### Amendment 44

to the Fishery Management Plan for the Snapper Grouper Fishery of the South Atlantic Region

Amendment 55 to the Fishery Management Plan for the Reef Fish Resources of the Gulf of Mexico



## Catch Level Adjustments and Allocations for Southeastern U.S. Yellowtail Snapper







**Environmental Assessment** 

## June 2023

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#### Snapper Grouper Amendment 44 to the Fishery Management Plan for the Snapper Grouper Fishery of the South Atlantic Region/Reef Fish Amendment 55 to the Fishery Management Plan for the Reef Fish Fishery of the Gulf of Mexico

**Proposed actions:** The actions in Amendment 44 to the Fishery Management Plan (FMP) for the Snapper Grouper Fishery of the South Atlantic Region and Amendment 55 to the FMP for the Reef Fish Resources of the Gulf of Mexico would modify management of Southeastern U.S. yellowtail snapper. Actions would revise the jurisdictional allocation, annual catch limits, and South Atlantic sector allocations.

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This Environmental Assessment (EA) is being prepared using the 2020 CEQ NEPA Regulations as modified by the Phase I 2022 revisions. The effective date of the 2022 revisions was May 20, 2022, and reviews begun after this date are required to apply the 2020 regulations as modified by the Phase I revisions unless there is a clear and

fundamental conflict with an applicable statute. This EA began on [Date] and accordingly proceeds under the 2020 regulations as modified by the Phase I revisions.

## **Abbreviations Used in This Document**

TO BE UPDATED/COMPLETED

ABC	acceptable biological catch
ACL	annual catch limit
ACT	annual catch target
AM	accountability measure
APAIS	Access Point Angler Intercept Survey
CHTS	Coastal Household Telephone Survey
Councils	South Atlantic Fishery Management Council and Gulf of
	Mexico Fishery Management Council
EA	Environmental Assessment
EEZ	exclusive economic zone
F	Fishing mortality
FES	Fishing Effort Survey
FHS	For-hire Survey
FMP	Fishery Management Plan
FMSY	Fishing mortality at maximum sustainable yield
GMFMC	Gulf of Mexico Fishery Management Council
Gulf	Gulf of Mexico
Gulf Council	Gulf of Mexico Fishery Management Council
lb	nound
Magnuson-Stevens Act	Magnuson-Stevens Fishery Conservation and Management
Magnuson-Stevens Act	A of
	Act
MFMT	maximum fishing mortality threshold
MFMT	maximum fishing mortality threshold million pounds
MFMT mp MRIP	maximum fishing mortality threshold million pounds Marine Recreational Information Program
MFMT mp MRIP MRESS	maximum fishing mortality threshold million pounds Marine Recreational Information Program Marine Recreational Fisheries Statistics Survey
MFMT mp MRIP MRFSS MSST	maximum fishing mortality threshold million pounds Marine Recreational Information Program Marine Recreational Fisheries Statistics Survey minimum stock size threshold
MFMT mp MRIP MRFSS MSST MSY	maximum fishing mortality threshold million pounds Marine Recreational Information Program Marine Recreational Fisheries Statistics Survey minimum stock size threshold Maximum sustainable yield
MFMT mp MRIP MRFSS MSST MSY	maximum fishing mortality threshold million pounds Marine Recreational Information Program Marine Recreational Fisheries Statistics Survey minimum stock size threshold Maximum sustainable yield matric tons
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MFMT mp MRIP MRFSS MSST MSY mt nm	maximum fishing mortality threshold million pounds Marine Recreational Information Program Marine Recreational Fisheries Statistics Survey minimum stock size threshold Maximum sustainable yield metric tons nautical miles National Marine Fisheries Service
MFMT mp MRIP MRFSS MSST MSY mt nm NMFS	maximum fishing mortality threshold million pounds Marine Recreational Information Program Marine Recreational Fisheries Statistics Survey minimum stock size threshold Maximum sustainable yield metric tons nautical miles National Marine Fisheries Service
MFMT mp MRIP MRFSS MSST MSY mt nm NMFS NOAA OEL	maximum fishing mortality threshold million pounds Marine Recreational Information Program Marine Recreational Fisheries Statistics Survey minimum stock size threshold Maximum sustainable yield metric tons nautical miles National Marine Fisheries Service National Oceanic and Atmospheric Administration
MFMT mp MRIP MRFSS MSST MSY mt nm NMFS NOAA OFL	maximum fishing mortality threshold million pounds Marine Recreational Information Program Marine Recreational Fisheries Statistics Survey minimum stock size threshold Maximum sustainable yield metric tons nautical miles National Marine Fisheries Service National Oceanic and Atmospheric Administration overfishing limit
MFMT mp MRIP MRFSS MSST MSY mt nm NMFS NOAA OFL OY	maximum fishing mortality threshold million pounds Marine Recreational Information Program Marine Recreational Fisheries Statistics Survey minimum stock size threshold Maximum sustainable yield metric tons nautical miles National Marine Fisheries Service National Oceanic and Atmospheric Administration overfishing limit Optimum yield
MFMT mp MRIP MRFSS MSST MSY mt nm NMFS NOAA OFL OY Reef Fish FMP	maximum fishing mortality threshold million pounds Marine Recreational Information Program Marine Recreational Fisheries Statistics Survey minimum stock size threshold Maximum sustainable yield metric tons nautical miles National Marine Fisheries Service National Oceanic and Atmospheric Administration overfishing limit Optimum yield Fishery Management Plan for Reef Fish Resources in the
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MFMT mp MRIP MRFSS MSST MSY mt nm NMFS NOAA OFL OY Reef Fish FMP	maximum fishing mortality threshold million pounds Marine Recreational Information Program Marine Recreational Fisheries Statistics Survey minimum stock size threshold Maximum sustainable yield metric tons nautical miles National Marine Fisheries Service National Oceanic and Atmospheric Administration overfishing limit Optimum yield Fishery Management Plan for Reef Fish Resources in the Gulf of Mexico South Atlantic Fishery Management Council
MFMT mp MRIP MRFSS MSST MSY mt nm NMFS NOAA OFL OY Reef Fish FMP SAFMC SEDAR	maximum fishing mortality threshold million pounds Marine Recreational Information Program Marine Recreational Fisheries Statistics Survey minimum stock size threshold Maximum sustainable yield metric tons nautical miles National Marine Fisheries Service National Oceanic and Atmospheric Administration overfishing limit Optimum yield Fishery Management Plan for Reef Fish Resources in the Gulf of Mexico South Atlantic Fishery Management Council Southeast Data Assessment and Review
MFMT mp MRIP MRFSS MSST MSY mt nm NMFS NOAA OFL OY Reef Fish FMP SAFMC SEDAR South Atlantic Council	maximum fishing mortality threshold million pounds Marine Recreational Information Program Marine Recreational Fisheries Statistics Survey minimum stock size threshold Maximum sustainable yield metric tons nautical miles National Marine Fisheries Service National Oceanic and Atmospheric Administration overfishing limit Optimum yield Fishery Management Plan for Reef Fish Resources in the Gulf of Mexico South Atlantic Fishery Management Council Southeast Data Assessment and Review South Atlantic Fishery Management Council
MFMT mp MRIP MRFSS MSST MSY mt nm NMFS NOAA OFL OY Reef Fish FMP SAFMC SEDAR South Atlantic Council SPR	maximum fishing mortality threshold million pounds Marine Recreational Information Program Marine Recreational Fisheries Statistics Survey minimum stock size threshold Maximum sustainable yield metric tons nautical miles National Marine Fisheries Service National Oceanic and Atmospheric Administration overfishing limit Optimum yield Fishery Management Plan for Reef Fish Resources in the Gulf of Mexico South Atlantic Fishery Management Council Southeast Data Assessment and Review South Atlantic Fishery Management Council Spawning potential ratio
MFMT mp MRIP MRFSS MSST MSY mt nm NMFS NOAA OFL OY Reef Fish FMP SAFMC SEDAR South Atlantic Council SPR SSB	maximum fishing mortality threshold million pounds Marine Recreational Information Program Marine Recreational Fisheries Statistics Survey minimum stock size threshold Maximum sustainable yield metric tons nautical miles National Marine Fisheries Service National Oceanic and Atmospheric Administration overfishing limit Optimum yield Fishery Management Plan for Reef Fish Resources in the Gulf of Mexico South Atlantic Fishery Management Council Southeast Data Assessment and Review South Atlantic Fishery Management Council Spawning potential ratio Spawning stock biomass
MFMT mp MRIP MRFSS MSST MSY mt nm NMFS NOAA OFL OY Reef Fish FMP SAFMC SEDAR South Atlantic Council SPR SSB SSC	maximum fishing mortality threshold million pounds Marine Recreational Information Program Marine Recreational Fisheries Statistics Survey minimum stock size threshold Maximum sustainable yield metric tons nautical miles National Marine Fisheries Service National Oceanic and Atmospheric Administration overfishing limit Optimum yield Fishery Management Plan for Reef Fish Resources in the Gulf of Mexico South Atlantic Fishery Management Council Southeast Data Assessment and Review South Atlantic Fishery Management Council Spawning potential ratio Spawning stock biomass Scientific and Statistical Committee

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#### **Summary**

## Why are the South Atlantic and Gulf of Mexico Fishery Management Councils considering action?

Yellowtail snapper is considered a single stock in the South Atlantic and the Gulf of Mexico. It is jointly managed by the South Atlantic Fishery Management Council (South Atlantic Council) and the Gulf of Mexico Fishery Management Council (Gulf Council) (together, Councils) under two separate fishery management plans (FMP). An Interim Analysis

(2022 SEDAR 64 Interim Analysis) was conducted for yellowtail snapper following the benchmark 2020 Southeast Data Assessment and Review (SEDAR) assessment (SEDAR 64), which used data through 2017. Both the South Atlantic Council and the Gulf Council determined that too much time had passed after SEDAR 64 had been completed to address the acceptable biological catch (ABC) guidance they received from the Councils' Scientific and Statistical Committees (SSC) review of SEDAR 64. Therefore, both Councils requested an interim analysis to the 2020 SEDAR 64 using data through 2020. The 2022 SEDAR 64 Interim Analysis applied updated landings and discards data for each fleet from 2018 through 2020. Adjusted projections of spawning stock biomass, recruitment, retained yield, and updated landings and discards were used to inform the overfishing limit (OFL) and the ABC. The Councils will use this information when they consider the jurisdictional allocation, catch limits, and sector allocations (South Atlantic only). The 2022 SEDAR 64 Interim Analysis estimated that the stock was not overfished nor undergoing overfishing as of 2020. In addition, the 2020 SEDAR 64 assessment and the 2022 SEDAR 64 Interim Analysis used revised estimates for recreational catch from the Marine Recreational Information Program (MRIP) Fishing Effort Survey (FES). In 2018, MRIP fully transitioned its estimation of recreational effort to the mailbased FES. Previous estimates of recreational catch for yellowtail snapper were made using the Marine Recreational Fisheries Statistics Survey (MRFSS). The latter was not considered as reliable and robust as the new FES survey method (see Section 1.6). Updated projections of catch and data changes incorporated in the 2022 SEDAR 64 Interim Analysis provided information to update the overfishing limit (OFL), ABC, South Atlantic annual optimum yield ([OY], see section 1.4 for stock OY information), and annual catch limits (ACL), see Table 1.4.1.

Both the South Atlantic and Gulf of Mexico's SSCs jointly recommended a new OFL and ABC for the stock based on results of the SEDAR 64 Interim Analysis. Because SEDAR 64 includes updated recreational landings estimates based on MRIP-FES the Councils are reviewing the jurisdictional allocation. The South Atlantic and Gulf ACLs would be adjusted based on the preferred jurisdictional allocation. In addition, South Atlantic sector allocations need to be reviewed to comply with the South Atlantic Council's Allocation Review Trigger Policy (Appendix C).

#### Purpose and Need

**Purpose:** The *purpose* of this fishery management plan amendment is to revise the overfishing limit, acceptable biological catch, the jurisdictional allocation between the South Atlantic and Gulf of Mexico Fishery Management Councils, South Atlantic annual optimum yield, South Atlantic and Gulf annual catch limits, and South Atlantic sector allocations, for southeastern U.S. yellowtail snapper based on the results of the 2020 SEDAR 64 stock assessment and following 2022 SEDAR 64 Interim Analysis.

**Need:** The *need* for this fishery management plan amendment is to update existing catch limits and allocations for southeastern U.S. yellowtail snapper to be consistent with the best scientific information available, and achieve optimum yield while minimizing, to the extent practicable, adverse social and economic effects.

#### What actions are being proposed in this plan amendment?

Amendment 44 to the Fishery Management Plan (FMP) for the Snapper Grouper Fishery of the South Atlantic Region (Snapper Grouper Amendment 44)/Amendment 55 to the FMP for the Reef Fish Resources of the Gulf of Mexico (Reef Fish Amendment 55) proposes three actions.

# Action 1: Modify the yellowtail snapper stock acceptable biological catch and the jurisdictional allocation of the stock acceptable biological catch between the South Atlantic and Gulf of Mexico Fishery Management Councils' Jurisdictions

**Purpose of Action:** This action will update the overfishing limit and stock acceptable biological catch for southeastern U.S. yellowtail snapper, based on the results of the Scientific and Statistical Committees' review of the 2022 SEDAR 64 Interim Analysis. This action will also divide the Scientific and Statistical Committees' recommended yellowtail snapper ABC between the South Atlantic and Gulf of Mexico jurisdictions. The Councils are considering revising the jurisdictional allocation because of the change to the MRIP FES data units for estimating and monitoring recreational landings.

Action 2: Revise the total annual catch limit and annual optimum yield for yellowtail snapper in the South Atlantic and revise the total annual catch limit for yellowtail snapper in the Gulf of Mexico

Sub-Action 2a: Revise the South Atlantic total annual catch limit and annual optimum yield for yellowtail snapper to reflect the new overfishing limit, acceptable biological catch, and jurisdictional allocation of the stock acceptable biological catch limit

**Purpose of Sub-Action:** The yellowtail snapper total ACL is being revised to incorporate the best scientific information available via the new ABC recommendations of the Scientific and Statistical Committees, based on the 2020 SEDAR 64 stock assessment and following 2022 SEDAR 64 Interim Analysis, both of which included updated recreational landings from the MRIP FES. The total ACL and South Atlantic annual OY in pounds whole weight that results from each alternative depends on the preferred alternative selected in **Action 1**.

# Sub-Action 2b: Revise the Gulf of Mexico acceptable biological catch buffer to set the total annual catch limit for yellowtail snapper

**Purpose of Sub-Action:** The yellowtail snapper total ACL is being revised based on the jurisdictional allocation selected in Action 1, and to incorporate the best scientific information available as reflected in the SSC's new ABC recommendations, based on the 2022 SEDAR 64 stock assessment and the subsequent 2022 SEDAR 64 Interim Analysis, which includes updated recreational landings from the MRIP FES.

# Action 3: Revise the South Atlantic yellowtail snapper sector allocations and sector annual catch limits

**Purpose of Action:** Allocations need to be reviewed since the recreational landings estimates changed in the new assessment. Recreational landings are now estimated using data from the MRIP FES rather than the Coastal Household Telephone Survey (CHTS).

## Chapter 1. Introduction

#### 1.1 What actions are being proposed in this plan amendment?

The actions in Amendment 44 to the Fishery Management Plan (FMP) for the Snapper Grouper

Fishery of the South Atlantic Region (Snapper Grouper Amendment 44)/Amendment 55 to the FMP for the Reef Fish Resources of the Gulf of Mexico (Reef Fish Amendment 55) would modify management of yellowtail snapper in the South Atlantic and Gulf of Mexico (Gulf). Actions include revising the overfishing limit (OFL) and acceptable biological catch level (ABC) based on the best scientific information available, the jurisdictional allocation of the ABC between the South Atlantic and Gulf. annual catch limits (ACL), and South Atlantic annual optimum yield (OY) and sector allocations.

# **1.2** Who is proposing the amendment?

Management Agencies
Gulf of Mexico and South Atlantic Fishery Management Councils – Engage in a process to determine a range of actions/alternatives and recommend action to the National Marine Fisheries Service.
National Marine Fisheries Service and Council staffs – Develop alternatives based on guidance from the Council and analyze the environmental impacts of those alternatives.
Secretary of Commerce – Will approve, disapprove, or partially approve the amendment as recommended by the Councils.

The Southeastern U.S. yellowtail snapper stock is considered a single unit in the South Atlantic and Gulf of Mexico. As such, the fishery is managed jointly by the South Atlantic Fishery Management Council (South Atlantic Council) and Gulf of Mexico Fishery Management Council (Gulf Council) (together, Councils) under two separate fishery management plans (FMP). This is a joint FMP amendment for each Council's FMP and must be approved by both Councils. Once both Councils approve the amendment, it will be submitted to the National Marine Fisheries Service (NMFS) for approval and implementation by the Secretary of Commerce. NMFS is a line office in the National Oceanic and Atmospheric Administration.

#### **1.3** Where is the project located?

Management of the South Atlantic stock of yellowtail snapper occurs in the 3-200 nautical miles (nm) U.S. exclusive economic zone (EEZ) in the South Atlantic, and 9-200 nm in the Gulf of Mexico (Figures 1.3.1 and 1.3.2) and is conducted under the Snapper Grouper FMP (SAFMC 1983) and Reef Fish FMP (GMFMC 1984).



Figure 1.3.1. Jurisdictional boundaries of the South Atlantic Council.

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Figure 1.3.2. Jurisdictional boundaries of the Gulf Council.

# **1.4** Why are the Councils considering action (Purpose and Need statement)?

**Purpose:** The *purpose* of this fishery management plan amendment is to revise the overfishing limit, acceptable biological catch, the jurisdictional allocation between the South Atlantic and Gulf of Mexico Fishery Management Councils, South Atlantic annual optimum yield, South Atlantic and Gulf annual catch limits, and South Atlantic sector allocations, for southeastern U.S. yellowtail snapper based on the results of the 2020 SEDAR 64 stock assessment and following 2022 SEDAR 64 interim analysis.

**Need:** The *need* for this fishery management plan amendment is to update existing catch limits and allocations for southeastern U.S. yellowtail snapper to be consistent with the best scientific information available, and achieve optimum yield while minimizing, to the extent practicable, adverse social and economic effects.

The Councils are considering action to respond to the most recent Southeast Data Assessment and Review (SEDAR) stock assessment for southeastern U.S. yellowtail snapper (2022 SEDAR

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64 Interim Analysis). The findings of this analysis indicated that the South Atlantic yellowtail snapper stock is not overfished or undergoing overfishing. The Interim Analysis was finalized in 2022, using data through 2020. The South Atlantic and Gulf Council's Scientific and Statistical Committee (SSC) reviewed the 2022 SEDAR 64 Interim Analysis and determined that the assessment is based on the best scientific information available. The current OFL and ABC for yellowtail snapper is based on the 2012 SEDAR 27A stock assessment. That assessment used landings information that has since been revised by the 2020 SEDAR 64 stock assessment, and then again by the 2022 SEDAR 64 Interim Analysis. The OFL and ABC, and all subsequent catch level recommendations proposed in this document are based on the 2022 SEDAR 64 Interim Analysis. The most recent landings data through the 2020/2021 fishing year will be reviewed by the Councils. Landings from the 2021/2022 fishing year are still considered preliminary as of this publishing. The current fishing season is August 1 to July 31.

SEDAR 27A (2012) defined the following maximum fishing mortality threshold (MFMT), minimum stock size threshold (MSST), maximum sustainable yield (MSY), and OY for yellowtail snapper. Amendments shown in Table 1.4.1 established the following values:

- MFMT (fishing mortality [F] 30% spawning potential ratio [SPR]): 3,072 metric tons (mt) or 6.8 million pounds (mp)
- MSST (0.75\*spawning stock biomass [SSB] at 30%SPR): 5,079,750 pounds whole weight (ww)
- OFL (equilibrium MSY) (recommended by Joint SSCs): 4.51 mp (landed catch without discards). 4.61 mp (landings plus dead discards).

Criteria	Definition	Amendment	Year Established	
MEET	0.75*\$\$\$	SG Reg Am 21	2015	
<b>M351</b>	0.75 SSD30%SPR	RF Am 48	2013	
мемт	Frances	SG Reg Am 15	2014	
	<b>Г</b> 30% SPR	RF Am 48		
MCV	Viold Excuses	SG Reg Am 15	2014	
IVIS Y	I leiu F30%SPR	RF Am 48	2014	
	4004 (static) SDD	SG Amendment	1008	
OV	40% (static) SFR	11	1990	
01	90% of MSY or MSY	<b>RF</b> Amendment	2022	
	proxy	48	2022	

**Table 1.4.1.** Existing status determination criteria for Southeaster U.S. yellowtail snapper.

Snapper-Grouper Amendment 15 and Reef Fish Amendment 48 defined MFMT, MSST, MSY, and OY. MFMT is defined as  $F_{30\% SPR}$ . SEDAR 64 (2020) estimated  $F_{current}$  for yellowtail snapper to be 0.438 yr<sup>-1</sup>. MSST is defined as 75% of the spawning stock biomass associated with  $F_{30\% SPR}$  (0.75\*SSBF<sub>30\% SPR</sub>) and estimated to be 1,428 metric tons (mt) or 3,148,201 pounds (lb). Reef Fish Amendment 48 established a stock OY as 90% of MSY or MSY proxy, and Snapper-Grouper Amendment 15 established an annual OY for the South Atlantic portion of the ABC. Snapper-Grouper Amendment 15 and Reef Fish Amendment 48 also established an MSY proxy as the yield at  $F_{30\% SPR}$ .

# **1.5** What are the overfishing limit and acceptable biological catch recommendations for yellowtail snapper?

The current OFL and ABC for yellowtail snapper is based on the 2012 <u>SEDAR 27A</u> stock assessment. The Councils accepted their SSCs' recommendations of a stock ABC of 4.05 million pounds (mp) for yellowtail snapper (landed catch without dead discards) (Joint SSC Report). This apportionment of the stock ABC was based on a jurisdictional apportionment of the ABC of 75% to the South Atlantic and 25% to the Gulf, which resulted in 3.0375 mp whole weight (ww) for the South Atlantic and 1.0125 mp (ww) for the Gulf. The Councils implemented this stock ABC and jurisdictionally allocated ABCs through Snapper Grouper Regulatory Amendment 15 (SAFMC 2013) and a 2013 Reef Fish Framework (GMFMC 2013). The jurisdictional apportionment was implemented with the Generic ACL/AM Amendment (GMFMC 2011) and the Comprehensive Annual Catch Limit Amendment (SAFMC 2011).

Recreational landings of yellowtail snapper are estimated using the Marine Recreational Information Program (MRIP) Fishing Effort Survey (FES), and are converted to be comparable to the OFL, ABC, and ACLs, which were derived, in part, using recreational landings estimates from the Marine Recreational Fisheries Statistics Survey (MRFSS). In general, landings estimates are higher using MRIP-FES as compared to the prior methods. Information about the changes to the recreational data collection survey and the implications of those changes is provided in Section 1.6.

The OFL, ABC, and all subsequent catch level recommendations, proposed in this document are based on the 2022 SEDAR 64 Interim Analysis and are directly comparable to the recreational landings estimates produced by MRIP-FES (Table 1.5.1).

The Councils are not exploring options for adjusting the stock status determination criteria or formulae for determining the associated stock status values in this FMP amendment (Table 1.5.2).

**Table 1.5.1.** Annual combined (South Atlantic and Gulf) OFLs and ABCs for yellowtail snapper, based on the 2022 SEDAR 64 Interim Analysis. Values are in mp whole weight (ww) and were derived, in part, using MRIP-FES recreational landings estimates.

Year	OFL from SEDAR 64 Interim Analysis	ABC (mp ww) from SEDAR 64 Interim Analysis
2023	3.922	3.887
2024	3.774	3.749
2025	3.684	3.665
2026	3.625	3.610
2027+	3.584	3.572

**Note:** ABC was provided by calendar year. Fishing year for yellowtail snapper for both commercial and recreational sectors in both jurisdictions is August 1 through July 31.

For the purpose of associating the calendar year provided catch limits to the fishing year, 2023 refers to the 2023/2024 fishing year, 2024 refers to the 2024/2025 fishing year, 2025 refers to the 2025/2026 fishing year, 2026 refers to the 2026/2027 fishing year, and 2027+ refers to the 2027/2028 and all fishing years thereafter. While the SSCs provided OFLs and ABCs based on the calendar year, the OFLs and ABCs need to be associated with the fishing year, which runs August 1 through July 31. Due to the SSCs providing a decreasing yield stream where catch levels are the highest in year 1 (2023/2024) and decrease until 2027/2028 and remain in place until modified, but based on the fact the yellowtail stock is not overfished or undergoing overfishing, the IPT decided to associate the calendar year catch limits with the forward fishing year as described above.

Criteria	Definition	Interim Base Model Value
F <sub>30%SPR</sub>	The fishing mortality rate associated with 30% SPR and the proxy used for $F_{MSY}$	0.429 yr <sup>-1</sup>
MFMT (Maximum Fishing Mortality Threshold)	F <sub>30%SPR</sub>	0.429 yr <sup>-1</sup>
F <sub>current</sub> (recent average fishing mortality rate on age-4 fish)	The geometric mean of F on age-4 fish for 2018-2020	0.292 yr <sup>-1</sup>
$\mathbf{SSB}_{\mathrm{F30\%SPR}}$	the estimated spawning stock biomass associated with F at 30% SPR	1,915.86 mt (4,223,743 lbs.)
MSST (Minimum Stock Size Threshold)	0.75*SSB <sub>F30%SPR</sub>	1,436.90 mt (3,167,807 lbs.)
SSB <sub>current</sub> (recent average of SSB)	The geometric mean of SSB for 2018- 2020	2,810.33 mt (6,195,718 lbs.)
MSY (Maximum Sustainable Yield)	Yield at F <sub>30%SPR</sub>	1,587.08 mt (3,498,908 lbs.)

**Table 1.5.2.** The stock status determination criterion for southeastern U.S. yellowtail snapper according to the 2022 SEDAR 64 Interim Analysis.

#### **1.6** How has recreational data collection changed in the southeast?

MRFSS was created in 1979 by NMFS. The program included the Access Point Angler Intercept Survey (APAIS), which consisted of onsite interviews at public marinas and other points where recreational anglers fish, to determine catch. MRFSS also included a Coastal Household Telephone Survey (CHTS), which used random digit dialing of homes in coastal counties to contact anglers to determine fishing effort. In 2000, the For-Hire Survey (FHS) was implemented to incorporate for-hire effort due to lack of coverage of charter boat anglers by the CHTS. The FHS used a directory of all known charter boats and a weekly telephone sample of the charter boat operators to obtain effort information.

MRIP<sup>1</sup> replaced MRFSS in 2013 to meet the increasing demand for more precise, accurate, and timely recreational catch estimates. MRIP is considered a more scientifically sound methodology for estimating catch because it reduces some sources of potential bias as compared to MRFSS, resulting in more accurate catch estimates. Specifically, CHTS was used to better estimate private angling effort. Instead of random telephone calls, MRIP-CHTS used targeted calls to anglers registered with a federal or state saltwater fishing registry. The MRIP also incorporated a new survey design for APAIS in 2013. This new design addressed concerns regarding the validity of the survey approach, specifically that trips recorded during a given time period are representative of trips for a full day (Foster et al. 2018). The more complete temporal coverage with the new survey design provides for consistent increases or decreases in APAIS angler catch rate statistics, which are used in stock assessments and management, for at least some species (NMFS 2021).

MRIP also transitioned from using the CHTS to a new mail survey (FES) beginning in 2015, and in 2018, the FES replaced the CHTS. Both survey methods collect data needed to estimate marine recreational fishing effort (number of fishing trips) by shore and private/rental boat anglers on the Atlantic and Gulf coasts. The new mail-based FES uses angler license and registration information as one way to identify and contact anglers (supplemented with data from the U.S. Postal Service, which includes virtually all U.S. households). Because the FES and CHTS are so different, NMFS conducted side-by side testing of the two methods from 2015 to 2018 and developed calibration procedures to convert the historical catch estimates (MRFSS, and MRIP-CHTS) into MRIP-FES.<sup>2</sup> In general, landings estimates are higher using the MRIP-FES as compared to the prior methods. This is because the FES is designed to more accurately measure fishing activity than the CHTS, not because there was a sudden rise in fishing effort. NMFS developed a calibration model to adjust historic effort estimates so that they can be accurately compared to new estimates from the FES. The new effort estimates alone do not lead to definitive conclusions about stock size or status in the past or at current. NMFS determined that the MRIP-FES data, when fully calibrated to ensure comparability among years and across states, produced the best available data for use in stock assessments and management (NMFS 2021).

# **1.7** What is the history of management for the yellowtail snapper fishery?

Snapper grouper regulations in the South Atlantic were first implemented in 1983 and reef fish regulations in the Gulf of Mexico were first implemented in 1984. The reader is referred to the following link for the management history, summary of changes under each amendment, implementation dates, an up-to-date list of amendments under development and more, for all of the species in the Snapper Grouper FMP: <u>https://safmc.net/fishery-management-plans/snapper-grouper/</u> and Reef Fish FMP: <u>https://gulfcouncil.org/fishery-management-2/implemented-plans/reef-fish/</u>. Below are amendments to the Snapper Grouper FMP and Reef Fish FMP

<sup>&</sup>lt;sup>1</sup> https://media.fisheries.noaa.gov/2021-09/MRIP-Survey-Design-and-Statistical-Methods-2021-09-15.pdf/

<sup>&</sup>lt;sup>2</sup> Although both MRFSS and MRIP-FES generate estimates measured in pounds of fish, these estimates are not directly comparable because FES generates larger estimates than MRFSS, as described below. To signify that the estimates use different scales, this document uses the terms "MRFSS units" and "MRIP-FES units" to describe the recreational catch limits.

addressing southeastern yellowtail snapper within both the South Atlantic and Gulf of Mexico EEZ.

#### **Snapper Grouper FMP (1983)**

The Snapper Grouper FMP included provisions to prevent growth overfishing in thirteen species in the snapper grouper complex and established a procedure for preventing overfishing in other species; established minimum size limits for red snapper, yellowtail snapper, red grouper, Nassau grouper, and black sea bass; established a 4-inch trawl mesh size to achieve a 12-inch total length minimum size limit for vermilion snapper; and included additional harvest and gear limitations.

#### Reef Fish FMP (1984)

The Reef Fish Fishery Management Plan implemented regulations designed to rebuild declining reef fish stocks, included: (1) prohibitions on the use of fish traps, roller trawls, and powerhead-equipped spear guns within an inshore stressed area; (2) a minimum size limit of 13 inches total length (TL) for red snapper with the exceptions that for-hire boats were exempted until 1987 and each angler could keep 5 undersized fish; and, (3) data reporting requirements. It also established a calendar fishing year for managed reef fish species.

#### Reef Fish Amendment 1 (1990)

This amendment established a 12-inch minimum size limit and a 10 fish per person bag limit within the 10 per person reef fish snapper aggregate for the Gulf of Mexico region.

#### **Snapper Grouper Amendment 4 (1992)**

This amendment established a 12-inch total length minimum for yellowtail snapper in the South Atlantic.

#### **Snapper Grouper Amendment 8 (1997)**

This amendment established initial eligibility for two limited entry snapper grouper permits: a non-transferable permit with a 225-pound trip limit and transferrable unlimited landings permit in the South Atlantic.

#### **Snapper Grouper Amendment 9 (1998)**

Snapper grouper Amendment 9 established a recreational 20-fish snapper aggregate inclusive of all snappers that did not currently have a bag limit for the South Atlantic region.

#### **Snapper Grouper Amendment 11 (1998)**

Amendment 11 defined MSY for snapper grouper species, including yellowtail snapper, as a proxy of 30% static spawning potential ratio (SPR), the OY as 40% static SPR and the OFL as the fishing mortality rate (F) in excess of the fishing mortality rate at 30% static SPR, which is the snapper grouper MSY proxy.

#### **Snapper Grouper Amendment 17A (2010)**

This amendment required the use of non-stainless steel, and non-offset circle hooks, when fishing for or possessing snapper grouper species with hook and line gear north of 28° N

Latitude. The circle hook requirement was not required below 28° N Latitude to exclude the yellowtail fishery, which is unable to use circle hooks.

#### **Comprehensive Annual Catch Limit Amendment (2011)**

This amendment established ACL Control Rule, ABC levels, ACLs, sector and jurisdictional allocations, and accountability measures for species not undergoing overfishing; including yellowtail snapper.

#### Generic ACL Amendment (2012)

This amendment established a stock ACL of 725,000 lbs gutted weight and ACT of 645,000 lbs gutted weight for yellowtail snapper for the Gulf of Mexico region. However, the ACT was never used for management purposes. This amendment also established jurisdictional allocation between the South Atlantic and Gulf of Mexico.

#### **Snapper Grouper Regulatory Amendment 15 (2013)**

This amendment revised the total South Atlantic ACL and set it equal to the South Atlantic ABC based on the 2012 FWRI stock assessment. Regulatory Amendment 15 also updated both the commercial and recreational sector allocations for the South Atlantic region.

# **Reef Fish Framework Action Addressing Vermilion Snapper, Yellowtail Snapper, and Venting Tool Requirements (2013)**

This framework action increased the Gulf of Mexico annual catch limit from 725,000 lbs gutted weight to 901,125 lbs gutted weight. The action also removed the requirement to have onboard and use venting tools when releasing reef fish.

#### **Snapper Grouper Regulatory Amendment 21 (2014)**

Regulatory Amendment 21 modified the minimum stock size threshold (MSST) for select species (including yellowtail snapper) to 75% of spawning stock biomass at maximum sustainable yield ( $SSB_{MSY}$ ) for the South Atlantic portion of the stock.

#### **Snapper Grouper Regulatory Amendment 25 (2016)**

This amendment modified both the commercial and recreational yellowtail snapper fishing season from a calendar year to August 1 - July 31 in the South Atlantic.

# **Reef Fish Framework Action Addressing Gear Requirements and Fishing Year for Yellowtail Snapper in the Gulf of Mexico (2017)**

This amendment changed the Gulf of Mexico commercial and recreational yellowtail snapper fishing year so that it opens on August 1 and runs through July 31, each year. The amendment also modified the circle hook requirement so that the use of circle hooks is not required while commercial fishing with natural bait for yellowtail snapper south of Cape Sable (the line extending due west from 25°09' N. latitude off the west coast of Monroe County, Florida, to the Gulf and South Atlantic Councils' shared boundary).

#### Reef Fish Amendment 48 (2022)

This amendment confirmed status determination criteria (including MSY, MFMT, and MSST) for reef fish, including yellowtail snapper to be consistent with the South Atlantic's definitions. It also set the stock OY as 90% of MSY.

## **Chapter 2.** Proposed Actions and Alternatives

2.1 Action 1. Modify the yellowtail snapper stock overfishing limit and stock acceptable biological catch and jurisdictional allocation of the stock acceptable biological catch between the South Atlantic and Gulf of Mexico Fishery Management Councils' Jurisdictions

#### 2.1.1 Alternatives

Alternative 1 (No Action). Retain the current yellowtail snapper overfishing limit and stock acceptable biological catch, and allocation of the stock acceptable biological catch for yellowtail snapper between the South Atlantic and Gulf of Mexico Fishery Management Councils' jurisdictions. The current jurisdictional allocation between the South Atlantic and the Gulf of Mexico is 75% and 25% of the stock acceptable biological catch, respectively, and is in Marine Recreational Fisheries Statistics Survey data units. This jurisdictional allocation is based 50% on the average landings from 1993-2008, plus 50% on the average landings from 2006-2008.

**Alternative 2.** Update the yellowtail snapper overfishing limit and stock acceptable biological catch based on the results of the 2022 SEDAR 64 Interim Analysis and the Scientific and Statistical Committees' recommendations. Retain the current jurisdictional allocation of yellowtail snapper **updated stock acceptable biological catch** between the South Atlantic and Gulf of Mexico Fishery Management Councils' jurisdictions at 75% for the South Atlantic and 25% for the Gulf. The updated stock acceptable biological catch to be allocated is in the Marine Recreational Information Program's Fishing Effort Survey data units.

**Alternative 3.** Update the yellowtail snapper overfishing limit and stock acceptable biological catch based on the results of the 2022 SEDAR 64 Interim Analysis and the Scientific and Statistical Committees' recommendations. Applying the Marine Recreational Information Program's Fishing Effort Survey data units to the current formula (50% on the average landings from 1993-2008, plus 50% on the average landings from 2006-2008) results in allocating 81% of the **updated stock acceptable biological catch** to the South Atlantic and 19% to the Gulf of Mexico. The updated stock acceptable biological catch to be allocated is in the Marine Recreational Information Program's Fishing Effort Survey data units.

**Alternative 4.** Update the yellowtail snapper overfishing limit and stock acceptable biological catch based on the results of the 2022 SEDAR 64 Interim Analysis and the Scientific and Statistical Committees' recommendations. Applying the Marine Recreational Information Program's Fishing Effort Survey data units to the 2012 – 2021 fishing years, the average landings from that period yield a jurisdictional allocation of 84% of the **updated stock acceptable biological catch** to the South Atlantic and 16% to the Gulf of Mexico. The updated stock acceptable biological catch to be allocated is in the Marine Recreational Information Program's Fishing Effort Survey data units.

**NOTE:** For Alternatives 2 through 4 above, recreational landings from Monroe County, Florida, are attributed to the South Atlantic region. Commercial landings are attributed to the location of reporting from state trip tickets.

#### Discussion:

SEDAR 64 was completed in 2020 and then reviewed by the Councils respective Science and Statistical Committees (SSC). The Southeast Data, Assessment, and Review (SEDAR) 64 assessment was completed in part to incorporate the revised recreational data landings estimates using data from Marine Recreational Information Program's Fishing Effort Survey (MRIP-FES). The use of MRIP-FES data changed the understanding of the magnitude of historical recreational catch and the relative rates of participation from the recreational and commercial sectors. In October 2020 the Gulf and South Atlantic SSCs held a joint meeting and accepted the southeastern U.S. yellowtail snapper assessment as the best scientific information available and agreed with the assessments results that southeastern U.S. yellowtail snapper is not overfished or experiencing overfishing. The 2022 SEDAR 64 Interim Analysis updated the time series of landings used and confirmed this stock status. The SSC made overfishing limit (OFL) and acceptable biological catch (ABC) recommendations, noting that the change in recreational data units from the Marine Recreational Fisheries Statistics Survey (MRFSS) to MRIP-FES affects estimates of historical landings and stock productivity. As such, the new catch level recommendations are not directly comparable to those in previous assessments or related management actions. New recommended catch levels result in a decreasing yield stream. This is due to the current spawning stock biomass (SSB) being greater than the yield at SSB of maximum sustainable yield ([MSY] SSB<sub>MSY</sub>), which is considered the stock's equilibrium. This decreasing yield stream allows for fishing to the stock's equilibrium SSB<sub>MSY</sub> (Table 2.1.1.1). Because SEDAR 64 or the Interim Analysis did not include an estimate of ABC if MRIP-FES had been available for SEDAR 27A, the Environmental Consequences analysis in Chapter 4 of this document use five-year averages of recent commercial landings and recreational landings in MRIP-FES units to compare the impacts of Alternative 1 and each of the action alternatives (Alternatives 2-4). While the fishery is managed jointly by the South Atlantic Fishery Management Council (South Atlantic Council) and Gulf of Mexico Fishery Management Council (Gulf Council) (together, Councils) under two separate fishery management plans, both Councils decided to proceed with a joint document to reduce workload and time to implement new catch limits.

Alternative 1 (No Action) would retain the current jurisdictional allocation percentages between the South Atlantic and the Gulf as 75% and 25%, respectively, of the current stock ABC, which is based on 50% of average landings from 1993-2008 + 50% of average landings from 2006-2008. This formula was applied to landings as of 2011. The Councils implemented the jurisdictional allocation through the Generic Annual Catch Limit (ACL)/Accountability Measure (AM) Amendment [GMFMC 2011] and the Comprehensive ACL Amendment [SAFMC 2011]) to obtain the current ABC jurisdictional allocation in weight of fish (lb). The allocation formula used recreational landings estimated by the (MRFSS), which has been since replaced by the Marine Recreational Information Program (MRIP). The catch limits in Alternative 1 also do not reflect the outcomes of the SEDAR 64, the 2022 SEDAR 64 Interim Analysis, and the SSC's

**Chapter 2. Proposed Actions** 

OFL and ABC recommendations, which is not considered to be consistent with the best scientific information available. Therefore, it would not be consistent with National Standard 2 of the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act) to retain the OFL and stock ABC under Alternative 1.

The stock ABC based on the 2022 Interim Analysis and SSC recommendation in Alternatives 2-4 is allocated between the Gulf and South Atlantic based on the percentage considered in each alternative (Table 2.1.1.1). Alternative 2 retains current jurisdictional allocation percentages between the South Atlantic and the Gulf as 75% and 25%, respectively, but applies these percentages to the updated stock ABC provided through the 2022 SEDAR 64 Interim Analysis. The new ABC is in MRIP- FES data units, which are considered by the National Marine Fisheries Service to be BSIA. Alternative 2 maintains status quo percentages for the allocation, but addresses the change to MRIP-FES by using this allocation to set the jurisdictional stock ABCs provided through the 2022 SEDAR 64 Interim Analysis. However, the recreational data used in establishing the current allocation underestimated the historical landings and effort from the recreational sector and thus, does not reflect the nature of the fleets harvesting vellowtail snapper during the reference period if MRIP-FES was used. Alternative 3 addresses this by using the same formula as Alternative 1, but updates recreational landings estimates that have been converted to MRIP-FES units to set the jurisdictional allocation. This results in an allocation of 81% to the South Atlantic and 19% to the Gulf. The resulting allocation is applied to the updated stock ABC. This shift to the South Atlantic jurisdiction reflects the additional recreational effort and landings that NMFS estimates occurred during this period as reflected in the MRIP-FES data. Like Alternative 3, Alternative 4 also uses recreational landings estimates in MRIP-FES units, but for the most recent ten years of landings data (2012-2021). This also addresses more recent recreational effort and results in an allocation of 84% to the South Atlantic and 16% to the Gulf. The resulting allocation is applied to the updated stock ABC. Alternative 4 represents the largest allocation to the South Atlantic and the least to the Gulf of the alternatives considered in this action.

**Table 2.1.1.1** The yellowtail snapper overfishing limit (OFL) stock ABC, and acceptable biological catch allocations for the Gulf of Mexico and South Atlantic jurisdictions, for all alternatives under Action 1. Note: Alternative 1 (No Action) is not a viable option (not best scientific information available) and cannot be directly compared to the other alternatives due to differences in data units. 2027/2028 values will remain in effect until modified.

Year	OFL (lb ww)	ABC (lb ww)	Gulf Stock ABC (lb ww)	South Atlantic Stock ABC (lb ww)	
Alternative 1 (No Action) GOM 25%/SA 75% - Current Stock ABC					
2023/2024	4,510,000	4,050,000	1,012,500	3,037,500	
2024/2025	4,510,000	4,050,000	1,012,500	3,037,500	
2025/2026	4,510,000	4,050,000	1,012,500	3,037,500	
2026/2027	4,510,000	4,050,000	1,012,500	3,037,500	
2027/2028	4,510,000	4,050,000	1,012,500	3,037,500	
	Alternative	2 GOM 25%	SA 75% - Updated Stock AB	С	
2023/2024	3,922,000	3,887,000	971,750	2,915,250	
2024/2025	3,774,000	3,749,000	937,250	2,811,750	
2025/2026	3,684,000	3,665,000	916,250	2,748,750	
2026/2027	3,625,000	3,610,000	902,500	2,707,500	
2027/2028	3,584,000	3,572,000	893,000	2,679,000	
	Alternative 3 GOM 19%/SA 81% -Updated Stock ABC				
2023/2024	3,922,000	3,887,000	738,530	3,148,470	
2024/2025	3,774,000	3,749,000	712,310	3,036,690	
2025/2026	3,684,000	3,665,000	696,350	2,968,650	
2026/2027	3,625,000	3,610,000	685,900	2,924,100	
2027/2028	3,584,000	3,572,000	678,680	2,893,320	
Draft Alternative 4 GOM 16%/SA 84% - Updated Stock ABC					
2023/2024	3,922,000	3,887,000	621,920	3,265,080	
2024/2025	3,774,000	3,749,000	599,840	3,149,160	
2025/2026	3,684,000	3,665,000	586,400	3,078,600	
2026/2027	3,625,000	3,610,000	577,600	3,032,400	
2027/2028	3,584,000	3,572,000	571,520	3,000,480	

Note: The recreational portion of Alternative 1 is in MRFSS units. The recreational portion of Alternatives 2-4 are in MRIP-FES units.

#### 2.1.2 Comparison of Alternatives:

#### TO BE COMPLETED UPON COMPLETION OF CHAPTER 4.

# 2.2 Action 2. Revise the total annual catch limit and annual optimum yield for yellowtail snapper in the South Atlantic and revise the total annual catch limit for yellowtail snapper in the Gulf of Mexico

2.2.1 Sub-action 2a. Revise the South Atlantic total annual catch limit and annual optimum yield for yellowtail snapper to reflect the new overfishing limit, acceptable biological catch, and jurisdictional allocation of the stock acceptable biological catch

#### 2.2.1.1 Alternatives

**NOTE**: Annual catch limit totals for Alternatives 2 through 6 under Action 2 will be dependent on the jurisdictional allocation from Action 1.

**Alternative 1 (No Action):** The South Atlantic total annual catch limit and annual optimum yield for yellowtail snapper are **equal to the current South Atlantic acceptable biological catch** (3,037,500 pounds whole weight). The current acceptable biological catch and overfishing limit are based on the results of SEDAR 27A, which included recreational landings estimates from the Marine Recreational Fisheries Statistics Survey.

**Alternative 2.** The total annual catch limit and annual optimum yield for yellowtail snapper is **equal to the updated South Atlantic acceptable biological catch level** resulting from the jurisdictional allocation in Action 1. The updated South Atlantic acceptable biological catch and overfishing limit are based on the results of the 2022 SEDAR 64 Interim Analysis, which included recreational landings estimates from the Marine Recreational Information Program's Fishing Effort Survey.

**Alternative 3.** The total annual catch limit and annual optimum yield for yellowtail snapper is equal to **90% of the updated South Atlantic acceptable biological catch level** resulting from the jurisdictional allocation in Action 1. The updated South Atlantic acceptable biological catch and overfishing limit are based on the results of the 2022 SEDAR 64 Interim Analysis, which included recreational landings estimates from the Marine Recreational Information Program's Fishing Effort Survey.

**Alternative 4.** The total annual catch limit and annual optimum yield for yellowtail snapper is equal to **95% of the South Atlantic acceptable biological catch level** resulting from the jurisdictional allocation in Action 1. The updated South Atlantic acceptable biological catch and overfishing limit are based on the results of the 2022 SEDAR 64 Interim Analysis, which included recreational landings estimates from the Marine Recreational Information Program's Fishing Effort Survey.

**Alternative 5.** The total annual catch limit and annual optimum yield for yellowtail snapper is equal to the lowest updated South Atlantic acceptable biological catch value. The updated South Atlantic acceptable biological catch and overfishing limit are inclusive of recreational estimates from the Marine Recreational Information Program's Fishing Effort Survey.

**Alternative 6.** The total annual catch limit and annual optimum yield for yellowtail snapper is equal to the constant catch at the fishing mortality rate at a 30% spawning potential ratio at equilibrium.

#### Discussion:

Alternative 1 (No Action) would retain the current South Atlantic ACL. Since updated catch levels have been provided through the 2022 SEDAR 64 Interim Analysis, this alternative is not based on best available science and is non-viable. Alternative 2 would set the South Atlantic ACL and annual optimum yield OY equal to the updated South Atlantic ABC (Action 1). Alternatives 3 and 4 would include a 10 and 5% buffer between the ACL/South Atlantic annual OY and the updated South Atlantic ABC, respectively.

Alternative 5 would set the ACL and South Atlantic annual OY equal to the lowest ABC value, which would be implemented and remain in place until modified. Similarly, Alternative 6 would set the ACL and South Atlantic annual OY equal to the yield at 30% of the spawning potential ratio at equilibrium and this would remain in place until modified.

anocation of Action 1 (Aner natives 2-4). All values are in pounds whole weight.					
	Total ACL (Action 2)				
Alternative	2023	2024	2025	2026	2027
Current SA ABC (lb ww)	3,037,500	3,037,500	3,037,500	3,037,500	3,037,500
Alternative 1 (No Action)	3,037,500	3,037,500	3,037,500	3,037,500	3,037,500
Action 1, Alternative 2 Updated SA ABC (lb ww) 75%	2,915,250	2,811,750	2,748,750	2,707,500	2,679,000
Action 2, Alternative 2	2,915,250	2,811,750	2,748,750	2,707,500	2,679,000
Action 2, Alternative 3	2,623,725	2,530,575	2,473,875	2,436,750	2,411,100
Action 2, Alternative 4	2,769,488	2,671,163	2,611,313	2,572,125	2,545,050
Action 2, Alternative 5	2,679,000	2,679,000	2,679,000	2,679,000	2,679,000
Action 2, Alternative 6	2,555,728	2,555,728	2,555,728	2,555,728	2,555,728
Action 1, Alternative 3 Updated SA ABC (lb ww) 81%	3,148,470	3,036,690	2,968,650	2,924,100	2,893,320
Action 2, Alternative 2	3,148,470	3,036,690	2,968,650	2,924,100	2,893,320
Action 2, Alternative 3	2,833,623	2,733,021	2,671,785	2,631,690	2,603,988
Action 2, Alternative 4	2,991,047	2,884,856	2,820,218	2,777,895	2,748,654
Action 2, Alternative 5	2,907,251	2,907,251	2,907,251	2,907,251	2,907,251
Action 2, Alternative 6	2,760,186	2,760,186	2,760,186	2,760,186	2,760,186
Action 1, Alternative 4 Updated SA ABC (lb ww) 84%	3,265,080	3,149,160	3,078,600	3,032,400	3,000,480
Action 2, Alternative 2	3,265,080	3,149,160	3,078,600	3,032,400	3,000,480
Action 2, Alternative 3	2,938,572	2,834,244	2,770,740	2,729,160	2,700,432
Action 2, Alternative 4	3,101,826	2,991,702	2,924,670	2,880,780	2,850,456
Action 2, Alternative 5	2,907,251	2,907,251	2,907,251	2,907,251	2,907,251
Action 2, Alternative 6	2,862,415	2,862,415	2,862,415	2,862,415	2,862,415

**Table 2.2.1.1.1** The total ACLs for each option for Action 2 under each viable jurisdictional allocation of Action 1 (Alternatives 2-4). All values are in pounds whole weight.

#### 2.2.1.2 Comparison of Alternatives:

TO BE COMPLETED UPON COMPLETION OF CHAPTER 4.

# 2.2.2 Sub-action 2b. Revise the Gulf of Mexico acceptable biological catch buffer to set the total annual catch limit for yellowtail snapper

#### 2.2.2.1 Alternatives

**NOTE**: Annual catch limit totals for Alternatives 2 and 3 under Action 2 will be dependent on the jurisdictional allocation from Action 1

Alternative 1 (No Action). Retain the current 11% buffer between the Gulf of Mexico's apportionment of the total acceptable biological catch buffer and the total annual catch limit. Use this acceptable biological catch buffer to update the Gulf of Mexico annual catch limit based on the Gulf of Mexico Fishery Management Council's jurisdictional allocation of the yellowtail snapper stock acceptable biological catch selected in Action 1. The 11% buffer is based on the calculation of the Gulf of Mexico Fishery Management Council's Annual Catch Limit/Annual Catch Target Control Rule using Marine Recreational Fisheries Statistics Survey landings data from 2008 – 2011.

Alternative 2. Modify the buffer between the Gulf of Mexico's apportionment of the total acceptable biological catch and total annual catch limit using the Gulf of Mexico Fishery Management Council's Annual Catch Limit/Annual Catch Target Control Rule using the Marine Recreational Information Program's Fishing Effort Survey data. Use this modified buffer to update the Gulf of Mexico annual catch limit based on the Gulf of Mexico Fishery Management Council's jurisdictional allocation of the yellowtail snapper stock acceptable biological catch selected in Action 1. Based on Marine Recreational Information Program Fishing Effort Survey landings data from the 2017/2018 – 2020/2021 fishing years, the Gulf of Mexico Fishery Management Council's Jurisdictional Catch Limit/Annual Catch Target Control Rule recommends an 8% buffer between the Gulf of Mexico Fishery Management Council's jurisdictional allocation of the yellowtail catch Target Control Rule recommends an 10 Mexico Fishery Management Council's Jurisdictional allocation of Mexico Fishery Management Council's Jurisdictional allocation of the yellowtail snapper stock acceptable biological catch and the Gulf of Mexico annual catch limit.

**Alternative 3.** Eliminate the buffer between the Gulf of Mexico's apportionment of the total acceptable biological catch and total annual catch limit. The Gulf of Mexico annual catch limit for yellowtail snapper is equal to the updated Gulf of Mexico Fishery Management Council's jurisdictional allocation of the stock acceptable biological catch level in the Marine Recreational Information Program's Fishing Effort Survey data units as calculated in Action 1.

#### Discussion:

Alternatives in Action 2, Sub-Action 2b address the buffer between the Gulf of Mexico's apportionment of the total ABC and the total Gulf ACL. The resulting ACLs are based on the jurisdictional allocations selected in Action 1 and the ABC buffer selected in Action 2. A 2013 Reef Fish Framework (GMFMC 2013) established the buffer between the ABC and ACL using the Gulf ACL/ACT Control Rule, which resulted in a buffer of 11% (Alternative 1). The ACL/ACT Control Rule considers the number of times the ACL was exceeded, the precision of recreational landings based on proportional standard error, the precision of commercial landings, in-season accountability measures (AM) in place, and the stock status. The 11% buffer was

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based on using the years 2008-2011 and recreational landing estimates were in MRFSS units. These same factors were considered for **Alternative 2** (Appendix B, buffer 8%), using a more recent time series (2017/2018-2020/2021) and recreational landing estimates in MRIP-FES units. The ABC is set equal to the ACL under **Alternative 3**.

Alternative 1 retains the existing ABC buffer (11%) that was established in the 2013 Reef Fish Framework (GMFMC 2013) and is based in part on MRFSS units. There has never been a yellowtail closure in the Gulf based on this buffer. However, the time series used to calculate the ABC buffer is over ten years old. It also was based on landings in MRFSS units, which are not considered to be consistent with the best scientific information available. If selected, this buffer would be used to update the jurisdictionally allocated ABC selected in Action 1. Based on average landings (Table 2.2.2.1.1, Appendix A), a closure is projected approximately two months before the end of the fishing season if the Gulf is allocated 16% of the stock ABC (Action 1, Alternative 4, Table 2.2.2.2). A closure is projected only a few weeks before the end of the fishing year if the Gulf is allocated 19% of the stock ABC (Action 1, Alternative 3).

Like **Alternative 1, Alternative 2** uses the Gulf ACL/ACT Control Rule to calculate the ABC buffer. However, it uses a more recent time series of available landings (2017/2018-2020/2021). It also incorporates the current fishing year, which splits the calendar year. This results in an ABC buffer of 9% (Appendix B). This is a reduction from the current buffer of 11% and is due in part to a more recent time series being used in the ACL/ACT Control Rule. This buffer would be used to update the jurisdictionally allocated ABC selected in Action 1. Similar to **Alternative 1**, a closure is projected approximately two months before the end of the fishing season if the Gulf is allocated 16% of the stock ABC (Action 1, Alternative 4, Table 2.2.2.2). A closure is projected only a few weeks before the end of the fishing year if the Gulf is allocated 19% of the stock ABC (Action 1, Alternative 1, the closure for **Alternative 2** under the 19% allocation with a 9% ABC buffer first occurs in the second fishing year presented (2024/2025) vs. the first (2023/2024).

Unlike **Alternatives 1** and **2**, **Alternative 3** sets the ACL equal to the ABC. Based on average landings (Table 2.2.2.1.1, Appendix A), no closures are expected under the new catch limits if the Gulf is allocated 19% of the stock ABC (Action 1, Alternative 3, Table 2.2.2.2). However, a closure approximately a month before the end of the fishing season is projected if the Gulf is allocated 16% of the stock ABC (Action 1, Alternative 4, Table 2.2.2.2).

No closures are projected under the new catch limits if the Gulf retains an allocation of 25% of the stock ABC (Action 1, Alternative 2, Table 2.2.2.2), whether there is a buffer between the ABC and ACL (Alternatives 1 and 2) or no buffer between the ABC and ACL (Alternative 3).

**Table 2.2.2.1.1.** Commercial and recreational landings in pounds (lb) whole weight (ww) of yellowtail snapper in the Gulf of Mexico for fishing years 2012-2021. The recreational portion of the landings are in MRIP-FES units.

Yellowtail Snapper Commercial and Recreational Landings				
Fishing Year	Rec. Landings (lb ww)	Comm. Landings (lb ww)	Total Landings (lb ww)	
2012	5,163	630,984	636,147	
2013	9,343	734,112	743,455	
2014	27,715	466,968	494,683	
2015	64,743	504,193	568,936	
2016	13,401	209,283	222,684	
2016/2017*	249,512	682,875	932,387	
2017/2018	206,785	589,868	796,653	
2018/2019	104,527	527,112	631,638	
2019/2020	12,348	287,940	300,289	
2020/2021	79,765	212,630	292,395	

\* On March 13, 2017, a framework action to the Reef Fish FMP was effective that changed the fishing year for both the recreational and commercial sectors to August 1 through July 31 to be consistent with the fishing year in the South Atlantic, which was implemented in 2016. For this reason, 2016 includes January through July 31, 2016 landings. August 1, 2016 through July 31, 2017 landings are attributed to the 2016/17 fishing year. **Source:** SEFSC Commercial ACL Dataset (August 31, 2022) and SEFSC MRIP FES Recreational ACL Dataset (October 25, 2022).

**Table 2.2.2.2** Predicted closure dates for Gulf of Mexico yellowtail snapper for each proposed acceptable biological catch buffer to set the annual catch limit (**Action 2**) and each proposed jurisdictional allocation (**Action 1**). Gulf of Mexico yellowtail snapper are managed as stock annual catch limits. All projected closure dates are predicted only if future landings are higher than expected (at the upper 95% confidence interval), otherwise no closure is expected for all alternatives and proposed annual catch limits. All ACLs are in lbs ww with the recreational portion being in MRIP-FES.

Action 1, Alternative 2: Gulf 25% / SA 75%					
Action 2	2023/2024	2024/2025	2025/2026	2026/2027	2027/2028+
Alternative 1 (ACL=89% Updated ABC)	ACL not met ACL=864,858	ACL not met ACL=834,153	ACL not met ACL=815,463	ACL not met ACL=803,225	ACL not met
Alternative 2 (ACL=92% Updated ABC)	ACL not met ACL=894,010	ACL not met ACL=862,270	ACL not met ACL=842,950	ACL not met ACL=830,300	ACL not met ACL=821,560
Alternative 3 (ACL= Updated ABC)	ACL not met ACL=971,750	ACL not met ACL=937,250	ACL not met ACL=916,250	ACL not met ACL=902,500	ACL not met ACL=893,000
Action 1, Altern	ative 3: Gulf 19	% / SA 81%			
Action 2	2023/2024	2024/2025	2025/2026	2026/2027	2027/2028+
Alternative 1 (ACL=89% Updated ABC)	Upper 95%: Jul 25 ACL=657,292	Upper 95%: Jul 17 ACL=633,956	Upper 95%: Jul 12 ACL=619,752	Upper 95%: Jul 8 ACL=610,451	Upper 95%: Jul 6 ACL=604,025
Alternative 2 (ACL=92% Updated ABC)	ACL not met ACL=679,448	Upper 95%: Jul 25 ACL=655,325	Upper 95%: Jul 19 ACL=640,642	Upper 95%: Jul 16 ACL=631,028	Upper 95%: Jul 13 ACL=624,386
Alternative 3 (ACL= Updated ABC)	ACL not met ACL=738,530	ACL not met ACL=712,310	ACL not met ACL=696,350	ACL not met ACL=685,900	ACL not met ACL=678,680
Action 1, Alternative 4: Gulf 16% / SA 84%					
Action 2	2023/2024	2024/2025	2025/2026	2026/2027	2027/2028+
Alternative 1 (ACL=89% Updated ABC)	Upper 95%: Jun 19 ACL=553,509	Upper 95%: Jun 12 ACL=533,858	Upper 95%: Jun 8 ACL=521,896	Upper 95%: Jun 5 ACL=514,064	Upper 95%: Jun 3 ACL=508,653
Alternative 2 (ACL=92% Updated ABC)	Upper 95%: Jun 25 ACL=572,166	Upper 95%: Jun 18 ACL=551,853	Upper 95%: Jun 14 ACL=539,488	Upper 95%: Jun 11 ACL=531,392	Upper 95%: Jun 9 ACL=525,798
Alternative 3 (ACL= Updated ABC)	Upper 95%: Jul 12 ACL=621.920	Upper 95%: Jul 4 ACL=599.840	Upper 95%: Jun 30 ACL=586.400	<b>Upper 95%:</b> Jun 27 ACL=577.600	<b>Upper 95%:</b> Jun 25 ACL=571.520

#### 2.2.2.2 Comparison of Alternatives:

#### TO BE COMPLETED

# 2.3 Action 3. Revise the South Atlantic yellowtail snapper sector allocations and sector annual catch limits

#### 2.3.1 Alternatives

Alternative 1 (No Action). Retain the current commercial and recreational sector allocations as 52.56% and 47.44%, respectively, of the revised total annual catch limit for yellowtail snapper.

**Alternative 2.** Allocate 40.73% of the revised total annual catch limit for yellowtail snapper to the commercial sector and 59.27% of the revised total annual catch limit for yellowtail snapper to the recreational sector.

#### Discussion:

Alternative 1 (No Action) retains the current allocation percentages and applies them to the updated South Atlantic ACL. The sector allocations proposed under Alternative 1 (No Action) result from applying the allocation formula adopted through the Comprehensive ACL Amendment (SAFMC 2011) for unassessed snapper grouper species: Annual catch limit = ((mean landings 2006-2008)\*0.5)) + ((mean landings 1986-2008)\*0.5). The same formula has also been used to allocate the total ACL for some assessed species (i.e., golden tilefish). When this method was originally applied, the formula used recreational landings estimates from MRFSS.

Alternative 2 uses the bow-tie method to recalculate the allocations percentages, using the same year ranges but incorporating recreational landings estimates from the MRIP-FES. These updated percentages would be applied to the updated South Atlantic ACL.

Table 2.3.1.1.	Sector allocation options for	r Action 3.	Allocations an	re shown for each	viable
jurisdictional al	location of Action 1 with ar	n ACL=Sou	th Atlantic AE	BC (Alternative 2	of Sub-
Action 2a).					

Year	SA Total ACL (lbs ww)	Commercial ACL (lbs ww)	Recreational ACL (lbs ww)		
BASED ON 75% S	A JURISDICTIONAL	ALLOCATION			
Alternative 1 (No A	Action) Com: 52.56% R	ec: 47.44%			
2023/2024	2,915,250	1,532,255	1,382,995		
2024/2025	2,811,750	1,477,856	1,333,894		
2025/2026	2,748,750	1,444,743	1,304,007		
2026/2027	2,707,500	1,423,062	1,284,438		
2027/2028	2,679,000	1,408,082	1,270,918		
Alternative 2 Com	: 40.73% Rec: 59.27%				
2023/2024	2,915,250	1,187,381	1,727,869		
2024/2025	2,811,750	1,145,226	1,666,524		
2025/2026	2,748,750	1,119,566	1,629,184		
2026/2027	2,707,500	1,102,765	1,604,735		
2027/2028	2,679,000	1,091,157	1,587,843		
BASED ON 81% S	A JURISDICTIONAL	ALLOCATION			
Alternative 1 (No A	Action) Com: 52.56% R	ec: 47.44%			
2023/2024	3,148,470	1,654,836	1,493,634		
2024/2025	3,036,690	1,596,084	1,440,606		
2025/2026	2,968,650	1,560,322	1,408,328		
2026/2027	2,924,100	1,536,907	1,387,193		
2027/2028	2,893,320	1,520,729	1,372,591		
Alternative 2 Com	: 40.73% Rec: 59.27%				
2023/2024	3,148,470	1,282,372	1,866,098		
2024/2025	3,036,690	1,236,844	1,799,846		
2025/2026	2,968,650	1,209,131	1,759,519		
2026/2027	2,924,100	1,190,986	1,733,114		
2027/2028	2,893,320	1,178,449	1,714,871		
BASED ON 84% S	BASED ON 84% SA JURISDICTIONAL ALLOCATION				
Alternative 1 (No A	Action) Com: 52.56% R	ec: 47.44%			
2023/2024	3,265,080	1,716,126	1,548,954		
2024/2025	3,149,160	1,655,198	1,493,962		
2025/2026	3,078,600	1,618,112	1,460,488		
2026/2027	3,032,400	1,593,829	1,438,571		
2027/2028	3,000,480	1,577,052	1,423,428		
Alternative 2 Com	: 40.73% Rec: 59.27%				
2023/2024	3,265,080	1,329,867	1,935,213		
2024/2025	3,149,160	1,282,653	1,866,507		
2025/2026	3,078,600	1,253,914	1,824,686		
2026/2027	3,032,400	1,235,097	1,797,303		
2027/2028	3,000,480	1,222,096	1,778,384		
## 2.3.2 Comparison of Alternatives:

TO BE COMPLETED UPON COMPLETION OF CHAPTER 4.

# Chapter 9. References

#### **TO BE COMPLETED**

Allen, G.R. 1985. FAO species catalogue. Vol. 6. Snappers of the world. An annotated and illustrated catalogue of lutjanid species known to date. FAO Fish. Synop. 6(125): 208 pp.

Barbieri, L.R., and J.A. Colvocoresses. 2003. Southeast Florida reef fish abundance and biology. Five-year performance report to the U.S. Department of Interior, U.S. Fish and Wildlife Service, Federal Aid in Sport Fish Restoration, Grant F-73.

Begossi, A., S. Salivonchyk, L. Araujo, T. Andreoli, M. Clauzet, C. Martinelli, A. Ferreira, L. Oliveira, and R. Silvano. 2011. Ethnobiology of snappers (Lutjanidae): target species and suggestions for management. Journal of Ethnobiology and Ethnomedicine, Volume 7, Number 111. Available here: <u>https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3068939/</u>

Bortone S.A. and J.L. Williams. 1986. Species profiles: life histories and environmental requirements of coastal fishes and invertebrates (south Florida): Gray, lane, mutton, and yellowtail snappers. Biological Report 82 (11.52). U.S. Fish and Wildlife Service. 18 p. U.S. Army Corps of Engineers TR EL-82-4.

Carter, D., Lovell,S., Liese,C.. 2020. Does angler willingness-to-pay for changes in harvest regulations vary by state? Results from a choice experiment in the Gulf of Mexico. Marine Policy 121 (2020) 104196

Carter, D. Liese, C. Lovell, S. 2022. The Option Price of Recreational Bag Limits and the Value of Harvest. Marine Resource Economics. Vol.37, Num. 1. January 2022

Claro, R., K.C. Lindeman, and L.R. Parenti. 2001. Ecology of the marine fishes of Cuba. Smithsonian Institution Press, Washington and London. 253p.

Collins, L.A. and J. Finucane. 1989. Reproductive biology of yellowtail snapper, *Ocyurus chrysurus*, from the Florida Keys. US Department of Commerce, NOAA, NMFS, SEFSC, Panama City Laboratory, PCL Contrib. No. 89-11, 23p.

Cooke, S.J., P. Venturelli, P., W. M. Twardek, *et al.* 2021. Technological innovations in the recreational fishing sector: implications for fisheries management and policy. Reviews in Fish Biology and Fisheries. Volume 31, pp. 253-288. Available here: <u>https://doi.org/10.1007/s11160-021-09643-1</u>

Cummings, N. 2004. The biology of yellowtail snapper, *Ocyurus chrysurus*, with emphasis on populations in the Caribbean. Sustainable Fisheries Division Contribution .SFD. No. 2004-045 [SEDAR8-DW-4. SEDAR, North Charleston, SC. 28 pp.]

Epstein, B. T. 2021. A History of Fishing in the Florida Keys: Angler's Paradise. Arcadia Publishing. Charleston, South Carolina.

Erdman, D.S. 1976. Spawning patterns of fishes from the northeastern Caribbean. Agric. Fish. Contrib. Puerto Rico Department of Agriculture Vol. 8.

Figuerola, M., D. Matos-Caraballo, and W. Torres. 1997. Maturation and reproductive seasonality of four reef fish species in Puerto Rico. Proceedings of the Gulf Caribbean Fisheries Institute 50: 938-968.

Fischer, W. 1978. FAO species identification sheets for fishery purposes. Western Central Atlantic. Book III. Food and Agriculture Organization of the United Nations, Rome, Italy.

Foster, J., F. J. Breidt, and J. D. Opsomer. 2018. AP AIS Data Calibration Methodology Report, Silver Spring, MD.

Friedlander, A.M., M.E. Monaco, R.D. Clark, S. Pittman, J.P Beets, R.H. Boulon Jr, R. Callender, J.D. Christensen, S. Hile, and M.S. Kendall. 2013. Fish movement patterns in Virgin Islands national park, Virgin Islands coral reef national monument and adjacent waters. NOAA Technical Memorandum NOS NCCOS 172. Silver Spring, MD. 102p.

Grimes, C. B. 1987. Reproductive biology of the Lutjanidae: A Review. [In: tropical Snappers and Groupers: Biology and Fisheries Management. 1987. Ed by Jeffrey J. Polovina and Stephen Ralston. Publ. by Westview Press, Inc., 5500 Central Avenue, Boulder, Colorado 80301, USA. pp 239-294.]

Gulf of Mexico Fishery Management Council (GMFMC). 1984 Fishery Management Plan for the Reef Fish Fishery of the Gulf of Mexico Region. Gulf of Mexico Fishery Management Council, Lincoln Center, Ste 881, 5401 West Kennedy Blvd, Tampa, FL 33609

GMFMC. 1990. Regulatory Impact review and Regulatory Flexibility Analysis for Amendment 1 to the Fishery Management plan for the Reef Fish Fishery of the Gulf of Mexico Region. Gulf of Mexico Fishery Management Council, Lincoln Center, Ste 881, 5401 West Kennedy Blvd, Tampa, FL 33609

GMFMC 2004. Generic Essential Fish Habitat Amendment to the Reef Fish Fishery of the Gulf of Mexico Region. Gulf of Mexico Fishery Management Council, 3018 U.S. Highway 301 North, Suite 1000, Tampa, Florida 33619-2266.

GMFMC 2005. Generic Amendment Number 3 for Addressing Essential Fish Habitat Requirements, Habitat Areas of Particular Concern, and Adverse Effects of Fishing to the Reef Fish Fishery of the Gulf of Mexico Region. Gulf of Mexico Fishery Management Council, 3018 U.S. Highway 301 North, Suite 1000, Tampa, Florida 33619-2266.

GMFMC 2011a. Generic Annual Catch Limits/Accountability Measures Amendment for the Gulf of Mexico Fishery Management Council's Reef Fish Fishery. Gulf of Mexico Fishery Management Council, 2203 North Lois Avenue, Suite 1100, Tampa, F.L. 33607

GMFMC 2011b. Amendment 32 to the Reef Fish Fishery of the Gulf of Mexico Region. Gulf of Mexico Fishery Management Council, 2203 North Lois Avenue, Suite 1100, Tampa, F.L. 33607

GMFMC. 2013. Framework Action to Set the Annual Catch Limit and Bag Limit for Vermilion Snapper, Set Annual Catch Limit for Yellowtail Snapper, and Modify the Venting Tool Requirement to the Fishery Management plan for the Reef Fish Fishery of the Gulf of Mexico Region. Gulf of Mexico Fishery Management Council, 2203 North Lois Avenue, Suite 1100, Tampa, F.L. 33607

GMFMC. 2016. Framework Action to Modify Gear Requirements and Fishing Year to the Fishery Management plan for the Reef Fish Fishery of the Gulf of Mexico Region. Gulf of Mexico Fishery Management Council, 2203 North Lois Avenue, Suite 1100, Tampa, F.L. 33607

GMFMC. 2018. Amendment 9 to the Fishery Management Plan for the Coral and Coral Reefs of the Gulf of Mexico, U.S. Waters. Gulf of Mexico Fishery Management Council, 2203 North Lois Avenue, Suite 1100, Tampa, F.L. 33607

GMFMC. 2022. Amendment 48 to the Fishery Management plan for the Reef Fish Fishery of the Gulf of Mexico Region. Gulf of Mexico Fishery Management Council, 4107 W. Spruce Street, Suite 200, Tampa F.L. 33607.

GMFMC and SAFMC 2011. Final Generic Annual Catch Limits/Accountability Measures Amendment for the Gulf of Mexico Fishery Management Council's Red Drum, Reef Fish, Shrimp, Coral and Coral Reefs, Fishery Management Plans. September. Available at: <u>https://gulfcouncil.org/wp-content/uploads/Final-Generic-ACL-AM-Amendment-September-9-2011-v.pdf</u>

Gore, R.H. 1992. The Gulf of Mexico: A treasury of resources in the American Mediterranean. Pineapple Press. Sarasota, Florida.

Hoese, H.D. and R.H. Moore. 1998. Fishes of the Gulf of Mexico: Texas, Louisiana, and adjacent waters, 2nd Edition. Texas A&M University Press, College Station, Texas.

Holland, S. M., Oh, C., Larkin, S. L., Hodges, A. W. 2012. The operations and economics of the for-hire fishing fleets of the South Atlantic states and the Atlantic coast of Florida. University of Florida. Available: <u>https://fred.ifas.ufl.edu/pdf/Holland.pdf</u>

Hospital J., and K. Leong. 2021. Community participation in Hawai'i fisheries. NOAA Technical Memorandum NMFS-PIFSC-119. 89 pp. Available at: https://repository.library.noaa.gov/view/noaa/30731 Interim Analysis for Southeastern US Yellowtail Snapper. 2022. Marine Fisheries Stock Assessment. Fish and Wildlife Research Institute, Florida Fish and Wildlife Conservation Commission.

Jacob, S., P. Weeks, B. Blount, and M. Jepson. 2013. Development and evaluation of social indicators of vulnerability and resiliency for fishing communities in the Gulf of Mexico. Marine Policy 37:86-95. Available here:

https://www.sciencedirect.com/science/article/abs/pii/S0308597X12000759

Jepson, M. and L. L. Colburn. 2013. Development of social indicators of fishing community vulnerability and resilience in the U.S. Southeast and Northeast Regions. U.S. Dept. of Commerce, NOAA Technical Memorandum NMFS-F/SPO-129, 64 p. Available here: https://repository.library.noaa.gov/view/noaa/4438

Lindeman, K.C., R. Pugliese, G.T. Waugh, and J.S. Ault. 2000. Developmental patterns within a multispecies reef fishery: management applications for essential fish habitats and protected areas. Bull Mar Sci 66: 929-956.

Lindholm, J., L. Kaufman, S. Miller, A. Wagschal, and M. Newville. 2005. Movement of yellowtail snapper (Ocyurus chrysurus Block 1790) and black grouper (Mycteroperca bonaci Poey 1860) in the northern Florida Keys National Marine Sanctuary as determined by acoustic telemetry. Marine Sanctuaries Conservation Series MSD-05-4. U.S. Department of Commerce, National Oceanic and Atmospheric Administration, Marine Sanctuaries Division, Silver Spring, MD. 17 pp

Lovell, Sabrina, Scott Steinback, and James Hilger. 2013. The Economic Contribution of Marine Angler Expenditures in the United States, 2011. U.S. Dep. Commerce, NOAA Tech. Memo. NMFS-F/SPO-134, 188 p. https://spo.nmfs.noaa.gov/sites/default/files/TM134.pdf

MacLauchlin-Buck. 2018. Socio-economic profile of the snapper grouper commercial fishery in the South Atlantic region. Prepared for the South Atlantic Fishery Management Council. South Atlantic Fishery Management Council. Charleston, S.C.

McEachran, J.D. and J.D. Fechhelm. 2005. Fishes of the Gulf of Mexico. Volume 2. Scorpaeniformes to Tetraodontiformes University of Texas Press, Austin, Texas.

McClellan, D.B. and N.J. Cummings. 1998. Fishery and biology of the yellowtail snapper, Ocyurus chrysurus, from the southeastern United States, 1962 through 1996. Proceedings of the 62nd Gulf and Caribbean Fisheries Institute 50: 827-850.

Muller, R.G., M.D. Murphy, J. de Silva, and L.R. Barbieri. 2003. A stock assessment of vellowtail snapper, Ocyrurus, chrysurus, in the Southeast United states. SEDAR 3 (Southeast Data, Assessment, and Review) Workshop. IHR 2003-10. 182 p. Fl. Fish Wild. Comm., Fl. Mar. Res. Inst., St. Petersburg, FL.

National Marine Fisheries Service (NMFS). 2021. The Marine Recreational Information Program: Survey design and statistical methods for estimation of recreational fisheries catch and effort. Prepared by K. J. Papacostas and J. Foster. Original December 2018, updates March 2021, September 2021.

https://media.fisheries.noaa.gov/2021-09/MRIP-Survey-Design-and-Statistical-Methods-2021-09-15.pdf/.

NMFS. 2022. Fisheries Economics of the United States, 2019. U.S. Dept. of Commerce, NOAA Tech. Memo. NMFS-F/SPO-229-A, 248 p.

NOAA, National Weather Service. 2021. Florida Keys Climate Data. Available at: <u>https://www.weather.gov/key/climate</u>.

Pinkard, D.R. and J.M. Shenker. 2001. Seasonal variation in density, size, and habitat distribution of juvenile yellowtail snapper (*Ocyurus chrysurus*) in relation to spawning patterns in the Florida Keys. Am. Zool. 41(6):1556-1557.

Randall, J.E. 1967. Food habits of reef fishes of the West Indies. Stud Trop Oceanogr 5: 665-847.

South Atlantic Fishery Management Council (SAFMC). 1983. Fishery Management Plan for the Snapper Grouper Fishery of the South Atlantic Region. South Atlantic Fishery Management Council, 1 Southpark Cir., Ste 306, Charleston, S.C. 29407.

SAFMC. 1992. Amendment 4 to the Fishery Management Plan for the Snapper Grouper Fishery of the South Atlantic Region. South Atlantic Fishery Management Council, 1 Southpark Cir., Ste 306, Charleston, S.C. 29407.

SAFMC. 1997. Amendment 8 to the Fishery Management Plan for the Snapper Grouper Fishery of the South Atlantic Region. South Atlantic Fishery Management Council, 1 Southpark Cir., Ste 306, Charleston, S.C. 29407.

SAFMC. 1998a. Amendment 9 to the Fishery Management Plan for the Snapper Grouper Fishery of the South Atlantic Region. South Atlantic Fishery Management Council, 1 Southpark Cir., Ste 306, Charleston, S.C. 29407.

SAFMC. 1998b. Amendment 1 to the Fishery Management Plan for the Snapper Grouper Fishery of the South Atlantic Region. South Atlantic Fishery Management Council, 1 Southpark Cir., Ste 306, Charleston, S.C. 29407.

SAFMC. 2009. Comprehensive Ecosystem Based Amendment 1 for the FMP for the Snapper Grouper Fishery of the South Atlantic Region. (Amendment 23 to the Snapper Grouper FMP). South Atlantic Fishery Management Council, 4055 Faber Place, Ste 201, North Charleston, S.C. 29405.

SAFMC. 2010. Amendment 17A to the FMP for the Snapper Grouper Fishery of the South Atlantic Region. South Atlantic Fishery Management Council, 4055 Faber Place Drive, Ste 201, Charleston, S.C. 29405.

SAFMC. 2011. Comprehensive Annual Catch Limit Amendment for the South Atlantic Region. South Atlantic Fishery Management Council, 4055 Faber Place Drive, Ste 201, Charleston, S.C. 29405. 755 pp. plus appendices.

SAFMC. 2012. Comprehensive Ecosystem Based Amendment 2 for the FMP for the Snapper Grouper Fishery of the South Atlantic Region. (Amendment 23 to the Snapper Grouper FMP). South Atlantic Fishery Management Council, 4055 Faber Place, Ste 201, North Charleston, S.C. 29405.

SAFMC. 2013. Regulatory Amendment 15 to the FMP for the Snapper Grouper Fishery of the South Atlantic Region. South Atlantic Fishery Management Council, 4055 Faber Place Drive, Ste 201, Charleston, S.C. 29405.

SAFMC. 2014. Regulatory Amendment 21 to the FMP for the Snapper Grouper Fishery of the South Atlantic Region. South Atlantic Fishery Management Council, 4055 Faber Place Drive, Ste 201, Charleston, S.C. 29405.

SAFMC. 2016. Regulatory Amendment 25 to the FMP for the Snapper Grouper Fishery of the South Atlantic Region. South Atlantic Fishery Management Council, 4055 Faber Place Drive, Ste 201, Charleston, S.C. 29405.

SAFMC. 2022. Yellowtail snapper. Fishery overview. Available at: <u>https://safmc.net/species/snapper-yellowtail/</u>

Savolainen, M.A., R.H. Caffey, and R.F. Kazmierczak, Jr. 2012. Economic and attitudinal perspectives of the recreational for-hire fishing industry in the U.S. Gulf of Mexico. Center for Natural Resource Economics and Policy, LSU AgCenter and Louisiana Sea Grant College Program, Department of Agricultural Economics and Agribusiness, Louisiana State University, Baton Rouge, LA. 171 pp. <u>www.laseagrant.org/wp-content/uploads/Gulf-RFH-Survey-Final-Report-2012.pdf</u>

Southeastern Data, Assessment, and Review (SEDAR) 3. 2003. Southeastern US Yellowtail Snapper. SEDAR, North Charleston, SC. Available at: <u>https://sedarweb.org/documents/sedar-03-stock-assessment-report-southeastern-u-s-yellowtail-snapper/</u>.

SEDAR 27A. 2012. The 2012 Stock Assessment Report for Yellowtail Snapper in the South Atlantic and Gulf of Mexico. Fish and Wildlife Research Institute, Florida Fish and Wildlife Conservation Commission, St. Petersburg, FL. Available at: https://sedarweb.org/documents/sedar-27a-stock-assessment-report-southeastern-yellowtail-snapper/.

SEDAR 64. 2020. Southeastern US Yellowtail Snapper. SEDAR, North Charleston, SC. Available at: <u>https://sedarweb.org/documents/sedar-64-southeastern-us-yellowtail-snapper-final-stock-assessment-report/</u>.

Scyphers, S., and K. Furman. 2019. Social Dimensions of the Recreational Fishery for Yellowtail Snapper (Ocyurus chrysurus) in Florida. SEDAR64-DW-17. SEDAR, North Charleston, SC. 7 pp

Shivlani, M. 2014. The impacts of fisheries management on the performance and resiliency of the commercial fishing industry and fishing communities in the Florida Keys (Monroe County, Florida) from 1950-2010. Ph.D. dissertation. Florida International University. Available at: <a href="https://digitalcommons.fiu.edu/cgi/viewcontent.cgi?article=2286&context=etd">https://digitalcommons.fiu.edu/cgi/viewcontent.cgi?article=2286&context=etd</a>

Soletchnik, P., M. Suquet, E. Thouard, and J.P. Mesdouze. 1989. Spawning of yellowtail snapper (Ocyurus chrysurus Bloch 1791) in captivity. Aquaculture 77:287-289.

Souza, Philip M., Jr. and Christopher Liese. 2019. Economics of the Federal For-Hire Fleet in the Southeast - 2017. NOAA Technical Memorandum NMFS-SEFSC-740, 42 p.

Stoffle, B., and A. D. Stoltz. 2021. Yellowtail Snapper: Human-Ecological Relationships in the South Florida Fishery. Journal of Ecological Anthropology, Volume 23, Number 1, pp. 42-51.

Thompson, R. and J.L. Munro. 1974. The biology, ecology and bionomics of Caribbean reef fishes: Lutjanidae (snappers). Zoology Dep., Univ. West Indies, Kingston, Jamaica Res. Rep. 3.

U.S. Census Bureau. 2020. QuickFacts: Key West, Florida. Available here: https://www.census.gov/quickfacts/fact/table/keywestcityflorida/PST045221

# Appendix A. Data Analyses

DRAFT

## 1. Expected Closure Dates of the Commercial and Recreational Yellowtail Snapper Fisheries in the Gulf of Mexico and South Atlantic Under Proposed Regional and Sector Allocations

March 2023, Updated May 2023 LAPP/DM Branch Southeast Regional Office

Yellowtail snapper is considered a single stock in the Gulf of Mexico (Gulf) and the South Atlantic. The Gulf of Mexico Fishery Management Council (GMFMC) manages yellowtail snapper in Gulf federal waters under the Fishery Management Plan for the Reef Fish Resources of the Gulf of Mexico (Reef Fish FMP). In 2012, the Generic Annual Catch Limits/Accountability Measures Amendment to the Reef Fish FMP established a stock (combined recreational and commercial) annual catch limit (ACL) for yellowtail snapper. The amendment also established an apportionment of acceptable biological catch (ABC), with 75% apportioned to the South Atlantic jurisdiction and 25% to the Gulf jurisdiction. The South Atlantic Fishery Management Council (SAFMC) manages yellowtail snapper from federal waters at the Virginia/North Carolina border through the Atlantic side of the Florida Keys under the Snapper-Grouper Fishery Management Plan (FMP). In 2016, Regulatory Amendment 25 to the Fishery Management Plan for the Snapper-Grouper Fishery of the South Atlantic Region changed the commercial season to August 1 through July 31 for both the recreational and commercial sectors. In 2017, a framework action to the Gulf Reef Fish FMP changed the fishing season for both the recreational and commercial sectors to August 1 through July 31 to be consistent with the fishing season in the South Atlantic.

This analysis investigates when the commercial and recreational sectors will be expected to close under the proposed jurisdictional allocation options (**Tables A.1.1 and A.1.2**) and sector allocation options (**Table A.1.3**) for both the Gulf and the South Atlantic using observed landings in pounds (lb) whole weight (ww) between 2019 and 2021 (**Tables A.1.4 and A.1.5**). Projected closure dates are described in **Tables A.1.2.1 through A.1.2.7**.

Action 1 Alternative 1 (No Action): GOM 25% / SA 75% Current Gulf of Mexico ACL (lb ww)							
Action 2 Alternative 1	2023/2024	2023/2024 2024/2025 2025/2026 2026/2027 2027/202					
Current GOM ACL= 89% ABC		ç	01,125				
Action 1, Alternative 2	: GOM 25% / SA 7	75%					
Action 2	2023/2024	2024/2025	2025/2026	2026/2027	2027/2028+		
Alternative 1 (ACL=89% Updated ABC)	864,858	834,153	815,463	803,225	794,770		
Alternative 2 (ACL=92% Updated ABC)	894,010	862,270	842,950	830,300	821,560		
Alternative 3 (ACL= Updated ABC)	971,750	937,250	916,250	902,500	893,000		
Action 1, Alternative 3	: GOM 19% / SA 8	81%					
Action 2	2023/2024	2024/2025	2025/2026	2026/2027	2027/2028+		
Alternative 1 (ACL=89% Updated ABC)	657,292	633,956	619,752	610,451	604,025		
Alternative 2 (ACL=92% Updated ABC)	679,448	655,325	640,642	631,028	624,386		
Alternative 3 (ACL= Updated ABC)	738,530	712,310	696,350	685,900	678,680		
Action 1, Alternative 4	: GOM 16% / SA 8	84%					
Action 2	2023/2024	2024/2025	2025/2026	2026/2027	2027/2028+		
Alternative 1 (ACL=89% Updated ABC)	553,509	533,858	521,896	514,064	508,653		
Alternative 2 (ACL=92% Updated ABC)	572,166	551,853	539,488	531,392	525,798		
Alternative 3 (ACL= Updated ABC)	621,920	599,840	586,400	577,600	571,520		

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**Table A.1.1.** Gulf of Mexico yellowtail snapper proposed annual catch limits (Action 2) for each proposed jurisdictional allocation (Action 1). Gulf of Mexico yellowtail snapper are managed as stock annual catch limits.

Action 1, Alternative 1	Action 1. Alternative 1 (No Action): Current South Atlantic ACL (lb ww)						
Action 2 Alternative 1	2023/2024	2024/2025	2025/2026	2026/2027	2027/2028+		
Current SA ABC=ACL=OY		3,037,500					
Action 1, Alternative 2	: GOM 25% / SA 7	75%	1				
Action 2	2023/2024	2024/2025	2025/2026	2026/2027	2027/2028+		
Alternative 2 (ACL=updated ABC)	2,915,250	2,811,750	2,748,750	2,707,500	2,679,000		
Alternative 3 (ACL=90% Updated ABC)	2,623,725	2,530,575	2,473,875	2,436,750	2,411,100		
Alternative 4 (ACL=95% Updated ABC)	2,769,488	2,671,163	2,611,313	2,572,125	2,545,050		
Alternative 5 (ACL/OY=Lowest ABC)	2,679,000						
Alternative 6 (F30%SPR at equilibrium)		2,5	555,728				
Action 1, Alternative 3	: GOM 19% / SA 8	81%					
Action 2	2023/2024	2024/2025	2025/2026	2026/2027	2027/2028+		
Alternative 2 (ACL=updated ABC)	3,148,470	3,036,690	2,968,650	2,924,100	2,893,320		
Alternative 3 (ACL=90% Updated ABC)	2,833,623	2,733,021	2,671,785	2,631,690	2,603,988		
Alternative 4 (ACL=95% Updated ABC)	2,991,047	2,884,856	2,820,218	2,777,895	2,748,654		
Alternative 5 (ACL/OY=Lowest ABC)	2,907,251						
Alternative 6 (F30% SPR at equilibrium)	2,760,186						
Action 1, Alternative 4	: GOM 16% / SA 8	34%					
Action 2	2023/2024	2024/2025	2025/2026	2026/2027	2027/2028+		
Alternative 2 (ACL=updated ABC)	3,265,080	3,149,160	3,078,600	3,032,400	3,000,480		
Alternative 3	2,938,572	2,834,244	2,770,740	2,729,160	2,700,432		

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 Table A.1.2. South Atlantic yellowtail snapper proposed annual catch limits (Action 2) for each proposed jurisdictional allocation (Action 1).

Action 1, Alternative 1 (No Action): Current South Atlantic ACL (lb ww)						
Action 2 Alternative 1	2023/2024	2024/2025	2025/2026	2026/2027	2027/2028+	
(ACL=90% Updated ABC)						
Alternative 4 (ACL=95% Updated ABC)	3,101,826	2,991,702	2,924,670	2,880,780	2,850,456	
Alternative 5 (ACL/OY=Lowest ABC)	2,907,251					
Alternative 6 (F30%SPR at equilibrium)		2,862,415				

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**Table A.1.3.** South Atlantic yellowtail snapper proposed annual catch limits for each proposed sector allocations (Action 3). Allocations are based on **Sub-Option 2a** from Action 2 (75% SA jurisdictional allocation, ACL = OY = updated SA ABC).

Option 1 (No Action): 52.56% commercial and 47.44% recreational					
Voor	SA Total ACL	Commercial ACL	Recreational ACL		
Teal	(lb ww)	(lb ww)	(lb ww)		
2023/2024	2,915,250	1,532,255	1,382,995		
2024/2025	2,811,750	1,477,856	1,333,894		
2025/2026	2,748,750	1,444,743	1,304,007		
2026/2027	2,707,500	1,423,062	1,284,438		
2027/2028+	2,679,000	1,408,082	1,270,918		
Option 2: 41% con	nmercial and 59% recrea	tional			
Year	SA Total ACL (lb ww)	Commercial (mp ww)	Recreational (mp ww)		
2023/2024	2,915,250	1,195,253	1,719,998		
2024/2025	2,811,750	1,152,818	1,658,933		
2025/2026	2,748,750	1,126,988	1,621,763		
2026/2027	2,707,500	1,110,075	1,597,425		
2027/2028+	2,679,000	1,098,390	1,580,610		

**Table A.1.4.** Commercial and recreational landings in pounds (lb) ww of yellowtail snapper inthe Gulf of Mexico for fishing years 2012-2021.

Yellowtail Snapper Commercial and Recreational Landings					
Fishing Year	Rec. Landings (lb ww)	Comm. Landings (lb ww)	Total Landings (lb ww)		
2012	5,163	630,984	636,147		
2013	9,343	734,112	743,455		
2014	27,715	466,968	494,683		
2015	64,743	504,193	568,936		
2016	13,401	209,283	222,684		
2017*	249,512	682,875	932,387		
2017/2018	206,784.83	589,868	796,653		
2018/2019	104,527	527,112	631,638		
2019/2020	12,348	287,940	300,289		

Yellowtail Snapper Commercial and Recreational Landings					
Fishing Year	g YearRec. Landings (lb ww)Comm. Landings (lb ww)Total Landings (lb ww)				
2020/2021	79,765	212,630	292,395		

\* In 2017, a framework action to the Reef Fish FMP changed the fishing season for both the recreational and commercial sectors to August 1 through July 31 to be consistent with the fishing season in the South Atlantic. For this reason, 2016 includes January through July 31, 2016 landings and 2016/17 fishing season landings are provided separately. Source: SEFSC Commercial ACL Dataset (August 31, 2022) and SEFSC MRIP FES Recreational ACL Dataset (October 25, 2022).

**Table A.1.5.** Commercial and recreational landings in pounds (lb) ww of yellowtail snapper inthe South Atlantic for fishing years 2012-2021.

Yellowtail Snapper Commercial and Recreational Landings					
Fishing Year	Rec. Landings (lb ww)	Comm. Landings (lb ww)	Total Landings (lb ww)		
2012	1,129,915	1,439,586	2,569,501		
2013	1,695,188	1,328,974	3,024,162		
2014	2,122,485	1,544,038	3,666,523		
2015 <sup>a</sup>	1,495,150	1,652,438ª	3,147,588		
2016*	1,184,513	1,393,495	2,578,008		
2016/2017 <sup>b</sup>	1,491,509	2,336,970 <sup>b</sup>	3,828,479		
2017/2018°	1,481,290	1,703,541°	3,184,830		
2018/2019 <sup>d</sup>	1,405,783	1,662,102 <sup>d</sup>	3,067,885		
2019/2020	1,330,659	1,435,167	2,766,566		
2020/2021	1,131,075	1,204,637	2,335,712		

\*The fishing season for yellowtail snapper was modified in Regulatory Amendment 25, which took effect on August 12, 2016. For this reason, 2016 includes January through August 12, 2016 landings and 2016/17 fishing season landings are provided separately.

<sup>a</sup>In-season closure for commercial sector from October 31, 2015 to December 31, 2015. <sup>b</sup>In-season closure for commercial sector from June 3, 2017 to July 31, 2017.

<sup>c</sup>In-season closure for commercial sector from June 5, 2018 to July 31, 2018. <sup>d</sup>In-season closure for commercial sector from June 7, 2019 to July 31, 2019. Source: SEFSC Commercial ACL Dataset (August 31, 2022) and SEFSC MRIP FES Recreational ACL Dataset (October 25, 2022).

#### **1.1 Commercial Sector**

Final commercial landings for 2012 through 2021 were provided from the Southeast Fisheries Science Center (SEFSC) on August 31, 2022. Monthly Gulf commercial yellowtail snapper landings were averaged from 2019 through 2021 to project future landings. Due to commercial closures in the South Atlantic, landings from different time periods were used to predict future landings. Monthly South Atlantic commercial yellowtail snapper landings were averaged from 2019 through 2021 to project future landings for January through May and August through December months, and June and July months were projected using 2016 and 2020-2021. Landings in 2016 were used to project future landings for June and July due to in-season closures in 2017 through 2019 (**Figures A.1.1.1 and A.1.1.2**). The changes to the commercial fishing year in response to South Atlantic Regulatory Amendment 25 and the Gulf Framework Action to the Reef Fish FMP are assumed to have minimal impact on monthly fishing behavior, and no adjustments were made to monthly landings. Monthly predicted landings were cumulatively summed for the fishing year (August 1 through July 31) until the landings met the ACL.



**Figure A.1.1.1.** Gulf of Mexico yellowtail snapper monthly commercial landings (lb ww) for 2016-2021, and projected future landings. Source: SEFSC Commercial ACL Dataset (August 31, 2022).



**Figure A.1.1.2.** South Atlantic yellowtail snapper monthly commercial landings (lb ww) for 2016-2021, and projected future landings. No landings are shown for months June and July in 2019 due to an in-season closure. Source: SEFSC Commercial ACL Dataset (August 31, 2022).

### **1.2 Recreational Sector**

A recreational landings dataset was provided from the SEFSC on October 25, 2022. This dataset includes landings from the Texas Parks and Wildlife recreational creel survey (TPWD), Louisiana Department of Wildlife and Fisheries creel survey (LA Creel), Southeast Region Headboat Survey (SRHS) and Marine Recreational Information Program Fishing Effort Survey (MRIP FES). TPWD and SRHS data provide monthly landings estimates whereas MRIP and LACreel data are provided in two month waves (e.g., January and February = wave 1, March and April = wave 2, etc.). To estimate monthly landings, MRIP waves were used to estimate to monthly landings by assuming equal daily catch rates for months within a wave, and then SRHS and TPWD landings were added back in. Average monthly landings from 2019-2021 were used to project future landings for most months, with the exception of March and April when 2018-2019 and 2021 data were used due to atypical landings in response to the 2020 pandemic (Figures A.1.2.1 and A.1.2.2). The changes to the recreational fishing year in response to South Atlantic Regulatory Amendment 25 and the Gulf Framework Action to the Reef Fish FMP are assumed to have minimal impact on monthly fishing behavior, particularly since the recreational sector has never reached their ACL, and consequently no adjustments were made to monthly landings.



**Figure A.1.2.1.** Gulf of Mexico yellowtail snapper monthly recreational landings (lb ww) for 2018-2021, and projected future landings. Source: SEFSC Recreational ACL Dataset (October 25, 2022).



**Figure A.1.2.2.** South Atlantic yellowtail snapper monthly recreational landings (lb ww) for 2018-2021, and projected future landings. Source: SEFSC Recreational ACL Dataset (October 25, 2022).

**Table A.1.2.1.** Predicted closure dates for Gulf of Mexico yellowtail snapper for each proposed annual catch limits (**Action 2**) and each proposed jurisdictional allocation (**Action 1**). Gulf of Mexico yellowtail snapper are managed as stock annual catch limits. All projected closure dates are predicted only if future landings are higher than expected (at the upper 95% confidence interval), otherwise no closure is expected for all alternatives and proposed annual catch limits.

Action 1, Alternative	e 1 (No Action): GOM	A 25% / SA 75% Cu	rrent Gulf of Mexico	ACL (lb ww)	
Action 2 Alternative	2023/2024	2024/2025	2025/2026	2026/2027	2027/2028+
Current GOM			No Closure		
ABC=ACL			ACL=901,125		
Action 1, Alternative	2: GOM 25% / SA 7	75%			
Action 2	2023/2024	2024/2025	2025/2026	2026/2027	2027/2028+
Alternative 1	No Closure	No Closure	No Closure	No Closure	No Closure
(ACL=89% Updated ABC)	ACL=864,858	ACL=834,153	ACL=815,463	ACL=803,225	ACL=794,770
Alternative 2	No Closure	No Closure	No Closure	No Closure	No Closure
(ACL=92% Updated ABC)	ACL=894,010	ACL=862,270	ACL=842,950	ACL=830,300	ACL=821,560
Alternative 3	No Closure	No Closure	No Closure	No Closure	No Closure
(ACL= Updated ABC)	ACL=971,750	ACL=937,250	ACL=916,250	ACL=902,500	ACL=893,000
Action 1, Alternative	e 3: GOM 19% / SA 8	81%			
Action 2	2023/2024	2024/2025	2025/2026	2026/2027	2027/2028+
Alternative 1	Upper 95%: Jul 25	Upper 95%: Jul 17	Upper 95%: Jul 12	Upper 95%: Jul 8	<b>Upper 95%: Jul 6</b>
(ACL=89% Updated ABC)	ACL=657,292	ACL=633,956	ACL=619,752	ACL=610,451	ACL=604,025
Alternative 2	No Closure	Upper 95%: Jul 25	Upper 95%: Jul 19	Upper 95%: Jul 16	Upper 95%: Jul 13
(ACL=92% Updated ABC)	ACL=679,448	ACL=655,325	ACL=640,642	ACL=631,028	ACL=624,386
Alternative 3	No Closure	No Closure	No Closure	No Closure	No Closure
(ACL= Updated ABC)	ACL=738,530	ACL=712,310	ACL=696,350	ACL=685,900	ACL=678,680
Action 1, Alternative	e 4: GOM 16% / SA 8	84%			
Action 2	2023/2024	2024/2025	2025/2026	2026/2027	2027/2028+
Alternative 1	Upper 95%: Jun 19	Upper 95%: Jun 12	Upper 95%: Jun 8	Upper 95%: Jun 5	Upper 95%: Jun 3
(ACL=89% Updated ABC)	ACL=553,509	ACL=533,858	ACL=521,896	ACL=514,064	ACL=508,653
Alternative 2	Upper 95%: Jun 25	Upper 95%: Jun 18	Upper 95%: Jun 14	Upper 95%: Jun 11	Upper 95%: Jun 9
(ACL=92% Updated ABC)	ACL=572,166	ACL=551,853	ACL=539,488	ACL=531,392	ACL=525,798
Alternative 3	Upper 95%: Jul 12	Upper 95%: Jul 4	Upper 95%: Jun 30	Upper 95%: Jun 27	Upper 95%: Jun 25
(ACL= Updated ABC)	ACL=621,920	ACL=599,840	ACL=586,400	ACL=577,600	ACL=571,520

Table A.1.2.2. Predicted closure dates for South Atlantic yellowtail snapper for each proposed annual catch limits (Action 2) based on current jurisdictional allocations (Action 1, Alternative 2: GOM 25% and SA 75%) and current sector allocations (Action 3, Alternative 1: 52.56% commercial and 47.44% recreational).

Action 2, Alternat	Action 2, Alternative 1 (No Action): Current South Atlantic ACL (lb ww)					
Year	SA Total ACL (lb ww)	Commercial	Recreational			
2022/2024	2 027 500	No Closure	No Closure			
2023/2024+	5,057,500	ACL=1,596,510	ACL=1,440,990			
Action 2, Alternat	ive 2: ACL = Updated	ABC				
Year	SA Total ACL (lb ww)	Commercial	Recreational			
		No Closure	No Closure			
2023/2024	2,915,250	Upper 95%: Apr 30	Upper 95%: Apr 17			
		ACL=1,532,255	ACL=1,382,995			
		Jul 27	No Closure			
2024/2025	2,811,750	Upper 95%: Apr 25	<b>Upper 95%: Apr 9</b>			
		ACL=1,477,856	ACL=1,333,894			
2025/2026	2 748 750	Jul 19	No Closure			
2023/2020	2,740,730	<b>Upper 95%: Apr 21</b>	<b>Upper 95%: Apr 4</b>			
		ACL=1,444,745	No Closure			
2026/2027	2,707,500	Unner 95% · Anr 19	Unner 95% · Mar 31			
2020/2021	2,707,800	ACL=1,423,062	ACL=1,284,438			
		Jul 11	No Closure			
2027/2028+	2,679,000	Upper 95%: Apr 18	<b>Upper 95%: Mar 29</b>			
		ACL=1,408,082	ACL=1,270,918			
Action 2, Alternat	Action 2, Alternative 3: ACL = 90% Updated ABC					
Year	SA Total ACL (lb ww)	Commercial	Recreational			
		Jul 4	No Closure			
2023/2024	2,623,725	Upper 95%: Apr 15	Upper 95%: Mar 25			
		ACL=1,379,030	ACL=1,244,695			
2024/2025	0.500.575	Jun 24	<b>Jul 28</b>			
2024/2025	2,530,575	Upper 95%: Apr 10	<b>Upper 95%: Mar 17</b>			
		ACL=1,330,070	ACL=1,200,505			
2025/2026	2 473 875	Juli 19 Unnon 050/ ( Ann 7	Jul 22 Unnon 059/ - Mon 13			
2023/2020	2,775,075	ACI –1 300 269	ACL = 1.173.606			
		Jun 15	.Jul 18			
2026/2027	2,436,750	Upper 95%: Apr 5	Upper 95%: Mar 10			
		ACL=1,280,756	ACL=1,155,994			
		Jun 13	Jul 16			
2027/2028+	2,411,100	Upper 95%: Apr 3	Upper 95%: Mar 8			
		ACL=1,267,274	ACL=1,143,826			
Action 2, Alternat	ive 4: ACL = 95% Upd	ated ABC				
Year	SA Total ACL (lb ww)	Commercial	Recreational			
		Jul 22	No Closure			
2023/2024	2,769,488	Upper 95%: Apr 22	Upper 95%: Apr 5			
		ACL= 1,455,643	ACL= 1,313,845			
2024/2025	2 (71 1 (2	Jul 10	No Closure			
2024/2025	2,0/1,103	Upper 95%: Apr 17	Upper 95%: Mar 29			
		ACL= 1,403,963	ACL= 1,267,200			

Appendix A. Data Analyses

Action 2, Alternative 1 (No Action): Current South Atlantic ACL (lb ww)					
Year	SA Total ACL (lb ww)	Commercial	Recreational		
		Jul 3	No Closure		
2025/2026	2,611,313	Upper 95%: Apr 14	Upper 95%: Mar 24		
		ACL= 1,372,506	ACL= 1,238,807		
		Jun 28	No Closure		
2026/2027	2,572,125	Upper 95%: Apr 12	<b>Upper 95%: Mar 21</b>		
		ACL= 1,351,909	ACL= 1,220,216		
	2,545,050	<b>Jun 26</b>	Jul 30		
2027/2028+		Upper 95%: Apr 10	<b>Upper 95%: Mar 19</b>		
		ACL= 1,337,678	ACL= 1,207,372		
Action 2, Alternat	ive 5: ACL/OY = Lowe	st ABC			
Year	SA Total ACL (lb ww)	Commercial	Recreational		
		Jul 11	No Closure		
2023/2024+	2,679,000	<b>Upper 95%: Apr 18</b>	<b>Upper 95%: Mar 29</b>		
		ACL=1,408,082	ACL=1,270,918		
Action 2, Alternat	ive 6: F30%SPR at equ	uilibrium			
Year	SA Total ACL (lb ww)	Commercial	Recreational		
		Jun 27	Jul 31		
2023/2024+	2,555,728	Upper 95%: Apr 11	Upper 95%: Mar 19		
		ACL= 1,343,291	ACL= 1,212,437		

Table A.1.2.3. Predicted closure dates for South Atlantic yellowtail snapper for each proposed annual catch limits (Action 2) based on proposed jurisdictional allocation (Action 1, Alternative 3: GOM 19% and SA 81%) and current sector allocations (Action 3, Alternative 1: 52.56% commercial and 47.44% recreational).

Action 2, Alternative 1 (No Action): Current South Atlantic ACL (lb ww)					
Year	SA Total ACL (lb ww)	Commercial	Recreational		
2023/2024+	3 037 500	No Closure	No Closure		
2023/2024	5,057,500	ACL=1,596,510	ACL=1,440,990		
Action 2, Alternat	ive 2: ACL = Updated A	ABC			
Year	SA Total ACL (lb ww)	Commercial	Recreational		
		No Closure	No Closure		
2023/2024	3,148,470	Upper 95%: May 22	<b>Upper 95%: May 5</b>		
		ACL=1,654,836	ACL=1,493,634		
	3,036,690	No Closure	No Closure		
2024/2025		Upper 95%: May 12	Upper 95%: Apr 26		
		ACL=1,596,084	ACL=1,440,606		
		No Closure	No Closure		
2025/2026	2,968,650	<b>Upper 95%: May 5</b>	Upper 95%: Apr 21		
		ACL=1,560,322	ACL=1,408,328		
		No Closure	No Closure		
2026/2027	2,924,100	<b>Upper 95%: May 1</b>	Upper 95%: Apr 17		
		ACL=1,536,907	ACL=1,387,193		
		No Closure	No Closure		
2027/2028+	2,893,320	Upper 95%: Apr 29	Upper 95%: Apr 15		
		ACL=1,520,729	ACL=1,372,591		
Action 2, Alternat	Action 2, Alternative 3: ACL = 90% Updated ABC				
Year	SA Total ACL (lb ww)	Commercial	Recreational		

Action 2, Alternat	ive 1 (No Action): Curr	ent South Atlantic AC	L (lb ww)
		Jul 30	No Closure
2023/2024	2,833,623	Upper 95%: Apr 26	Upper 95%: Apr 10
		ACL=1,489,352	ACL=1,344,271
		<b>Jul 17</b>	No Closure
2024/2025	2,733,021	Upper 95%: Apr 20	Upper 95%: Apr 2
		ACL=1,436,476	ACL=1,296,545
		Jul 10	No Closure
2025/2026	2,671,785	Upper 95%: Apr 17	Upper 95%: Mar 29
		ACL=1,404,290	ACL=1,267,495
		Jul 5	No Closure
2026/2027	2,631,690	Upper 95%: Apr 15	<b>Upper 95%: Mar 25</b>
		ACL=1,383,216	ACL=1,248,474
2025/2020		Jul 2	No Closure
2027/2028+	2,603,988	Upper 95%: Apr 14	<b>Upper 95%: Mar 23</b>
		ACL=1,368,656	ACL=1,235,332
Action 2, Alternat	ive 4: $ACL = 95\%$ Upd	ated ABC	
Year	SA Total ACL (lb ww)	Commercial	Recreational
	2,991,047	No Closure	No Closure
2023/2024		Upper 95%: May 7	Upper 95%: Apr 23
		ACL= 1,572,094	ACL= 1,418,953
	2,884,856	No Closure	No Closure
2024/2025		Upper 95%: Apr 29	Upper 95%: Apr 14
		ACL= 1,516,280	ACL= 1,368,576
2025/2026	2,820,218	Jul 28	No Closure
2025/2026		Upper 95%: Apr 25	Upper 95%: Apr 9
		ACL= 1,482,307	ACL= 1,337,911
2026/2027	2,777,895	Jul 23	No Closure
2026/2027		Upper 95%: Apr 23	<b>Upper 95%: Apr 6</b>
		ACL= 1,460,062	ACL= 1,317,833
2027/2020	0.740.654	Jul 19	No Closure
2027/2028+	2,748,654	Upper 95%: Apr 21	Upper 95%: Apr 4
Action 2 Alternat	$i_{\rm MO}$ 5. A CL $/OV$ – L or $i_{\rm MO}$	ACL= 1,444,693	ACL= 1,303,961
Action 2, Alternat	$\frac{1}{2} = \frac{1}{2} = \frac{1}$		
Year	SA Total ACL (Ib WW)	Commercial	Recreational
2022/2024	0.007.051	No Closure	No Closure
2023/2024+	2,907,251	Upper 95%: Apr 30	Upper 95%: Apr 16
		ACL= 1,528,051	ACL= 1,379,200
Action 2, Alternat	ive 6: F30%SPR at equ	ullibrium	
Year	SA Total ACL (lb ww)	Commercial	Recreational
		<b>Jul 21</b>	No Closure
2023/2024+	2,760,186	Upper 95%: Apr 22	<b>Upper 95%: Apr 5</b>
		ACL= 1,450,754	ACL= 1,309,432

Table A.1.2.4. Predicted closure dates for South Atlantic yellowtail snapper for each proposed annual catch limits (Action 2) based on proposed jurisdictional allocation (Action 1, Alternative 4: GOM 16% and SA 84%) and current sector allocations (Action 3, Alternative 1: 52.56% commercial and 47.44% recreational).

Action 2, Alternat	Action 2, Alternative 1 (No Action): Current South Atlantic ACL (lb ww)					
Year	SA Total ACL (lb ww)	Commercial	Recreational			
2023/2024	3 037 500	No Closure	No Closure			
2023/2024+ 3,037,300		ACL=1,596,510	ACL=1,440,990			
Action 2, Alternat	ive 2: ACL = Updated	ABC				
Year	SA Total ACL (lb ww)	Commercial	Recreational			
		No Closure	No Closure			
2023/2024	3,265,080	Upper 95%: Jun 2	Upper 95%: May 14			
		ACL=1,716,126	ACL=1,548,954			
2024/2025	2 1 40 1 60	No Closure	No Closure			
2024/2023	5,149,100	Opper 95%: May 22	<b>Upper 95%: May 5</b>			
		No Closure	No Closure			
2025/2026	3.078.600	Unner 95%: May 16	Unner 95%: Anr 29			
		ACL=1,618,112	ACL=1,460,488			
		No Closure	No Closure			
2026/2027	3,032,400	Upper 95%: May 11	Upper 95%: Apr 26			
		ACL=1,593,829	ACL=1,438,571			
2027/2020	2 000 400	No Closure	No Closure			
2027/2028+	3,000,480 <b>Upper 95%: Ma</b>		Upper 95%: Apr 23			
Action 2 Alternat	ive $2$ : ACL = 0.00/ Und	ACL=1,577,052	ACL=1,423,428			
Voor	$\frac{1}{2} \frac{1}{2} \frac{1}$	Commorcial	Pagrantional			
1 Cal	SA TOTAL ACL (10 ww)	Tul 20	No Closure			
2023/2024	2 938 572	Jul JU Unner 05% : Anr 26	Upper 95%: Apr 10			
2023/2024	2,750,572	ACL = 1.489.352	ACL=1.344.271			
		Jul 17	No Closure			
2024/2025	2,834,244	Upper 95%: Apr 20	Upper 95%: Apr 2			
		ACL=1,436,476	ACL=1,296,545			
		ACL=1,450,470         ACL=1,290,343           Jul 10         No Closure           Upper 95%: Apr 17         Upper 95%: Mar 2				
2025/2026	2,770,740	Jui 10         No Closure           Upper 95%: Apr 17         Upper 95%: Mar 29           ACL=1,404,290         ACL=1,267.495				
		ACL=1,404,290	ACL=1,267,495			
2026/2027	2 720 160	JUI 5	No Closure			
2020/2027	2,729,100	$\Delta CL = 1.383.216$	Opper 95%: Mar 25 $\Delta CI = 1.248.474$			
		Jul 2	No Closure			
2027/2028+	2,700,432	Upper 95%: Apr 14	Upper 95%: Mar 23			
		ACL=1,368,656	ACL=1,235,332			
Action 2, Alternat	ive 4: ACL = 95% Upd	ated ABC				
Year	SA Total ACL (lb ww)	Commercial	Recreational			
		No Closure	No Closure			
2023/2024	3,101,826	Upper 95%: May 18	Upper 95%: May 1			
		ACL= 1,630,320	ACL= 1,471,506			
2024/2025	0.001.700	No Closure	No Closure			
2024/2025	2,991,702	Upper 95%: May 7	Upper 95%: Apr 23			
		AUL = 1,5/2,439	ACL = 1,419,263			
2025/2026	2 924 670	INO CIOSUFE Unner 050/. May 1	INO CIOSUI E Unnor 0504 · Apr 17			
2023/2020	2,727,070	ACL = 1.537.207	Opper 75 70; Apr 17 ACL= 1.387.463			
2026/2027	2,880,780	No Closure	No Closure			

Action 2, Alternative 1 (No Action): Current South Atlantic ACL (lb ww)					
Year	SA Total ACL (lb ww)	Commercial	Recreational		
		<b>Upper 95%: Apr 28</b> ACL= 1.514.138	<b>Upper 95%: Apr 14</b> ACL = 1.366.642		
		No Closure	No Closure		
2027/2028+	2,850,456	Upper 95%: Apr 27 ACL= 1,498,200	Upper 95%: Apr 12 ACL= 1,352,256		
Action 2, Alternat	ive 5: ACL/OY = Lowe	st ABC			
Year	SA Total ACL (lb ww)	Commercial	Recreational		
		No Closure	No Closure		
2023/2024+	2,907,251	Upper 95%: Apr 30 ACL= 1,528,051	Upper 95%: Apr 16 ACL= 1,379,200		
Action 2, Alternat	ive 6: F30%SPR at equ	uilibrium			
Year	SA Total ACL (lb ww)	Commercial	Recreational		
		No Closure	No Closure		
2023/2024+	2,862,415	<b>Upper 95%: Apr 27</b> ACL= 1,504,485	Upper 95%: Apr 12 ACL= 1,357,930		

**Table A.1.2.5.** Predicted closure dates for South Atlantic yellowtail snapper for each proposed annual catch limits (Action 2) based on current jurisdictional allocations (Action 1, Alternative 2: GOM 25% and SA 75%) and proposed sector allocations (Action 3, Alternative 2: 40.73% commercial and 59.27% recreational).

Action 2, Alternative 1 (No Action): Current South Atlantic ACL (lb ww)					
Year	SA Total ACL (lb ww)	Commercial	Recreational		
2023/2024+	3 037 500	No Closure	No Closure		
2023/20241	5,057,500	ACL=1,596,510	ACL=1,440,990		
Action 2, Alternat	ive 2: ACL = Updated A	ABC			
Year	SA Total ACL (lb ww)	Commercial	Recreational		
		<b>May 29</b>	No Closure		
2023/2024	2,915,250	Upper 95%: Mar 24 Upper 95%			
		ACL=1,187,381	ACL=1,727,869		
		<b>May 19</b>	No Closure		
2024/2025	2,811,750	Upper 95%: Mar 19	Recreational         Recreational         No Closure         ACL=1,440,990         Recreational         No Closure         24       Upper 95%: Jun 13         ACL=1,727,869       No Closure         19       Upper 95%: Jun 3         ACL=1,666,524       No Closure         16       Upper 95%: May 28         ACL=1,662,184       No Closure         13       Upper 95%: May 24         ACL=1,604,735       No Closure         12       Upper 95%: May 21         ACL=1,587,843       No Closure         Pupper 95%: Jun 15         Recreational         No Closure       No Closure         Pupper 95%: Jun 15         ACL=1,555,082         No Closure		
		ACL=1,145,226	ACL=1,666,524		
		<b>May 14</b>	No Closure		
2025/2026	2,748,750	Upper 95%: Mar 16	Upper 95%: May 28		
-		ACL=1,119,566	ACL=1,629,184		
		<b>May 10</b>	No Closure		
2026/2027	2,707,500	Upper 95%: Mar 13 Upper 95%: May			
		ACL=1,102,765	ACL=1,604,735		
		May 8	No Closure		
2027/2028+	2,679,000	Upper 95%: Mar 12	Upper 95%: May 21		
		ACL=1,091,157	ACL=1,587,843		
Action 2, Alternat	ive 3: ACL = 90% Upd	ated ABC			
Year	SA Total ACL (lb ww)	Commercial	Recreational		
		May 3	No Closure		
2023/2024	2,623,725	Upper 95%: Mar 9	Upper 95%: Jun 15		
		ACL= 1,068,643	ACL= 1,555,082		
2024/2025	2,530,575	Apr 26	No Closure		

Action 2, Alternat	ive 1 (No Action): Curr	ent South Atlantic AC	L (lb ww)
Year	SA Total ACL (lb ww)	Commercial	Recreational
		Upper 95%: Mar 4	Upper 95%: May 6
		ACL= 1,030,703	ACL= 1,499,872
		Apr 23	No Closure
2025/2026	2,473,875	Upper 95%: Mar 1	Upper 95%: Apr 30
		ACL= 1,007,609	ACL= 1,466,266
2026/2027	2 426 750	Apr 20	No Closure
2026/2027	2,430,750	Upper 95%: Feb 26	Upper 95%: Apr 27
		ACL= 992,488	ACL= 1,444,262
2027/2028	2 411 100	Apr 19 Ummer 050/ ( Ech 22	INO CIOSUre
2027/2020+	2,411,100	$\Delta CI = 982.041$	$\Delta CI = 1.429.059$
Action 2 Alternat	ive 4. ACL = 95% Und	ated ABC	ACL- 1,429,039
Vear	SA Total ACL (lb ww)	Commercial	Recreational
1 cai		Mov 16	No Closura
2023/2024	2 769 488	May 10 Unner 95% • Mar 17	Upper 95% May 30
2023/2021	2,709,100	ACL = 1.128.012	ACL = 1.641.476
		May 7	No Closure
2024/2025	2,671,163	Upper 95%: Mar 11	Upper 95%: May 20
		ACL= 1,087,965	ACL= 1,583,198
		May 2	No Closure
2025/2026	2,611,313	Upper 95%: Mar 8	Upper 95%: May 14
		ACL= 1,063,588	ACL= 1,547,725
	2,572,125	Apr 29	No Closure
2026/2027		Upper 95%: Mar 6	Upper 95%: May 10
		ACL= 1,047,627	ACL= 1,524,498
2027/2028	2 5 4 5 0 5 0	Apr 27	No Closure
2027/2028+	2,545,050	Upper 95%: Mar 5	Upper 95%: May 7
Action 2 Alternat	$\frac{1}{100} 5 \cdot \Lambda C I / O V - I O V O V$	ACL= 1,036,599	ACL= 1,508,451
Action 2, Alternat	S A Total ACL (lb ywy)	Commonoial	Descretional
rear	SA TOLAL ACL (ID WW)	Commercial	Recreational
2022/2024	2 670 000	May 8	No Closure
2023/2024+	2,079,000	<b>Upper 95%: Mar 12</b>	<b>Upper 95%: May 21</b>
Action 2 Altornat	ive 6. F30% SDR at our	ACL= 1,091,137	AUL = 1,387,843
Vcor	SA Total ACL (lb www)	Commercial	Pagrantianal
rear	SA TOTALACE (IU WW)	Amm 29	No Cleanna
2023/2024	2 555 728	Apr 28	INO CIOSUre
2023/2024+	2,333,720	Opper 95%: War 5 ACL = 1.040.948	Opper 95%: Way 9 ACL = 1 514 780

Table A.1.2.6. Predicted closure dates for South Atlantic yellowtail snapper for each proposed annual catch limits (Action 2) based on proposed jurisdictional allocation (Action 1, Alternative 3: GOM 19% and SA 81%) and proposed sector allocations (Action 3, Alternative 2: 40.73% commercial and 59.27% recreational).

Action 2, Alternative 1 (No Action): Current South Atlantic ACL (lb ww)					
Year	SA Total ACL (lb ww)	Commercial	Recreational		
2023/2024+	3 037 500	No Closure	No Closure		
2023/2024+	3,037,500	ACL=1,596,510	ACL=1,440,990		

Action 2, Alternative 1 (No Action): Current South Atlantic ACL (lb ww)							
Year	SA Total ACL (lb ww)	Commercial	Recreational				
Action 2, Alternat	Action 2, Alternative 2: ACL = Updated ABC						
Year	SA Total ACL (lb ww)	Commercial	Recreational				
		Jun 16	No Closure				
2023/2024	3,148,470	Upper 95%: Apr 5	Upper 95%: Jul 6				
		ACL=1,282,372	ACL=1,866,098				
		Jun 7	No Closure				
2024/2025	3,036,690	5,690 <b>Upper 95%: Mar 31 Upper 95%: Jun</b>					
		ACL=1,236,844	ACL=1,799,846				
2025/2026	2 0 6 9 6 5 0	Jun 2	No Closure				
2025/2026	2,968,650	Upper 95%: Mar 27	Upper 95%: Jun 19				
		ACL=1,209,131	ACL=1,/59,519				
2026/2027	2 924 100	Wiay 29 Unnon 050/ 1 Man 25	Ino Closure				
2020/2027	2,724,100	ACI -1 190 986	ACL = 1.733 114				
		May 27	No Closure				
2027/2028+	2,893,320	Upper 95%: Mar 23	Upper 95%: Jun 11				
		ACL=1,178,449	ACL=1,714,871				
Action 2, Alternat	ive 3: ACL = 90% Upd	ated ABC					
Year	SA Total ACL (lb ww)	Commercial	Recreational				
		May 21	No Closure				
2023/2024	2,833,623	Upper 95%: Mar 20	Upper 95%: Jun 5				
		ACL= 1,154,135	ACL= 1,679,488				
		May 13	No Closure				
2024/2025	2,733,021	Upper 95%: Mar 15 ACI = 1 113 159 ACI = 1 619 862					
		Upper 95%: Mar 15 ACL= 1,113,159         Upper 95%: May 26 ACL= 1,619,862           May 7         No Closure					
2025/2026	2 671 705	May 7 No Closure Upper 95%: Mar 11 Upper 95%: May 20					
2023/2020	2,071,783	Upper 95%: Mar 11	<b>Upper 95%: May 20</b>				
		ACL- 1,000,210	No Closure				
2026/2027	2.631.690	1914y 4 Unner 95% • Mar 9	Unner 95% · May 16				
2020/2027	2,001,000	ACL = 1.071.887	ACL = 1.559.803				
		May 1	No Closure				
2027/2028+	2,603,988	Upper 95%: Mar 8	<b>Upper 95%: May 13</b>				
		ACL= 1,060,604	ACL= 1,543,384				
Action 2, Alternat	ive 4: ACL = 95% Upd	ated ABC	l				
Year	SA Total ACL (lb ww)	Commercial	Recreational				
		Jun 6	No Closure				
2023/2024	2,991,047	Upper 95%: Mar 29	Upper 95%: Jun 21				
		ACL= 1,218,253	ACL= 1,772,794				
2024/2025	2 994 956	May 26	No Closure				
2024/2025	2,884,830	<b>Upper 95%: Mar 23</b>	<b>Upper 95%: Jun 10</b>				
		$M_{\rm AU} = 1,173,002$	$\frac{ACL=1,109,834}{No Closure}$				
2025/2026	2,820,218	1914y 40 Unner 95% • Mar 10	Unner 95% · Jun A				
2020/2020	2,020,210	ACL= 1,148.675	ACL = 1.671.543				
		<b>May 16</b>	No Closure				
2026/2027	2,777,895	<b>Upper 95%: Mar 17</b>	<b>Upper 95%: May 31</b>				
		$ACI = 1 \ 131 \ 437$	ACL = 1.646.458				

Action 2, Alternative 1 (No Action): Current South Atlantic ACL (lb ww)					
Year	SA Total ACL (lb ww)	Commercial	Recreational		
		May 14	No Closure		
2027/2028+	2,748,654	May 14       No Closure         Upper 95%: Mar 16       Upper 95%: May 28         ACL= 1,119,527       ACL= 1,629,127         ABC       Example         Commercial       Recreational         May 28       No Closure         Upper 95%: Mar 24       Upper 95%: Jun 13         ACL= 1,184,123       ACL= 1,723,128         librium       Example 1			
		ACL= 1,119,527	ACL= 1,629,127		
Action 2, Alternat	ive 5: ACL/OY = Lowe	st ABC			
Year	SA Total ACL (lb ww)	Commercial	Recreational		
		<b>May 28</b>	No Closure		
2023/2024+	2,907,251	Upper 95%: Mar 24 Upper 95%: Jun 13			
		ACL= 1,184,123	ACL= 1,723,128		
Action 2, Alternat	ive 6: F30%SPR at equ	uilibrium			
Year	SA Total ACL (lb ww)	Commercial	Recreational		
		May 15	No Closure		
2023/2024+	2,760,186	Upper 95%: Mar 16	Upper 95%: May 29		
		ACL= 1,124,224	ACL= 1,635,962		

Table A.1.2.7. Predicted closure dates for South Atlantic yellowtail snapper for each proposed annual catch limits (Action 2) based on proposed jurisdictional allocation (Action 1, Alternative 4: GOM 16% and SA 84%) and proposed sector allocations (Action 3, Alternative 2: 40.73% commercial and 59.27% recreational).

Action 2, Alternative 1 (No Action): Current South Atlantic ACL (lb ww)							
Year	SA Total ACL (lb ww)	Commercial	Recreational				
2022/2024	2 027 500	No Closure	No Closure				
2023/2024+	3,037,300	ACL=1,596,510	ACL=1,440,990				
Action 2, Alternat	ive 2: ACL = Updated	ABC					
Year	SA Total ACL (lb ww)	Commercial	Recreational				
		Jun 24	No Closure				
2023/2024	3,265,080	Upper 95%: Apr 10	<b>Upper 95%: Jul 18</b>				
		ACL=1,329,867	ACL=1,935,213				
		Jun 16	No Closure				
2024/2025	3,149,160	Upper 95%: Apr 5	(lb ww)         Recreational         No Closure         ACL=1,440,990         Recreational         No Closure         Upper 95%: Jul 18         ACL=1,935,213         No Closure         Upper 95%: Jul 6         ACL=1,866,507         No Closure         Upper 95%: Jul 6         ACL=1,866,507         No Closure         Upper 95%: Jun 29         ACL=1,824,686         No Closure         Upper 95%: Jun 25         ACL=1,797,303         No Closure         Upper 95%: Jun 25         ACL=1,778,384         Recreational         No Closure         Upper 95%: Jun 16         ACL= 1,741,692         No Closure				
		ACL=1,282,653	ACL=1,866,507				
		Jun 10	No Closure				
2025/2026	3,078,600	Upper 95%: Apr 2	Jun 10         No Closure           pper 95%: Apr 2         Upper 95%: Jun 29           ACL=1,253,914         ACL=1,824,686				
		ACL=1,253,914	ACL=1,824,686				
		Jun 7	No Closure				
2026/2027	3,032,400	Jun 7         No Closure           Upper 95%: Mar 31         Upper 95%: Jun 25           ACL=1,235,097         ACL=1,797,303					
		ACL=1,235,097	ACL=1,797,303				
		Jun 4 No Closure					
2027/2028+	3,000,480	<b>Upper 95%: Mar 29</b>	Upper 95%: Jun 22				
		ACL=1,222,096	ACL=1,778,384				
Action 2, Alternat	ive 3: $ACL = 90\%$ Upd	ated ABC					
Year	SA Total ACL (lb ww)	Commercial	Recreational				
		May 31	No Closure				
2023/2024	2,938,572	<b>Upper 95%: Mar 26</b>	Upper 95%: Jun 16				
		ACL= 1,196,880	ACL= 1,741,692				
		May 21	No Closure				
2024/2025	2,834,244	Upper 95%: Mar 20	Upper 95%: Jun 5				
		ACL= 1,154,388	ACL= 1,679,856				

Action 2, Alternat	ive 1 (No Action): Curr	ent South Atlantic AC	L (lb ww)	
Year	SA Total ACL (lb ww)	Commercial	Recreational	
		May 16	No Closure	
2025/2026	2,770,740	<b>Upper 95%: Mar 17</b>	<b>Upper 95%: May 30</b>	
		ACL= 1,128,522	ACL= 1,642,218	
		May 12	No Closure	
2026/2027	2,729,160	Upper 95%: Mar 14	<b>Upper 95%: May 26</b>	
		ACL= 1,111,587	ACL= 1,617,573	
2027/2020	0 700 400	May 10	No Closure	
2027/2028+	2,700,432	Upper 95%: Mar 13	<b>Upper 95%: May 23</b>	
		ACL= 1,099,886	ACL= 1,600,546	
Action 2, Alternat	1 = 95% Upd	ated ABC		
Year	SA Total ACL (Ib ww)	Commercial	Recreational	
2022/2024	2 101 02 6	Jun 12	No Closure	
2023/2024	3,101,826	<b>Upper 95%: Apr 3</b> ACL = 1 263 374 ACL = 1 838 452		
		ACL= 1,263,374	ACL= 1,838,452	
2024/2025	2 001 702	Jun 4	No Closure	
2024/2025	2,991,702	Upper 95%: Mar 29	Upper 95%: Jun 21	
		ACL = 1,218,520	ACL= 1,773,182	
2025/2026	2 924 670	May 29 Unnon 050/ 1 Man 25	Ino Closule	
2023/2020	2,724,070	$\Delta CI = 1.191.218$	$\Delta CI = 1.733.452$	
		May 26	No Closure	
2026/2027	2.880.780	May 26 No Closure Upper 95%: Mar 23 Upper 95%: Jun 1		
	_,,	ACL = 1,173,342	ACL = 1,707,438	
		May 23	No Closure	
2027/2028+	2,850,456	Upper 95%: Mar 21 Upper 95%:		
		ACL= 1,160,991	ACL= 1,689,465	
Action 2, Alternat	ive 5: ACL/OY = Lowe	st ABC		
Year	SA Total ACL (lb ww)	Commercial	Recreational	
		May 28	No Closure	
2023/2024+	2,907,251	<b>Upper 95%: Mar 24</b>	<b>Upper 95%: Jun 13</b>	
			ACL= 1,723,128	
Action 2, Alternat	ive 6: F30%SPR at equ	uilibrium		
Year	SA Total ACL (lb ww)	Commercial	Recreational	
		May 24	No Closure	
2023/2024+	2,862,415	Upper 95%: Mar 22	Upper 95%: Jun 8	
		ACL= 1.165.862	ACL= 1.696.553	

The reliability of these results is dependent upon the accuracy of the underlying data and input assumptions. We have attempted to create a realistic baseline as a foundation for comparisons, under the assumption that projected future landings will accurately reflect actual future landings. These closure dates are our best estimate, but uncertainty still exists as economic conditions, weather events, changes in catch-per-unit effort, fisher response to management regulations, and a variety of other factors may cause departures from any assumption.

## Appendix B. Gulf of Mexico Annual Catch Limit/Annual Catch Target Control Rule

Figure B.1 shows the method of implementing the Gulf of Mexico's ACL/ACT Control Rule, which was developed through the Generic Annual Catch Limits/Accountability Measures Amendment (GMFMC 2011a). Figure B.2 shows the application of the control rule for the Gulf of Mexico's portion of the yellowtail snapper for the fishing years 2017/2018 through 2020/2021. Table B.1 shows the recreational reference years used in Figure B.1.

ACL/ACT Buffer Spreadsheet v. 4.1			Gulf Yellowtail Snapper	Sector: both	
sum of points	3			Years: 2017/18-2	2020/21
max points	7.0		Buffer between ACL and ACT (or ABC and ACL)	Unweighted	8
Min. Buffer	0	min. buffer	User adjustable	Weighted	8
Max Unw.Buff	19	max unwt. Buff			
Max Wtd Buff	25	max wtd. buffer	User adjustable		
	-	-			Element
	Component	Element score	Element	Selection	result
	Stock assemblage	0	This ACL/ACT is for a single stock.	х	0
		1	This ACL/ACT is for a stock assemblage, or an indicator species for a stock		
	Ability to	1	Catch limit has been eveneded 0 or 1 times in last 4 years		0
	Addity to	0	Catch limit has been exceeded 0 of 1 times in last 4 years	X	0
			Catch limit has been exceeded 2 of more times in last 4 years		
			(rounded up) above ACL	0.0	
			Not applicable (there is no catch limit)		
			Apply this component to recreational fisheries, not commercial or IFO		
			fisheries		
		0	Method of absolute counting		2
	Precision of	1	MRIP proportional standard error (PSE) <= 20		
	Landings Data	2	MRIP proportional standard error (PSE) > 20	х	
			Apply this component to commercial fisheries or any fishery under an IFQ		
			program		
	Precision of	0	Landings from IFQ program		1
	Landings Data	1	Landings based on dealer reporting	х	
		2	Landings based on other		
	Timeliness	0	In-season accountability measures used or fishery is under an IFQ	x	0
		1	In-season accountability measures not used		
	Weighting factor				
		Element weight	Element	Selection	Weighting
	Overfished status	0	1. Stock biomass is at or above B <sub>OY</sub> .	х	0
		0.1	2. Stock biomass is below $B_{OY}$ but at or above $B_{MSY}$ .		
		0.2	3. Stock biomass is below B <sub>MSY</sub> but at or above MSST.		
		0.3	4. Stock is overfished, below MSST.		
		0.3	5. Status criterion is unknown.		

**Figure B.1.** Application of the Gulf of Mexico Fishery Management Council's (Gulf Council) Annual Catch Limit/Annual Catch Target (ACL/ACT) Control Rule (GMFMC 2012) for southeastern U.S. yellowtail snapper landed in the Gulf Council's jurisdiction from the 2017/2018 – 2020/2021 fishing years

#### Appendix B. GM ACL/ACT Control Rule

<b>Fishing Year</b>	Comm	Rec	Total			
2017/18	589,868	206,785	796,653			
2018/19	527,112	104,527	631,638			
2019/20	287,940	12,348	300,289			
2020/21	212,630	79,765	292,395			

**Table B.1.** Recreational reference years used for the Gulf of Mexico ACT/ACL Control Rule.

Source: SERO ACL Monitoring Database 8/9/2022

# Appendix C. South Atlantic Allocations Review Trigger Policy

In a letter to the NOAA Assistant Administrator dated July 16, 2019, the South Atlantic Fishery Management Council (Council) responded to NOAA's Fisheries Allocation Review Policy (<u>NMFS Policy Directive 01-119</u>) and the associated Procedural Directive on allocation review triggers (NMFS Procedural Directive 01-119-01). The Policy established the responsibility for the Regional Fishery Management Councils to set allocation review triggers and consider three types of trigger criteria: indicator, public interest, and time. Councils were directed to establish triggers for consideration of allocation reviews by August 2019. The Council's response follows:

The Council has reviewed species allocations on numerous occasions in the past. However, these reviews may not have been formally documented in a fishery management plan amendment if a decision was made not to modify sector allocations. This new policy will ensure all species currently having sector allocations will be reviewed on a regular basis and will formalize the allocation review process so the Council's consideration of allocations will be documented.

The Council reviewed their current sector allocations and began discussions on the Policy and Procedural Directives and criteria for considering fishery allocation reviews at their December 2018 meeting. At their June 2019 meeting, the Council adopted two types of criteria for triggering consideration of an allocation review: indicator and time.

The Council chose several indicator-based criteria as triggers:

- Either sector exceeds its ACL or closes prior to the end of its fishing year three out of five consecutive years,
- Either sector under harvests its ACL or OY by at least 50% three out of five consecutive years,
- After a stock assessment is approved by the SSC and presented to the Council, and
- After the Council reviews a species Fishery Performance Report.

The Council chose a time-based trigger to ensure allocation reviews are regularly considered. Each species will have its sector allocations reviewed not less than every seven years. Table I.1.1 shows by species when the next sector allocation review will be considered by the Council should an indicator-based criterion not be triggered. Regardless of whether consideration of an allocation review is triggered by an indicator or time criterion once it occurs the next one will automatically be scheduled for consideration seven years later. For species which are jointly managed with the Gulf of Mexico Fishery Management Council, the timing for consideration of allocation reviews was coordinated with that council.

A public interest-based criterion was not selected because the Council currently receives substantial and regular comment from the public through scoping and public hearing sessions, general public comment periods held at every Council meeting, the public comment form on the Council's website, and through other more informal channels. Thus, the Council decided the existing Council process provides sufficient opportunity for public input on allocation.

Assessed Species	Review Year	Unassessed Species	Review Year	Grunts Complex	Review Year
Black grouper	2026	Atlantic spadefish	2022	White grunt	2024
Black sea bass	2023	Bar jack	2022	Sailor's choice grunt	2024
Blueline Tilefish	2020	Scamp	2022	Tomtate	2024
Gag	2022	Speckled hind	*	Margate	2024
Golden tilefish	2021	Warsaw grouper	*	Shallow-Water Groupers Complex	Review Year
Gray triggerfish	2023	Deepwater Species	Review Year	Red hind	2026
Greater amberjack	2021	Yellowedge grouper	2024	Rock hind	2026
GA-NC Hogfish	2023	Silk snapper	2024	Yellowmouth grouper	2026
FLK/EFL Hogfish	2023	Misty grouper	2024	Yellowfin grouper	2026
Mutton napper	2023	Sand tilefish	2024	Coney	2026
Red grouper	2023	Queen Snapper	2024	Graysby	2026
Red porgy	2021	Blackfin snapper	2024	Porgy Complex	Review Year
Red snapper	2024	Jacks Complex	Review Year	Jolthead porgy	2027
Snowy grouper	2021	Almaco jack	2025	Knobbed porgy	2027
Vermilion snapper	2021	Banded rudderfish	2025	Saucereye porgy	2027
Wreckfish	2019	Lesser amberjack	2025	Scup	2027
Yellowtail snapper	2021	Snappers Complex	Review Year	Whitebone porgy	2027
Atlantic Group King mackerel	2021	Gray snapper	2025	Dolphin/Wahoo	Review Year
Atlantic Group Spanish mackerel	2022	Lane snapper	2025	Dolphin	2019
Gulf Group Cobia FL East Coast zone	2021	Cubera snapper	2025	Wahoo	2019

Table C.1. Next year for allocation reviews (as of 2019) for Council managed species.

\*ACL=0 for this species. If ACL>0 in the future, allocations will be reviewed when the ACL is increased.

# Appendix D. Gulf Council's Allocation Review Guidelines

#### I. Background

In conjunction with the Council Coordination Committee (CCC), the National Marine Fisheries Services (NMFS) developed a Fisheries Allocation Review Policy (NMFS Policy Directive 01-119)<sup>3</sup> and an associated procedural directive addressing criteria for initiating allocation reviews (NMFS Procedural Directive 01-119-01)<sup>4</sup>. In a subsequent policy directive, NMFS recommended practices and factors to consider when reviewing and making allocation decisions (NMFS Procedural Directive 01-119-02)<sup>5</sup>. These allocation review policies and procedural directives required regional fisheries management develop allocation review triggers that would be considered to initiate allocation reviews. The Gulf Council's selected review triggers are included in its allocation review policy (Appendix A).

In NMFS Allocation Review Policy, a fishery allocation (or "allocation" or "assignment" of fishing privileges) is defined by NMFS as a "direct and deliberate distribution of the opportunity to participate in a fishery among identifiable, discrete user groups or individuals." 50 CFR 600.10. The Allocation Review Policy makes a clear distinction between an allocation review and an evaluation of fisheries allocation options for an FMP amendment. A fisheries allocation review is the evaluation that leads to the decision of whether or not the development and evaluation of allocation options is warranted, but is not, in and of itself, an implicit trigger to consider alternative allocations. An evaluation of allocation options for an FMP amendment is the full analysis and evaluation of allocation options that is initiated if the allocation review determines a reallocation may be warranted. The goal will be an FMP amendment (or framework adjustment if applicable) that either updates the allocation or retains the status quo.

Allocation review guidelines in this document detail the process that the Gulf Council would follow to conduct its allocation reviews mandated by NMFS Allocation Review Policy. In some instances, e.g., following a stock assessment, the Council may elect to skip a formal allocation review and directly proceed with the development of an FMP amendment. In these cases, these guidelines would not apply.

<sup>&</sup>lt;sup>3</sup> <u>NMFS Policy Directive 01-119</u>

<sup>&</sup>lt;sup>4</sup> NMFS Procedural Directive 01-119-01

<sup>&</sup>lt;sup>5</sup> https://media.fisheries.noaa.gov/dam-migration/01-119-02.pdf

#### **II.** Terms of Reference

Prior to each allocation review, the Council will formally adopt terms of reference (TORs) for the review. TORs will either be developed by the SEFSC or by Council staff in conjunction with the SEFSC and SERO. The SSC will review draft TORs and provide recommendations to the Council. Draft TORs have to be reviewed and possibly amended by the Council prior to approval. A Council motion would be required to formally approve the TORs.

#### **III.** Membership of the Review Panel

Prior to each allocation review, the Council will appoint an allocation review panel or specify the method by which the panel will be appointed. During the selection of a review panel, the Council will pay special attention to potential conflicts of interest by avoiding the appointment of individuals with affiliation to a particular sector. For example, individuals who belong to (or represent) a particular sector should not be appointed to serve on allocation review panels. To determine the composition of the review panel the Council could:

- Allow the Council staff, SERO and the SEFSC to select members of an Interdisciplinary Planning Team (IPT) to conduct the review. The IPT typically includes SERO, SEFSC and, Council staff. Members would be selected by the Council Office, SERO, and the SEFSC following the usual IPT selection process.
- Select SSC members (with NMFS and Council staff support).
- Appoint independent experts.

If deemed necessary, the Council may select members of the review panel by relying on a combination between the alternative approaches listed. The Council will determine the size of the review panel based on the specifics of the species or species group allocation to be reviewed.

#### **IV. Review Notice**

A *Federal Register* notice (FRN) must be published prior to the initiation of each allocation review. At a minimum, the FRN notice will indicate the species and allocation(s) to be reviewed, list the membership of the review panel, and provide the starting date of the review and anticipated locations and dates of the review panel meetings as applicable. However, allocation reviews that would be entirely conducted by an IPT are exempt from meeting notice requirements.

#### V. Allocation Review Criteria

Allocation reviews will typically be conducted based on information and data that are routinely available. Reviews are expected to utilize existing ecological, biological, and socio-economic studies relevant to the species (or group of species) and user groups under consideration. Prior to each allocation review, the Council will determine the suite of ecological, biological, economic,

and social factors consistent with the NMFS Allocation Review Policy to be included in the review. It is expected that a subset of the list provided in this section would be used for a particular allocation review, depending on their relevance to the species under review, sectors, user groups, or states concerned, and data availability.

#### **FMP Objectives**

Re-evaluate goals and objectives to determine whether they are current, clear, and measurable. As directed by NMFS Allocation Review Policy, allocation reviews must include an evaluation of the relevant FMP objectives. Specifically, the review should assess whether the allocation is consistent with the FMP objectives.

#### **Regulatory Structure**

- Mainly discuss relevant current management measures
- However, if warranted consider changes over time (bag limit changes)
- Several elements could be gathered from history of management sections included in Council's regulatory actions

#### Status of the Stock(s)

- Discuss findings of the latest stock assessment

## Acceptable Biological Catch (ABC), Quotas, Annual Catch Limits and Targets (ACLs and ACTs)

- List allowable biological catch (ABC), annual catch limits and targets (ACLs and ACTs); Discuss buffers between the catch limits and targets.
- If warranted, include changes to these variables over time and to the metrics used (e.g., MRIP-CHTS to FES)

#### **Accountability Measures**

- Season closures and quota paybacks
- Include comparison across user groups

#### Landings history

- Provide detailed landings history by sector, within sector (gear, components of a particular sector), by region or by state. Discuss relevant changes in units of measurement used (e.g., conversion of recreational landings from MRIP-CHTS to MRIP-FES)
- Provide aggregate landings including other species in the FMP. Discuss the relative dependence of a given user group on the species under review (for example, include red snapper landings and total reef fish landings)
## **ACL/Quota Utilization Rates**

- Trends for each user group
- Include comparison across user groups

## **Participation and Effort Measures**

- Provide numbers of participants, as measured by permits or licenses, vessels, and anglers where available. Include total numbers as well as active (non-latent) participation based on the allocation(s) being reviewed
- Provide effort measures including number of trips (e.g., catch and target trips for private recreational anglers and for-hire operators)
- Include evaluation of participation and effort trends

## **Discards and Discard Mortality Rates**

- Include comparison across user groups

## **Protected Species Bycatch Numbers and Rates**

- Include comparison across user groups

## **Habitat Impacts**

- Include comparison across user groups
- Discuss impacts of relevant environmental events. For example, discuss spatial considerations in allocation between Gulf states such as red tide, oil spills, etc.

#### **Economic Factors**

An allocation review should provide, to the extent practicable, metrics to evaluate economic factors relevant to the species and allocation under review.

- Consumer surplus commercial
- Consumer surplus rec anglers
- Producer surplus for-hire vessels, revenues, variable and fixed costs
- Producer surplus commercial vessels, revenues, variable and fixed costs
- Share and allocation transfer price (catch share managed species only)
- Economic impacts by sector as measured by employment, output, income and value-added.

## **Social Factors**

Allocation reviews should include, to the extent practicable, metrics to evaluate social considerations of allocation. However, available human dimensions data are limited and data are typically not available to make comparisons across sectors or for recreational fishing among states.

- Demographics (e.g., race/ethnicity, age) – These data are not currently available, but have recently been collected among federal permitholders for a single year, only. It remains unknown whether these data would become available in the future.

Snapper Grouper Amendment 44	Appendix D. GM Allocation Review Guidelines
Reef Fish Amendment 55	D-4

- Community Regional and Local Quotients These analyses are available for the commercial sector, only. Data are not currently available to associate recreational landings with a particular community.
- Community engagement and reliance indicators Measurements of fishing activity specific to a particular stock (commercial sector) or for fishing in general (recreational fishing).
- Community social vulnerability indicators Measure of social vulnerability for the community in general and not specific to the fishing aspects of a community, and not distinguished by sector.

# **VI.** Allocation Review Stages

Allocation reviews will include a minimum of three steps:

- **Stage One** will be the data review phase. During this phase, potential data sources are identified and available data are gathered. Data collected should be consistent with the evaluations/requirements detailed in the TORs.
- **Stage Two** will include the core of the allocation review. During this phase, data collected are interpreted, trends are identified and discussed. The evaluation of trends performed should be consistent with the requirements detailed in the TORs.
- **Stage Three** will focus on producing the allocation review report. A preliminary report is drafted during this phase. The draft report will include the deliverables specified in the TORs. The report should include: a section discussing historical allocations and how they were established; a discussion of the types of data collected and sources, data trends, and data gaps. If requested by the Council, the report would include potential reallocation scenarios. The draft report should also discuss research that could improve future allocation reviews and present recommendations provided by the review panel. In addition, all datasets used during the review must be attached to the report.

# VII. Advisory Panels and SSC Recommendations

A draft allocation review prepared by the review panel must be discussed by the Standing and Socioeconomic SSCs and relevant advisory panel(s) (APs) to garner their recommendations. The draft report, along with recommendations provided by the SSCs and APs will be presented to the Council. Stakeholder engagement throughout the allocation review process is a key component of reviews. In addition to the formal presentation of the draft allocation review report to the relevant APs, stakeholders will have several opportunities to provide input and discuss the different phases of an allocation review by either attending review proceedings or by providing public comments. Electronic comments pertaining to an ongoing allocation review can be submitted to the Council's website at any time. Furthermore, stakeholders may provide comments during public testimony sessions scheduled during each Council meeting.

#### **VIII.** Council Decisions

Upon completion, designated members of the allocation review panel will present the draft report to the Council. Council staff will present recommendations provided by the SSCs and relevant APs. Council staff will also provide a summary of public comments received. The Council may ask the allocation review panel to amend the report and provide additional information as needed. Following the submission of a final allocation review report, including revisions suggested by the Council, the Council will formally approve the report and make recommendations to either direct staff to initiate an amendment to the relevant FMP to consider alternative reallocations or elect to conclude the review without considering revisions to the existing allocation.

## IX. Resetting the Allocation Review Clock

Following the completion of an allocation review, the Council may maintain the existing allocation until its future review or elect to initiate an allocation FMP amendment. If the Council determines that an amendment to the relevant FMP to consider alternative reallocation scenarios is not warranted, then the clock resets immediately and the next allocation review will be scheduled based on the time interval set by the corresponding time-based trigger. If the Council determines that a reallocation amendment to the relevant FMP is warranted, then the clock resets on the effective date of the final rule that implements the allocation FMP amendment.

# **Gulf Council's Allocation Review Policy**

The Fisheries Allocation Review Policy (NMFS Policy Directive 01-119) and the associated Procedural Directive on allocation review triggers (NMFS Procedural Directive 01-119-01) present three types of triggers (indicator-based, public interest-based, and time-based criteria) and request that Regional Fishery Management Councils establish review triggers.

The Gulf Council initially reviewed a discussion paper introducing the allocation review policy and procedural directive during its August 2018 meeting. Follow-up discussions during the October 2018 meeting included an evaluation of the types of triggers considered in the policy and procedural directives and a preliminary identification of Gulf allocations that would be subject to the policy. Additional discussions, including the formal selection of triggers for relevant Gulf of Mexico allocations and the adoption of the policy on allocation reviews detailed below were held in January 2019 and finalized during the April 2019 Council meeting. The Gulf Council adopted the following policy on allocation reviews:

The Council selects time-based criteria as primary allocation review triggers bolstered by general monitoring of indicators for reallocation justification through the Council's general deliberative process including public input channels as a secondary trigger. Consistent with the adaptive management process suggested in the Allocation Review Policy (referenced above), the incorporation of the Council's public input process as secondary public interest-based review triggers will include the consideration of relevant social, economic, and ecological indicators as an intermediate step before determining whether an allocation review is triggers. For example, economic tools that might contribute to the development of indicator-based review triggers could include cost-benefit analysis, economic impact analysis, economic efficiency, and others. Social indicators could include a range of social metrics such as community resilience, vulnerability and well-being. Examples of ecological criteria include changes in fishery status resulting from a stock assessment, undocumented sources of mortality, increases in discards, or changes in species distribution and food web dynamics. Allocations include are:

- red snapper allocations within the recreational sector, i.e., between the federal for-hire and private angling components (with a 4-year timeframe);
- red snapper allocations between the five Gulf states (with a 5-year timeframe);
- gray triggerfish and greater amberjack allocations between the commercial and recreational sectors (with a 6-year timeframe);
- Gulf of Mexico group king mackerel allocations between the recreational and commercial sectors, zones, and gear types (with a 6-year timeframe);
- recreational and commercial allocations of red snapper, gag, red grouper, shallow water grouper IFQ aggregate, deep water grouper IFQ aggregate, and tilefish IFQ aggregate (with a 7-year timeframe);
- black grouper, mutton snapper, yellowtail snapper allocations between the Gulf and South Atlantic Councils (with a 7-year timeframe).

The table below lists the time intervals to be used with the time-based allocation review triggers and provides anticipated start dates for the initial allocation reviews. In addition to the allocation reviews scheduled based on the review triggers selected above, the Council may initiate

supplementary allocation reviews at any time. For example, the Council could initiate an allocation review should relevant new information, e.g., data recalibration, be made available.

Timeframes for the time-based allocation review triggers and expected starts of initial reviews

	Time	Expected start
Allocations	Intervals	of the first
		review
Recreational red snapper ACL allocation		
between the private angling and federal for-	4 years	April 2023
hire components		
Red snapper allocations between the Gulf		
states	5 years	April 2024
Gray triggerfish and greater amberjack		
allocations between the recreational and	6 years	April 2025
commercial sectors		
Gulf of Mexico group king mackerel		
allocations between the recreational and	6 years	April 2025
commercial sectors, zones, and gear types		
Recreational and commercial allocations of red		
snapper, gag, red grouper, shallow water	7 years	April 2026
grouper IFQ aggregate, deep water grouper		
IFQ aggregate, and tilefish IFQ aggregate		
Black grouper, mutton snapper, yellowtail		
snapper allocations between the Gulf and	7 years	April 2026
South Atlantic Councils		