

Socio-Economic Profile of the Snapper Grouper Fishery in the South Atlantic Region

Snapper Grouper Advisory Panel Meeting
April 2018

Prepared by: Kari MacLauchlin
kari.maclauchlin@gmail.com

Overview of Presentation

- Background
- Main Topics
- Data and Methods
- Key Findings
- Next Steps



Background on the Project

- Council and Snapper Grouper Advisory Panel requested an in-depth profile of the commercial fishery as part of the Snapper Grouper Vision Blueprint
- Input from AP, Council and SEP
- Analysis conducted October 2017 – January 2018
- Presentation to the Council- March 2018
- Presentation to the AP- April 2018
- Finalize document- April 2018

Project Goals

- Community/Area summaries
 - 9 areas
- Detailed analysis of SG permits, permit holders and permitted vessels
- Participation
 - Details on number of trips, vessels and days at sea by year and area
 - Catch portfolios, trip types
- Snapper Grouper Landings
 - Total landings and revenue over time
 - Landings and revenue by species or complex
 - Landings and revenue by gear type

Data and Methods

- Data

- Permit records from 1998 through 2016
- Commercial logbook data from 1998 through 2016
- Accumulated Landings System (ALS) data
- SEFSC- SSRG Socioeconomic Data set Oct 2017

- Methods

- Descriptive statistics
- Two-mode network analysis and network metrics (permit and catch portfolios)

Key Findings: Permits and Permit Holders

How many SG1 (Unlimited) and SG2 (250-lb Limited) permits are there?

Total as of January 2018:

- 541** SG1 permits

- 110** SG2 permits

How have the numbers of SG1/SG2 permits changed since 1998?

- **45%** decrease in SG1 permits

- **67%** decrease in SG2 permits

Decrease in SG1 permits → 2-for-1 requirement and retired (not renewed) permits

Decrease in SG2 permits → retired permits (non-transferable except to immediate family)

Key Findings: Permits and Permit Holders

Where are the homeports of vessels with SG1/SG2 permits?

Majority in Florida, largest concentration in the Florida Keys

- **67%** SG1 permits in FL
- **80%** SG2 permits in FL

How long have SG1 permit holders held the permits?

- ~**60%** : same permit holder for 10+ years
- ~**30%**: original permit holder

What other federal permits do SG1/SG2 vessels have?

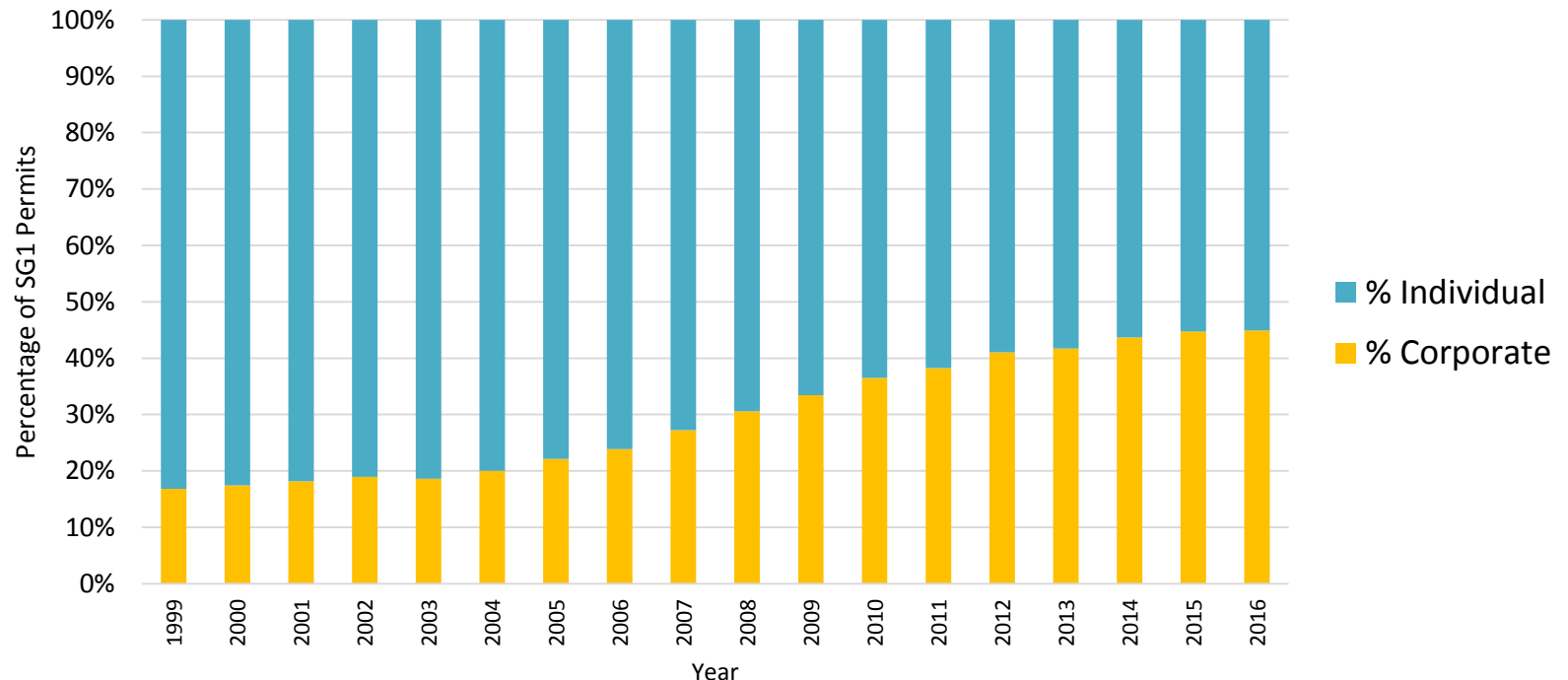
- Most vessels have 3-4 federal permits
- Majority have Commercial Dolphin/Wahoo and Spanish Mackerel— many also have Commercial King Mackerel
- About 1/3 have at least one federal S Atlantic charter permit

Key Findings: Permits and Permit Holders

How many SG1 permits are held by corporations?

The proportion of SG1 permits held by corporations has increased from 17% in 1998 → 45% in 2016

Most permits holders are individuals (non-corporate).



Proportions of total SG1 permits that are held by individuals and corporations 1998-2016

Key Findings: Permits and Permit Holders

What is the cost to obtain a SG1 permit?

- \$60,000 to \$80,000
→ for 1 corporate or 2 non-corporate SG1 permits
- The increase in advertised prices from about \$40,000 in 2011
- Advertised prices for SG1 annual “leases” at \$6,000 to \$8,000

How many permits have no landings of Snapper Grouper?

- **Less than 5%** of SG1/SG2 permits have zero SG landings 2012-2016

How many permits have Snapper Grouper landings in every year from 2012-2016?

- **45%** SG1 permits have landings every year
- **30%** SG1 permits have landings every year

Key Findings: Permitted Vessels

— Florida vessels

- 20-30 ft
- Built in 1970s or 1980s
- 201-400 hp
- Fiberglass, ice for refrigeration

— North Carolina, South Carolina and Georgia vessels

- 30-40 ft
- Built in 1980s or 1990s
 - NC has the highest number of newer vessels (2000s)
- 201-400 hp
- Fiberglass, ice for refrigeration

Key Findings: Participation

- 9 Areas/ 3 Seasons
 - Number of vessels, trips and days at sea
-
- Participation has been consistent 2012 through 2016
 - Participation has decreased since 2001, except for North Florida and Central Florida
 - Participation in northern areas is highest in the Season 2; middle areas in Seasons 1 and 2; southern areas consistent all year
 - Northern NC, Central NC and Florida areas typically have 1-day trips with 1-2 crew
 - Southern NC, South Carolina and Georgia have longer trips (3-5 days) with 2-3 crew

Key Findings: Catch Portfolios

Areas: NC/SC/GA, Florida East Coast, and Florida Keys

Each season:

- Primary and secondary species were identified for each season
 - Primary species → driving species for trips
 - Secondary species → other species caught on trips
- Trip types
- Annual portfolios



Photo credit: Amber Von Harten

Key Findings: Catch Portfolios

North Carolina, South Carolina, Georgia– 2016 data
Season 1: January- April

Description of species caught on trips landed in North Carolina, South Carolina and Georgia in Season 1 of 2016

| Primary Snapper Grouper Species | Secondary Snapper Grouper Species | Non-Snapper Grouper Species |
|---|--|---|
| Black sea bass Vermilion Snowy grouper Other species Gray triggerfish Jacks/Amberjacks | Grunts/Porgies Blueline tilefish White grunt Golden tilefish Greater amberjack Yellowedge grouper Silk Snapper Hogfish Yellowtail snapper Gray snapper Queen snapper Misty grouper Mutton snapper | King mackerel Dolphin Wahoo Sheepshead Spanish mackerel |

Key Findings: Catch Portfolios

North Carolina, South Carolina, Georgia– 2016 data
Season 2: May- August

Description of species caught on trips landed in North Carolina, South Carolina and Georgia in Season 2 of 2016

| Primary Snapper Grouper Species | Secondary Snapper Grouper Species | Non-Snapper Grouper Species |
|---------------------------------|-----------------------------------|-----------------------------|
| Black sea bass | White grunt | Dolphin |
| Blueline tilefish | Red grouper | King mackerel |
| Other Species | Rock hind | Wahoo |
| Gag grouper | Silk snapper | Spanish mackerel |
| Red porgy | Black grouper | Sheepshead |
| Greater Amberjack | Yellowedge grouper | |
| Jacks/Amberjacks | Gray snapper | |
| Scamp | Mutton snapper | |
| Snowy grouper | Yellowtail snapper | |
| Grunts/Porgies | Yellowfin grouper | |
| Vermilion | Spadefish | |
| Gray triggerfish | Queen snapper | |
| | Yellowmouth grouper | |

Key Findings: Catch Portfolios

North Carolina, South Carolina, Georgia– 2016 data
Season 3: September-December

Description of species caught on trips landed in North Carolina, South Carolina and Georgia in Season 3 of 2016

| Primary Snapper Grouper Species | Secondary Snapper Grouper Species | Non-Snapper Grouper Species |
|---|--|---|
| Black sea bass Gag grouper Gray triggerfish Other species Red porgy White grunt Vermilion Grunts/Porgies | Scamp Greater amberjack Golden tilefish Hogfish Rock hind Red grouper Black grouper Silk snapper Red hind Jacks/Amberjacks Mutton snapper Yellowtail snapper Gray snapper Blueline tilefish Snowy grouper Yellowedge grouper Yellowfin grouper | King mackerel Dolphin Spanish mackerel Wahoo Sheepshead |

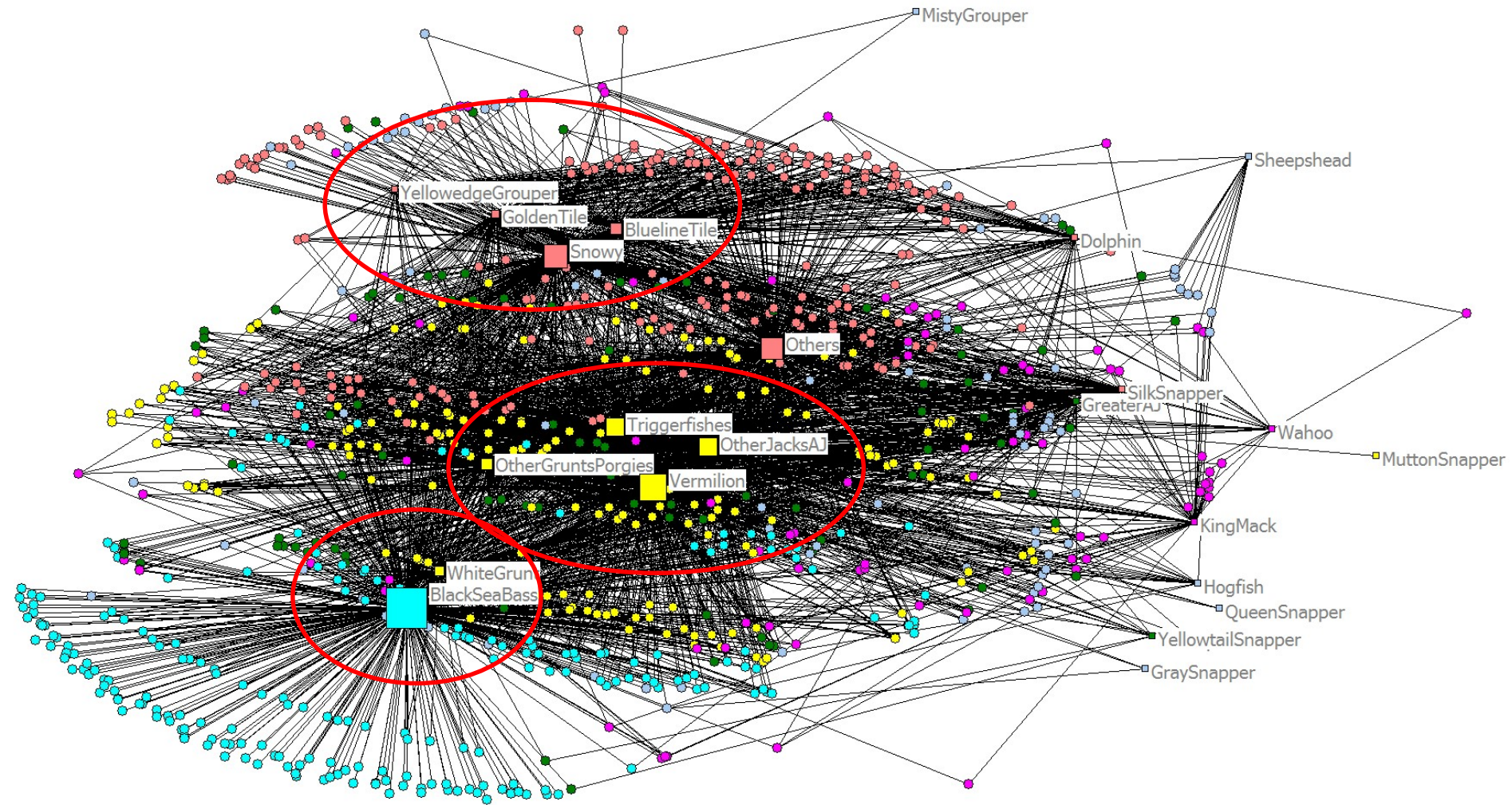
Key Findings: Catch Portfolios

North Carolina, South Carolina, Georgia Trip Types – 2016 data

| Season 1 (January – April) | Season 2 (May – August) | Season 3 (September - December) |
|--|--|--|
| 1 – Black sea bass driven Main sp: Black sea bass Main Gear: Electric, some H&L | 1 – Core Snapper Grouper Main spp: Black sea bass, Gag, Red porgy, ‘Other Species’, Vermilion, Gray triggerfish, Greater amberjack Main Gear: Mostly Electric, some H&L | 1 – Core Snapper Grouper Main spp: Gray triggerfish, Red porgy, ‘Other species’ Main Gear: Electric |
| 2 – Core Snapper Grouper Main spp: Vermilion, Gray Triggerfish, Jacks Complex, Grunts Main Gear: Electric | 2 - Blueline tilefish driven Main spp: Blueline tilefish Main Gear: Electric and longline | 2 – Black sea bass and gag driven Main sp: Black sea bass Main Gear: Electric and H&L, some |
| 3 - Deepwater Main spp: Snowy grouper, ‘Other species’, Blueline tilefish, Golden tilefish, Yellowedge grouper Main Gear: Electric, some longline | 3 – Deepwater Main sp: Snowy grouper Main Gear: Electric | Trap |

**Not all trips fit into the typology

Key Findings: Catch Portfolios

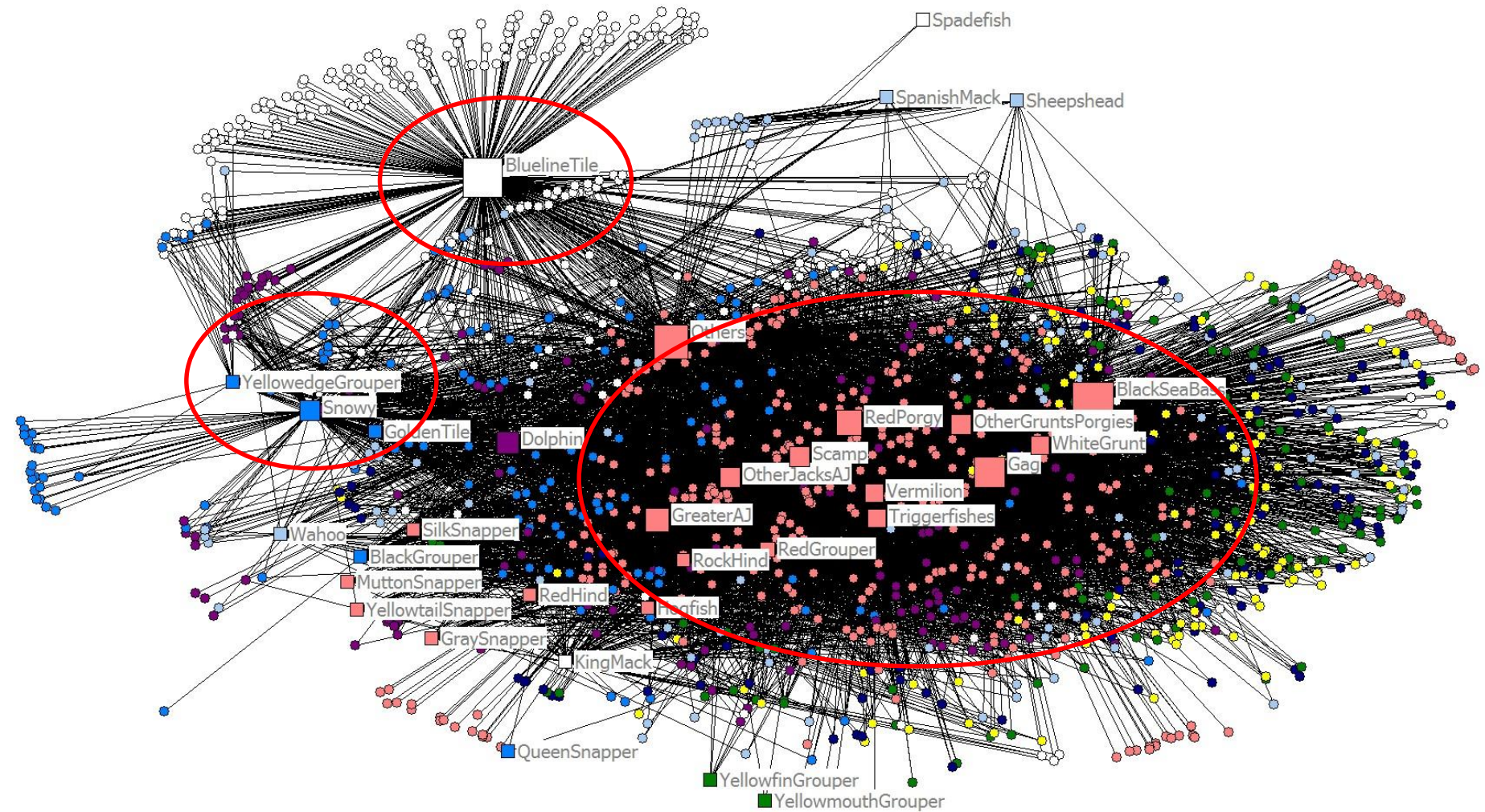


NC/SC/GA 2016 Season 1

Circle: Fishing trip

Square: Species

Key Findings: Catch Portfolios



NC/SC/GA 2016 Season 2

Circle: Fishing trip

Square: Species

Key Findings: Annual Portfolios

North Carolina, South Carolina, Georgia– 2016 data

Common annual catch portfolios for North Carolina, South Carolina and Georgia in 2016

| Portfolio | Season 1 | Season 2 | Season 3 |
|-----------|------------------------------------|---|--|
| A | Core SG- Vermilion | Core SG- Black sea bass/Gag/ Red porgy | Black sea bass/ Gag or Core SG- Gray triggerfish |
| B | Black sea bass | Core SG- Black sea bass/Gag/ Red porgy | Black sea bass/ Gag or Core SG- Gray triggerfish |
| C | Deepwater- Snowy grouper | Core SG- Black sea bass/Gag/ Red porgy or Deepwater- Snowy grouper | Core SG- Gray triggerfish |
| D | Deepwater- Snowy grouper (minimal) | Blueline tilefish | Core SG- Gray triggerfish or None |

Key Findings: Catch Portfolios

Florida East Coast– 2016 data

Season 1: January- April

Description of species caught on trips landed in Florida East Coast areas in Season 1 of 2016

| Primary Snapper Grouper Species | Secondary Snapper Grouper Species | Non-Snapper Grouper Species |
|---|---|---|
| Other species Jacks/Amberjacks Golden tilefish Yellowtail snapper Snowy grouper | Vermilion Mutton snapper Greater amberjack Grunts/Porgies Gray snapper Gray triggerfish Blueline tilefish Black sea bass Hogfish Yellowedge grouper Silk snapper Lane snapper Queen snapper White grunt Spadefish | King mackerel Dolphin Spanish mackerel Wahoo Sheepshead |

Key Findings: Catch Portfolios

Florida East Coast– 2016 data

Season 2: May- August

Description of species caught on trips landed in Florida East Coast areas in Season 2 of 2016

| Primary Snapper Grouper Species | Secondary Snapper Grouper Species | Non-Snapper Grouper Species |
|---|--|--|
| Grunts/Porgies Golden tilefish Mutton snapper Greater amberjack Gag grouper White grunt Blueline tilefish | Black sea bass Spadefish Lane snapper Red grouper Red porgy Gray snapper Snowy grouper Scamp Vermilion Black grouper Gray triggerfish Rock hind Hogfish Red hind Queen snapper Silk snapper Jacks/Amberjacks | King mackerel Spanish mackerel Sheepshead Dolphin Other species Wahoo |

Key Findings: Catch Portfolios

Florida East Coast– 2016 data

Season 3: September-December

Description of species caught on trips landed in Florida East Coast areas in Season 3 of 2016

| Primary Snapper Grouper Species | Secondary Snapper Grouper Species | Non-Snapper Grouper Species |
|---|--|---|
| Other species Jacks complex Yellowtail snapper Golden tilefish Greater amberjack Vermilion | Gray snapper Gray triggerfish Mutton snapper Grunts/Porgies Red porgy Gag grouper Hogfish Black sea bass Black grouper Silk snapper Scamp Red grouper Lane snapper Yellowedge grouper Rock hind Blueline Tilefish Red hind White grunt Spadefish Snowy grouper Queen snapper | Spanish mackerel King mackerel Dolphin Wahoo Sheepshead |

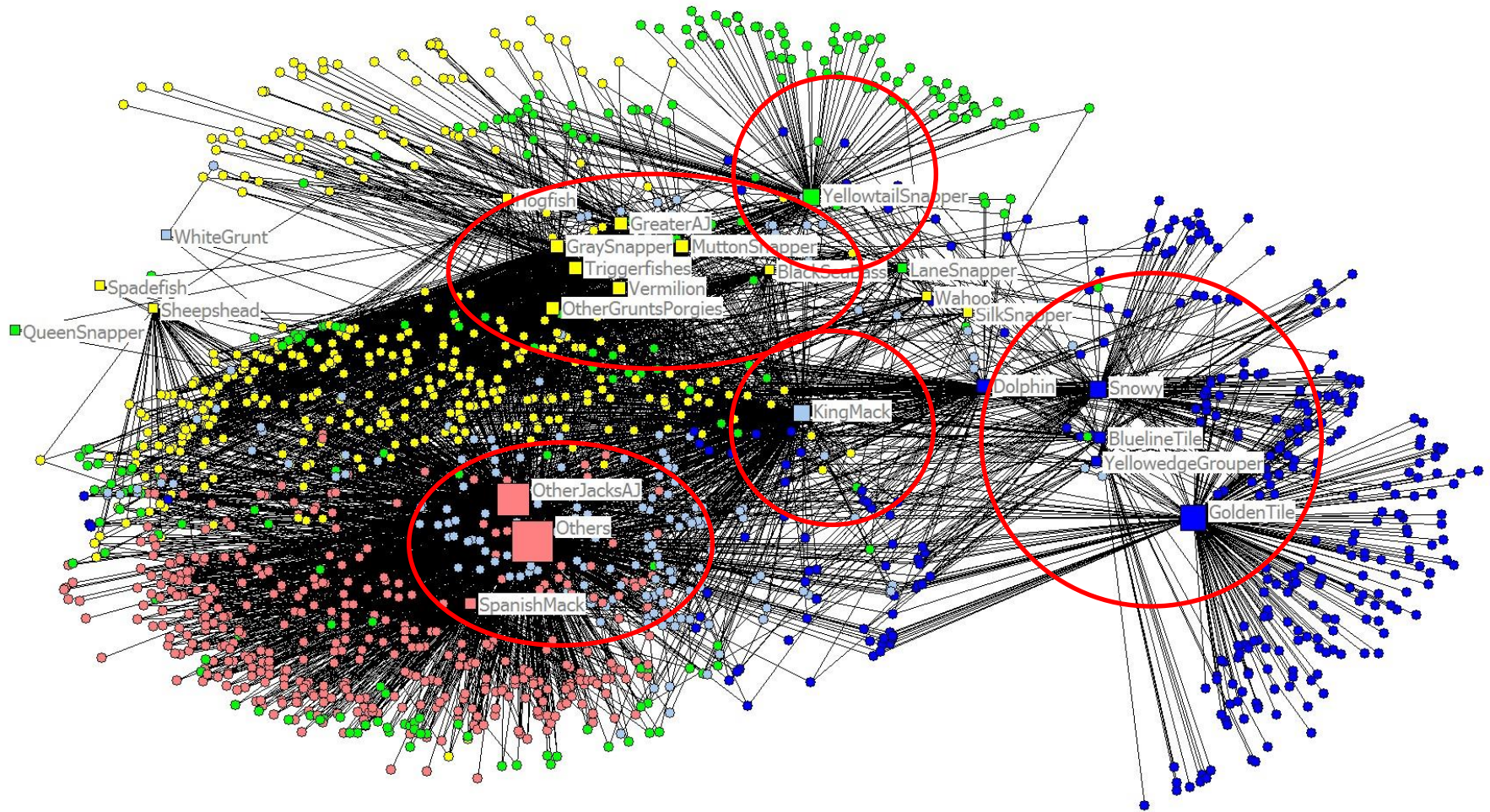
Key Findings: Catch Portfolios

Florida East Coast Trip Types – 2016 data

| Season 1 (January – April) | Season 2 (May – August) | Season 3 (September - December) |
|--|---|--|
| 1 – Core Snapper Grouper Main spp: Vermilion, Gray triggerfish, Mutton snapper, Gray snapper, Greater amberjack, Hogfish Main Gear: Electric or Hook and line | 1 – Greater amberjack driven Main spp: Greater amberjack, Jacks complex, core snapper grouper Main Gear: Electric or Hook and line | 1 – Core Snapper Grouper Main spp: Shallow water species, Vermilion, Gray triggerfish, Scamp Main Gear: Electric or Hook and line |
| 2 - Yellowtail snapper driven Main spp: Yellowtail snapper Main Gear: Hook and line | 2 - Yellowtail snapper driven Main sp: Yellowtail snapper Main Gear: Hook and line | 2 - Yellowtail snapper driven Main sp: Yellowtail snapper Main Gear: Hook and line |
| 3 - Golden tilefish driven Main sp: Golden tilefish Main Gear: Longline, some Electric and Hook and line | 3 – Mutton snapper driven Main sp: Mutton snapper Main Gear: Hook and line or trolling | 3 - Golden tilefish driven Main sp: Golden tilefish Main Gear: Electric and some H&L |
| 4 - Jacks Main spp: Other species, Jacks complex Main Gear: Hook and line | 4 – Non-Snapper grouper driven Main sp: Other species, king mackerel Main Gear: Hook and line or trolling | 4 – Non-Snapper grouper driven Main sp: Other species, Spanish mackerel Main Gear: Hook and line or trolling |
| 5 – King Mackerel driven Main spp: King mackerel Main Gear: Hook and line or Trolling | | |

**Not all trips fit into the typology

Key Findings: Catch Portfolios



Florida East Coast 2016 Season 1

Circle: Fishing trip

Square: Species

Key Findings: Annual Portfolios

Florida East Coast – 2016 data

Too many species and trip diversity!

Key Findings: Catch Portfolios

Florida Keys– 2016 data

Season 1: January- April

Description of species caught on trips landed in the Florida Keys in Season 1 of 2016

| Primary Snapper Grouper Species | Secondary Snapper Grouper Species | Non-Snapper Grouper Species |
|---|--|-----------------------------------|
| Yellowtail snapper Other species Greater amberjack Snowy grouper Gray snapper Mutton snapper | Blueline tilefish Hogfish Golden tilefish Grunts/Porgies Vermilion Yellowedge grouper Jacks/Amberjacks Gray triggerfish Lane snapper Silk snapper White grunt Queen snapper | King mackerel Dolphin Wahoo |

Key Findings: Catch Portfolios

Florida Keys– 2016 data

Season 2: May- July

Description of species caught on trips landed in the Florida Keys in Season 2 of 2016

| Primary Snapper Grouper Species | Secondary Snapper Grouper Species | Non-Snapper Grouper Species |
|--|---|---|
| Yellowtail snapper Gray snapper Other species Black grouper Greater amberjack Mutton snapper Snowy grouper | Red grouper Blueline tilefish Hogfish Jacks/Amberjacks Grunts/Porgies Yellowedge grouper Gray triggerfish Golden tilefish Vermilion Gag grouper Scamp Silk snapper Red hind Lane snapper Rock hind White grunt Spadefish Yellowmouth grouper Yellowfin grouper Red porgy | Dolphin King mackerel Spanish mackerel Wahoo |

Key Findings: Catch Portfolios

Florida Keys– 2016 data

Season 3: August- December

Description of species caught on trips landed in the Florida Keys in Season 3 of 2016

| Primary Snapper Grouper Species | Secondary Snapper Grouper Species | Non-Snapper Grouper Species |
|--|--|---|
| Yellowtail snapper Other species Mutton snapper Gray snapper Black grouper | Hogfish Greater amberjack Red grouper Grunts/Porgies Golden tilefish Yellowedge grouper Vermilion Blueline tilefish Gray triggerfish Red hind Gag grouper Lane snapper Red porgy White grunt Silk snapper Scamp Jacks/Amberjacks Rock hind Queen snapper | King mackerel Dolphin Spanish mackerel Wahoo |

Key Findings: Catch Portfolios

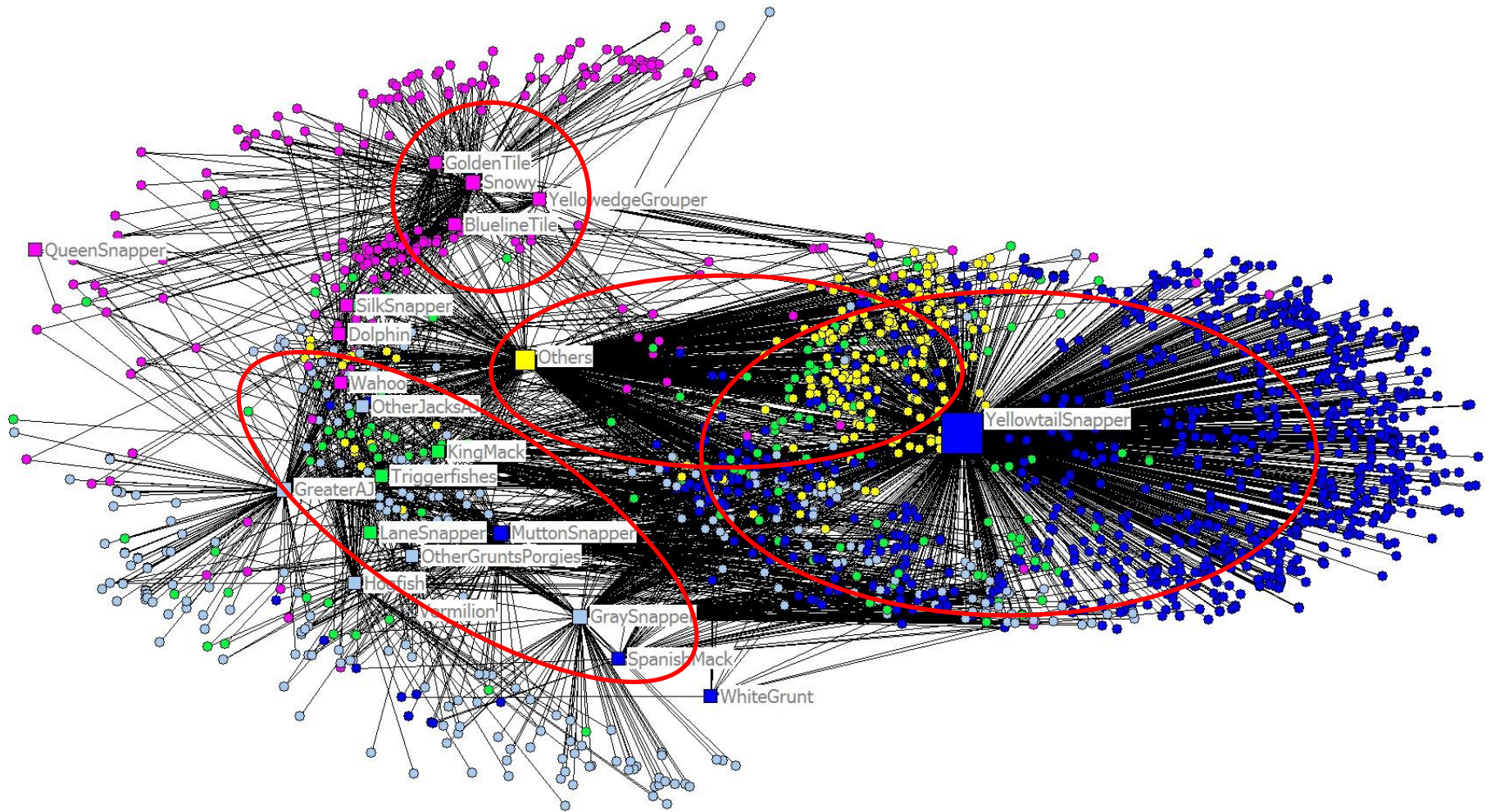
Florida Keys Trip Types – 2016 data

| Season 1 (January – April) | Season 2 (May – July) | Season 3 (August - December) |
|--|--|--|
| 1 - Yellowtail snapper driven Main sp: Yellowtail snapper, Other species Main Gear: Hook and line | 1 - Yellowtail snapper driven Main sp: Yellowtail snapper Main Gear: Hook and line | 1 - Yellowtail snapper driven Main sp: Yellowtail snapper Main Gear: Hook and line |
| 2 - Deepwater Main spp: Snowy grouper, Blueline tilefish, Golden tilefish, Yellowedge grouper Main Gear: Electric | 2 – Greater amberjack driven Main sp: Greater amberjack Main Gear: Hook and line | 2 –Core Snapper Grouper Main spp: Shallow water species, Hogfish, Mutton snapper, Gray Triggerfish, Other species Main Gear: Hook and line or Other |
| 3 - Non-snapper grouper driven Main spp: Other species, Yellowtail snapper Main Gear: Hook and line | 3 – Gray snapper driven Main sp: Gray snapper Main Gear: Hook and line or Trolling | 3 – Deepwater Main spp: Blueline tilefish, Golden tilefish, Yellowedge grouper Main Gear: Electric |
| 4 – Core Snapper Grouper Main spp: Mutton snapper, Gray snapper, Gray triggerfish, Greater amberjack Main Gear: Hook and line | 4 – Core Snapper Grouper Main spp: Mutton snapper, Shallow-water groupers Main Gear: Hook and line | |
| | 5 - Deepwater Main spp: Snowy grouper, Blueline tilefish, Golden tilefish, Yellowedge grouper Main Gear: Electric | |

**Not all trips fit into the typology

***Different seasons for Florida Keys

Key Findings: Catch Portfolios

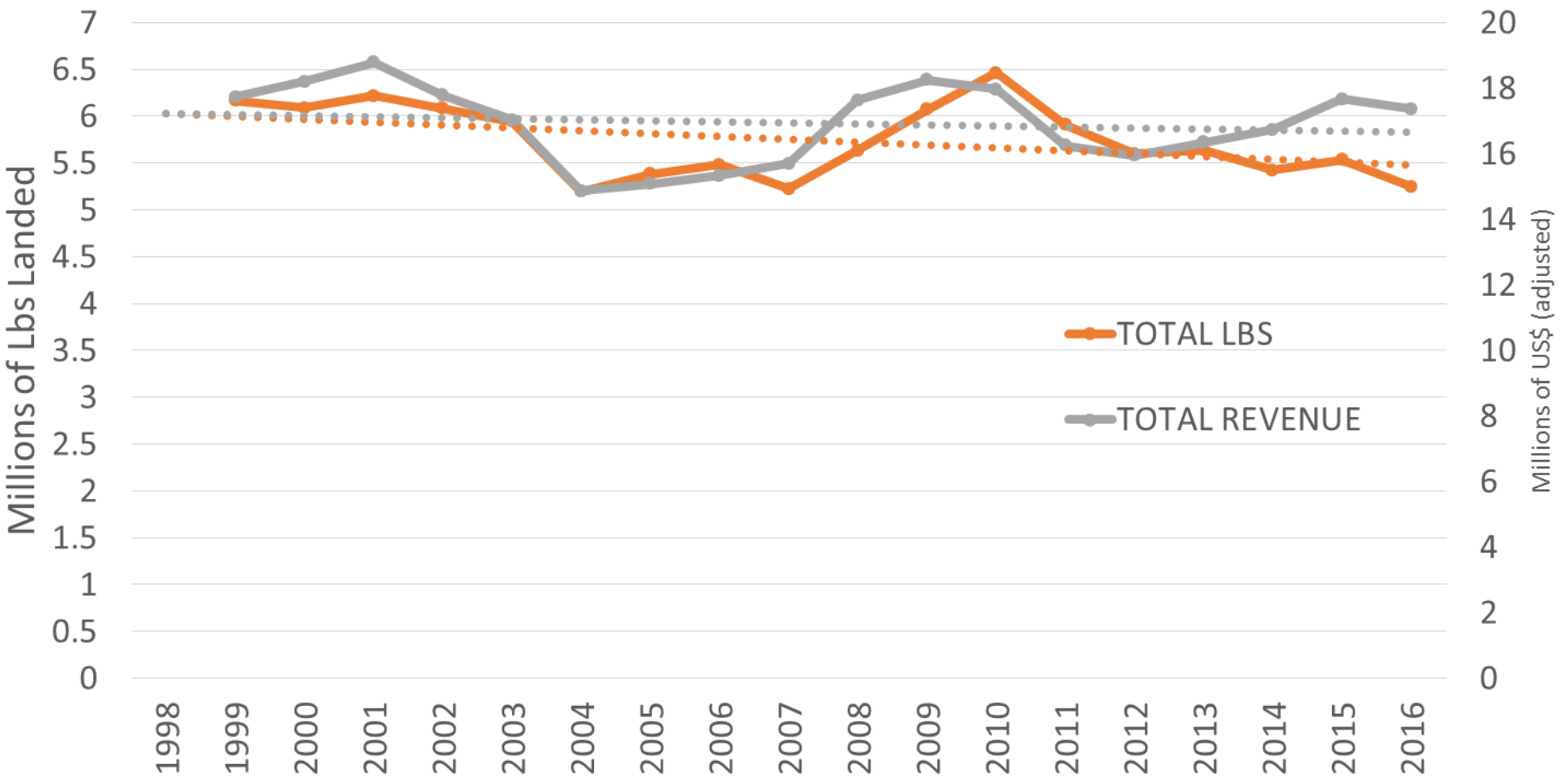


Key Findings: Annual Portfolios

Common annual catch portfolios for Florida Keys in 2016

| Portfolio | Season 1 | Season 2 | Season 3 |
|-----------|---------------------------|---|---|
| A | Yellowtail Snapper | Yellowtail Snapper | Yellowtail Snapper |
| B | Greater Amberjack | Greater Amberjack or Core SG- Mutton snapper, Shallow-water groupers | Core SG- Shallow-water species, Hogfish, Mutton snapper, Gray Triggerfish, Other species |
| C | Deepwater | Deepwater- Snowy grouper | Core SG- Shallow-water species, Hogfish, Mutton snapper, Gray Triggerfish, Other species or None |

Key Findings: Landings and Revenue



Total commercial landings of snapper grouper species and total revenue (adjusted for inflation) for the South Atlantic region from 1998 through 2016

Next steps

- Presentation to Council and AP
- Review and revisions
- Additional analysis and data collection possible



Chef Jon Buck with a golden tilefish
Photo credit: Hannah Miller



Offloading, Charleston SC
Photo credit: Amber Von Harten