing the profit by the equity currently invested by the owner in the vessel.

## D: Economic Status of the Active South Atlantic Rock Shrimp Fleet

In 2011, approximately 18 vessels landed SA rock shrimp---the active SA rock shrimp fleet. The results below are based on a random sample of 9 permits from this population with complete and usable surveys. A sample of 9 is very small, leading to a high level of uncertainty concerning these results. Tabulated results for this fleet can be found in Table 6, column 2, in the Appendix. The sample's vessel characteristics are not materially different from the RSLA population, but are larger, more powerful, and newer compared to all vessels with SA shrimp permits. The geographic distribution of the permit owners' residence across the individual South Atlantic states and Gulf of Mexico is provided in Figure D1.

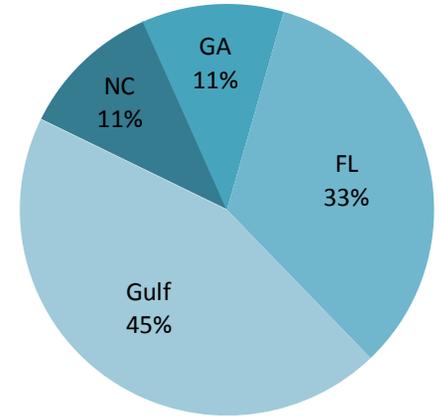


Figure D1: State of Residency of Owner

### Balance Sheet

The average market value of a vessel was \$333,281 in 2011, about \$100 thousand less than the original purchase price. The average vessel has \$93,231 of liabilities, and 56% of the vessels have an outstanding loan. This implies an average equity of \$240,050 for each owner and a debt to equity ratio of 39%. Most vessels (89%) had hull insurance. The average implicit value of a vessel's fishing permits is \$66,203. In addition to the limited access RSLA permit, all 9 vessels also owned the limited access Gulf shrimp permit. It is unknown if any other fishing permits contributed to the value.

Table D1: Landings, prices, and revenue by (fishery) category

	Landings (lbs, head-off)	Price (\$ per lbs)	Revenue (\$)
Shrimp - Atlantic - Penaeid shrimp	68,612	3.90	267,761
Shrimp - Atlantic - Rock shrimp	34,962	2.24	78,481
Shrimp - Gulf - Any shrimp	71,438	3.36	239,878
Non-shrimp species	-	-	5,163
Government payments (shrimp related)	-	-	8,657
DWH-related payments	-	-	16,767

### Landings and Revenue

Of vessels in the active SA rock shrimp fleet, 100% landed SA penaeid shrimp, 100% landed SA rock shrimp, and 67% landed Gulf shrimp. In 2011, the average vessel landed 69, 35, and 71 thousand pounds of SA penaeid, SA rock, and Gulf shrimp, respectively (Table D1). SA penaeid shrimp averaged \$3.90 per pound, while a pound of SA rock shrimp yielded \$2.24. In 2011, average annual revenue from all sources was \$616,708. As a percentage of revenue, SA penaeid shrimp accounted for 43%, Gulf shrimp for 39%, SA rock shrimp for 13%, and DWH-related payments for 3%, and government payments and non-shrimp landings for 1% each (Figure D2). We estimate that the fleet generated fishing revenue of \$9.50 (of which \$9.42 was from shrimp) for each gallon of fuel used (a measure of fuel efficiency).

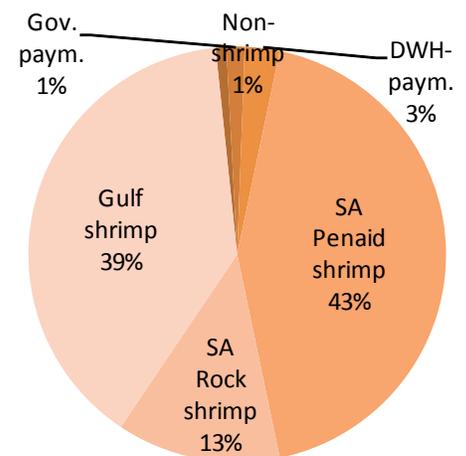


Figure D2: Revenue by Fishery

## Costs

In 2011, average annual expenses for operations were \$591,284, where operations refer to commercial fishing activities. Operating expenses include both variable costs, usually paid on a trip basis, and fixed costs, such as insurance. The average vessel used 62,226 gallons of fuel, and the average gallon of fuel was purchased for \$2.93 in 2011. Fuel accounted for 33% of operating expenses, and other supplies accounted for 10% (Figure D3). The expense for hired crew and captains is on average \$132,329, or 24% of expenses, which indicates the importance of the industry as a source of wage income. Of the vessels, 33% are owner operated, and we estimate that the average owner operator's contribution *as captain* is about \$53,000 per year ("opportunity cost of time"---based on data from owners paying themselves a captain's share). Overall, labor accounts for 27% of operating expenses. Fixed costs account for the remaining 29.5% of operating expenses; themselves split among maintenance (29%), repairs (23%), estimated depreciation (13%), insurance payments (10%), and overhead (25%).

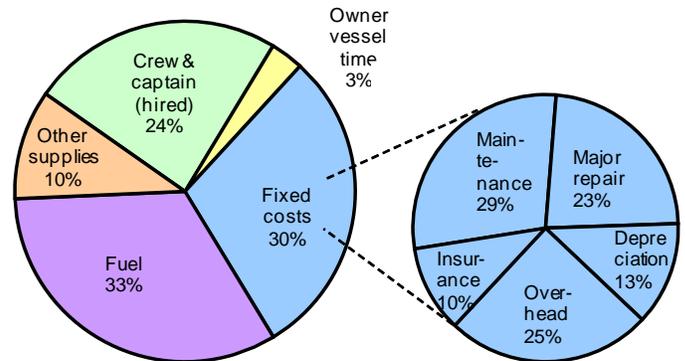


Figure D3: Percentage Breakup of Total Costs and Fixed Costs

Additional expenses in 2011, not counted as operating expenses, include interest payments of \$8,825 (financing costs), principal payments of \$34,110 (paying down debt), and new investments (beyond maintenance and repair) of \$1,238. Tabulated results for this fleet can be found in the Appendix, Table 6, column 2.

## Financial Performance

Given the small sample size, caution is advised when interpreting the results. There are large fluctuations in most numbers compared to last two years which is likely the result of the small sample size. For the average vessel, the difference between total revenue and total expenses---the net cash flow---is \$57,514 (Figure D4). This is a measure of the industry's liquidity and should usually be quite positive in an established industry. It does not account for owner operators' labor contribution or the vessels' depreciation. The difference between revenue from commercial fishing operations and operating expenses---net revenue from operations---is on average \$38,207, which accounts for all costs of production. Finally, when financing costs are subtracted and non-operational income (government and DWH-related payments) is added, the average profit for each owner is \$54,807.

Figure D4: Net Cash Flow, Net Revenue, Profit

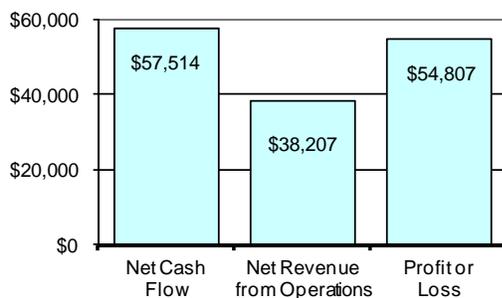
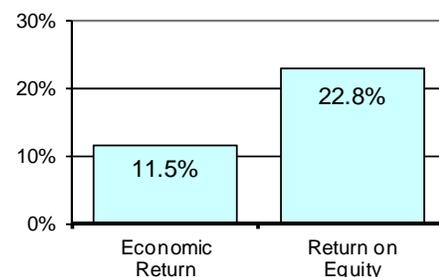


Figure D5: Financial Returns



An average economic return of 11.5% is calculated by dividing net operating revenue by the value of vessel assets (Figure D5). Economic return quantifies the productivity of a shrimp vessel's production from a societal perspective. In contrast, the return on equity is the primary concern of the individual owner. The return on equity of 22.8% is calculated by dividing the profit by the equity currently invested by the owner in the vessel. It is substantially higher than the economic return due to DWH-related payments (\$16,767).

## E: Economic Status of the **Active, Predominantly-SA Penaeid Shrimp Fleet**

This section reports results for vessels which, in 2011, predominantly caught SA penaeid shrimp. Of the 72 sampled vessels in the active SA penaeid shrimp fleet, only 52 derive the majority of their revenue from SA penaeid shrimp landings. Tabulated results for this fleet can be found in Table 6, column 3, in Appendix. Results for the 11 vessels whose primary catch is not SA penaeid shrimp are reported in Table 6, column 4. Vessels specializing on SA penaeid shrimp are generally smaller and older than the overall fleet and are rarely made of steel or use less freezers. The geographic distribution of the permit owners' residence across the individual South Atlantic states and the Northeast U.S. is provided in Figure E1.

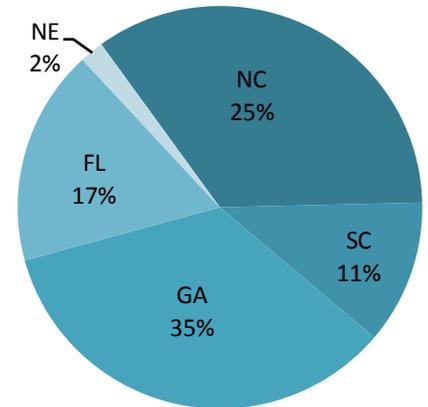


Figure E1: State of Residency of Owner

### Balance Sheet

The average market value of a vessel was \$86,478 in 2011, about \$32 thousand less than the original purchase price. This is substantially less than for the overall fleet. Since only 19% of the vessels have an outstanding loan, the average vessel only has \$10,393 of liabilities. This implies an average equity of \$76,086 for each owner and a debt to equity ratio of only 14%. Hence, the use of credit is practically absent among these vessels. Also, 27% of the vessels had hull insurance.

Table E1: Landings, prices, and revenue by (fishery) category

	Landings (lbs, head-off)	Price (\$ per lbs)	Revenue (\$)
Shrimp - Atlantic - Penaeid shrimp	42,252	3.42	144,708
Shrimp - Atlantic - Rock shrimp	0	-	0
Shrimp - Gulf - Any shrimp	642	3.14	2,017
Non-shrimp species	-	-	12,731
Government payments (shrimp related)	-	-	6,860
DWH-related payments	-	-	0

### Landings and Revenue

Of the vessels that primarily fished for SA penaeid shrimp, 100% landed SA penaeid shrimp, 4% landed Gulf shrimp, and none landed SA rock shrimp. In 2011, the average vessel landed 42 thousand pounds of SA penaeid shrimp (Table E1). SA penaeid shrimp averaged \$3.42 per pound. In 2011, average annual revenue from all sources was \$166,315. As a percentage of revenue, SA penaeid shrimp accounted for 87%, non-shrimp landings for 8%, government payments for 4%, and Gulf shrimp landings for 1% (Figure E2). We estimate that the fleet generated fishing revenue of \$10.37 (of which \$9.54 was from shrimp) for each gallon of fuel used (a measure of fuel efficiency).

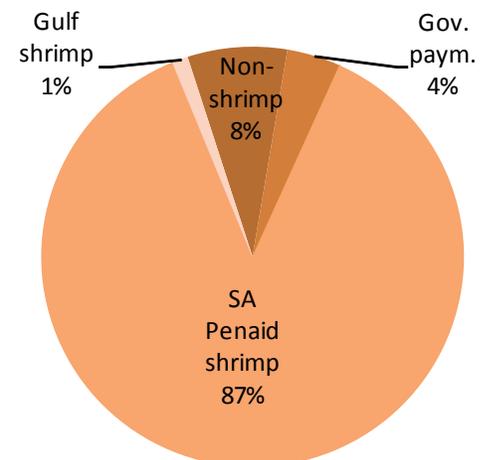


Figure E2: Revenue by Fishery

## Costs

In 2011, average annual expenses for operations were \$143,814, where operations refer to commercial fishing activities. Operating expenses include both variable costs, usually paid on a trip basis, and fixed costs, such as insurance. The average vessel used 15,375 gallons of fuel, and the average gallon of fuel was purchased for \$3.15 in 2011. Fuel accounted for 34% of operating expenses, and other supplies accounted for 9%

(Figure E3). The expense for hired crew and captains is on average \$41,974, or 29% of expenses. Of the vessels, 67% are owner operated, and we estimate that the average owner operator's contribution *as captain* is about \$15,000 per year ("opportunity cost of time"---based on data from owners paying themselves a captain's share). Overall, labor accounts for 36% of operating expenses. Fixed costs account for the remaining 21% of operating expenses; themselves split among maintenance (37%), major repairs (19%), estimated depreciation (17%), insurance payments (9%), and other overhead (18%).

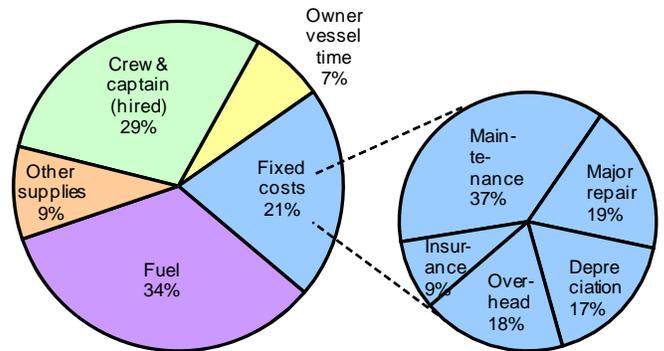


Figure E3: Percentage Breakup of Total Costs and Fixed Costs

Additional expenses in 2011, not counted as operating expenses, include interest payments of \$521 (financing costs), principal payments of \$968 (paying down debt), and new investment of \$4,136 (beyond maintenance and repair). Tabulated results for this fleet can be found in the Appendix, Table 6, column 3.

## Financial Performance

For the average vessel, the difference between total revenue and total expenses---the net cash flow---is on average \$32,443 (Figure E4). This is a measure of the industry's liquidity and should usually be quite positive in an established industry. It does not account for owner operators' labor contribution or the vessels' depreciation. The difference between revenue from commercial fishing operations and operating expenses---net revenue from operations---is on average \$15,641, which accounts for all costs of production. Finally, when financing costs are subtracted and non-operational income (government payments) is added, the average profit for each owner is \$21,980.

Figure E4: Net Cash Flow, Net Revenue, Profit

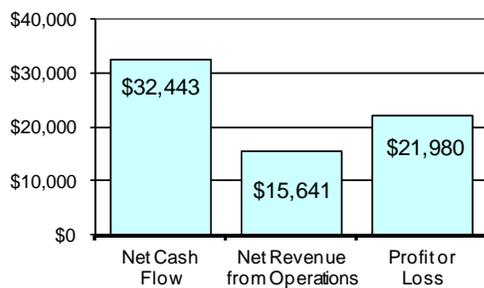
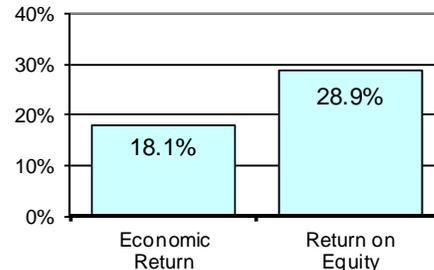


Figure E5: Financial Returns



An average economic return of 18.1% is calculated by dividing net operating revenue by the value of vessel assets (Figure E5). Economic return quantifies the productivity of a shrimp vessel's production from a societal perspective. In contrast, the return on equity is the primary concern of the individual owner. The return on equity 28.9% is calculated by dividing the profit by the equity currently invested by the owner in the vessel. The high return on equity is partly due to significant government payments (\$6,860).

## Summary

This report provides an overview of the financial and economic health of vessels holding a federal permit for harvesting shrimp in the South Atlantic. The analysis suggests that SPA permitted vessels (Fleet A) are, on average, generating a positive cash flow, net revenue from operations, and profit (Table 4). The economic return (20%) and return on the equity (28%) are respectable. It should be noted that much of this profit is being made by vessels not active or not primarily active in the SA penaeid or rock shrimp fisheries. When only vessels that land penaeid shrimp are considered (Fleet C), the results are somewhat moderated, but qualitatively similar, with positive flows and returns. The economic return, a reflection of the return to commercial fishing, is 17%. Vessels that generate a majority of their revenue from penaeid shrimp (Fleet E)---in contrast to previous years---also generated similar, economically healthy results; including an economic return of 18% and a return on equity of 29%.

Looking at fleets defined by ownership of the limited-entry rock shrimp permit (RSLA) leads to similar results. All vessels that own a RSLA permit (Fleet B) have quite substantial positive cash flow, net revenue, and returns. When only vessels actually landing rock shrimp are considered (Fleet D) the economic return drops to 11% from 19%. The economic return tentatively indicates that rock shrimp was the least profitable commercial fishery (among those engaged in by the studied vessels); yet 11% still seems healthy, i.e., well above break even. The active rock shrimp fleet is mostly located in the Gulf of Mexico and benefited, on average, from about \$17,000 of DWH-related payments in 2011. Due to a sample size of 9, these results are highly uncertain.

Table 4: Financial Results for the Average Vessel by Fleets in 2011 (thousand dollars)

	# of Obs.	Assets	Equity	Net Cash Flow	Net Rev. from Operations	Profit or Loss	Economic Return	Return on Equity
A: SPA-permitted fleet	165	189	160	53	38	45	20%	28%
B: RSLA-permitted fleet	41	430	377	110	83	95	19%	25%
C: Active SA penaeid shrimp fleet	72	152	131	44	26	33	17%	25%
D: Active SA rock shrimp fleet	9	333	240	58	38	55	11%	23%
E: Predominantly SA penaeid fleet	52	86	76	32	16	22	18%	29%

In summary, the results indicate that the economics of the commercial harvest of South Atlantic shrimp further improved in 2011. In 2010 SA shrimping was a profitable activity, in contrast to 2009 when losses were being made. These results are averages and hence hide the wide variation that clearly exists within all fleets. The reader is cautioned that many further caveats apply to these results, including small sample sizes and the general difficulty of collecting economic data. Hence the results should be viewed as tentative indicators of the general economic health of the industry.

## **Appendix**

## Data Tables

Table 5: F&E Results: Averages for the Permitted Fleet by Shrimp Permit (2011)

	Permitted Fleet		
	<u>SPA</u>	<u>RSLA</u>	<u>RSCZ</u>
# of Observations	165	41	33
<b><u>Vessel Characteristics</u></b>			
Length (feet)	61	76	56
Gross tons	83	130	68
Horse power	496	630	477
Year built	1984	1992	1987
Hull material - Steel	43%	88%	45%
Refrigeration - Freezer	40%	85%	21%
State of Owner - North Carolina	25%	27%	30%
State of Owner - South Carolina	5%	0%	0%
State of Owner - Georgia	15%	2%	3%
State of Owner - Florida	31%	22%	36%
State of Owner - Gulf of Mexico Region	19%	44%	9%
State of Owner - Northeast Region	4%	5%	21%
Permit - SPA	100%	90%	94%
Permit - RSLA	22%	100%	0%
Permit - RSCZ	19%	0%	100%
Permit - SPGM	45%	95%	33%
<b><u>Balance Sheet (end of 2011)</u></b>			
<b>Assets</b> - Market value of vessel	<b>\$188,639</b>	<b>\$430,238</b>	<b>\$208,552</b>
<i>Original value of vessel (purchase price)</i>	<i>\$191,896</i>	<i>\$432,114</i>	<i>\$166,880</i>
<i>Implicit value of fishing permit(s)</i>	<i>\$137,603</i>	<i>\$293,431</i>	<i>\$366,371</i>
<b>Liabilities</b> - Loan on vessel	<b>\$28,727</b>	<b>\$53,165</b>	<b>\$36,054</b>
<i>% of vessels with loan</i>	<i>24%</i>	<i>32%</i>	<i>18%</i>
<b>Equity</b> - Owner's equity in vessel	<b>\$159,912</b>	<b>\$377,073</b>	<b>\$172,498</b>
<i>Insurance coverage (% of vessels / % of assets)</i>	<i>42% / 64%</i>	<i>83% / 76%</i>	<i>42% / 69%</i>
<b><u>Vessel Operation (2011)</u></b>			
Owner-operator	48%	27%	42%
Actively shrimping - Atlantic - Penaeid shrimp	44%	44%	33%
Actively shrimping - Atlantic - Rock shrimp	5%	22%	0%
Actively shrimping - Gulf - Any shrimp	33%	61%	12%
Shrimp pounds landed - Atlantic - Penaeid shrimp	18,791	24,741	18,430
Shrimp pounds landed - Atlantic - Rock shrimp	1,907	7,675	0
Shrimp pounds landed - Gulf - Any shrimp	30,718	75,286	7,483
Annual fuel use (gallons)	25,021	59,279	17,337
<b><u>Fleet Averages (2011)</u></b>			
Shrimp price - Atlantic - Penaeid shrimp (\$ per pound)	3.58	3.97	3.94
Shrimp price - Atlantic - Rock shrimp (\$ per pound)	2.24	2.24	-
Shrimp price - Gulf - Any shrimp (\$ per pound)	3.65	3.80	3.48
Shrimp price - Overall shrimp (\$ per pound)	3.57	3.73	3.81
Fuel price (\$ per gallon)	3.17	3.09	3.27
Fuel efficiency I - Shrimp pounds per gallon	2.1	1.8	1.5
Fuel efficiency II - Shrimp revenue (\$) per gallon	7.34	6.78	5.69
Fuel efficiency III - Seafood revenue (\$) per gallon	12.15	11.81	19.61

(in USD unless otherwise noted)	Permitted Fleet		
	<u>SPA</u>	<u>RSLA</u>	<u>RSCZ</u>
# of Observations	165	41	33
<b><u>Cash Flow (2011)</u></b>			
<b>Inflow - Total</b>	<b>312,660</b>	<b>715,737</b>	<b>343,087</b>
Shrimp revenue - Atlantic - Penaeid shrimp	67,248	98,331	72,650
Shrimp revenue - Atlantic - Rock shrimp	4,281	17,228	0
Shrimp revenue - Gulf - Any shrimp	112,112	286,256	26,022
Non-shrimp revenue	120,263	298,505	241,357
Government payments received (shrimp related)	5,005	5,359	1,073
DWH-related payments received	3,752	10,060	1,984
<b>Outflow - Total</b>	<b>260,124</b>	<b>605,984</b>	<b>261,689</b>
Fuel	79,393	183,352	56,650
Other supplies	19,938	48,534	17,540
Crew & captain (hired)	99,724	235,245	131,570
Regular maintenance (vessel and gear)	17,317	39,725	14,733
Major repair and haul-out	10,830	25,784	7,855
Insurance	7,783	20,709	8,629
Overhead (excluding loan payments)	12,621	27,693	13,367
Interest payments made (on vessel loans)	1,976	4,318	2,103
Principal payments made (on vessel loans)	6,577	15,463	4,053
New investments and upgrades (in vessel)	3,965	5,161	5,187
<b>Net Cash Flow</b>	<b>52,536</b>	<b>109,753</b>	<b>81,398</b>
<b><u>Non-Cash Cost Estimates (2011)</u></b>			
Owner's vessel time	8,368	14,837	6,301
Depreciation	9,985	20,940	10,933
<b><u>Income Statement (2011)</u></b>			
<b>Revenue from Operations</b>	<b>303,903</b>	<b>700,319</b>	<b>340,029</b>
<b>Cost of Operations</b>	<b>265,959</b>	<b>616,820</b>	<b>267,580</b>
<i>Variable costs - Non-Labor</i>	<i>37.3%</i>	<i>37.6%</i>	<i>27.7%</i>
<i>Variable costs - Labor</i>	<i>40.6%</i>	<i>40.5%</i>	<i>51.5%</i>
<i>Fixed costs</i>	<i>22.0%</i>	<i>21.9%</i>	<i>20.7%</i>
<b>Net Revenue from Operations</b>	<b>37,944</b>	<b>83,499</b>	<b>72,450</b>
<b>Profit or Loss (before taxes)</b>	<b>44,725</b>	<b>94,599</b>	<b>73,404</b>
<b><u>Fleet Returns (2011)</u></b>			
Economic Return	20.1%	19.4%	34.7%
Return on Equity	28.0%	25.1%	42.6%

Table 6: F&E Results: Averages for the South Atlantic Fleet Actively Shrimping and by Primary Fishery (Rock Shrimp, Penaeid Shrimp, or Other Fish) (2011)

	Active S. Atl.	Active South Atlantic Shrimp Fleet		
	Shrimp Fleet	Rock Shrimp	Penaeid - Primary	Penaeid - Secondary
# of Observations	72	9	52	11
<b><u>Vessel Characteristics</u></b>				
Length (feet)	63	81	58	71
Gross tons	84	145	70	103
Horse power	463	717	413	487
Year built	1982	1992	1978	1992
Hull material - Steel	40%	100%	23%	73%
Refrigeration - Freezer	35%	100%	23%	36%
State of Owner - North Carolina	33%	11%	35%	45%
State of Owner - South Carolina	10%	0%	12%	9%
State of Owner - Georgia	28%	11%	35%	9%
State of Owner - Florida	18%	33%	17%	9%
State of Owner - Gulf of Mexico Region	8%	44%	0%	18%
State of Owner - Northeast Region	3%	0%	2%	9%
Permit - SPA	100%	100%	100%	100%
Permit - RSLA	25%	100%	8%	45%
Permit - RSCZ	15%	0%	19%	9%
Permit - SPGM	31%	100%	13%	55%
<b><u>Balance Sheet (end of 2011)</u></b>				
<b>Assets</b> - Market value of vessel	<b>\$152,381</b>	<b>\$333,281</b>	<b>\$86,478</b>	<b>\$315,909</b>
<i>Original value of vessel (purchase price)</i>	<i>\$188,753</i>	<i>\$433,889</i>	<i>\$118,369</i>	<i>\$320,909</i>
<i>Implicit value of fishing permit(s)</i>	<i>\$47,925</i>	<i>\$66,203</i>	<i>\$13,208</i>	<i>\$197,091</i>
<b>Liabilities</b> - Loan on vessel	<b>\$21,382</b>	<b>\$93,231</b>	<b>\$10,393</b>	<b>\$14,545</b>
<i>% of vessels with loan</i>	<i>24%</i>	<i>56%</i>	<i>19%</i>	<i>18%</i>
<b>Equity</b> - Owner's equity in vessel	<b>\$130,999</b>	<b>\$240,050</b>	<b>\$76,086</b>	<b>\$301,364</b>
<i>Insurance coverage (% of vessels / % of assets)</i>	<i>40% / 63%</i>	<i>89% / 78%</i>	<i>27% / 38%</i>	<i>64% / 84%</i>
<b><u>Vessel Operation (2011)</u></b>				
Owner-operator	57%	33%	67%	27%
Actively shrimping - Atlantic - Penaeid shrimp	100%	100%	100%	100%
Actively shrimping - Atlantic - Rock shrimp	13%	100%	0%	0%
Actively shrimping - Gulf - Any shrimp	17%	67%	4%	36%
Shrimp pounds landed - Atlantic - Penaeid shrimp	43,063	68,612	42,252	25,994
Shrimp pounds landed - Atlantic - Rock shrimp	4,370	34,962	0	0
Shrimp pounds landed - Gulf - Any shrimp	15,981	71,438	642	43,121
Annual fuel use (gallons)	25,543	62,226	15,375	43,598
<b><u>Fleet Averages (2011)</u></b>				
Shrimp price - Atlantic - Penaeid shrimp (\$ per pound)	3.58	3.90	3.42	4.06
Shrimp price - Atlantic - Rock shrimp (\$ per pound)	2.24	2.24	-	-
Shrimp price - Gulf - Any shrimp (\$ per pound)	3.54	3.36	3.14	3.82
Shrimp price - Overall shrimp (\$ per pound)	3.48	3.35	3.42	3.91
Fuel price (\$ per gallon)	3.11	2.93	3.15	3.23
Fuel efficiency I - Shrimp pounds per gallon	2.5	2.8	2.8	1.6
Fuel efficiency II - Shrimp revenue (\$) per gallon	8.63	9.42	9.54	6.20
Fuel efficiency III - Seafood revenue (\$) per gallon	10.49	9.50	10.37	11.85

(in USD unless otherwise noted)	Active S. Atl.	Active South Atlantic Shrimp Fleet		
	Shrimp Fleet	Rock Shrimp	Penaeid - Primary	Penaeid - Secondary
# of Observations	72	9	52	11
<b>Cash Flow (2011)</b>				
<b>Inflow - Total</b>	<b>276,614</b>	<b>616,708</b>	<b>166,315</b>	<b>519,768</b>
Shrimp revenue - Atlantic - Penaeid shrimp	154,109	267,761	144,708	105,562
Shrimp revenue - Atlantic - Rock shrimp	9,810	78,481	0	0
Shrimp revenue - Gulf - Any shrimp	56,639	239,878	2,017	164,930
Non-shrimp revenue	47,468	5,163	12,731	246,295
Government payments received (shrimp related)	6,492	8,657	6,860	2,982
DWH-related payments received	2,096	16,767	0	0
<b>Outflow - Total</b>	<b>232,892</b>	<b>559,194</b>	<b>133,872</b>	<b>434,013</b>
Fuel	79,323	182,584	48,409	140,975
Other supplies	22,673	57,529	13,066	39,572
Crew & captain (hired)	71,512	132,329	41,974	161,390
Regular maintenance (vessel and gear)	16,281	46,948	11,129	15,546
Major repair and haul-out	12,533	37,829	5,620	24,514
Insurance	6,393	17,202	2,641	15,283
Overhead (excluding loan payments)	12,715	40,601	5,408	24,442
Interest payments made (on vessel loans)	1,646	8,825	521	1,091
Principal payments made (on vessel loans)	5,449	34,110	968	3,182
New investments and upgrades (in vessel)	4,367	1,238	4,136	8,019
<b>Net Cash Flow</b>	<b>43,722</b>	<b>57,514</b>	<b>32,443</b>	<b>85,755</b>
<b>Non-Cash Cost Estimates (2011)</b>				
Owner's vessel time	10,618	17,481	10,356	6,241
Depreciation	9,536	20,574	5,211	20,950
<b>Income Statement (2011)</b>				
<b>Revenue from Operations</b>	<b>268,026</b>	<b>591,284</b>	<b>159,455</b>	<b>516,786</b>
<b>Cost of Operations</b>	<b>241,584</b>	<b>553,077</b>	<b>143,814</b>	<b>448,912</b>
<i>Variable costs - Non-Labor</i>	<i>42.2%</i>	<i>43.4%</i>	<i>42.7%</i>	<i>40.2%</i>
<i>Variable costs - Labor</i>	<i>34.0%</i>	<i>27.1%</i>	<i>36.4%</i>	<i>37.3%</i>
<i>Fixed costs</i>	<i>23.8%</i>	<i>29.5%</i>	<i>20.9%</i>	<i>22.4%</i>
<b>Net Revenue from Operations</b>	<b>26,442</b>	<b>38,207</b>	<b>15,641</b>	<b>67,874</b>
<b>Profit or Loss (before taxes)</b>	<b>33,384</b>	<b>54,807</b>	<b>21,980</b>	<b>69,765</b>
<b>Fleet Returns (2011)</b>				
Economic Return	17.4%	11.5%	18.1%	21.5%
Return on Equity	25.5%	22.8%	28.9%	23.1%

Table 7: F&E Results: Averages for the South Atlantic Fleet NOT Actively Shrimping (in the S. Atlantic) by Activity (Not Active, Other Fish, and Gulf Shrimp) (2011)

	IN-Active South Atlantic Shrimp Fleet		
	Not Active	Non-Shrimp Only	Gulf Shrimp Only
# of Observations	27	28	44
<b><u>Vessel Characteristics</u></b>			
Length (feet)	41	53	73
Gross tons	37	67	120
Horse power	527	437	583
Year built	1986	1986	1988
Hull material - Steel	15%	43%	66%
Refrigeration - Freezer	15%	14%	80%
State of Owner - North Carolina	19%	36%	7%
State of Owner - South Carolina	4%	0%	0%
State of Owner - Georgia	15%	4%	0%
State of Owner - Florida	52%	39%	36%
State of Owner - Gulf of Mexico Region	11%	0%	55%
State of Owner - Northeast Region	0%	21%	2%
Permit - SPA	89%	96%	95%
Permit - RSLA	11%	18%	34%
Permit - RSCZ	37%	29%	9%
Permit - SPGM	19%	32%	95%
<b><u>Balance Sheet (end of 2011)</u></b>			
<b>Assets</b> - Market value of vessel	<b>\$45,181</b>	<b>\$313,668</b>	<b>\$289,329</b>
<i>Original value of vessel (purchase price)</i>	\$63,693	\$200,438	\$301,373
<i>Implicit value of fishing permit(s)</i>	\$5,145	\$761,368	\$23,642
<b>Liabilities</b> - Loan on vessel	<b>\$3,296</b>	<b>\$44,493</b>	<b>\$42,402</b>
<i>% of vessels with loan</i>	7%	25%	32%
<b>Equity</b> - Owner's equity in vessel	<b>\$41,885</b>	<b>\$269,175</b>	<b>\$246,927</b>
<i>Insurance coverage (% of vessels / % of assets)</i>	4% / 0%	57% / 76%	61% / 65%
<b><u>Vessel Operation (2011)</u></b>			
Owner-operator	48%	39%	39%
Actively shrimping - Atlantic - Penaeid shrimp	0%	0%	0%
Actively shrimping - Atlantic - Rock shrimp	0%	0%	0%
Actively shrimping - Gulf - Any shrimp	0%	0%	100%
Shrimp pounds landed - Atlantic - Penaeid shrimp	0	0	0
Shrimp pounds landed - Atlantic - Rock shrimp	0	0	0
Shrimp pounds landed - Gulf - Any shrimp	0	0	96,316
Annual fuel use (gallons)	70	19,716	46,448
<b><u>Fleet Averages (2011)</u></b>			
Shrimp price - Atlantic - Penaeid shrimp (\$ per pound)	-	-	-
Shrimp price - Atlantic - Rock shrimp (\$ per pound)	-	-	-
Shrimp price - Gulf - Any shrimp (\$ per pound)	-	-	3.71
Shrimp price - Overall shrimp (\$ per pound)	-	-	3.71
Fuel price (\$ per gallon)	3.63	3.46	3.18
Fuel efficiency I - Shrimp pounds per gallon	-	-	2.1
Fuel efficiency II - Shrimp revenue (\$) per gallon	-	-	7.69
Fuel efficiency III - Seafood revenue (\$) per gallon	-	33.93	8.06

(in USD unless otherwise noted)	IN-Active South Atlantic Shrimp Fleet		
	Not Active	Non-Shrimp Only	Gulf Shrimp Only
# of Observations	27	28	44
<b>Cash Flow (2011)</b>			
<b>Inflow - Total</b>	<b>2,928</b>	<b>669,416</b>	<b>391,247</b>
Shrimp revenue - Atlantic - Penaeid shrimp	0	0	0
Shrimp revenue - Atlantic - Rock shrimp	0	0	0
Shrimp revenue - Gulf - Any shrimp	0	0	357,229
Non-shrimp revenue	76	668,987	17,036
Government payments received (shrimp related)	444	429	7,693
DWH-related payments received	2,408	0	9,289
<b>Outflow - Total</b>	<b>6,137</b>	<b>478,130</b>	<b>363,889</b>
Fuel	256	68,289	147,813
Other supplies	119	36,538	25,507
Crew & captain (hired)	224	289,054	108,198
Regular maintenance (vessel and gear)	609	24,056	26,691
Major repair and haul-out	1,791	11,842	11,902
Insurance	17	14,700	11,281
Overhead (excluding loan payments)	1,975	14,688	17,078
Interest payments made (on vessel loans)	250	2,907	2,714
Principal payments made (on vessel loans)	256	9,618	9,471
New investments and upgrades (in vessel)	641	6,437	3,234
<b>Net Cash Flow</b>	<b>(3,209)</b>	<b>191,286</b>	<b>27,358</b>
<b>Non-Cash Cost Estimates (2011)</b>			
Owner's vessel time	370	3,539	14,141
Depreciation	3,541	16,363	13,761
<b>Income Statement (2011)</b>			
<b>Revenue from Operations</b>	<b>76</b>	<b>668,987</b>	<b>374,265</b>
<b>Cost of Operations</b>	<b>8,902</b>	<b>479,068</b>	<b>376,370</b>
<i>Variable costs - Non-Labor</i>	<i>4.2%</i>	<i>21.9%</i>	<i>46.1%</i>
<i>Variable costs - Labor</i>	<i>6.7%</i>	<i>61.1%</i>	<i>32.5%</i>
<i>Fixed costs</i>	<i>89.1%</i>	<i>17.0%</i>	<i>21.4%</i>
<b>Net Revenue from Operations</b>	<b>(8,827)</b>	<b>189,919</b>	<b>(2,105)</b>
<b>Profit or Loss (before taxes)</b>	<b>(6,224)</b>	<b>187,441</b>	<b>12,162</b>
<b>Fleet Returns (2011)</b>			
Economic Return	(19.5%)	60.5%	(0.7%)
Return on Equity	(14.9%)	69.6%	4.9%

## Definitions

Balance Sheet: A balance sheet is a snapshot of a company's financial condition. A company's balance sheet has three parts: assets, liabilities, and the owner's equity. The asset side of a balance sheet lists all assets of a company and their value at a given point in time. The liability side lists the various sources of money invested to acquire these assets (the financial capital). Beyond investing their own capital (money), most company owners borrow financial capital from other sources, such as banks. The equity, the owners' interest on the assets of the company, always equals the difference between the value of all assets and what is owed.

Cash Flow Statement: The cash flow statement shows a company's flow of money. Money accruing to the company is called cash inflow. In this study, the most important cash inflow is revenue generated through the sale of commercially harvested seafood. Money leaving the company is called cash outflow, which includes the various costs of owning and operating the shrimp vessel. Transactions that do not directly create cash receipts and payments are excluded. The difference between inflow and outflow---the net cash flow---reflects the vessel owner's liquidity or solvency and is useful in determining the short-term viability of a company.

Income Statement: An income statement is intended to help owners and investors determine the true economic performance of a company over a specified period of time. The income statement is sometimes called the profit and loss statement. The income statement begins with the revenue generated from operations (sale of product or service) and subtracts all operating costs, including estimates of non-cash costs such as the value of owner's labor and depreciation. The result is the net revenue from operations. This is a measure of the true economic return to a productive activity. More relevant to the owners of a company is their actual profit or loss, which is calculated by subtracting financing costs (such as interest payments) and adding non-operating income to net revenue from operations. In contrast to the cash flow statement, loan principal and new investment expenses are not included, as they represent a shift among asset classes (e.g., cash to vessel) rather than an economic cost.

Returns: An "economic return" (of commercial fishing) is calculated by dividing net operating revenue by the value of vessel assets. Economic return quantifies the productivity of a shrimp vessel's production from a societal perspective. In contrast, the return on equity is the primary concern of the individual owner. The return on equity is calculated by dividing the profit or loss by the equity currently invested by the owner in the vessel.

## Data Sources

Permit and vessel data: Constituency Services Branch, Southeast Regional Office, NMFS.  
Revenue and landings data: Trip ticket programs of the various Atlantic and Gulf States as consolidated by the Atlantic Coastal Cooperative Statistics Program; Florida Trip Ticket Program; & NMFS, SE Fisheries Science Center, Galveston lab (Gulf shrimp system).  
Economic data: NMFS, SE Fisheries Science Center, Miami lab, Social Science Research Group.

## More Information

For more definitions, as well as background on the survey design, processing and cleaning of the data, and the quality, caveats, and idiosyncrasies associated with each data field, please see the NOAA technical memorandum (NMFS-SEFSC-601) available at: [www.sefsc.noaa.gov/socialscience/shrimp.htm](http://www.sefsc.noaa.gov/socialscience/shrimp.htm)

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