

Identifying Key Stocks
SEDAR Committee
December 2024

KEY STOCKS BACKGROUND

The Committee was briefed on the idea of key stocks for the fishery at their September 2024 meeting. The impetus for key stocks comes from the lack of resources in the Southeast to assess all managed stocks, therefore, 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 is devoted to those stocks getting attention or creating controversy, and age of assessment.

The MSA reauthorization in 2006 required that Councils submit Research and Monitoring plans to NOAA fisheries. In developing 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 and managed stocks changed. In the most recent version (SAFMC 2023), 23 primary and 17 secondary stocks are listed.

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 realized at the time that SEDAR could not complete that many assessments on a recurring basis. This led to the idea of “key stocks” that was presented to the SSC in October 2017 as a way to select a manageable number of stocks for regular assessments (*SSC October 2017 A11*). The goal was to identify 12 – 15 stocks that drive the fishery and thus the management program, meaning that they are the ones that influence fishing trip decisions, and that collectively represent a large proportion of fishing landings. The thinking at the time was that 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 idea 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.

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 build 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.

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. There were 16 species that could be updated on a five-year cycle. Most of the species that could be updated regularly were species that currently have aged-based assessments. Two species with aged-based assessments but considered unknown as to regular 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. It is also not clear if an increased number of age-based assessments could be supported by 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 of 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 SAFMC SSC recommendation to limit projections to 5 years post terminal year of assessment). The initial schedule put forth by the SEFSC at the July 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 1 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 assessment 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 Assessed: 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 1**). 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 2**). 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 for the fishery and that a recent Research Track Assessment has been reviewed.

The current list of 15 key stocks 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. 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). 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

To have the assessment frequency to match SSC recommendations for maximum length of projects (5 years), the SEFSC is recommending 9 to 10 stocks. If the Council would like assessments on a more frequent basis, such as every 3 or 4 years, then the number of key stocks would be limited to less than 8 stocks.

In addition, **Table 3** 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 4** presents information for non-FSSI species.

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.
 - 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 exceeds 1 million pounds
 - 7 of 10 stocks with greater than 1 million pounds are included in the current list of key stocks (missing Dolphin, Wahoo, and Gray Snapper)
- 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).
 - 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. Three of the overfished stocks were also experiencing overfishing.

PREVIOUS MEETING DISCUSSION ON KEY STOCKS AND SSC DISCUSSION

The Committee and 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 as key stocks. 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 Committee did not come to consensus on the number of key stocks that would be assessed by SEFSC. 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.

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.

Notes on stocks that meet 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 IRA projects as a potential species to address using a 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 YPR 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.
 - A 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 1. 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)
ASMFC Atlantic Group Cobia	1	SEFSC	2017			1
Black Sea Bass	1	SEFSC	2020	2027	2.99	2
Blueline Tilefish	1	SEFSC	2015	On going	4.01	3
Gag	1	SEFSC	2019	2026	2.98	4
Golden Tilefish	1	SEFSC	2018	On going	2.94	5
Gray Triggerfish*	1	SEFSC	2020		3.42	6
Greater Amberjack	1	SEFSC	2016	2028	2.47	7
King Mackerel	1	SEFSC	2018	2027	3.44	8
Red Grouper	1	SEFSC	2015	2026	4.03	9
Red Porgy	1	SEFSC	2017	2028	5.49	10
Red Snapper	1	SEFSC	2019	2025	6.5	11
Scamp	1	SEFSC	2020		3.41	12
Snowy Grouper	1	SEFSC	2018	2027	4.89	13
Spanish Mackerel	1	SEFSC	2021	2028	3.42	14
Vermilion Snapper	1	SEFSC	2016	2027	2.86	15
Dolphin	1	SEFSC		MSE On going		Y
Black Grouper	1	FWC	2008	MSE On going	2.54	Y
FLK/EFL Hogfish	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

Stock	Level	Lead	Terminal Year of Last Completed Assessment	Proposed Start of Next Assessment	2017 Priority score	Key Candidate (Numbers don't mean ranking)
White Grunt	1 [^]	SEFSC			3.97	N
Almaco Jack	2	SEFSC			2.81	N
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 Hind	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 2. 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
Gray snapper	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 3. 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
SAFMC	Black sea bass	No	No	No	NA	0.713
SAFMC	Blueline tilefish	No	No	No	NA	1.056
SAFMC	Gag	Yes	Yes	No	Year 1 of 10	0.15
SAFMC	Gray triggerfish	No	Unknown	Unknown	NA	not estimated
SAFMC	Greater amberjack	No	No	No	NA	2.101
SAFMC	Red grouper	No	Yes	NA	Year 4 of 9	0.286
SAFMC	Red porgy	No	Yes	No	Year 2 of 26	0.27
SAFMC	Red snapper	Yes	Yes	NA	Year 13 of 35	0.44
SAFMC	Scamp	No	Unknown	Unknown	NA	not estimated
SAFMC	Snowy grouper	Yes	Yes	No	Year 18 of 34	0.362
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 4. 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.

Jurisdiction	Stock	Overfishing	Overfished	Approaching Overfished	Rebuilding Program Progress
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
SAFMC	Hogfish - Florida Keys / East Florida	No	Yes	NA	Year 7 of 10-year plan
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

