Management Context

The South Atlantic Region includes East Florida, Georgia, North Carolina, and South Carolina. Federal fisheries in this region are managed by the South Atlantic Fishery Management Council (SAFMC) and NOAA Fisheries (NMFS) under four fishery management plans (FMPs). The spiny lobster and coastal migratory pelagic resources fisheries are managed with the Gulf of Mexico Fishery Management Council (GMFMC). The Dolphin Wahoo FMP is managed with the Mid-Atlantic Fishery Management Council (MAFMC) and the New England Fishery management Council (NEFMC)[1]

South Atlantic Region FMPs

1. Coastal migratory pelagic resources (with GMFMC)
2. Coral coral reef and live/hardbottom habitat plan
3. Dolphin wahoo (with MAFMC and NEFMC))
4. Golden crab
5. Pelagic Sargassum habitat
6. Shrimp
7. Snapper grouper
8. Spiny lobster (with GMFMC)

Of the stocks or stock complexes covered in these fishery management plans, six are currently listed as overfished: black sea bass, pink shrimp, red grouper, red porgy, red snapper, and snowy grouper. Nine stocks or stock complexes are currently subject to overfishing: black sea bass, gag, red grouper, red snapper, snowy grouper, speckled hind, tilefish, vermilion snapper, and warsaw grouper.

Commercial Fisheries

In 2009, commercial fishermen in the South Atlantic Region landed 111 million pounds of finfish and shellfish, earning $144 million in landings revenue. Landings revenue was dominated by blue crab ($35 million) and shrimp ($33 million). These species groups commanded ex-vessel prices of $0.96 and $1.64 per pound, respectively, and together comprised 47% of total landings revenue, and 51% of total landings in the South Atlantic Region.

Key South Atlantic Region Commercial Species

- Blue crab
- Clams
- Flounders
- Groupers
- King mackerels
- Oysters
- Shrimp
- Snappers
- Swordfish
- Tunas

North Carolina and East Florida had the highest landings revenue in the region in 2009 with $77 million and $41 million, respectively. The next greatest landings revenue came from South Carolina with $17 million in landings revenue. In terms of pounds landed, North Carolina also had the highest landings (69 million pounds), followed by East Florida (27 million pounds) and South Carolina (9.4 million pounds).

Shrimp experienced a 34% decrease in ex-vessel price (44% decrease in real terms) from $2.49 per pound in 2000 to $1.64 per pound in 2009. Over the same time period, the ex-vessel price per pound for blue crab only increased 4.3% (11% decrease in real terms), from $0.92 to $0.96 per pound. The decline in value of shrimp is mostly attributable to increases in competition from imports of farmed shrimp. Blue crab in the South Atlantic Region has not experienced an increase in competition, but rather has maintained its ex-vessel price due to declining harvest in the Mid-Atlantic, South Atlantic and Gulf of Mexico.

Economic Impacts[2]

In 2009, the South Atlantic Region's seafood industry generated $13 billion in sales impacts in Florida, $1 billion in sales impacts in Georgia, $696 million in sales impacts in North Carolina, and $70 million in sales impacts in South Carolina. Florida generated the largest employment, income, and value added impacts, generating 65,000 jobs, $2.4 billion, and $4.3 billion, respectively. The smallest income impacts were generated in South Carolina ($26 million) and the smallest employment impacts were also generated in South Carolina (1,200 jobs).

The sector that generated the greatest employment impacts by state was the importers sector with 34,000 jobs in Florida and 2,700 jobs in Georgia. The harvest sector in North Carolina generated 2,400 jobs. More sales impacts were generated by importers in Florida than any other sector in any another state in the region at $9.5 billion and the greatest value added impacts were also generated by importers in Florida ($2.9 billion).

Landings Revenue

Landings revenue in the South Atlantic Region totaled $144 million in 2009. This was a 35% decrease (a 44% decrease in real terms) from 2000 levels ($220 million) and a 13% decrease (a 13% decrease in real terms) relative to 2008 ($166 million).

Totaling $81 million in 2009, shellfish revenue experienced a 45% decrease (a 53% decrease in real terms) from 2000 to 2009 and experienced a 23% decrease (22% decrease in real terms) from 2008 to 2009.

Blue crab and shrimp had the highest landings revenue in the South Atlantic Region in 2009, with $35 million and $33 million, respectively. Together they accounted for 47% of the total landings revenue earned in 2009. Between 2000 and 2009, the landings revenue from blue crab decreased 30% (a 40% decrease in real terms), landings revenue from shrimp decreased 60% (a 66% decrease in real terms), and landings revenue from clams

[1] The authority to manage red drum was transferred to the Atlantic States Marine Fisheries Commission (ASMFC) in 2008.
[2] The NMFS Commercial Fishing Industry Input/Output Model was used to generate the impact estimates (see NMFS Commercial Fishing & Seafood Industry Input/Output Model, available at: www.st.nmfs.noaa.gov/documents/commercial_seafood_impacts_2007-2009.pdf)

decreased 59% (a 65% decrease in real terms).

In terms of finfish, North Carolina contributed the most ($34 million) followed by East Florida ($23 million), and South Carolina ($5.2 million). Shellfish landings revenue was dominated by North Carolina, which also contributed the most ($43 million) followed by East Florida ($18 million), and South Carolina ($12 million).

Commercial Fisheries Facts

Landings revenue

- On average, between 2000 and 2009, the key species or species groups accounted for 78% of total revenue, generating $126 million in the South Atlantic Region.
- Shrimp had higher landings revenues than any other species or species group, averaging $47 million in landings revenue from 2000 to 2009.
- Swordfish had the largest annual increase in landings revenue over the 10 year time period, increasing 56% from $2.8 million in 2006 to $4.3 million in 2007.
- Shrimp had the largest annual decrease in landings revenue over the 10 year time period, decreasing 37% from $82 million in 2000 to $52 million in 2001.

Landings

- Key species or species groups contributed an average of 52% annually to total landings between 2000 and 2009.
- Blue crab, contributed the most to landings in the region, averaging 43 million pounds from 2000 to 2009.
- Tunas had the largest annual increase in landings over the 10 year time period, increasing 50% from 1.6 million in 2005 pounds to 2.4 million pounds in 2006.
- Shrimp had the largest annual decrease in landings over the 10 year time period, decreasing 39% from 26 million pounds in 2004 to 16 million pounds in 2005.

Prices

- Clams had the highest average annual ex-vessel price per pound ($6.37) over the time period, followed by oysters ($4.37), and groupers ($2.78).
- Blue crab had the lowest average annual ex-vessel price per pound ($0.89) over the time period, followed by king mackerels ($1.69), and flounders ($1.86).
- Blue crab had the largest annual increase in ex-vessel price over the 10 year time period, increasing 34% from $0.74 per pound in 2006 to $0.99 in 2007.
- Shrimp had the largest decrease in ex-vessel price over the 10 year time period, decreasing 25% from $2.19 per pound in 2008 to $1.64 in 2009.

From 2000 to 2009, species or species groups with large changes in landings revenue include oysters (increased 119%), shrimp (decreased 60%), and king mackerels (increased 60%). Species or species groups with large changes in landings revenue between 2008 and 2009 include shrimp (decreasing 36%), swordfish (increasing 30%), and groupers (decreasing 21%).

Landings

Fishermen in the South Atlantic Region landed 111 million pounds of finfish and shellfish in 2009. This was a 50% decrease from the 222 million pounds landed in 2000 and a 4.8% decrease from the 117 million landed in 2008. Finfish landings contributed 46% of total landings in the South Atlantic Region (51 million pounds) in 2009. From 2008 to 2009, finfish landings experienced a 16% increase. Over the same time period, shellfish landings experienced a 18% decrease from 73 million pounds in 2008 to 60 million in 2009 and a 35% decrease from 92 million pounds in 2000.

Blue crab and shrimp had the highest annual landings in the South Atlantic Region in 2009, with 37 million pounds and 20 million pounds, respectively. Together they accounted for 51% of the total landings in 2009. Blue crab landings decreased 33% and shrimp landings decreased 40% during this period.

From 2000 to 2009, species or species groups with large changes in landings include oysters (increasing 71%), king mackerels (increasing 63%), and clams (decreasing 46%). Species or species groups with large changes in landings between 2008 and 2009 include swordfish (increasing 36%), groupers (decreasing 22%), and blue crab (decreasing 18%).

Prices

The ex-vessel prices for the South Atlantic Region's key species and species groups in 2009 were higher than their 10 year average for six of the key species (two of the species in real terms). Ex-vessel prices for groupers and tunas experienced the biggest increases between 2000 and 2009, increasing 37% (17% in real terms) and 29% (10% in real terms), respectively. Relative to the ex-vessel prices in 2008, the South Atlantic Region's blue crab experienced the greatest increase (7.87%, 8.24% in real terms) from $0.89 in 2008 to $0.96 in 2009. Shrimp experienced the greatest decrease in ex-vessel price during this period (25.1%, 24.9% in real terms) from $2.19 to $1.64. Relative to ex-vessel prices in 2008, three species or species groups experienced increases, including oysters (4.5%), and groupers (0.3%).

In East Florida, the species or species group with the largest change in ex-vessel price from 2000 to 2009 was blue crab (51% increase, 29% increase in real terms) from $0.96 to $1.45. The largest change in ex-vessel price experienced in Georgia was for snails (conchs) (52% increase, 30% increase in real terms from $0.66 to $1.00 and in North Carolina the largest change in ex-vessel price was experienced by Atlantic croaker (63% increase, 40% increase in real terms from $0.30 to $0.49).

Recreational Fishing

In 2009, almost 2.4 million recreational anglers took 19 million fishing trips in the South Atlantic Region. Over 81% of these anglers were residents of a regional coastal county. Of the total fishing trips taken, 47% of them were taken from a private or rental boat and another 50% were shore-based. Atlantic croaker and spot were the most frequently caught species or species

[1]Expenditures and economic impacts from recreational fishing activities were generated using the NMFS Recreational Economic Impact Model (see

group with 8 million fish caught in 2009, and represented 28% of total fish caught in the region. Of the Atlantic croaker and spot caught, 62% of them were released rather than harvested.

Economic Impacts and Expenditures[1]

The contribution of recreational fishing activities in South Atlantic Region are reported in terms of economic impacts at the state level (employment, sales, income, and value added impacts) and expenditures on fishing trips and durable equipment at the regional level. Employment impacts in East Florida were the highest in the region with over 27,000 full- and part-time jobs generated by recreational fishing activities in the state. North Carolina (17,000 jobs), and South Carolina (5,000 jobs), followed in terms of employment impacts.

Overall, these employment impacts were generated by expenditures on recreational fishing trips taken by anglers (private or rental boat, for-hire boat, or shore-based trips) and expenditures on durable equipment. Throughout the South Atlantic Region, most of the employment impacts in 2009 were generated by expenditures on durable equipment: 92% in Georgia, 84% in East Florida, and 47% in North Carolina.

Key South Atlantic Region Recreational Species

- Black sea bass
- Bluefish
- Dolphinfish
- Atlantic croaker and spot
- Spotted seatrout
- King mackerel
- Sheepshead porgy
- Red drum
- Sharks
- Spanish mackerel

In addition to jobs, the contribution of recreational fishing activities to South Atlantic Region's economy can be measured in terms of sales impacts and the contribution of these activities to gross domestic product (value added impacts).

In 2009, sales impacts were the highest in East Florida ($3.1 billion in sales impacts), followed by North Carolina ($1.8 billion), South Carolina ($441 million), and Georgia ($197 million). In the same year, value added impacts were the highest in East Florida ($1.6 billion in value added impacts), followed by North Carolina ($890 million), South Carolina ($241 million), and Georgia ($102 million).

Overall, total fishing trip and durable equipment expenditures across the South Atlantic Region in 2009 were $5.8 billion. Approximately 81% of these expenditures were related to durable equipment purchases. The greatest expenditures were for boat expenses ($1.7 billion), followed by vehicle expenses ($1.3 billion), fishing tackle ($1.1 billion), and other equipment ($290 million). Fishing trip-related expenditures by the South Atlantic Region's non-residents totaled over $608 million of which the greatest portion can be attributed to shore-based fishing trips ($444 million). Residents of the South Atlantic Region spent $501 million on saltwater fishing trips, with the most of these expenses related to private boat trips ($275 million).

Recreational Fishing Facts

Participation

- An average of 2.8 million anglers fished in South Atlantic Region annually from 2000 to 2009.
- In 2009, coastal county residents made up 81% of total anglers in this region. These anglers averaged 84% of total anglers annually over the 10 year time period.
- The largest annual increase in the number of coastal anglers during the 10 year time period occurred between 2004 and 2005, increasing 24%, from 2.1 million anglers to 2.6 million anglers.
- The largest annual decrease during the same period for coastal anglers occurred between 2007 and 2008, decreasing 26%, from 3.2 million anglers to 2.3 million anglers.

Fishing trips

- In the South Atlantic Region, an average of 21 million fishing trips were taken annually from 2000 to 2009.
- Private or rental boat and shore-based fishing trips accounted for 9 million and 9.5 million fishing trips, respectively, in 2009. Together these made up 97% of the fishing trips taken in that year.
- The largest annual increase in the number of total trips taken annually over the 10 year time period occurred between 2002 and 2003, increasing 20%, from 18 million trips to 21 million trips.
- The largest annual decrease during the same period in total trips taken occurred between 2001 and 2002, decreasing 18%, from 22 million trips to 18 million trips.

Harvest and release

- Atlantic croaker and spot was the most commonly caught key species or species group, averaging 9.1 million fish over the 10 year time period. Of these, 45% were released rather than harvested.
- Of the ten commonly caught key species or species groups, five were released more often than harvested over this time period. The species or species group that was most commonly released was sharks (99% released).
- Dolphinfish (87% harvested), followed by king mackerel (75% harvested), and Spanish mackerel (65% harvested) were key species or groups that experienced the greatest proportion of harvests rather than releases.
- The largest annual change in the number of fish released was for releases of king mackerel, which increased 159% between 2002 and 2003; the largest annual change in number of fish harvested occurred in sharks, which increased 357% from 2006 to 2007.

Participation

There were 2.4 million recreational anglers who fished in the South Atlantic Region in 2009. This was a 3.6% decrease from 2000 (2.5 million anglers). These anglers were South Atlantic Region residents from either a coastal county (1.9 million anglers)

Marine Angler Expenditures in the United States, 2006, available at: http://www.st.nmfs.noaa.gov/st5/publication/AnglerExpenditureReport/AnglerExpendituresReport_ALL.pdf) or non-coastal county (462,000 anglers). Almost 81% of total anglers in 2009 were residents of a coastal county. Coastal county angler participation in 2009 decreased 8% relative to 2000 (2.1 million anglers) and decreased 17% between 2008 and 2009. Non-coastal county angler participation increased 20% relative to 2000 (384,000 anglers) and decreased 18% relative to 2008 (560,000 anglers).

Fishing Trips

Recreational fishermen took 19 million fishing trips in the South Atlantic Region in 2009. This was a 4.9% decrease from the 2000 (20 million trips) and was 3.2 million fewer trips than taken in 2008. Of the total trips taken in the South Atlantic Region in 2009, approximately 50% of the trips were shore based (9.5 million trips). The other most popular mode of fishing was private or rental boat-based with 9 million trips in 2009.

Harvest and Release

Of the South Atlantic Region's key species and species groups, Atlantic croaker and spot (8 million fish), spotted seatrout (5.1 million fish), bluefish (3.9 million fish) and black sea bass (3 million fish) were the most often caught by anglers in 2009. Sharks (99% released), black sea bass (90% released), red drum (85% released), spotted seatrout (74% released), Atlantic croaker and spot (62% released), and bluefish (61% released) were most often released rather than harvested. Anglers harvested more often than released dolphinfish (91% harvested) and king mackerel (78% harvested).

At the state level Atlantic croaker and spot was the most commonly caught species in North and South Carolina with a total of 6.4 million fish caught across the two states in 2009. In East Florida, the most commonly caught fish was gray snapper (2 million fish) and spotted seatrout was the most commonly caught fish in Georgia (1.3 million fish) in the same year. Between 2000 and 2009, five of the South Atlantic Region's key species or species groups showed decreases in catch totals. Key species or groups with the largest decreases were dolphinfish (61%), Spanish mackerel (19%), and king mackerel (16%).

Marine Economy

The sum of the gross domestic products by state for Florida, Georgia, North Carolina, and South Carolina was $1.7 trillion in 2008. Employee compensation totaled $958 billion and annual payroll totaled $598 billion. These economic measures increased 43% (a 22% increase in real terms) and 38% (a 18% increase in real terms), respectively, between 2000 and 2008; and experienced a 0.6% increase (a 9.2% decrease in real terms), and 0.4% increase (a 9.4% decrease in real terms), respectively between 2007 and 2008. Approximately 1.1 million establishments employed 16 million full- and part-time employees across the region in 2008. This was a 15% increase in establishment numbers and a 11% increase in employee numbers from 2000 to 2008.

In 2008, the commercial fishing location quotient (CFLQ) for Florida was the highest in the region at 0.97. This was an 29% decrease from 2001 and a 2% decrease from 2007. Florida's CFLQ suggests that the level of employment in commercial fishing-related industries in this state is approximately equal to the level of employment in these industries nationwide. The CFLQ in South Carolina in 2008 was 0.17 (a 61% decrease from 2000).

Seafood Sales and Processing

Annual receipts for nonemployer firms, businesses that have no paid employees and are subject to federal income tax, engaged in seafood product preparation and packaging across the South Atlantic Region totaled $15 million in 2007 and increased 5.7% from 2006 to 2007. Annual receipts totals experienced a 10% decrease in South Carolina between 2000 and 2008. There were 344 seafood wholesale establishments across the South Atlantic Region in 2008 that employed 3,145 full- and part-time workers. From 2000 to 2008, the number of seafood wholesale establishments decreased 31% and the number of employees decreased 33%.

Nonemployer firms engaged in seafood retail in the South Atlantic Region totaled 610 in 2008, a 28% increase relative to 2000. Of these firms, 17% were located in Georgia. At the state level, these firms showed a 51% increase in Florida and a 19% decrease in North Carolina between 2000 and 2008. Annual receipts in the region totaled $49 million in 2008, a 35% increase from 2000 (a 15% increase in real terms) and a 12% decrease from 2007 (a 20% decrease in real terms).

Employer establishments engaged in seafood retail increased 26% from 2000 to 2008, totaling 370 in 2008. These establishments employed 1,662 workers. Region-wide, the numbers of employees in the seafood retail sector increased 40% between 2000 and 2008. Across the states within the region, the largest change occurred in South Carolina (42% increase).

Transport, Support, and Marine Operations

The ship and boat building employed more people than any other industry in this sector, employing approximately 22,000 people in 2008. This industry also had the highest annual payroll in the region totaling $747 million. Marinas had the highest number of establishments (677), followed by the ship and boat building industries with 440 establishments and the navigational services to shipping industries with 176 establishments.

In Florida, industries with large changes in establishment numbers, employees, or annual payroll from 2007 to 2008 were: port and harbor operations (92% increase in payroll), port and harbor operations (55% increase in employees), coastal and Great Lakes freight transportation (47% decrease in payroll) and navigational services to shipping (40% decrease in employees). In Georgia, large changes were seen for port and harbor operations (25% increase in establishments), marinas (23% increase in payroll), deep sea freight transportation (18% increase in employees) and navigational services to shipping (16% decrease in payroll). In South Carolina, large changes were seen in the deep sea passenger transportation (600% increase in establishments), deep sea freight transportation (81% decrease in payroll), navigational services to shipping (62% increase in payroll) and navigational services to shipping (49% increase in employees).