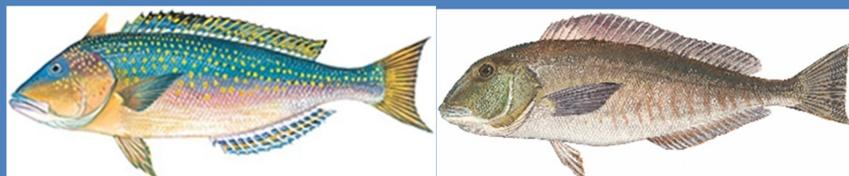


Amendment 52



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

*Catch Level Adjustments and Allocations for
Golden Tilefish*

*Modification to recreational management of
Blueline Tilefish*

Decision Document

September 2022

Background

Golden Tilefish

Current management of South Atlantic golden tilefish is based on an update of SEDAR 25 completed in 2016 with an assessment period of 1962-2014 (SEDAR 2016). This amendment addresses the SEDAR 66 standard assessment for golden tilefish, which was completed in 2021, and includes recreational landings estimates using the Marine Recreational Information Program (MRIP) Fishing Effort Survey (FES). Revised catch levels would be specified based on the Scientific and Statistical Committee (SSC)'s recommended acceptable biological catch (ABC) and this most recent assessment.

The Council received the results of the assessment and the SSC's recommendations for the overfishing limit (OFL) and ABC at their June 2021 meeting. The SSC determined the stock is no longer experiencing overfishing, but there is a high degree of uncertainty in the stock status determination since the stock is being fished at or close to maximum sustainable yield (MSY). The Council directed staff to begin work on a plan amendment to adjust catch levels based on the SSC recommendations and [SEDAR 66 \(2021\)](#).

The Council is also responding to an industry request to vary the fishing year for the longline component of the commercial golden tilefish sector which would avoid oversupplying the market in the first part of January and allow commercial longline vessels to remain fishing for golden tilefish during Lent when prices tend to be relatively high.

An application providing an overview of the golden tilefish fishery, including management history, landings, and assessment information, can be found here: https://safmc-shinyapps.shinyapps.io/SA_FisheryDataTilefish/.

Blueline Tilefish

In the last six years, landings of blueline tilefish in the South Atlantic region have often exceeded the sector and total ACL, and the National Standard Guidelines contain the following language: *If the catch exceeds the ACL for a given stock, or stock complex, more than once in the last four years, the system of ACLs and AMs should be reevaluated and modified if necessary to improve its performance and effectiveness.*

The recreational sector has a four-month season, May 1 through August 31, that was established in 2015 through Amendment 32. The amendment also established a 1 fish per vessel limit during the open season. The bag limit was increased to the current 3 fish per person per day through implementation of Regulatory Amendment 25 in 2016.

The in-season recreational accountability measure currently in place is triggered when recreational landings meet, or are projected to meet, the recreational ACL. The post-season accountability measure is triggered by an overage of the recreational ACL, an overage of the total (commercial and recreational) ACL, and an overfished determination for the stock. If those criteria are met, a payback of the overage and a reduction in next year's fishing season are implemented. These accountability measures have not been triggered for blueline tilefish despite overages of the recreational ACL. The AM has not been triggered due to landings estimates not being available until after the season closes. Overages of the recreational ACL have not been corrected because blueline tilefish are currently not overfished. Hence, the Council intends to re-evaluate the system of accountability measures for the recreational sector and consider modification to recreational management measures.

An application providing an overview of the blueline tilefish fishery, including management history, landings, and assessment information, can be found here: https://safmc-shinyapps.shinyapps.io/SA_FisheryDataBluelineTilefish/

Management actions in this amendment

Action 1: Revise the golden tilefish overfishing limit, acceptable biological catch, total annual catch limit, and annual optimum yield.

Action 2: Revise sector allocations and sector annual catch limits for golden tilefish

Action 3. Modify the fishing year for the commercial golden tilefish hook and line and longline sectors.

Action 4. Modify recreational accountability measures for golden tilefish.

Action 5. Modify blueline tilefish recreational bag limit.

Action 6. Modify blueline tilefish recreational season.

Action 7. Modify recreational accountability measures for blueline tilefish.

Amendment timing

June 2021	Receive SSC comments and recommendations on SEDAR 66
December 2021	Review AP comments and options paper, and approve for scoping
February 2022	Conduct scoping hearings
March 2022	Review scoping comments and provide guidance to staff
April 2022	AP comments on actions and alternatives
June 2022	Reviewed modifications to the amendment, reviewed AP input, select preferred alternatives, and approved for public hearings
September 2022	Review public hearing comments and approve all actions
December 2022	Review final draft amendment and consider approval for formal review
2023	Regulations effective

Objectives for this meeting

- **Review public hearing comments**
- **Review alternatives and analyses to date and approve all actions**

Purpose and Need

Purpose: The purpose is to revise the acceptable biological catch, overfishing limit, annual optimum yield, total annual catch limit and sector allocations for golden tilefish based on the most recent stock assessment. Additionally, the purpose is to consider modifications to management measures and accountability measures for golden tilefish and blueline tilefish.

Need: The need is to base conservation and management measures on the best scientific information available and achieve optimum yield, consistent with the Magnuson-Stevens Act and its National Standards.

Proposed Actions

2.1 Action 1. Revise the overfishing limit, acceptable biological catch, total annual catch limit, and annual optimum yield for golden tilefish

2.1.1 Alternatives

Alternative 1 (No Action). The total annual catch limit and annual optimum yield for golden tilefish are equal to the current acceptable biological catch (342,000 lbs gutted weight). The current acceptable biological catch and overfishing limit is inclusive of recreational estimates from the Marine Recreational Information Program’s Coastal Household Telephone Survey.

Preferred Alternative 2. The total annual catch limit and annual optimum yield for golden tilefish are equal to the updated acceptable biological catch level. The updated acceptable biological catch and overfishing limit are inclusive of recreational estimates from the Marine Recreational Information Program’s Fishing Effort Survey.

Year	OFL (lbs gw)	ABC (lbs gw)	Annual OY (lbs gw)	Total ACL (lbs gw)
2023	562,000	435,000	435,000	435,000
2024	552,000	448,000	448,000	448,000
2025	543,000	458,000	458,000	458,000
2026+	535,000	466,000	466,000	466,000

Alternative 3. The total annual catch limit and annual optimum yield for golden tilefish are equal to 95% of the updated acceptable biological catch level. The updated acceptable biological catch and overfishing limit are inclusive of recreational estimates from the Marine Recreational Information Program’s Fishing Effort Survey.

Year	OFL (lbs gw)	ABC (lbs gw)	Annual OY (lbs gw)	Total ACL (lbs gw)
2023	562,000	435,000	413,250	413,250
2024	552,000	448,000	425,600	425,600
2025	543,000	458,000	435,100	435,100
2026+	535,000	466,000	442,700	442,700

Alternative 4. The total annual catch limit and annual optimum yield for golden tilefish are equal to 90% of the updated acceptable biological catch level. The updated acceptable biological catch and overfishing limit are inclusive of recreational estimates from the Marine Recreational Information Program’s Fishing Effort Survey.

Year	OFL (lbs gw)	ABC (lbs gw)	Annual OY (lbs gw)	Total ACL (lbs gw)
2023	562,000	435,000	391,500	391,500
2024	552,000	448,000	403,200	403,200
2025	543,000	458,000	412,200	412,200
2026+	535,000	466,000	419,400	419,400

Discussion:

A revised ACL would be specified based on the SSC’s recommended ABCs and the most recent assessment. SEDAR 66 included landings data using the Marine Recreational Information Program (MRIP) Fishing Effort Survey (FES) rather than the previously used CHTS data. Per the guidance provided at 50 CFR §600.310(f)(4)(iv), the Council has chosen to specify optimum yield (OY) for golden tilefish on an annual basis and set it equal to the total ACL. All of the action alternatives will result in higher ACLs than the status quo. The acceptable biological catch, total annual catch limit, and annual optimum yield would increase annually until 2026 and remain in place after 2026 until modified.

Summary of Biological Effects:

- Increasing golden tilefish catch levels as proposed in this amendment would not be expected to result in negative biological impacts since overall catch would be constrained to the ACL and AMs would prevent the ACL and OFL from being exceeded, correct for overages if they occur (if the stock is in an overfished condition), and prevent overfishing.
- The proposed increase in the total ACL for golden tilefish is based on the SSC’s recommended ABC for golden tilefish in the South Atlantic region.
- **Preferred Alternative 2** would result in the least biological benefit to the golden tilefish as there would be no buffer between the ABCs and the total ACLs. Biological benefits resulting from **Alternatives 3** and **4** would increase as the buffer increases.
- Although **Preferred Alternative 2** would allow the greatest amount of harvest of the action alternatives considered, it is based on the SSC’s ABC recommendation and BSIA and represents a catch level that does not result in overfishing.

Summary of Economic Effects:

- ACLs that allow for more fish to be landed can result in increased positive economic effects if harvest increases without notable long-term effects on the health of a stock.
- ACLs that are set above the observed landings in the fishery for a species and do not change harvest or fishing behavior may not have realized economic effects each year.
- There are potential economic benefits from ACLs that allow for a gap between ACLs and observed harvest providing the opportunity for increased landings and a reduced likelihood of triggering restrictive AMs

- **Alternative 1 (No Action)** is not a viable alternative since it does not implement BSIA. Among the viable alternatives, **Preferred Alternative 2** would allow for the highest potential economic benefits followed by **Alternative 3** and **Alternative 4**.

Summary of Social Effects:

- ACL does not directly affect resource users unless AMs are triggered resulting in significant direct and indirect social effects because, when triggered, can restrict harvest in the current season or subsequent seasons.
- Restrictions on harvest contribute to sustainable management goals and are expected to be beneficial to fishermen and communities in the long term.
- Generally, the higher the ACL the greater the short-term social benefits that would be expected to accrue if harvest is sustainable.
- **Alternative 1 (No Action)** would not update the golden tilefish ACL based on current information and would not provide the social benefits associated with up-to-date scientific information.
- Among the action alternatives, **Preferred Alternative 2** would be the most beneficial for fishermen, followed by **Alternative 3**, and **Alternative 4**.

Committee Action:

- REVIEW PUBLIC HEARING COMMENTS
- REVIEW ALTERNATIVES AND ANALYSES

Action 2. Revise sector allocations and sector annual catch limits for golden tilefish

Purpose of Action:

Allocations need to be reviewed since the recreational landings stream changed in the new assessment. Recreational landings are now estimated using data from the Fishing Effort Survey rather than the Coastal Household Telephone Survey.

Note: The revised sector annual catch limits in **Alternatives 1 (No Action)** through 2 reflect the revised total annual catch limit in **Preferred Alternative 2** of Action 1. The revised total annual catch limit is based on recreational landings from the MRIP using the FES method as well as updates to commercial and headboat landings used in the latest assessment (SEDAR 66).

Alternative 1 (No Action). Retain the current recreational sector and commercial sector allocations as 3.00% and 97.00%, respectively, of the revised total annual catch limit for golden tilefish. Within the commercial sector, 25% is allocated to the hook and line (HL) component and 75% to the longline (LL) component.

Year	Total ACL= ABC	Commercial ACL (lbs gw) (97% of Total ACL)			Recreational ACL (numbers of fish) (3% of Total ACL)
		Total	HL (25%)	LL (75%)	
2023	435,000	421,950	105,488	316,462	2,326
2024	448,000	434,560	108,640	325,920	2,396
2025	458,000	444,260	111,065	333,195	2,449
2026+	466,000	452,020	113,005	339,015	2,492

Note: Recreational ACL in numbers of fish was calculated using the average weight (5.61lb) from recreational samples in SEDAR 66 data from 2016 through 2018.

Preferred Alternative 2. Allocate 96.70% of the revised total annual catch limit for golden tilefish to the commercial sector and 3.30% of the revised total annual catch limit for golden tilefish to the recreational sector. Within the commercial sector 25% is allocated to the hook and line (HL) component and 75% to the longline (LL) component.

Year	Total ACL= ABC	Commercial ACL (lbs gw) (96.7% of Total ACL)			Recreational ACL (numbers of fish) (3.3% of Total ACL)
		Total	HL (25%)	LL (75%)	
2023	435,000	420,645	105,161	315,484	2,559
2024	448,000	433,216	108,304	324,912	2,635
2025	458,000	442,886	110,722	332,165	2,694

2026+	466,000	450,622	112,656	337,967	2,741
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Note: Recreational ACL in numbers of fish was calculated using the average weight from recreational samples in SEDAR 66 data from 2016 through 2018.

Discussion:

The Council’s Allocations Trigger Policy states the Council will review sector allocations upon completion of a stock assessment. In addition, recreational landings estimates have been revised to adopt the new FES methodology. This action allows the Council to consider how to allocate the total ACL between the commercial and recreational sectors from 2023 onwards under the revised catch levels.

The current commercial ACL is 331,740 lbs gw, and the current recreational ACL is 2,316 fish. The commercial annual catch limit is allocated between two gear sectors: 25% is allocated to the hook and line sector and 75% to the longline sector. Amendment 18B (2012) allocated 25% of the commercial ACL to the hook-and line component and 75% to the longline component. Such an allocation restored access to the resource for hook-and-line fishermen to proportions observed prior to 2006, and during periods when they have historically harvested golden tilefish (late summer to early fall). It was noted that, if the hook-and-line component regularly reached its ACL in the future, the Council would consider increasing the allocation.

The Council is only considering two allocation scenarios for golden tilefish. The update to the recreational landings stream did not substantially change the historical landings ratio between sectors. The current allocations for the recreational and commercial sectors are 3% and 97%, respectively. These allocation percentages were based on applying the formula of sector annual catch limit = ((mean landings 2006-2008)*0.5) + ((mean landings 1986-2008)*0.5) to the landings dataset used in Snapper Grouper Amendment 17B that included recreational estimates from the Marine Recreational Information Program’s Coastal Household Telephone Survey. Applying the same allocation method to data used in SEDAR 66, including recreational FES data where applicable, would result in allocations of 96.70% and 3.30% for the commercial and recreational sectors, respectively. The difference between the proposed 2023 ACL for commercial sector compared to average landings (2017-2021) shows an average annual increase of 32,562 (lbs gw) for the commercial longline component and an average annual increase of 12,877 (lbs gw) for the commercial hook and line component (Table 1.).

Table 1. Differences in pounds (gw) between proposed commercial golden tilefish hook and line ACLs in 2023 and average landings (2017-2021).

	Commercial Longline (lbs gw)	Commercial Hook and Line (lbs gw)
Average Landings 2017-2021	282,922	92,284
Proposed 2023 ACL	315,484	105,161
Difference Between Proposed 2023 ACL and Average Landings	+32,562	+12,877

The Council will need to consider National Standard 4 in all allocation actions and alternatives. National Standard 4 states: *Conservation and management measures shall not discriminate between residents of different States. If it becomes necessary to allocate or assign fishing privileges among various United States fishermen, such allocation shall be (A) fair and equitable to all such fishermen; (B) reasonably calculated to promote conservation; and (C) carried out in such manner that no particular individual, corporation, or other entity acquires an excessive share of such privileges.*

Summary of Biological Effects:

- Biological effects are not expected to be substantially different between **Alternative 1 (No Action)** and **Preferred Alternative 2**, since the allocation percentages would be similar and do not affect the total ACL specified in Action 1.
- Proposed sector and gear type allocations under this action would not be expected to result in any biological effects, positive or negative, on co-occurring species.

Summary of Economic Effects:

- Sector ACLs that allow for more fish to be landed can result in increased positive economic effects if harvest increases without notable long-term effects on the health of a stock.
- The sector ACL does not directly impact the fishery for a species unless harvest changes, fishing behavior changes, or the sector ACL is exceeded, thereby potentially triggering AMs such as harvest closures or other restrictive measures. As such, sector ACLs that are set above observed landings in a fishery for a species and do not change harvest or fishing behavior may not have realized economic effects each year.
- Nevertheless, sector ACLs set above observed average harvest levels do create a gap between the sector ACL and typical landings that may be utilized in years of exceptional abundance or accessibility of a species, thus providing the opportunity for increased landings and a reduced likelihood of triggering restrictive AMs. As such there are potential economic benefits from sector ACLs that allow for such a gap. Under this notion, **Alternative 1 (No Action)** would allow for comparatively higher potential economic benefits than **Alternative 2** for the commercial sector.
- The opposite would be true for the recreational sector, where **Alternative 2** would have comparatively higher economic benefits than **Alternative 1 (No Action)**.

- In terms of total estimated net economic benefits for the action, in comparison to **Alternative 1 (No Action)**, **Preferred Alternative 2** would increase net economic benefits by \$11,613 in the 2023 fishing year (2020 \$).

Summary of Social Effects:

- **Alternative 1 (No Action)** would maintain the current allocation percentages and may have few social effects. With **Preferred Alternative 2** there would be a less than 1% decrease in the commercial percentage compared to **Alternative 1 (No Action)**.
- The choice of an allocation would need to be assessed with other actions within this amendment to determine the overall social effects and whether short-term losses are offset by any long-term biological gains.
- Based on recent landings of golden tilefish (2018-2021) and assuming Action 1 – **Preferred Alternative 2**, no closures are expected under **Alternative 1 (No Action)** or **Preferred Alternative 2** for the time period of January 1 through June 30 for the hook and line component of the commercial sector. Alternatively, the longline component of the commercial sector is anticipated to close early to mid-March.

Committee Action:

- REVIEW PUBLIC HEARING COMMENTS
- REVIEW ALTERNATIVES AND ANALYSES

Action 3. Modify the fishing year for the commercial golden tilefish hook and line and longline sectors

Purpose of Action: The Council is responding to an industry request to vary the fishing year for commercial golden tilefish sectors which would avoid oversupplying the market in the first part of January and allow commercial longline vessels to remain fishing for golden tilefish during Lent when prices tend to be relatively high.

Note: Council may choose more than one alternative.

Alternative 1 (No Action). Do not modify the fishing year for the commercial hook and line or commercial longline components. Current fishing year for both sectors is January 1- December 31.

Alternative 2. Modify the fishing year for the commercial hook and line component.

Sub-Alternative 2a. Modify the fishing year to start January 15.

Sub-Alternative 2b. Modify the fishing year to start January 22.

Sub-Alternative 2c. Modify the fishing year to start February 1.

Preferred Alternative 3. Modify the fishing year for the commercial longline component.

Preferred Sub-Alternative 3a. Modify the fishing year to start January 15.

Sub-Alternative 3b. Modify the fishing year to start January 22.

Sub-Alternative 3c. Modify the fishing year to start February 1.

Discussion:

Golden tilefish are important for the market when shallow water grouper fishery is closed. In addition, the longline endorsement holders may benefit from a January 15 opening with social benefits to families at the start of the year and the likelihood of extending the fishing closer to Easter and Lent when prices are higher. The Council intends to retain the January 1 start date for the HL component of the recreational sector to allow them a “head start” for the year before the LL sector begins fishing.

Summary of Data or Analyses

Hook and Line Component

- The South Atlantic golden tilefish hook and line component closed early every year since 2015. In 2021, the season closed on June 1, 2021. In previous years, the season had historically been longer. Since 2015, the season has progressively gotten shorter. Figure 1 shows the landings used in this analysis, and **Table 2** provides the predicted landings for each month.
- Analyses for the hook and line component were conducted similarly to the longline component. However, the 3-year average landings (which total 68,259 lbs gw) were only available for the time period of January 1 through June 30. Therefore, the analysis shows that no closures are expected (**Table 3**) under any of the proposed ACLs before June 30.

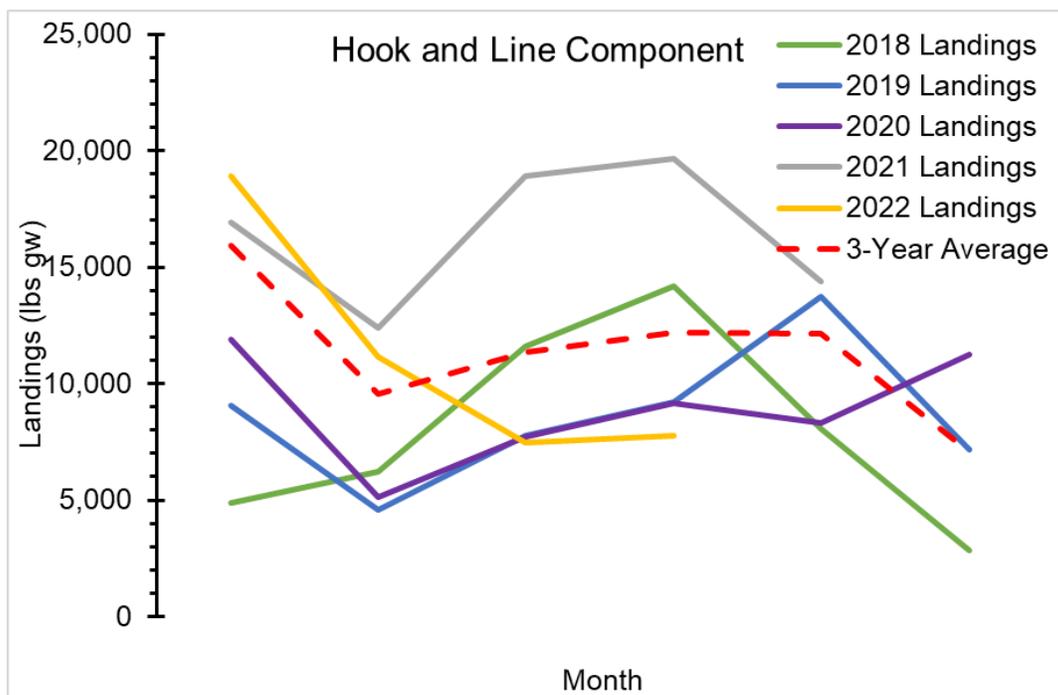


Figure 1. South Atlantic golden tilefish commercial hook and line component landings by month from 2018 to 2022, and a three-year average of available monthly landings (red dashed line). All the landings are in pounds gutted weight.

Season lengths were projected by cumulatively summing the commercial 3-year average landings for January and February and then applying the daily catch rate (3,976 lbs gw per day) from March through December.

Table 2. Predicted South Atlantic golden tilefish hook and line component commercial landings by month. The landings are in pounds gutted weight.

Month	Landings
January	15,925
February	9,552
March	11,359
April	12,197
May	12,139
June	7,087
Total	68,259

Table 3. The projected closure dates for the golden tilefish commercial hook and line component for a range of commercial ACLs in Amendment 52. The closure dates came from comparing the 3-year average landings against the ACLs. However, the 3-year average landings are only available from January 1 through June 30.

ACL	Closure Date
82,935	None
101,052	None
105,161	None
108,304	None
110,722	None
112,656	None

Longline Component

- Since 2015, the longline component of the commercial golden tilefish fishery has typically closed due to meeting its ACL as early as mid-February and as late as early May. Figure 2 shows the landings used in this analysis, and Table 4 provides the predicted landings for each month.
- Analyses used recent commercial landings data to predict future landings (**Table 4**) and compare to the proposed catch levels. However, the data are limited due to numerous closures due to the ACL being met in-season. Details on methodology can be found in Appendix F of the draft amendment document. **Table 5** provides the predicted closure dates. The analysis shows that all of the closure dates are in the month of March (see Appendix F of the draft amendment for more detail on methodology used).

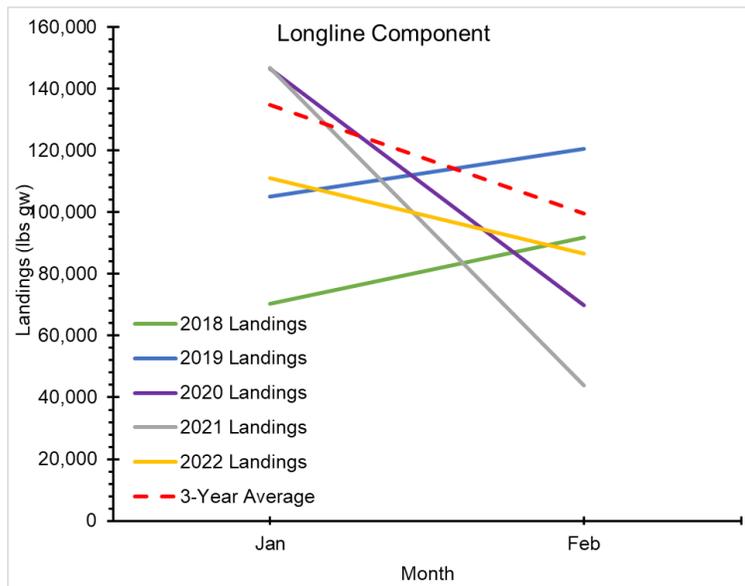


Figure 2. South Atlantic golden tilefish commercial longline component landings by month from 2018 to 2022 and a three-year average of available monthly landings. The landings are in pounds gutted weight.

Table 4. Predicted South Atlantic golden tilefish longline component commercial landings by month. The landings are in pounds gutted weight.

Month	Landings
January	134,866
February	99,701
Total	234,567

Table 5. The projected closure dates for the golden tilefish commercial longline component for a range of commercial ACLs in Amendment 52.

ACL	Closure Date
248,805	March-4
303,155	March-18
315,484	March-21
324,912	March-23
332,165	March-25
337,967	March-27

Summary of Biological Effects:

- Regardless of the alternative selected, this action is not anticipated to have negative biological impacts on golden tilefish. The commercial sectors are constrained by ACLs (as determined in Action 1 and sector allocations as set in Action 2) and AMs.
- There is not expected to be any difference in the biological impacts of **Alternative 1 (No action)** and **Alternative 2** and **Alternative 3** and associated sub-actions.

Summary of Economic Effects:

- From a total harvest perspective, all of the alternatives in Action 3 would likely result in all of the commercial sector ACL being landed.
- There may be some economic benefits for both the commercial hook and line component (**Alternative 2**) and the commercial longline component (**Alternative 3**) if the start times vary avoiding oversupplying the market and leading to improved prices.
- A later start time for the commercial longline component would allow vessels to remain fishing for golden tilefish during Lent when prices tend to be relatively high. **Sub-alternative 3c** may then offer the highest economic benefits followed by **Sub-alternative 3b**, and **Preferred Sub-alternative 3a** in comparison to **Alternative 1 (No Action)**.

Summary of Social Effects:

- Golden tilefish is an important commercial species in Florida, particularly in central Florida (Port Orange, Titusville, Cocoa, and Fort Pierce).

- Changes to the fishing year could change the level of access to the golden tilefish stock during periods when golden tilefish are available.
- Changes to the fishing year for the commercial hook-and-line or the commercial longline components could change the level of access to the golden tilefish stock during periods when golden tilefish are available.
- The effects on commercial fishermen and related businesses would be associated with access to golden tilefish stock during periods when the dockside value is highest, and if the commercial ACL is met and an early closure occurs.
- Staggering the commercial hook and line (**Alternative 2**) and commercial longline (**Preferred Alternative 3**) seasons may reduce the number of fish on the market at a given time and increase the profitability of commercial longline businesses. It would also allow the longline fishery to remain open closer to Lent when prices for fish increase.
- The farther apart the two seasons the higher likelihood of avoiding low prices due to a flooded market, assuming golden tilefish are available in highly reliant communities at the time. **Sub-alternative 3c** would offset the hook and line and longline seasons the furthest followed by **Sub-alternative 3b**, **Preferred Sub-alternative 3a** and **Alternative 1 (No Action)**.

Committee Action:

- REVIEW PUBLIC HEARING COMMENTS
- REVIEW ALTERNATIVES AND ANALYSES

Action 4. Modify recreational accountability measures for golden tilefish.

Purpose of Action: Modifications to recreational accountability measures for golden tilefish are being considered to prevent recreational landings from exceeding the ACL and correcting for overages if they occur.

Post-Season Recreational AMs		
	Trigger	Accountability Measure
Alternative 1 (No action)	<ul style="list-style-type: none"> Recreational landings exceed the recreational ACL Golden tilefish is identified as overfished; The combined commercial and recreational ACL is exceeded in the same calendar year. <p>All triggers must be met.</p>	Recreational landings will be monitored for a persistence in increased landings and if deemed necessary, in the following fishing year reduce the length of the recreational fishing season and the recreational ACL by the amount of the recreational ACL overage.
Alternative 2	<ul style="list-style-type: none"> Recreational landings exceed the recreational ACL 	Recreational landings will be monitored for a persistence in increased landings and if deemed necessary, in the following fishing year reduce the length of the recreational fishing season and the recreational ACL by the amount of the recreational ACL overage.
Preferred Alternative 3	NMFS will annually announce the length of the recreational fishing season based on catch rates from the previous season. The fishing season will start on January 1 and end on the date National Marine Fisheries Service projects the recreational annual catch limit will be met.	

Discussion:

- The intent is that in season accountability measures for golden tilefish would stay in place under all alternatives being considered.
- Council needs to determine if the intent under Alternative 1 and Alternative 2 is to have both a reduction in the length of season and a reduction in ACL by the amount of an overage. Also, if the preferred is retained, the AM will be different than what is now being considered for snowy grouper.

Summary of Biological Effects:

- Biological benefits would be expected to be greater for the alternative that provides the most timely and realistic option chosen to trigger and implement an AM.

- Under **Alternative 1 (No Action)**, an in-season closure would likely not be triggered due to need for both the total and recreational ACL to be exceeded AND for the stock to be overfished.
- Biological benefits to the golden tilefish stock would be greatest under **Preferred Alternative 3**, followed by **Alternative 2** and **Alternative 1 (No Action)** relative to each other.

Summary of Economic Effects:

- **Alternative 1 (No Action)** could result in short-term economic benefits for the recreational sector due to increased harvest and long-term potential economic costs to fishery participants. This alternative would not occur if the species is not overfished, therefore the economic effects are dependent on the status of the golden tilefish stock.
- The economic effects of **Alternative 2** would likely be similar to those of **Alternative 1 (No Action)**, but the AM would occur regardless of the stock status, thus has a higher likelihood of occurring.
- **Alternative 3** would result in a fishing season that is announced annually with set start and end dates. This AM would limit overall long-term harvest of golden tilefish but could result in economic benefits that mitigate the short-term cost of the AM itself by allowing more time to adjust to the changing harvest regulations through a consistent announcement of the season length.

Summary of Social Effects:

- AMs can have direct and indirect social effects because, when triggered, can restrict harvest in the current season or subsequent seasons.
- **Alternative 1 (No Action)** would not modify the current recreational AMs for golden tilefish (a season length reduction provision if overfished and stock ACL is exceeded). Inconsistent fishing seasons can make it challenging for private anglers and for-hire business to plan their fishing activities through the long-term.
- **Alternative 2** would reduce the following fishing season in response to landings exceeding the recreational ACL. The fishing season may vary significantly from year to year due to changes in fishing behavior or environmental conditions. Inconsistent fishing seasons can make it challenging for private anglers and for-hire business to plan their fishing activities through the long-term.
- **Preferred Alternative 3** would have NMFS announce the length of the recreational season for golden tilefish in the Federal Register prior to the start date each year, with an end date corresponding to when the recreational ACL is projected to be met for that year. While the end date for golden tilefish may shift each year, announcing at the beginning of the season would allow private anglers and for-hire businesses to plan their activities around the closure in advance.

Committee Action:

- REVIEW PUBLIC HEARING COMMENTS
- REVIEW ALTERNATIVES AND ANALYSES

Action 5. Modify blueline tilefish recreational bag limit.

Purpose of Action: The Council is considering lowering the recreational bag limit to lower the chance of the sector having overages and exceeding the ACL. In the last six years, landings of blueline tilefish in the South Atlantic region have often exceeded the sector and total ACL.

Note: Council can select more than one alternative to address bag limit modification as well as retention of blueline tilefish by captain and crew.

Alternative 1 (No Action). The current recreational blueline tilefish bag limit is 3 per person per day. Captains and crew of for-hire vessels with valid Federal South Atlantic Charter/Headboat Snapper Grouper Permits are allowed to retain bag limit quantities of all snapper grouper species during the open recreational season.

Preferred Alternative 2. Reduce recreational blueline tilefish bag limit to 2 fish per person per day.

Alternative 3. Reduce recreational blueline tilefish bag limit to 1 fish per person per day.

Preferred Alternative 4. Do not allow retention of blueline tilefish by captain and crew.

Discussion:

The Council is considering lowering the recreational bag limit to lower the chance of the sector having overages and exceeding the ACL. In the last six years, landings of blueline tilefish in the South Atlantic region have often exceeded the sector and total ACL.

Summary of Biological Effects:

- Reduction of the recreational bag limit under **Alternative 2** and **Alternative 3** would be expected to have a positive biological effect on the stock with less recreational pressure on the stock.
- **Alternative 4** would also lead to less recreational harvest if captain and crew are not allowed to retain bag limit quantities on each fishing trip.
- Action alternatives (**Alternative 2, Alternative 3 and Alternative 4**) could result in a lengthened recreational fishing season due to this reduction in recreational harvest which could lead to an increase in discards of co-occurring species.

Note: See Appendix F of the draft amendment for more details on the data analysis.

The percentage of trips by blueline tilefish harvest per person per day and by mode (Headboat, charter, and private) are shown in **Figure 3** (including captain and crew), and **Figure 4** (excluding captain and crew).

To explore the percent reduction in harvest to each component of the recreational sector, data from 2017 through 2021 were used (**Table 6**).

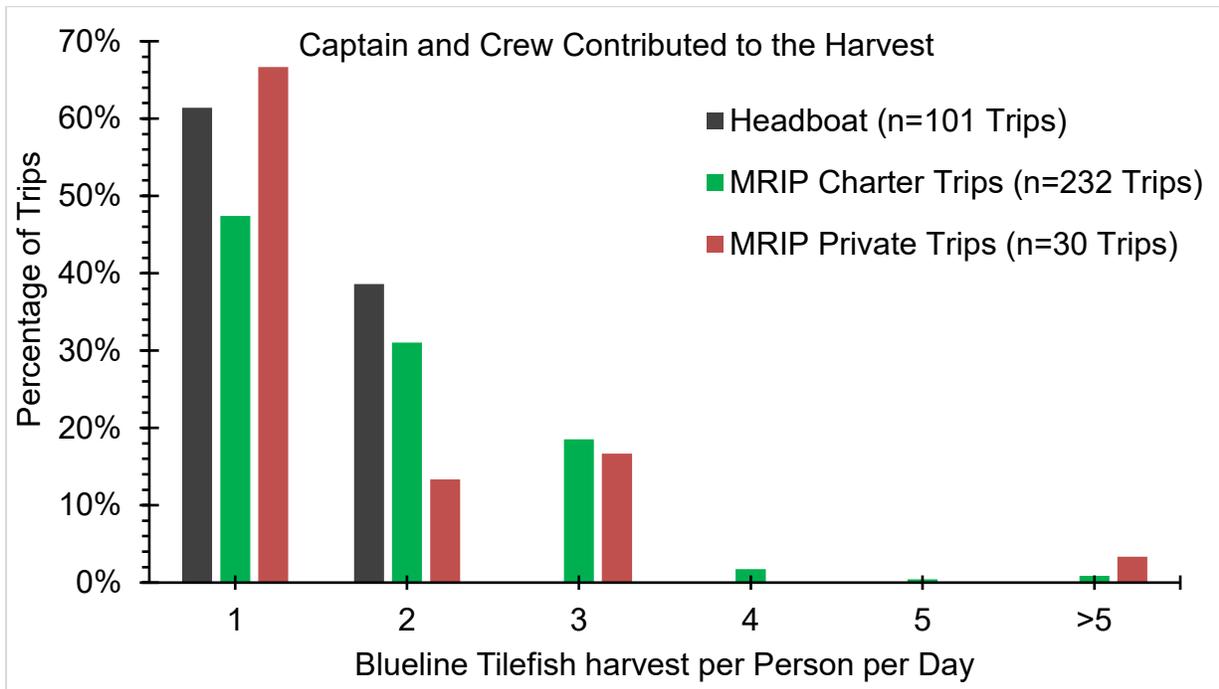


Figure 3. Percentage of trips for a range of South Atlantic blueline tilefish harvested per person by dataset and by mode.

Note: The harvest per person includes captain and crew to the contribution of the fish per person per day harvest. Data is from 2017 through 2021, and data from both Headboat and MRIP are provided.

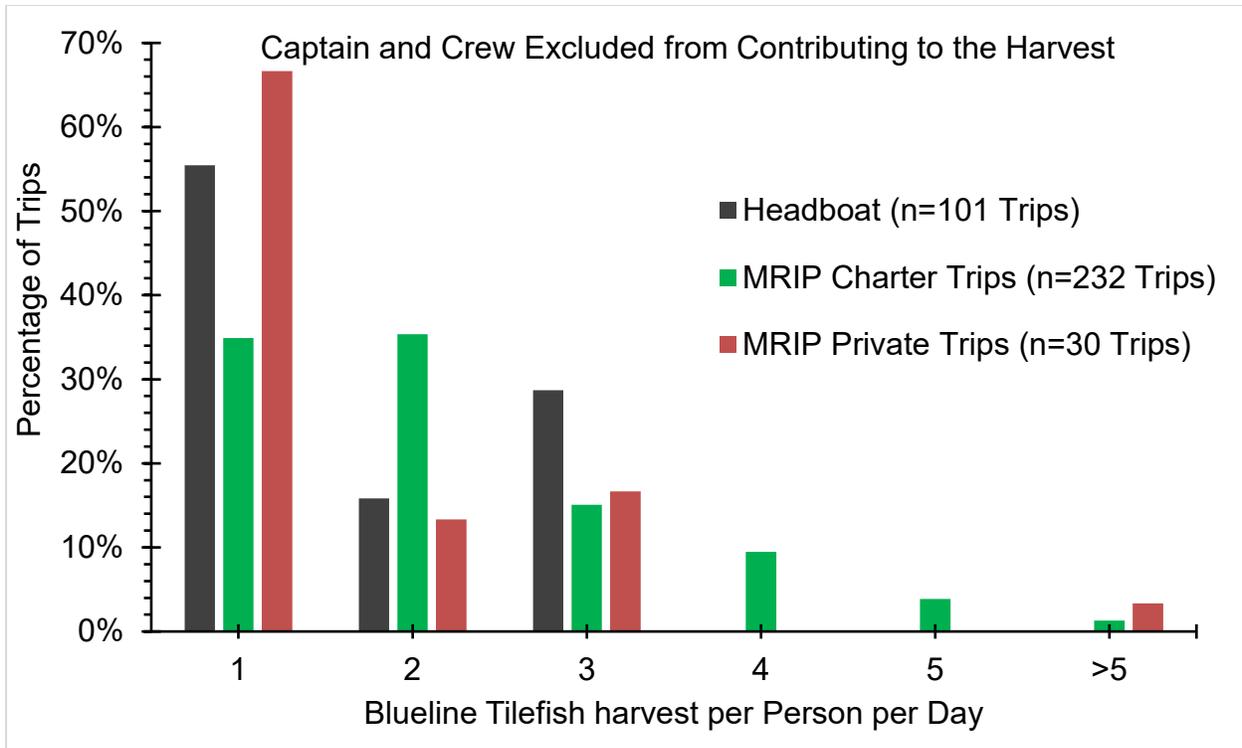


Figure 4. Percent of South Atlantic blueline tilefish harvested per person by dataset and mode.

Note: The harvest per person excludes captain and crew from contributing to the fish per person per day harvest. Data is from 2017 through 2021, and data from both Headboat and MRIP are provided.

In recent years the majority (about 72%) of the South Atlantic recreational blueline tilefish landings came from MRIP charter mode (**Table 6**). Percent reductions weighted by each mode’s contribution to the landings are presented in **Table 7**.

Table 6. Percent of South Atlantic blueline tilefish recreational landings by mode during the open season from 2017 to 2021.

Mode	Percentage of Landings
MRIP Charter	71.6%
MRIP Private	1.9%
Headboat	26.6%

Note: The open season is May 1 through August 31. Percentages were based on the recreational landings in pounds whole weight.

Table 7. Adjusted percent reductions of South Atlantic blueline tilefish recreational landings.

Alternative	Adjusted Reductions
Alternative 1: 3 Fish per Person	0.0%
Preferred Alternative 2: 2 Fish per Person	8.5%
Alternative 3: 1 Fish per Person	35.1%
Preferred Alternative 4: No Retention for Captain and Crew	3.7%

Note: Adjusted percent reductions of South Atlantic blueline tilefish recreational landings. The percent reductions were adjusted by weighting the percent reductions by mode by the recreational landings for each mode during the open season from 2017 to 2021 (see Appendix F in the draft amendment). Percentages are based on the recreational landings by mode in pounds whole weight.

Summary of Economic Effects:

- Setting the bag limit at 2 fish (**Preferred Alternative 2**) or 1 fish per person (**Alternative 3**) would have greater negative economic effects on a trip-level due to constraining harvest and related CS.
- Removing a captain and crew bag limit (**Preferred Alternative 4**) may also constrain harvest leading to similar effects in comparison to **Alternative 1 (No Action)**.
- Conversely, more restrictive retention limits would allow for longer open harvest seasons. **Preferred Alternative 2** is estimated to result in an estimated decrease in CS of \$273,922 and **Preferred Alternative 4** is estimated to result in an estimated decrease in CS of \$119,268 (**Table 7**).

Table 7. Estimated reduction in recreational harvest of blueline tilefish and associated reductions in CS.

Alternative	Estimated Reduction in Harvest (%) ^a	Estimated Reductions (#s of Fish) ^b	Estimated Reduction in CS (2020 \$) ^c
Alternative 1 (No Action)	0.00%	-	-
Preferred Alternative 2	8.50%	4,498	\$273,993
Alternative 3	35.10%	18,572	\$1,131,430
Preferred Alternative 4	3.70%	1,958	\$119,268

^aReductions are based upon Table 7 in Appendix F in the draft amendment document.

^bBased on 5-year average landings and an average weight of 3.7 lbs ww per blueline tilefish.

^cBased on a CS estimate of \$60.92 which is for the second grouper kept on a recreational trip is used (2020 \$). This marginal value estimate is used as a proxy value since one is not currently available specifically for blueline tilefish.

Summary of Social Effects:

- In general, a reduction in the recreational bag limit (**Preferred Alternative 2** and **Alternative 3**) or prohibiting retention of fish by captain and crew (**Preferred**

Alternative 4) may help slow the rate of harvest, lengthen a season, and prevent the ACL from being exceeded.

- Bag and vessel limits that are too low may make fishing trips inefficient and lower angler satisfaction.
- The higher bag limit under **Alternative 1 (No Action)** would likely have little effect on recreational fishermen in the short-term but could result in negative effects in the future if the recreational ACL is regularly exceeded.
- Slowing the rate of harvest and ensuring sustainable of harvest of the blueline tilefish stock would provide for long-term social benefits.
- If slowing the rate of harvest and lengthening the season provides additional fishing opportunities to the recreational fishing communities, **Alternative 3** (35% reduction in landings) would be the most beneficial, followed by **Preferred Alternative 2** (8.5%), **Preferred Alternative 4** (3.7%), and **Alternative 1 (No Action)**.

Committee Action:

- REVIEW PUBLIC HEARING COMMENTS
- REVIEW ALTERNATIVES AND ANALYSES

Action 6. Modify blueline tilefish recreational season.

Purpose of Action:

The Council is modifying the recreational season to reduce recreational harvest and reduce the chance of the sector having overages and exceeding the ACL. In the last six years, landings of blueline tilefish in the South Atlantic region have often exceeded the sector and total ACL.

Alternative 1 (No Action). Do not modify the blueline tilefish recreational season. The current recreational season is May 1-August 31.

Alternative 2. Modify blueline tilefish recreational season to May 1 through July 30.

Alternative 3. Modify blueline tilefish recreational season to June 1 through August 31.

Preferred Alternative 4. Modify blueline tilefish recreational season to May 1 through June 30.

Alternative 5. Modify blueline tilefish recreational season to July 1 through August 31.

Summary of Biological Effects:

- Relative to **Alternative 1 (No Action)** the proposed alternatives could have a positive biological effect to the blueline tilefish stock because they would result in a shortened recreational fishing season.
- **Preferred Alternative 4** and **Alternative 5** would reduce the fishing season the most. However, blueline tilefish spawn from March to October, with peak activity occurring in May.
- All of the proposed alternatives are expected to have negative biological impacts on the stock as they all encompass some portion of the spawning season in the South Atlantic.
- A shortened season could result in an increase in regulatory discards. Blueline tilefish are a deepwater species and consequently experience high release mortality.

Note: See Appendix C for more details on the data analysis.

Table 8. provides the blueline tilefish recreational landings (Headboat and MRIP CHTS landings) from 2016 through 2021 by two-month wave. See Appendix F of the draft amendment for additional detail. Since March of 2015 Amendment 32 implemented the blueline tilefish recreational sector to only be open from May 1 through August 31, and **Table 8.** has this open season time period shaded in green. The summary recent recreational landings (**Table 8.**) reveals that there is blueline tilefish harvest occurring outside of the current open season (May through August). **Table 8.** provides the percentage of recreational landings by year within and outside the current recreational season. The amount of blueline tilefish recreational landings harvested outside of the open season ranges from 1% to 38% per year (**Table 9**). From 2016 through 2021 about 9.8% of the blueline tilefish recreational landings occurred outside of the open season.

Table 8. South Atlantic blueline tilefish recreational landings by two-month wave from 2016 through 2021. The green shaded area is the open season when blueline tilefish harvest is allowed. The landings are in pounds whole weight.

Year	Wave						Total
	Jan/Feb	Mar/Apr	May/Jun	July/Aug	Sep/Oct	Nov/Dec	
2016	10,376	2,919	15,336	156,976	391	0	185,998
2017	2,940	50,666	50,030	56,908	1,547	9,364	171,455
2018	268	4,133	34,173	71,544	346	0	110,463
2019	10,450	1,855	38,299	58,662	169	681	110,116
2020	0	1,020	46,893	340,258	0	14,631	402,802
2021	116	256	57,164	109,403	227	0	167,165

Table 9. Comparison of the South Atlantic blueline tilefish recreational landings that occur outside the open season against percentage of recreational landings from inside the open season by year. The open season is May 1 through August 31.

Year	% Landings Outside Open Season	% Landings from Open Season
2016	7.4%	92.6%
2017	37.6%	62.4%
2018	4.3%	95.7%
2019	11.9%	88.1%
2020	3.9%	96.1%
2021	0.4%	99.6%
2016-2021	9.8%	90.2%

Note: The “2016-2021” results is from summing the recreational landings from 2016 to 2021 and calculating the percentages.

Monthly recreational landings were used to generate three potential future recreational landings scenarios: 1) three year average of the most recent years of complete data (2019, 2020, and 2021), 2) five year average of the most recent years of complete data (2017 through 2021), and 3) the maximum landings in the last five years of complete data. The year with the maximum recreational landings in the last five years is 2020. The monthly landings are shown in Figure 5.

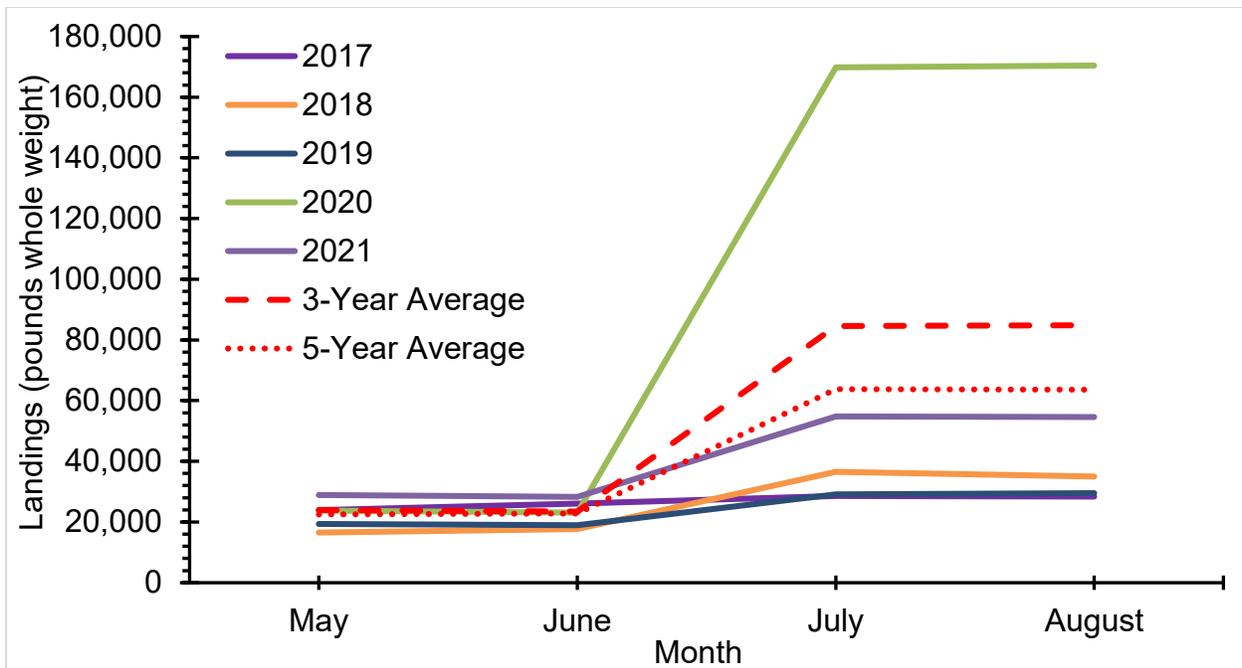


Figure 5. South Atlantic blueline tilefish recreational landings by month from 2017 through 2021, three-year average, and five year average for the open season.

Analyses were conducted to predict when the recreational landings would reach the current recreational ACL for three landings scenarios under the proposed recreational seasons and the proposed bag limit reduction in Action 6 (**Table 10**). There would be no expected closures under a bag limit of 2 fish per person per day with no retention by captain and crew (Preferred Alternatives 2 and 4 in Action 6) and a May-June recreational season (**Preferred Alternative 4** under this action).

Table 10. The projected closure dates for the South Atlantic blueline tilefish recreational sector for the Amendment 52 action 7 open season alternatives with the impact of Action 6 bag limit Alternatives.

Open Season Alternatives	Closure Date		
	Scenario 1: 3-Year Average (2019-2021)	Scenario 2: 5-Year Average (2017-2021)	Scenario 3: Max Landings (2020)
Alternative 1: 3 Fish per Person per Day (Status Quo)			
1. May 1-August 31	26-Jul	4-Aug	13-Jul
2. May 1-July 30	26-Jul	None	13-Jul
3. June 1-August 31	4-Aug	15-Aug	18-Jul

4. May 1- June 30	None	None	None
5. July 1- August 31	12-Aug	26-Aug	22-Jul
Preferred Alternative 2: 2 Fish per Person per Day			
1. May 1- August 31	30-Jul	10-Aug	15-Jul
2. May 1- July 30	30-Jul	None	15-Jul
3. June 1- August 31	8-Aug	20-Aug	20-Jul
4. May 1- June 30	None	None	None
5. July 1- August 31	16-Aug	None	24-Jul
Alternative 3: 1 Fish per Person per Day			
1. May 1- August 31	18-Aug	None	25-Jul
2. May 1- July 30	None	None	25-Jul
3. June 1- August 31	27-Aug	None	29-Jul
4. May 1- June 30	None	None	None
5. July 1- August 31	None	None	2-Aug
Preferred Alternative 4: No Retention for Captain and Crew			
1. May 1- August 31	28-Jul	6-Aug	14-Jul
2. May 1- July 30	28-Jul	None	14-Jul
3. June 1- August 31	5-Aug	17-Aug	18-Jul
4. May 1- June 30	None	None	None
5. July 1- August 31	14-Aug	29-Aug	23-Jul

Note: The projected closure dates for the South Atlantic blueline tilefish recreational sector for the Amendment 52 Action 7 open season alternatives with the impact of the Action 6 bag limit Alternatives. The closure dates were generated from the three different landings scenarios of 1) three-year average of the most recent years of complete data, 2) five-year average of the most recent years of complete data, and 3) the maximum landings in the last five years of complete data. The closure dates were determined with cumulatively summing the recreational landings and comparing them to the ACL (116,820 lbs ww).

Summary of Economic Effects:

- Prolonged time periods when recreational harvest is allowed can result in increased economic benefits.
- If the ACL is not fully harvested during the established season, it can lead to fewer short-term economic benefits, thus there is the potential for **Alternative 2**, **Alternative 3**, **Preferred Alternative 4**, and **Alternative 5** to have lower economic benefits than **Alternative 1 (No Action)**.
- **Alternative 1 (No Action)** provides the longest fishing season (4 months), thus the greatest opportunity to fully harvest the ACL and the highest potential short-term economic benefits, followed by **Alternative 2** and **Alternative 3** (three months), and **Preferred Alternative 3-4** and **Alternatives 4-5** (two months).

Summary of Social Effects:

- Imposing a recreational season could change the level of access to blueline tilefish during periods when they are available and when participation in the blueline tilefish portion of the snapper grouper fishery is highest.
- Social benefits for individual communities highly engaged in the recreational blueline tilefish fishery will vary based on when participation in the fishery is the highest in that community.

Committee Action:

- REVIEW PUBLIC HEARING COMMENTS
- REVIEW ALTERNATIVES AND ANALYSES

Action 7. Modify recreational accountability measures for blueline tilefish.

Purpose of Action: The Council is considering modifying the recreational accountability measures to increase the ability to ensure the sector stays within the recreational ACL and address overages regardless of whether the stock is overfished or the total ACL was exceeded. In the last six years, landings of blueline tilefish in the South Atlantic region have often exceeded the sector and total ACL.

	Post-season Recreational AMs	
	Trigger	Accountability Measure
Alternative 1 (No action)	<ul style="list-style-type: none"> Recreational landings exceed the recreational ACL Blueline tilefish is identified as overfished; The combined commercial and recreational ACL is exceeded in the same calendar year. <p>All triggers must be met.</p>	Recreational landings will be monitored for a persistence in increased landings and if deemed necessary, in the following fishing year reduce the length of the recreational fishing season and the recreational ACL by the amount of the recreational ACL overage.
Alternative 2	<ul style="list-style-type: none"> Recreational landings exceed the recreational ACL 	Recreational landings will be monitored for a persistence in increased landings and if deemed necessary, in the following fishing year reduce the length of the recreational fishing season and the recreational ACL by the amount of the recreational ACL overage.
Preferred Alternative 3	NMFS will annually announce the length of the recreational fishing season based on catch rates from the previous season. The fishing season will start on May 1 and end on the date National Marine Fisheries Service projects the recreational annual catch limit will be met.	

Discussion:

- The intent is that in season accountability measures for blueline tilefish would stay in place under all alternatives being considered. However, the Council intends to remove these measures for snowy and they removed them for red porgy, both of which have shortened recreational seasons.
- Council needs to determine if the intent under Alternative 1 and Alternative 2 is to have both a reduction in the length of season and a reduction in ACL by the amount of an overage. Also, if the preferred is retained, the AM will be different than what is now being considered for snowy grouper.

Summary of Biological Effects:

- Biological benefits would be expected to be greater for the alternative that provides the most timely and realistic option chosen to trigger and implement an AM.
- Under **Alternative 1 (No Action)**, the many triggers (recreational ACL and total ACL exceeded and the stock being overfished) would likely result in the AM not being triggered.
- **Alternative 2** would allow for the correction of overages of the recreational ACL in the following fishing season without the total ACL also needing to be exceeded and the stock declared overfished. As such, this alternative would be more effective at correcting for overages. In combination with the current in-season AM, this alternative would be biologically beneficial to the blueline tilefish stock as it would prevent overfishing from occurring and correct for overages if they occur.
- Biological benefits to the golden tilefish stock would be greatest under **Preferred Alternative 3**, followed by **Alternative 2** and **Alternative 1 (No Action)** relative to each other.

Summary of Economic Effects:

- Recreational AMs typically consist of corrective measures that create short-term indirect negative economic effects by curtailing harvest and fishing activity when harvest has exceeded the sector ACL, thus potentially affecting net revenues of for-hire operations and CS on recreational fishing trips.
- **Alternative 1 (No Action)** would retain a post-season shortening of the season and a potential payback provision for an overage of the sector ACL that would reduce the sector ACL by the amount of the overage as long as blueline tilefish are overfished. There would continue to be no safeguard in place outside of the existing season to prevent the total ACL from being exceeded. This could result in short-term economic benefits for the recreational sector due to increased harvest and long-term potential economic costs to fishery participants. If a reduced fishing season is implemented in Action 7, these potential economic effects would be largely mitigated.
- The economic effects of **Alternative 2** would likely be similar to those of **Alternative 1 (No Action)**, but the AM would occur regardless of the stock status, thus has a higher likelihood of occurring.
- **Alternative 3** would result in a fishing season that is announced annually and would limit overall long-term harvest of blueline tilefish but could result in economic benefits that mitigate the short-term cost of the AM itself by allowing more time to adjust to the changing harvest regulations through a consistent announcement of the season length.

Summary of Social Effects:

- AMs can have direct and indirect social effects because, when triggered, can restrict harvest in the current season or subsequent seasons.
- While the negative effects are usually short-term, they may at times induce other indirect effects through changes in fishing behavior or business operations that could have long-term

social effects. While these negative effects are usually short term, they may at times induce other indirect effects that can have a lasting effect on a community.

- **Alternative 1 (No Action)** would not modify the current recreational AMs for blueline tilefish and overall longer seasons result in increased fishing opportunities for the recreational sector and increased revenue opportunities for the for-hire sector.
- Under **Alternative 2**, the fishing season may vary significantly from year to year due to changes in fishing behavior or environmental conditions. Inconsistent fishing seasons can make it challenging for private anglers and for-hire business to plan their fishing activities through the long-term.
- With **Alternative 3**, the end date for blueline tilefish may shift each year, announcing at the beginning of the season would allow private anglers and for-hire businesses to plan their activities around the closure in advance.

Committee Action:

- REVIEW PUBLIC HEARING COMMENTS
- REVIEW ALTERNATIVES AND ANALYSES

**DRAFT MOTION: APPROVE ALL ACTIONS FOR SNAPPER GROUPE
AMENDMENT 52**

Appendix A.

Table A1. Table of past and present ABC, ACLs, landings, and closures for golden tilefish.

Management Measures	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
ABC (gw)	668,000	668,000	668,000	655,000	558,000	558,000	323,000	342,000	342,000	342,000
Total ACL (gw)	625,000	625,000	625,000	625,000	558,000	558,000	323,000	342,000	342,000	342,000
Com. ACL H&L(gw)	541,295	541,295	135,324	135,324	135,324	135,324	79,328	82,935	82,935	82,935
Com. ACL LL (gw)	Combined	Combined	405,971	405,971	405,971	405,971	234,982	248,805	248,805	248,805
Com. Landings H&L (gw)	517,188	537,946	144,678	143,872	121,962	131,941	74,445	85,141	87,616	82,279
Com. Landings LL (gw)			564,421	389,244	411,367	405,691	227,554	282,676	256,676	242,051
Com. Overage/ Underage H&L(%) Closure Date	95.5 2/17/12	99.4 5/5/13	106.9 8/29/14	106.3 12/8/15	90.1	97.5 11/29/17	93.8 8/14/18	102.7 7/23/19	105.6 7/23/20	100.8 6/1/21
Com. Overage/ Underage LL (%) Closure Date			139 3/5/14	95.9 2/19/15	101.3 3/15/16	99.9 5/19/17	96.8 3/25/18	113.6 3/14/19	103.1 2/18/20; 3/14- 23/20	94.3 2/10/21: 3/20- 30/21
Rec. ACL (# of fish)	3,019	3,019	3,019	3,019	3,019	3,019	2,187	2,316	2,316	2,316
Rec. Landings, "Old" MRIP (# of fish)	3,627	4,143	1,357	3,595	13,010	1,746	3,112	15,638	2,894	2,539
Rec. Overage/ Underage (%) Closure Date	120.1	137.2 6/3/13	44.9 6/7/14	119.1 8/11/15	430.9 8/27/16	57.8	142	675	125	110

Appendix B.

Table B1. Table of past and present ABC, ACLs, landings, and closures for Blueline Tilefish.

Management Measures	2014	2015	2016	2017	2018	2019	2020	2021
ABC (ww)			224,100	224,100	224,100	224,100	233,968	233,968
Total ACL (ww)			174,798	174,798	174,798	174,798	233,968	233,968
Com. ACL (ww)	112,207	17,841	87,521	87,521	87,521	87,521	117,148	117,148
Com. Landings (ww)	159,300	80,337	100,392	87,558	93,051	95,904	116,563	119,781
Com. Overage/Underage (%)	142.0	450.3	114.71	100.04	106.32	109.58	99.50	102.20
Comm. closure date		4/7/15	6/1/16 Reopened 7/13/16; 8/30/16	7/18/17 Reopened 10/24/17- 11/1/17	8/22/18	7/30/19	8/11/20	8/1/21
Rec. ACL (ww)	111,893	17,791	87,277	87,277	87,277	87,277	116,820	116,820
Rec. Landings, MRIP-CHTS (ww)	95,712	45,323	172,286	153,959	116,597	110,113	392,253	189,224
Rec. Overage/Underage (%)	85.5	254.8	197.40	176.40	133.59	126.16	335.78	161.98
Rec. Closure date		6/10/15						

Note: Prior to 2014 Blueline Tilefish was part of the Deepwater Complex. 2021 Recreational landings are preliminary wave 1-4 MRIP landings. Recreational landings were provided from the Southeast Fisheries Science Center on October 25, 2021 and include both MRIP-CHTS and Southeast Region Headboat Survey landings.

Appendix C. Data and Analyses.

Analyses for South Atlantic Golden Tilefish and Blueline Tilefish are contained in Appendix F of the Draft Amendment 52 document.