

# Identifying Key Stocks

SEDAR Committee

March 2025

## KEY STOCKS BACKGROUND

The Committee was briefed on the idea of key stocks for prioritizing stock for stock assessments at their September and December 2024 meetings. The impetus for key stocks comes from the lack of resources in the Southeast to assess all managed stocks. Given the limitations, the Council must identify priority stocks for data collection and assessment. For the first few years of SEDAR, the Council prioritized stocks for assessments based on the ‘squeaky wheel’, where assessment effort was devoted to those stocks causing controversy, and based on the age of the assessment. While the term “key stocks” was not used, the Council’s process of prioritizing stocks due to inadequate resources was consistent with the key stocks concept.

The MSA reauthorization in 2007 required that Councils submit Research and Monitoring Plans to NOAA fisheries. In the initial plan, submitted in 2008, the Council identified 18 “primary” stocks for which age-based assessments were desired and 11 “secondary” stocks for which non age-based assessments would be considered. These lists have been updated and modified over the years as priorities shifted and managed stocks changed. In the most recent version (SAFMC 2023), 23 primary and 17 secondary stocks are listed. Through this exercise the Council moved a bit closer to formalizing priority or “key” stocks and identifying those it felt needed the most robust and frequent assessments. At this time the snapper grouper FMU included over 60 stocks, so by this action the Council essentially recognized that about a third of the stocks were unlikely to be assessed given methods and resources available at the time.

In 2015, NOAA Fisheries produced a stock assessment prioritization document that proposed a national framework for prioritizing stocks. The framework consisted of a number of stock metrics that could be scored to provide an overall priority level. The approach was summarized for the SSC in October 2016 (*SSC October 2016 A3*). The SSC supported applying the method to South Atlantic stocks and several iterations were developed during the ensuing years and reviewed by the SSC.

The prioritization framework was applied to 31 stocks, and it was determined at that time that the SEDAR process could not be used to complete the necessary number of assessments on a recurring basis. This led to the idea of “key stocks” that was presented to the SSC in October 2017 to select a manageable number of stocks for regular assessments (*SSC October 2017 A11*). The goal was to identify 12 to 15 stocks that “drive the fishery” and thus the management program; that is, the ones that influence fishing trip decisions, and that collectively represent a large proportion of landings. Note that this is nearly a 50% reduction from the prior 23 stocks identified as “primary” in the 2008 Research Plan. At the time, keeping tabs on the status of these stocks would provide a reliable indication of the condition of the overall snapper grouper fishery. Efforts were also made, in collaboration with the Science Center, to develop a regular schedule for assessing the key stocks. The South Atlantic schedule was built around 4 analysts assessing 12 key stocks, addressing 7 stocks per year with a combination of update and interim analyses approaches. This provided 2 years between catch advice and 4 years between

assessment updates. It was recognized that adding ‘new’ stocks to the program or making major changes to existing assessments would require benchmark assessments that would reduce throughput. There was also considerable uncertainty as to whether the data enterprise could support this level of productivity. The SSC reviewed further progress on key stocks in May 2018 (*SSC May 2018 A22*). Additional information provided at this time included the percentage of each FMP’s landings attributed to the candidate key stocks.

The SEDAR Steering Committee discussed the key stocks and interim approaches described in the SSC documents during 2017 and 2018. The Research Track Process also entered into discussions around this time. Work on key stocks then fell by the wayside as the Steering Committee dealt with implementing the Research Track process and the rapidly increasing time demands it was placing on the system. Other challenges arose, such as addressing major recreational data revisions and the impact of COVID on all operations. The data enterprise continues to struggle to support the planned assessment workload.

SEDAR is transitioning away from the Research Track Process (see SEDAR\_A3a\_SEDAR Changes). The revised process is being designed to get more assessments through the SEDAR process and use different processes or analytical methods where possible to increase efficiency outside of SEDAR. These new processes can be confusing because there is an overlap among processes and methods.

### **Description of processes, procedures, and analyses to develop catch level recommendations.**

- SEDAR Assessments – assessments conducted through the SEDAR process to develop catch level recommendations. These assessments are scheduled through the SEDAR Steering Committee and terms of reference for the assessment are approved by the Council.
- Assessment update – a rerun of previous assessment with minimal changes to configuration. An assessment update can range from updating all previously used datasets or updating only portions of datasets included in previous assessment. As proposed at the February 2025 SEDAR Steering Committee meeting, assessment updates may not go through the SEDAR process.
- Updated projection – a rerun of previous projections. This typically includes replacing assumed removals with observed information.
- Management strategy evaluation (MSE) – these evaluations can be used to evaluate potential outcomes of different management strategies and identify tradeoffs for each of the strategies. MSEs do not describe the best approach to manage but evaluate which actions would achieve the objectives of the evaluation. MSEs typically include management procedures and/or harvest control rules. MSEs can be used to develop catch level recommendations (Dolphin MSE) or evaluate management alternatives (SAFMC Snapper Grouper MSE).
- Management procedure (MP) – a process that combines pre-defined data with a model to provide guidance on catch or effort limits. The procedure includes a method for analyzing the current condition, information to include in the analysis, and management response to the outcome (harvest control rule). Management procedures can vary from a simple rule to set a harvest control rule (HCR) to complex rules that change management response based on a suite of indicators. Management procedures

- can be model-based (i.e., assessment) or empirical-based (i.e., index) (Rademeyer et al. 2007). Ideally, the management procedure is tested to ensure the HCR is robust to the management objectives.
- Harvest control rule (HCR) – set of predefined guidelines that dictate changes to the catch limit or effort limit based on indicators. In some instances, harvest control rules can be synonymous with a management procedure or be a component of one. Harvest control rules can be model-based (i.e., stock assessment), empirical-based (i.e., survey index), or data-limited based (i.e., historical catch or expert judgement) (Free et al. 2022).
  - Interim analysis or update model – a limited approach to adjust acceptable biological catch. This will typically use a data-limited approach to inform adjustments to the ABC. Interim analysis use a model outside of the stock assessment (see Klibansky et al. 2023, [Attachment 9a to SSC April 2023 Meeting](#)).
  - Interim assessment or update model – updates pieces of a previous stock assessment model but does not update all information in the stock assessment. (see SEDAR 73 update). The Red Snapper Update and Black Sea Bass Update incorporate the previous stock assessment model and data inputs with catch, index, and ages from the index for the most recent years.

*Example in the South Atlantic region of an interim assessment being a management procedure.* Black Sea Bass will have an update assessment presented to the SSC in April 2025. The update assessment will include updated catch, index, and age data from the index since 2021 (terminal year of previous assessment). The data will be input into the SEDAR 76 model. The harvest control rule is to set the buffer between the overfishing limit and acceptable biological catch using the P\* (probability of overfishing) based on the population size and risk level assigned for the stock (SAFMC ABC Control Rule, Comprehensive ABC Control Rule Amendment, 2023).

*Example in the South Atlantic region of an assessment not being a management procedure.* SEDAR 90 (South Atlantic Red Snapper) is a stock assessment of Red Snapper that will have data workshops, assessment webinars, and external review. In the data workshop, the panel will review all the data that is available before developing the next stock assessment model for Red Snapper. Since the data are not pre-defined, this would not be considered a management procedure.

*Example in the South Atlantic region of an index being an interim analysis.* The Vermilion Snapper interim analysis was developed using projections from SEDAR 55 and an index of abundance from the Southeast Reef Fish Survey. The model was equation 6 from Quanh et al. 2020. However, the management response had not been laid out; therefore, this would not be considered a management procedure.

*Example in the Mid-Atlantic Region using recreational harvest as a management procedure.* In the Mid-Atlantic Region, harvest levels for Summer Flounder, Scup, Black Sea Bass, and Bluefish are modified based on a management procedure (**Figure 1**). Their procedure compares the confidence level around an estimate of the expected harvest under status quo to the average recreational harvest level for the upcoming two years and biomass compared to target levels from the recent stock assessment. The HCR changes the harvest level up, down, or keeps the

same based on the comparisons of the recent data to the baseline. Management measures, if warranted, are adjusted based on the specification process.

**Figure 1.** Harvest control rule for Summer Flounder, Scup, Black Sea Bass, and Bluefish based on predicted future harvest. Copied from Mid-Atlantic Recreational Harvest Control Rule Framework/Addenda [supplemental table](#)

Future RHL vs Harvest Estimate	Stock biomass compared to the target stock size ( $B/B_{MSY}$ )	Change in Harvest
Future 2-year average RHL is <b>greater than</b> the upper bound of the harvest estimate confidence interval (harvest is expected to be lower than the RHL)	<b>Very high</b> (at least 150% of the target stock size)	<b>Liberalization</b> percent based on the difference between the harvest estimate and the 2-year average RHL, <u>not to exceed 40%</u>
	<b>High</b> (between the target and 150% of the target stock size)	<b>Liberalization</b> percent based on the difference between the harvest estimate and the 2-year average RHL, <u>not to exceed 20%</u>
	<b>Low</b> (below the target stock size)	<b>Liberalization: 10%</b>
Future 2-year average RHL is <b>within</b> the confidence interval of the harvest estimate (harvest is expected to be close to the RHL)	<b>Very high</b> (at least 150% of the target stock size)	<b>Liberalization: 10%</b>
	<b>High</b> (between the target and 150% of the target stock size)	<b>No change: 0%</b>
	<b>Low</b> (below the target stock size)	<b>Reduction: 10%</b>
Future 2-year average RHL is <b>less than</b> the lower bound of the harvest estimate confidence interval (harvest is expected to exceed the RHL)	<b>Very high</b> (at least 150% of the target stock size)	<b>Reduction: 10%</b>
	<b>High</b> (between the target and 150% of the target stock size)	<b>Reduction</b> percent based on the difference between the harvest estimate and the 2-year average RHL, <u>not to exceed 20%</u>
	<b>Low</b> (below the target stock size)	<b>Reduction</b> percent based on the difference between the harvest estimate and the 2-year average RHL, <u>not to exceed 40%</u>

## SCHEDULING OF DIFFERENT PROCESSES

Each of the different processes will have varying needs to develop a schedule. SEDAR assessments would be scheduled through the SEDAR Steering Committee with input from the SAFMC. Currently, the SEDAR Steering Committee works to develop assessment schedules three years out to give all the data providers sufficient time to complete work needed for the assessment. The SEFSC has proposed using key stocks to help in identifying long-term scheduling. This approach could help to have fixed deadlines for data products needed for assessing key stocks and limit the number of species that would be assessed through the SEDAR process on a regular basis. The plan for reviewing catch levels for species not included as a key stock has not been provided.

A schedule of ongoing projects is provided in **Table 1**.

**Table 1.** Project schedules for South Atlantic species/complexes. Green boxes indicate projects that have been scheduled through SEDAR (most accurate timeline), orange projects are tentatively scheduled through SEDAR but a formal schedule has not been developed, blue projects are future SEDAR requests, purple are update assessments that will not be scheduled through SEDAR, gray are projects being conducted outside of the SEDAR process (typically MSEs). Bolded species are led by Florida Fish and Wildlife Conservation Commission staff.

Year	2025				2026				2027				2028				2029			
Quarter	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4
Mutton Snapper	SS C																			
Yellowtail Snapper	SS C																			
South Atlantic Tilefish		SS C																		
Red Snapper		D W		A W	A W	A W			SS C											
Blueline Tilefish		SS C																		
Southeastern Hogfish			D W	A W	A W	A W	R W	SS C												
Gag																				
King Mackerel																				
Black Sea Bass		SS C																		
Red Grouper																				
Snowy Grouper																				
Vermilion Snapper																				
Red Porgy																				
Greater Amberjack																				
Spanish Mackerel																				
Scamp																				
Tilefish																				
Blueline Tilefish																				
Dolphin MSE					R W	SS C														
Black Grouper MSE						R W														
Snapper Grouper MSE																				
Shrimp Futures																				

**PROPOSED KEY STOCKS AND SEDAR SCHEDULING FOR THE SOUTH ATLANTIC**

There are three aspects to SEDAR scheduling – the number of stocks, the frequency they are assessed, and the number of assessments that can be completed in any given year. Due to limited

resources, adding more stocks into the list for assessments results in a longer time between assessments. It is unrealistic to expect an increase in resources in the foreseeable future, and it is in fact proving difficult to consistently obtain the promised 4 assessment “slots” the Council has built its assessment planning around. Therefore, the Council will need to balance the number of stocks with the acceptable time between assessments. Doing so effectively has been hindered by the lack of a clear indication of just how many stocks can be assessed. At the recent February 2025 SEDAR Steering Committee, the fourth assessment “slot” for the South Atlantic was removed.

Since age data are the leading bottleneck, knowing the number of age structures that can be extracted, processed, and read is critical for determining the number of age-based assessments. Under the current process, age samples are evaluated for each project rather than processed as they come in on an annual basis. This approach requires that stocks to be assessed be identified at least 3 years in advance so that aging and associated analyses can be completed for the accumulated samples. The result to the Council is a loss of flexibility to modify the assessment schedule to address developing issues or changing circumstances. There is also a net loss to productivity, because if an assessment is begun but then fails to move forward for any reason, there is not another stock to fill that space. The SEFSC provided feedback on species with accepted aging methods, species with validated methods, and species that could be aged every five years. There were 16 species that could be updated on a five-year cycle (meaning that 5 years would elapse between assessments of a given stock) based on expected assessment production resources. Most of the species that could be updated regularly were species that currently have aged-based assessments. Two species with age-based assessments but considered unknown for regular aging updates were Snowy Grouper and Tilefish. It was not clear if the age samples for these 16 stocks could be analyzed in near real time, nor is it certain that 16 age-based assessments could be supported with current age evaluation capabilities. It is also not clear if an increased number of age-based assessments could be supported by the current number of staff that collect, process, or read age structures nor if the number of staff and thus the ability to process age structures may decrease due to budget issues.

The purpose of identifying key stocks is to manage the assessment data preparation and analysis workload required to complete assessments through the SEDAR process and develop a feasible stock assessment schedule to regularly assess the key stocks. Not all the stocks currently assessed through SEDAR can be assessed in the future without the time between each assessment becoming excessive (>5 years, which is based on the SAFMC SSC’s recommendation to limit projections to 5 years past the terminal year of the assessment). The initial schedule put forth by the SEFSC at the July 2024 Steering Committee meeting includes 14 stocks with an interval of 6 years between assessments (Atlantic Group Cobia are included in this), with some uncertainty noted. This plan also required agreeing to a long-term rotation of the stocks, allowing no flexibility for responding to unexpected issues without a considerable loss of productivity.

**Table 2** provides an overview of Key Stock candidates.

- Research Plan Level: the desired assessment level included in the Research and Monitoring Plan.

- Levels are modified here to provide a single value for each stock, whereas the plan includes combination scores in some cases.
- Lead: the agency that conducts the assessment.
  - Both FWC and SEFSC conduct assessments through SEDAR, and each has a capacity to do assessments.
  - Key Stocks is focused on species assessed by SEFSC.
- Priority Score: Priority score from the NMFS assessment prioritization tool as presented to the SSC in 2017
  - Scores are based on the results that did not consider “assessment overdue” which measured the length of time past the desired assessment intervals.
  - Scores have not been updated and would differ today.
- Terminal Year: shows the year of data included in the model when the stock was last assessed.
- Next Assessment – Year when the next assessment for a stock is proposed to start.
- Key Candidate: Initial recommendation for key stocks.
  - Since the SEFSC proposal limits the Council to 14 key stocks assessed by the SEFSC, numbers are provided to keep track of the number of stocks.
  - Assessments by FWC are denoted with a Y.
- Bolded stocks: These stocks are under rebuilding plans and require assessment consideration to evaluate progress and determine when the stock is rebuilt.
  - National Standard 2 states updates should be provided every two years. Updates can range from tracking landings relative to ACL or a more in-depth analysis.

Many species identified as level 1 stocks by the Council have undergone SEDAR assessments (**Table 2**). Currently, Benchmark or Research Track assessments with SEFSC staff leading the analysis have been conducted for 14 Council managed stocks through SEDAR. While the Council oversees many more stocks, only a few have sufficient data for age-based assessments and would likely require alternative evaluation methods (**Table 3**). For instance, only two additional species have validated aging methods: Yellowedge Grouper and Gray Triggerfish. Yellowedge Grouper is a non-assessed species with a validated aging method but lacks a potential index of abundance, with low landings averaging less than 100,000 pounds per year from 2019 to 2023. The Council requested Gray Triggerfish be considered as a key stock due to the increasing importance of the fishery and a recent Research Track Assessment has been reviewed.

The current list of 15 key stocks identified by the Council will result in greater than 6 years between assessments. With 14 species as key stocks, the SEFSC indicated that each stock would be assessed every 6 years, and an update model would be conducted between assessments. The process for the update model has not been completed for the South Atlantic, and importantly and underscoring the role of the age evaluations, it is not clear if the updated process would include updated age information. A major shift is that the 6 years between assessments exceeds the length for projections recommended by the SSC. The Council would need to work with the SSC to determine if the update model would be sufficient to adjust catch level recommendations or provide a health check (catch recommendations not changed). While both the SSC and Council are willing to do this, the uncertainty in what data an update model includes and how it would be conducted make completing the task difficult.

The SEFSC developed an assessment schedule scenario depending on the frequency of assessments with flexibility to address urgent needs:

- 5-6 stocks could be assessed on a 3-year rotation
- 7-8 stocks could be assessed on a 4-year rotation
- 9-10 stocks could be assessed on a 5-year rotation
- 14 stocks could be assessed on a 6- year rotation with update models performed at year 3.

This assessment frequency assumes there will be four analysts available. There are not four analysts available at this time. At the February 2025 SEDAR Steering Committee Meeting, it was recommended to empty one analyst slot for the foreseeable future due to a hiring freeze. If this position is filled and the individual trained, then additional requests for stock assessments can be made. Since the hiring process will take time and new hires typically go through a year of training and mentoring before being charged with leading an assessment, there will be ample time for the Council to identify additional stocks to assess.

#### *Considerations for Selecting Key Stocks*

- Stock is a level 1 priority for the Council
  - Age-based assessment desired
  - All assessed stocks have over 200 age structures collected (**Table 3**).
  - Additional stocks exceeding 200 age structures collected include Blackfin Snapper, Gray Snapper, Silk Snapper, Yellowedge Grouper, and Wreckfish
- Importance to fishery (based on landings)
  - Landings exceed 1 million pounds (**Table 3**)
  - 7 of 10 stocks with greater than 1 million pounds are currently assessed (missing Dolphin, Wahoo, and Gray Snapper)
  - Landings should be viewed with caution as some species have low landings due to rebuilding plans.
  - Fishery performance report indicated some communities are dependent on some species (**Table 4**).
- Stock is assessed successfully
  - Stocks selected for assessment in the past are clear priorities given there has never been a surplus of assessment capability.
  - An important component of successful stock assessment is an index of abundance.
    - All current key stocks have a fishery independent index or will have one shortly (deepwater species with South Atlantic Deepwater Longline Survey).
    - Several non-key stock species have an index of abundance described in the Southeast Reef Fishery Survey Update (see Full Council 1 Attachment 2) or in SEAFiSh (Southeast Abundance of Fish and Shrimp Data Visualizer webpage).
  - 10 Species had assessment frequencies of 7 years or less (**Table 5**).
  - Some assessments have been attempted but not passed peer review or have not been operationalized.

- GA-NC Hogfish, Black Grouper, Goliath
  - Gray Triggerfish
- Stock is overfished
  - Rebuilding plans need regular evaluation.
  - 6 out of 19 assessed stocks are overfished (**Table 3**). Three of the overfished stocks were also experiencing overfishing.
- Trends in index of abundance
  - Most of the species in the Snapper Grouper Complex recommended for age-based assessments have declining trends in long-term or recent index except Red Snapper (**Table 5**).
  - Deepwater species (Blueline Tilefish, Golden Tilefish, and Snowy Grouper) have an index of abundance that should become available in 2025.
  - Pelagic species such as Dolphin, King Mackerel, and Spanish Mackerel lack indices of abundance

### **PREVIOUS MEETING DISCUSSION ON KEY STOCKS AND SSC DISCUSSION**

The Committee and the SSC recommended that Gray Triggerfish be included as a key stock.

The SSC recommended that White Grunt be included as a key stock. The SSC wanted more information before recommending key stocks. They noted that all groups would have differing opinions about which stocks to include. The SSC recommended considering economic information, status determination criteria, available data, availability of an index, age validation, recruitment trends, and volatility of assessment outputs.

The SSC requested that all assessments be added into the schedule to better help with their planning (currently SEFSC and FWRI Assessments). The SSC previously requested no more than two stock assessments be reviewed at one meeting. This results in four assessments per year during regularly scheduled meetings. Over the past four years, the SSC has also reviewed stock assessments at meetings outside of their regularly scheduled in-person meetings.

The Committee did not come to a consensus on the number of key stocks that would be assessed by the SEFSC during the prior discussions. The Committee mentioned eight to ten stocks as a potential starting point. This would require removing five to seven species from the current list of key stocks. There was a suggestion to include Gray Triggerfish over Black Sea Bass due to the increasing importance of Gray Triggerfish and decreasing abundance of Black Sea Bass.

*Notes on stocks that meet the above criteria but are not suggested as key stocks*

- Wreckfish
  - Wreckfish were assessed in 2012 by a contractor hired by fishery participants. The SSC reviewed the assessment and used it to recommend fishing levels.
  - The SEFSC will not update an outside assessment and has raised concerns about the validity of a US only assessment given the Atlantic-wide stock structure.
  - Wreckfish were included in SAFMC request for proposals as a potential species to address using an MSE-style approach.

- Dolphin
  - Prioritized for an age-based assessment but not scheduled due to SEFSC concerns with a US only assessment for an Atlantic-wide stock.
  - Although there are accepted methods for aging, collecting age structures, processing age structures, and reading ages structures is challenging.
  - An MSE is now underway and should be completed and evaluated before considering next steps for Dolphin.
- White Grunt
  - Assessments were planned over many years, but the priority never rose high enough to be completed.
  - White Grunt likely have multiple stocks in the South Atlantic region and would pose additional difficulties in the assessment process.
  - The Council recommended dropping the stock from SEDAR priorities given workload limitations.
- Gray Snapper
  - Prioritized for an age-based assessment but not reached SEDAR scheduling due to workload limitations.
- Spiny Lobster
  - Managed to optimize Yield Per Recruit because the stock is Caribbean-wide and the US does not contribute to spawning stock.
- Black Grouper
  - During SEDAR 48, issues were raised about the identification issues between Black Grouper and Gag. The assessment was cancelled because the issues could not be resolved.
  - An MSE is underway and should be completed and evaluated before considering next steps for Black Grouper.
- GA-NC Hogfish
  - Previous age-based assessment was not accepted.
  - Life history information has been gathered in recent years (since 2010).
  - Rare event in recreational datasets.
  - Low landings

**Table 2.** Level of requested stock assessment, lead agency for last stock assessment, terminal year of last completed stock assessment, proposed timing for next stock assessment, priority ranking score from 2017, and if a species is proposed as a key stock for South Atlantic managed species. Key stocks are either labeled with a Y for yes or a number to keep track of the number of potential key stocks. Stocks in **bold** are under rebuilding plans. NOTE: not all Council managed species are included in the table. Color indicates number of assessments that could be completed under different frequencies (not to indicate which ones): blue 3 years between assessments (5 to 6 stocks), green 4 years between assessments (7 to 8 stocks), yellow 5 years between assessments (9 to 10 stocks), and red 6 years between assessments (14 stocks).

Stock	Level	Lead	Terminal Year of Last Completed Assessment	Proposed Start of Next Assessment	2017 Priority score	Key Candidate (Numbers don't mean ranking)
Black Sea Bass	1	SEFSC	2020	2027	2.99	1
Blueline Tilefish	1	SEFSC	2015	On going	4.01	2
<b>Gag</b>	1	SEFSC	2019	2026	2.98	3
Golden Tilefish	1	SEFSC	2018	On going	2.94	4
Gray Triggerfish*	1	SEFSC	2020		3.42	5
Greater Amberjack	1	SEFSC	2016	2028	2.47	6
King Mackerel	1	SEFSC	2018	2027	3.44	7
<b>Red Grouper</b>	1	SEFSC	2015	2026	4.03	8
<b>Red Porgy</b>	1	SEFSC	2017	2028	5.49	9
<b>Red Snapper</b>	1	SEFSC	2019	2025	6.5	10
Scamp	1	SEFSC	2020		3.41	11
<b>Snowy Grouper</b>	1	SEFSC	2018	2027	4.89	12
Spanish Mackerel	1	SEFSC	2021	2028	3.42	13
Vermilion Snapper	1	SEFSC	2016	2027	2.86	14
Dolphin	1	SEFSC		MSE On going		Y
Black Grouper	1	FWC	2008	MSE Delayed	2.54	Y
<b>FLK/EFL Hogfish</b>	1	FWC	2012	2025	5.54	Y
Mutton Snapper	1	FWC	2011	On going	2.49	Y
Yellowtail Snapper	1	FWC	2010	On going	2.45	Y
GA-NC Hogfish**	1	SEFSC	2012		2.4	N
Gray Snapper	1	SEFSC				N
White Grunt	1^	SEFSC			3.97	N
Almaco Jack	2	SEFSC			2.81	N

Stock	Level	Lead	Terminal Year of Last Completed Assessment	Proposed Start of Next Assessment	2017 Priority score	Key Candidate (Numbers don't mean ranking)
Atlantic Spadefish	2	SEFSC				N
Banded Rudderfish	2	SEFSC				N
Bar Jack	2	SEFSC				N
Knobbed Porgy	2	SEFSC			2.36	N
Lane Snapper	2	SEFSC			3.77	N
Penaeid Shrimp	2	SEFSC				N
Red Hind	2	SEFSC			2.17	N
Silk Snapper	2	SEFSC			2.29	N
Tomtate	2	SEFSC				N
Wahoo	2	SEFSC				N
Golden Crab	3	SEFSC				N
Nassau Grouper	3	SEFSC				N
Speckled Himp	3	SEFSC			2.4	N
Warsaw Grouper	3	SEFSC			2.05	N
Wreckfish	3	Consultant	2012		1.61	N
Goliath Grouper	3	FWC			2.31	N
Spiny Lobster	3	FWC	2010			N

\* Gray Triggerfish Research Track has been reviewed by Center for Independent Experts but an operational assessment has not been completed due to potential issues with recreational data and workload.

\*\* GA-NC Hogfish stock assessment was not recommended for use.

^ Council requested this species be removed from SEDAR Grid after the research plan was approved.

**Table 3.** Summary of Information Available by Stock and Average Landings. Stock status is based on the NMFS 2023 Stock Status Report of Congress (labeled with O is overfished, OO is overfished and experiencing overfishing, S is sustainable, and U is unknown). Number of length and otolith samples are based the Trip Information Program viewer provided to SAFMC staff from 2019 to 2023. The number of age structures are color coded based on an accepted aging structure as yellow, accepted aging structure and validated aging structure as green, and validated aging structure only as gray. Potential for an index of abundance is based on the SEFSC’s response letter presented to the Committee September 2024. Average landings are averaged FES weight plus commercial weight from 2019 to 2023 based on ACL tracking files. All landings are whole weight and annual values regardless of how a stock is tracked for ACLs. Bold indicates an assessment has been used in management.

Species	Stock Status (2023 Report to Congress)	Length Samples	Age Samples	Potential for an Index of Abundance	Average Landings in lbs (2019-2023)
Almaco jack	U	5,191	194		>500,000
Atlantic spadefish	U	60	0		>500,000
Banded rudderfish	U	488	45		<100,000
Bank sea bass	U	155	0		<100,000
Bar jack	U				<100,000
Black grouper	S	994	581	Yes	>100,000
Black sea bass**	S	3,830	1,517	Yes	>500,000
Blackfin snapper	U	1059	384		<100,000
Blueline tilefish	S	1,810	380	Soon	>100,000
Coney grouper	U				<100,000
Cottonwick	U	283	33		<100,000
Cubera snapper	U	112	81		<100,000
Dolphin	S	1,609			>2 million
Gag	OO	3,575	2,439	Yes	>100,000
Goliath grouper	U			Yes	<100,000
Graysnapper	U	2,471	1,976		>2 million
Gray triggerfish	S	8,844	532	Yes	>2 million
Graysby	U				<100,000
Greater amberjack	S	1,616	245	Yes	>1 million
Hogfish*	O	619	158	Yes	<100,000
Jolthead porgy	U	246	8		>100,000
King mackerel	S	11,286	3,736	Yes	>2 million
Knobbed porgy	U	818	67		<100,000
Lane snapper	U	107	107		>100,000
Lesser amberjack	U	143	5		<100,000
Longspine porgy	U				<100,000
Margate	U	70	17		<100,000
Misty grouper	U	5	1		<100,000
Mutton snapper	S	2,647	2,304	Yes	>500,000

Species	Stock Status (2023 Report to Congress)	Length Samples	Age Samples	Potential for an Index of Abundance	Average Landings in lbs (2019-2023)
Nassau grouper	U				<100,000
Queen snapper	U	20	17		<100,000
Red grouper	O	498	317	Yes	>100,000
Red hind	U	86	58		<100,000
Red porgy	O	4,819	2,848	Yes	>100,000
Red snapper^^	OO	7,221	6,835	Yes	>2 million
Rock hind	U	238	158		<100,000
Rock sea bass	U	4	1		<100,000
Sailors choice	U	14	4		<100,000
Sand tilefish	U	747	3		<100,000
Scamp**	U	2,222	1,660	Yes	>100,000
Scup	U	103	0		<100,000
Silk snapper	U	3,554	949		<100,000
Snowy grouper	OO	4,089	2,398	Soon	>100,000
Spanish mackerel	S	13,961	2,158	Yes	>2 million
Speckled hind	U	3	3		<100,000
Tilefish	S	5,047	4,434	Soon	>500,000
Tomtate	U	802	100		>100,000
Vermilion snapper	S	27,044	20,755	Yes	>1 million
Wahoo	U	121	16		>1 million
Warsaw grouper	U	1	1		<100,000
White grunt	U				>100,000
Whitebone porgy	U	387	20		<100,000
Wreckfish	S	904	786	Yes	>100,000^
Yellowedge grouper	U	281	248		<100,000
Yellowfin grouper	U	32	19		<100,000
Yellowmouth grouper	U	68	43		<100,000
Yellowtail snapper	S	10,876	6,235	Yes	>1 million

\* Includes both Florida East Coast/Florida Keys Stock and Georgia-North Carolina Stock

\*\* New assessment has been completed but has not been adopted into management.

^ Indicates confidential landings. Value is based on ACL.

^^ based on MRIP estimates

**Table 4.** Summarized information to describe community dependence based on past fishery performance reports.

Species	FPR Year	Community Dependence
Black Sea Bass	2017 2022	Dependance on Black Sea Bass for both the commercial and recreational sectors is influenced significantly by regulations and relative abundance of black sea bass in comparison to other targetable species.
Blueline Tilefish	2019 2023	Communities in the Outer Banks, North Carolina are very reliant on Blueline Tilefish, especially in the event dolphin are unavailable.
Gag	2020	Gag remains a prized catch in the South Atlantic but infrastructure challenges have made it hard to target grouper, generally.
Golden Tilefish	2018	Fishermen utilizing longline gear in Florida are very dependent on Golden Tilefish and they have few species they can switch to in the event of a decline.
Gray Triggerfish	2021	Gray Triggerfish are becoming increasingly important as they are sold easily for a good price and other species are becoming less accessible.
Greater Amberjack	2018	Greater Amberjack are important for all states and sectors in the South Atlantic because they are reliably caught and are part of the set of species that allow commercial and for-hire fishermen to make a trip.
King Mackerel	2018 2019	King mackerel are important to fishermen in North Carolina and Florida in all sectors, but they are being affected by loss of infrastructure and changes in species distribution.
Red Grouper	2017 2023	Red Grouper is not an important species due to lack of access and availability, but popularity of spearfishing for red grouper is increasing in Florida.
Red Porgy	2018	Communities are not dependent on Red Porgy alone, however they are a key part of a suite of species and losing them would be detrimental.

Species	FPR Year	Community Dependence
Red Snapper	2020	Red Snapper was historically an important species to communities and current restrictions have hurt local economies and have resulting in high frustrations.
Scamp	2019	Scamp receives a high price and is desirable for recreational anglers to catch but communities are not as dependent on them due to scarcity.
Snowy Grouper	N/A	<i>There is no completed Fishery Performance Report for Snowy Grouper.</i>
Spanish Mackerel	2018 2021	Spanish mackerel is a critical species for the commercial and for-hire sector in North Carolina and Florida and is becoming increasingly important in the Mid-Atlantic region.
Vermilion Snapper	2017	Vermilion Snapper are very important to commercial and recreational fisheries. Commercially price and demand are increasing and recreationally they are a substitute for red snapper and black sea bass when those species cannot be kept.

**Table 5.** Information considered to select species for regular assessments through the SEDAR Process. Species bolded are staff recommendations for regular assessments through the SEDAR Process.

Species	Time Between Assessments	Overfished or Overfishing	Long Term Index	Recent Index
<b>Black Sea Bass</b>	<b>3.8</b>	<b>O*</b>	<b>Below</b>	<b>Below</b>
<b>Blueline Tilefish</b>	<b>5.5</b>		<b>N/A</b>	<b>N/A</b>
<b>Gag</b>	<b>7</b>	<b>OO</b>	<b>Below</b>	<b>Flat</b>
<b>Golden Tilefish</b>	<b>5.25</b>		<b>N/A</b>	<b>N/A</b>
Gray Triggerfish*	8		Below	Decreasing
Greater Amberjack	11		Above	Increasing

<b>King Mackerel</b>	<b>5.333333</b>		<b>N/A</b>	<b>N/A</b>
Red Grouper	7	O	Below	Decreasing
<b>Red Porgy</b>	<b>5.333333</b>	<b>O</b>	<b>Below</b>	<b>Decreasing</b>
<b>Red Snapper</b>	<b>4.25</b>	<b>OO</b>	<b>Above</b>	<b>Increasing</b>
Scamp		O*	Below	Stable
Snowy Grouper	7.5	OO	N/A	N/A
<b>Spanish Mackerel</b>	<b>6.5</b>		<b>N/A</b>	<b>N/A</b>
<b>Vermilion Snapper</b>	<b>3.75</b>		<b>Below</b>	<b>Decreasing</b>
White Grunt			Below	Decreasing

In addition, **Table 6** is a copy of the Fish Stock Sustainability Index (FSSI), which is used by NMFS to monitor the number of overfished, overfishing, and unknown stocks nationwide. The table includes the current stock status as reported to Congress, along with a timeline for a rebuilding plan if necessary and an estimate of biomass relative to biomass at Maximum Sustainable Yield (MSY). Similarly, **Table 7** presents information for non-FSSI species.

**Table 6.** Summary of Stock Status for FSSI Stocks. Reprinted from: NMFS – 2023 Status of US Fisheries. Table A. Summary of Stock Status for FSSI Stocks. Bolded indicates overfished species and yellow indicates species with change in stock status not included in the table.

Jurisdiction	Stock	Overfishing	Overfished	Approaching Overfished	Rebuilding Program Progress	B/Bmsy
SAFMC	Dolphinfish	No	No	No	NA	1.56
SAFMC	Brown rock shrimp	No	Unknown	Unknown	NA	not estimated
SAFMC	Brown shrimp	No	No	No	NA	6.65
SAFMC	Pink shrimp	No	No	No	NA	5.393
SAFMC	White shrimp	No	No	No	NA	8.333
<b>SAFMC</b>	<b>Black sea bass</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>NA</b>	<b>0.713</b>
SAFMC	Blueline tilefish	No	No	No	NA	1.056
<b>SAFMC</b>	<b>Gag</b>	<b>Yes</b>	<b>Yes</b>	<b>No</b>	<b>Year 1 of 10</b>	<b>0.15</b>
SAFMC	Gray triggerfish	No	Unknown	Unknown	NA	not estimated
SAFMC	Greater amberjack	No	No	No	NA	2.101
<b>SAFMC</b>	<b>Red grouper</b>	<b>No</b>	<b>Yes</b>	<b>NA</b>	<b>Year 4 of 9</b>	<b>0.286</b>
<b>SAFMC</b>	<b>Red porgy</b>	<b>No</b>	<b>Yes</b>	<b>No</b>	<b>Year 2 of 26</b>	<b>0.27</b>
<b>SAFMC</b>	<b>Red snapper</b>	<b>Yes</b>	<b>Yes</b>	<b>NA</b>	<b>Year 13 of 35</b>	<b>0.44</b>
<b>SAFMC</b>	<b>Scamp</b>	<b>No</b>	<b>Unknown</b>	<b>Unknown</b>	<b>NA</b>	<b>not estimated</b>
<b>SAFMC</b>	<b>Snowy grouper</b>	<b>Yes</b>	<b>Yes</b>	<b>No</b>	<b>Year 18 of 34</b>	<b>0.362</b>
SAFMC	Tilefish	No	No	No	NA	0.927
SAFMC	Vermilion snapper	No	No	No	NA	1.131
SAFMC / GMFMC	Cobia - Gulf	Yes	No	No	NA	0.689
SAFMC / GMFMC	King mackerel - Gulf	No	No	No	NA	0.922
SAFMC / GMFMC	King mackerel - Atlantic	No	No	No	NA	1.735
SAFMC / GMFMC	Spanish mackerel - Gulf	No	No	No	NA	0.828
SAFMC / GMFMC	Spanish mackerel - Atlantic	No	No	No	NA	1.05
SAFMC / GMFMC	Black grouper*	No	No	No	NA	1.4
SAFMC / GMFMC	Mutton snapper*	No	No	No	NA	1.132
SAFMC / GMFMC	Yellowtail snapper*	No	No	No	NA	1.467



**Table 7.** Summary of Stock Status for non-FSSI Stocks. Reprinted from: NMFS – 2023 Status of US Fisheries. Table C. Summary of Stock Status for FSSI Stocks. Bolded indicates overfished species and \* indicates stock unit includes Gulf of Mexico stock.

<b>Jurisdiction</b>	<b>Stock</b>	<b>Overfishing</b>	<b>Overfished</b>	<b>Approaching Overfished</b>	<b>Rebuilding Program Progress</b>
SAFMC	Black corals (Antipatharia)	No	Unknown	Unknown	NA
SAFMC	Fire corals (Milleporidae)	No	Unknown	Unknown	NA
SAFMC	Hydrocorals (Stylasteridae)	No	Unknown	Unknown	NA
SAFMC	Soft corals (Octocorallia)	No	Unknown	Unknown	NA
SAFMC	Stony corals (Scleractinia)	No	Unknown	Unknown	NA
SAFMC	Wahoo	Unknown	Unknown	Unknown	NA
SAFMC	Golden deepsea crab	Unknown	Unknown	Unknown	NA
SAFMC	Sargassum	No	No	Unknown	NA
SAFMC	Atlantic spadefish	Unknown	Unknown	Unknown	NA
SAFMC	Bar jack	Unknown	Unknown	Unknown	NA
SAFMC	Hogfish - Carolinas	Unknown	Unknown	Unknown	NA
<b>SAFMC</b>	<b>Hogfish - Florida Keys / East Florida</b>	<b>No</b>	<b>Yes</b>	<b>NA</b>	<b>Year 7 of 10-year plan</b>
SAFMC	Nassau grouper *	No	Unknown	Unknown	NA
SAFMC	South Atlantic Deepwater Snapper	Unknown	Unknown	Unknown	NA
SAFMC	South Atlantic Grunts Complex	Unknown	Unknown	Unknown	NA
SAFMC	South Atlantic Jacks Complex	Unknown	Unknown	Unknown	NA
SAFMC	South Atlantic Porgy Complex	Unknown	Unknown	Unknown	NA
SAFMC	South Atlantic Shallow Water Snapper-Grouper Complex	Unknown	Unknown	Unknown	NA
SAFMC	South Atlantic Snappers Complex	Unknown	Unknown	Unknown	NA
SAFMC	Speckled hind	Unknown	Unknown	Unknown	NA
SAFMC	Warsaw grouper	Unknown	Unknown	Unknown	NA
SAFMC	Wreckfish	No	No	No	NA
SAFMC / GMFMC	Goliath grouper *	No	Unknown	Unknown	NA
SAFMC / GMFMC	Caribbean spiny lobster *	No	Unknown	Unknown	NA

