Approach for Determining Acceptable Risk of Overfishing: Social Concerns
Scientific and Statistical Committee and Socioeconomic Panel Meeting
April 2019

Methodology

The top ten commercial communities are identified based on value regional quotient (the total value of a species landed in a given community, by the total value (or pounds) for that species for all communities in the region). Local quotient (an individual dealer's total value for one species in a fishing year compared to value of all species in that year, averaged across communities) is calculated for the top ten communities. A community is considered highly reliant on the commercial fishery for that species if the value local quotient is greater than a set threshold. The results are then compared to fishery performance reports, where available, and social vulnerability indicators.

The top ten recreational communities are identified based on the number of directed trips in a given community, by the total number of directed trips for all communities in that region. The number of trips targeting all South Atlantic Council managed species, by the number of trips targeting a single species are calculated for the top ten communities. A community is considered to highly reliant on the recreational fishery if greater than a set threshold of directed trips targeted and/or landed that species. The results are then compared to fishery performance reports, where available, and social vulnerability indicators.

If less than seven communities are considered highly reliant on a species, the fishery is considered to be low risk. If more than six but less than fourteen communities are reliant on a species, the fishery is considered to be medium risk. If greater than thirteen communities are reliant on a species, the fishery is considered to be high risk.

Notes:

- More information on fishery performance reports can be found on the South Atlantic Council's website (http://safmc.net/fishery-performance-reports/).

- More information on social indicators can be found on the NOAA Fisheries Socioeconomics Section website (https://www.fisheries.noaa.gov/national/socioeconomics/social-indicators).

Table 1. Top ten commercial fishing communities.

Black Sea Bass	Red Grouper	Gag Grouper	Scamp	Red Porgy	Greater Amberjack	Gray Triggerfish
Beaufort, NC	Key West, FL	Murrells Inlet, SC	Murrells Inlet, SC	Murrells Inlet, SC	Key Largo, FL	Murrells Inlet, SC
Engelhard, NC	Murrells Inlet, SC	Mayport, FL	Mayport, FL	Saint Augustine, FL	Murrells Inlet, SC	Saint Augustine, FL
Wanchese, NC	Winnabow, NC	Little River, SC	Little River, SC	Mayport, FL	Mayport, FL	Mayport, FL
Sneads Ferry, NC	Marathon, FL	Saint Augustine, FL	Winnabow, NC	Little River, SC	Cocoa, FL	Little River, SC
Little River, SC	Supply, NC	Morehead City, NC	Myrtle Beach, SC	Beaufort, NC	Saint Augustine, FL	Supply, NC
Murrells Inlet, SC	Cape Coral, FL	Wilmington, NC	Saint Augustine, FL	Supply, NC	Sugarloaf Shores, FL	Winnabow, NC
Hobucken, NC	Wilmington, NC	Cocoa, FL	Charleston, SC	Charleston, SC	New Smyrna Beach, FL	Charleston, SC
Surf City, NC	Beaufort, NC	Surf City, NC	Wrightsville Beach, NC	Winnabow, NC	Islamorada, FL	Southport, NC
Oriental, NC	Surf City, NC	Wrightsville Beach, NC	Supply, NC	McClellanville, NC	Port Orange, FL	McClellanville, NC
Wilmington, NC	Emerald Isle, NC	Myrtle Beach, SC	McClellanville, SC	Morehead City, NC	Charleston, SC	Myrtle Beach, SC

Source: ACCSP, 2014-2016 average.

Communities with a local quotient greater than 25%

Communities with a local quotient greater than 15%

Communities with a local quotient greater than or equal to 5%

Communities with a local quotient less than 5%

Table 2. Top ten recreational fishing communities.

Black Sea Bass	Red Grouper	Gag Grouper	Scamp	Red Porgy	Greater Amberjack	Gray Triggerfish
Mayport, FL	Key Biscayne, FL	Mayport, FL	Little River, SC	Homestead, FL	Cape Canaveral, FL	Homestead, FL
Morehead City, NC	S Allapattah, FL	Jacksonville, FL	Cape Canaveral, FL	Mayport, FL	Melbourne Beach, FL	Cape Canaveral, FL
Fernandina Beach, FL	South Beach, FL	Cape Canaveral, FL	Jacksonville, FL	St Augustine, FL	Mayport, FL	Fernandina Beach, FL
Wrightsville Beach, NC	Coral Gables, FL	Melbourne Beach, FL	Grant, FL	West Ashley, SC	Nags Head, NC	Jupiter, FL
Jacksonville, FL	Homestead, FL	Fort Pierce, FL	St Augustine, FL	Murrells Inlet, SC	Islamorada, FL	Nags Head, NC
Carolina Beach, NC	Riviera Beach, FL	Sebastian, FL	Murrells Inlet, SC	Jacksonville, FL	Boca Raton, FL	Morehead City, NC
Savannah, GA	Jupiter, FL	St Augustine, FL	Oak Island, NC	Cape Canaveral, FL	Key West, FL	Mayport, FL
Emerald Isle, NC	Ft Lauderdale, FL	St. Mary's, GA	Mt. Pleasant, SC	Little River, SC	Dania Beach, FL	Riviera Beach, FL
Cedar Point, NC	Sebastian, FL	Carolina Beach, NC	Morehead City, NC	Charleston, SC	Hatteras, NC	S Allapattah, FL
Cape Canaveral, FL	Dania Beach, FL	Fernandina Beach, FL	N. Miami Beach, FL	Wrightsville Beach, NC	St Augustine, FL	Sebastian, FL

Source: SEFSC, 2015-2017 average.

Communities with directed trips greater than 65%

Communities with directed trips greater than 55%

Communities with directed trips greater than or equal to 45%

Communities with direct trips less than 45%

Table 3. Information gathered from Fishery Performance Reports (FPR).

Black Sea Bass	Red Grouper	Red Porgy	Greater Amberjack
• In Florida, during times of peak abundance there were a few brothers who were responsible for most black sea bass landings (using pots). None of those fishermen have fished for black sea bass in recent years and may be selling their endorsements. • Several black sea bass endorsements have been transferred in recent years when snapper grouper permits changed hands. New permit holders have been opting not to use their endorsements in some months in favor of targeting other available species (North Carolina). • In Florida, demand for black sea bass on charters has decreased (minimum size is too large). • In Georgia, charter vessels have started targeting sheepshead instead of black sea bass. • In North Carolina, black sea bass are not the reason people book charters, but rather part of the "grab bag" that attracts people.	• Commercial fishermen based out of Morehead City, NC, reported that Red Grouper has never been a primary species for them. • Off the coast of Georgia, charter captains on the AP reported that Red Grouper are incidental catch and are not commonly seen. • For charter vessels off North Florida, red grouper are not a target species. • One AP member reported that there is more targeting of Red Grouper in the spearfishing sector off the Florida east coast. • AP members noted that while there is a demand for grouper in general, there is not a lot of demand for Red Grouper specifically. Restaurants do not prefer Red Grouper and commercial trips marketing to restaurants will try to sell any species caught on a multi-species trip, but there is not consumer and restaurant demand.	• In North Carolina, South Carolina, Georgia, and Florida AP members agreed that that red porgy do really well in the market and demand as gone up in recent years. Red porgy is a cheaper offering and they fill the need of restaurants looking for a whole fish presentation. • Charter captains on the AP generally agreed that customers don't normally request to catch red porgy; however, they catch their bag limit and are happy to keep them. • While no one community may be dependent on a single species, people still depend on many species to make ends meet. Any time a species is taken out of the catch, the trip becomes less profitable for both commercial and charter vessels. Red porgy are "part of the puzzle, and they're an important part of the puzzle".	• For private recreational fishermen in southeast North Carolina, decreased abundance of gag and red grouper might soon lead to a shift towards targeting amberjack. • Closures for other species have resulted in fishermen being more interested in greater amberjack. • In the charter industry, customers are more willing to keep greater amberjack nowadays. • Commercial representatives on the AP agreed that effort has shifted towards greater amberjack in recent years, mostly due to price and closures. • Morehead City, NC, is dependent on greater amberjack. It supports the local economy when other fisheries are closed in the fall of the year. Charter customers in North Carolina expect to catch greater amberjacks. • If the Charleston, SC area didn't have amberjack, getting through some of the months would be tough. • In St. Augustine, Florida, the charter and commercial industries are dependent on greater amberjack. • In the Florida Keys, everyone who fishes commercially targets greater amberjack. The species is important, especially to day-fishing operations.

Note: Fishery performance reports were unavailable for scamp, gag grouper, and gray triggerfish. Full reports here: http://safmc.net/fishery-performance-reports/

Table 4. Community social vulnerability indicators.

Community	Poverty	Population Composition	Personal Disruption	Community	Poverty	Population Composition	Personal Disruption
Beaufort, NC	Low	Low	Medium/High	Fernandina Beach, Fl	Medium/High	Medium/High	Medium/High
Engelhard, NC	Medium	Low	Medium	Jacksonville, FL	Medium	Medium	Medium
Wanchese, NC	Medium/High	Low	Low	Carolina Beach, NC	Medium	Low	Medium/High
Sneads Ferry. NC	Low	Low	Low	Savannah. GA	Medium/High	Medium/High	Medium/High
Little River, SC	Low	Low	Low	Cedar Point, NC	Low	Low	Low
Murrells Inlet, SC	Low	Low	Low	Cape Canaveral, FL	Medium	Low	Medium
Hobucken, NC	Unavailable	Unavailable	Unavailable	Key Biscayne, FL	Low	Medium	Low
Surf City, NC	Unavailable	Low	Medium	S. Allapattha, FL	Unavailable	Unavailable	Unavailable
Oriental, NC	Low	Low	Low	South Beach, FL	Medium/High	High	Medium/High
Wilmington, NC	Medium	Low	Medium/High	St. Mary's, GA	Low	Low	Low
Key West, FL	Low	Low	Low	Coral Gables, FL	Low	Medium	Low
Winnabow, NC	Unavailable	Unavailable	Unavailable	Homestead, FL	High	High	High
Marathon, FL	Low	Medium	Low	Riviera Beach, FL	High	High	High
Supply, NC	Unavailable	Unavailable	Unavailable	Jupiter, FL	Low	Low	Low
Emerald Isle, NC	Low	Low	Low	Ft. Lauderdale, FL	Medium/High	Medium	Medium
Mayport, FL	Medium	Medium	Medium	Sebastian, FL	Low	Low	Low
Saint Augustine, FL	Medium	Low	Medium	Dania Beach, FL	Medium	Medium	Medium
Morehead City, NC	Medium	Low	Medium	Melbourne Beach, FL	Low	Low	Low
Cocoa, FL	Low	Low	Low	Ft. Pierce, FL	High	High	High
Wrightsville Beach, NC	Low	Low	Low	Grant, FL	Unavailable	Unavailable	Unavailable
Myrtle Beach, SC	Low	Low	Low	Oak Island, NC	Low	Low	Low
Charleston, SC	High	Medium/High	High	Mt. Pleasant, SC	Low	Low	Low
McClellanville, SC	Low	Low	Low	N. Miami Beach, FL	Medium/High	High	Medium/High
Key Largo, FL	Low	Low	Low	Hatteras, NC	Medium/High	Low	Medium/High
Sugarloaf Shores, FL	Unavailable	Unavailable	Unavailable	Boca Raton, FL	Low	Low	Low
New Smyrna Beach, FL	Medium	Low	Low	Nag's Head, NC	Low	Low	Low
Islamorada, FL	Low	Low	Low	Southport, NC	Low	Low	Low
Port Orange. FL	Low	Low	Low	Cocoa, FL	High	Medium/High	High

Table 5. Final quantitative risk tolerance rankings.

Reliance Threshold	Black Sea Bass[a]	Red Grouper[b]	Gag Grouper[c]	Scamp[d]	Red Porgy[e]	Greater Amberjack[f]	Gray Triggerfish[g]
High	Low Risk (5 Communities)	Low Risk (1 Community)	Low Risk (2 Communities)	Low Risk (1 Community)	Low Risk (1 Community)	Low Risk (1 Community)	Low Risk (0 Communities)
Medium	Medium Risk (7 Communities)	Low Risk (3 Communities)	Low Risk (6 Communities)	Low Risk (2 Communities)	Low Risk (2 Communities)	Low Risk (2 Communities)	Low Risk (1 Communities)
Low	Medium Risk (10 Communities)	Low Risk (4 Communities)	Medium Risk (8 Communities)	Low Risk (5 Communities)	Low Risk (2 Communities)	Low Risk (3 Communities)	Low Risk (6 Communities)

[a] Information from the FPR supports low social risk, indicating that participation in both the recreational and commercial black sea bass fishery has declined in recent years. Of those communities highly reliant on the black sea bass fishery Savannah, GA, Fernandina Beach, FL, and Wilmington, NC may be vulnerable to sudden changes or social disruption from changes to the regulatory environment.

[b] Information from the FPR supports low social risk, indicating that red grouper is not a primary target in the commercial fishery and is primarily incidental catch in the recreational fishery. Of those communities highly reliant on the red grouper fishery South Beach, Florida may be vulnerable to sudden changes or social disruption from changes to the regulatory environment.

[c] Of those communities highly reliant on the gag grouper fishery Wilmington, NC may be vulnerable to sudden changes or social disruption from changes to the regulatory environment.

[d] Of those communities highly reliant on the scamp fishery none are vulnerable to sudden changes or social disruption from changes to the regulatory environment. Saint Augustine, FL may be slightly vulnerable.

[e] Information from the FPR supports low to medium social risk, indicating that red porgy is an important component of multispecies trips. Commercial demand for red porgy has increased in recent years. Of those communities highly reliant on red porgy, Charleston, SC and West Ashley, SC may be vulnerable to sudden changes or social disruption from changes to the regulatory environment.

[f] While the quantitative information suggests that greater amberjack is the low risk fishery, information from the FPR shows greater amberjack may be a medium to high risk species. The FPR indicates that commercial and recreational effort is increasing due to improved prices and closures of other reef fish species. Communities throughout the South Atlantic may be reliant on greater

amberjack in months where other species are unavailable. Of those communities highly reliant on greater amberjack, none are vulnerable to sudden changes or social disruption from changes to the regulatory environment.

[g] Of those communities highly reliant on gray triggerfish, Fernandina Beach, FL may be vulnerable to sudden changes or social disruption from changes to the regulatory environment.