



THE SOUTH ATLANTIC FISHERY MANAGEMENT COUNCIL

Coastal Migratory Pelagics Framework Amendment 13

Atlantic migratory group Spanish mackerel catch levels

Decision Document

December 2023

Background

Framework Amendment 13 to the Fishery Management Plan (FMP) for Coastal Migratory Pelagic (CMP) Resources in the Gulf of Mexico and Atlantic Region (CMP FMP) would change catch limits for Atlantic migratory group Spanish mackerel (Atlantic Spanish mackerel) based on the most recent stock assessment, SEDAR 78. The SEDAR 78 indicated, consistent with the original stock status determined by SEDAR 28, that Atlantic Spanish mackerel are not overfished or undergoing overfishing. Based on the results of SEDAR 78, the SSC made new Atlantic Spanish mackerel catch level recommendations for the South Atlantic Fishery Management Council (Council) to consider (**Table 1**).

SEDAR 78 update includes revised recreational landings that are based on the Marine Recreational Information Program's (MRIP) newer Fishing Effort Survey (FES) method. In August 2023, NOAA Fisheries published a report, Evaluating Measurement Error in the MRIP Fishing Effort Survey, that summarized results from a small-scale study to evaluate potential sources of bias in the FES. Using data from July to December 2015, the study found that switching the current sequence of survey questions resulted in fewer reporting errors and illogical responses. As a result, effort estimates for shore and private boat anglers were generally 30 to 40 percent lower. NOAA Fisheries is now conducting a large-scale follow up study to gain

a better understanding of differences in effort estimates between the current and revised survey designs. This study will be conducted throughout 2024, with results available the following year.

In September 2023, the Council’s Mackerel Cobia Committee discussed how dependent Framework Amendment 13 is on MRIP-FES data, the federal deadlines associated with completion of the amendment, and whether they were interested in moving forward. Ultimately, the Committee chose to continue work on Framework Amendment 13 noting the importance of moving away from MRIP CHTS to FES to reduce confusion in how the recreational annual catch limit (ACL) is tracked vs. how recreational landings are estimated. Additionally, stakeholders have been awaiting an updated stock assessment for many years and updated catch levels will help guide stakeholder input during upcoming port meetings (see below) for the king and Spanish mackerel fisheries.

Table 1. South Atlantic Scientific and Statistical Committee catch level recommendations for Atlantic migratory group Spanish mackerel, using data resultant from SEDAR 78 (2022).

Criteria		Deterministic		
Overfished evaluation (SSB ₂₀₂₀ /MSST)		1.40		
Overfishing Evaluation (F ₂₀₁₈₋₂₀₂₀ /F _{MSY})		0.77		
MFMT (F _{MSY proxy})		0.516		
SSB _{MSY} (metric tons)		6,406		
MSST (metric tons)		4,804		
MSY (1000 lbs.)		8,210		
Y at 75% F _{MSY} (1000 lbs.)		8,024		
ABC Control Rule Adjustment		10%		
P-Star		40%		
M		0.35		
OFL RECOMMENDATIONS				
Year	Landed (lbs ww)	Discard (lbs ww)	Landed (number)	Discard (number)
2023	8,210,000	581,000	5,413,000	1,147,000
2024	8,210,000	581,000	5,413,000	1,147,000
2025	8,210,000	581,000	5,413,000	1,147,000
2026	8,210,000	581,000	5,413,000	1,147,000
2027	8,210,000	581,000	5,413,000	1,147,000
ABC RECOMMENDATIONS				
Year	Landed (lbs ww)	Discard (lbs ww)	Landed (number)	Discard (number)
2023	8,024,000	469,000	4,977,000	916,000
2024	8,024,000	469,000	4,977,000	916,000
2025	8,024,000	469,000	4,977,000	916,000
2026	8,024,000	469,000	4,977,000	916,000
2027	8,024,000	469,000	4,977,000	916,000

The intent of Framework Amendment 13 to the CMP FMP is to revise the ACL, optimum yield (OY), and recreational annual catch target (ACT) for Atlantic Spanish mackerel based on the SSC’s recommendations.

Actions in this Framework Amendment

Action 1. Revise the acceptable biological catch, annual optimum yield, total annual catch limit, sector annual catch limits, and commercial zone quotas for Atlantic migratory group Spanish mackerel to reflect the updated acceptable biological catch level.

Objectives for this Meeting

- Review annual catch limit analysis.
- Consider whether to set a long-term optimum yield.
- Approve action and alternatives to be analyzed.

Tentative Amendment Timing

PROCESS STEP	DATE
✓ Council directs staff to start work on an amendment.	June 2023
✓ Council reviews options paper and approves amendment for scoping.	September 2023
✓ Mackerel Cobia Advisory Panel (MC AP) makes recommendations for the Council to consider.	November 2023
Council reviews MC AP and scoping comments and approves action/alternatives to be analyzed.	December 2023
Council reviews draft amendment, selects preferred alternatives, and approves for public hearings.	March 2024
Council reviews the draft amendment, conducts public hearings, and approves for formal review.	June 2024
CMP Framework Amendment 13 transmitted for Secretarial Review.	Summer 2024
Regulations implemented	2024/2025

Purpose and Need Statement

The *purpose* of this amendment is to revise the acceptable biological catch, annual catch limits, annual optimum yield? and recreational annual catch target for Atlantic migratory group Spanish mackerel, based on the results of the latest stock assessment.

The *need* for this amendment is to ensure catch limits are based on the best scientific information available and to ensure overfishing does not occur in the Atlantic migratory group Spanish mackerel fishery.

Proposed Action and Alternatives

Action 1. Revise the acceptable biological catch, annual optimum yield?, total annual catch limit, sector annual catch limits, and commercial zone quotas and for Atlantic migratory group Spanish mackerel.

***Purpose of Action:** Update the Atlantic Spanish mackerel catch levels to be consistent with SEDAR 78, SSC recommendations, and the best scientific information available. The Council may consider setting the Atlantic Spanish mackerel total ACL at the same level as the ABC recommended by the SSC or may consider including a buffer between the two values.*

Alternative 1 (No Action). The total annual catch limit and annual optimum yield for Atlantic migratory group Spanish mackerel are equal to the current acceptable biological catch (6,057,000 pounds as landed). The current acceptable biological catch is inclusive of recreational estimates from the Marine Recreational Information Program’s Coastal Household Telephone Survey.

Alternative 2. Revise the acceptable biological catch for Atlantic migratory group Spanish mackerel and set it equal to the most recent recommendation from the Scientific and Statistical Committee. Revise the total annual catch limit and annual optimum yield for Atlantic migratory group Spanish mackerel and set them equal to the recommended acceptable biological catch. Revise the sector annual catch limits and commercial zone quotas based on current allocation percentages. The recommended acceptable biological catch is inclusive of recreational estimates from the Marine Recreational Information Program’s Fishing Effort Survey.

ABC	Buffer	Total ACL	Rec. ACL	Rec. ACT	Comm. ACL	Comm. Northern Zone	Comm. Southern Zone
8,024,000	None	8,024,000	3,610,800	3,112,510	4,413,200	882,640	3,530,560

Note: catch levels are in pounds as landed.

Alternative 3. Revise the acceptable biological catch for Atlantic migratory group Spanish mackerel and set it equal to the most recent recommendation from the Scientific and Statistical Committee. Revise the total annual catch limit and annual optimum yield for Atlantic migratory group Spanish mackerel and set them equal to 95% of the recommended acceptable biological catch. Revise the sector annual catch limits and commercial zone quotas based on current allocation percentages. The recommended acceptable biological catch is inclusive of recreational estimates from the Marine Recreational Information Program’s Fishing Effort Survey.

ABC	Buffer	Total ACL	Rec. ACL	Rec. ACT	Comm. ACL	Comm. Northern Zone	Comm. Southern Zone
8,024,000	5%	7,622,800	3,430,260	2,956,884	4,192,540	838,508	3,354,032

Note: catch levels are in pounds as landed.

Alternative 4. Revise the acceptable biological catch for Atlantic migratory group Spanish mackerel and set it equal to the most recent recommendation from the Scientific and Statistical Committee. Revise the total annual catch limit and annual optimum yield for Atlantic migratory group Spanish mackerel and set them equal to 90% of the recommended acceptable biological catch. Revise the sector annual catch limits and commercial zone quotas based on current allocation percentages. The recommended acceptable biological catch is inclusive of recreational estimates from the Marine Recreational Information Program’s Fishing Effort Survey.

ABC	Buffer	Total ACL	Rec. ACL	Rec. ACT	Comm. ACL	Comm. Northern Zone	Comm. Southern Zone
8,024,000	10%	7,221,600	3,249,720	2,801,259	3,971,880	794,376	3,177,504

Note: catch levels are in pounds as landed.

Discussion

Optimum Yield: OY is the harvest level for a species that achieves the greatest overall benefit, including economic, social, and biological considerations. OY is different from maximum sustainable yield (MSY) in that MSY considers only the biology of the species. MSY constitutes a “ceiling” for OY. OY may be lower than MSY, depending on relevant economic, social, or ecological factors. The South Atlantic Council has typically established annual OY values for coastal migratory pelagic species but could consider establishing a with a long-term OY, as had been discussed for some snapper grouper species.

Sector Allocations: Sector allocations for Atlantic Spanish mackerel were originally established in Amendment 2 to the CMP FMP based on the average ratio of catch from 1979 through 1985, resulting in an allocation of 76% to the

For recent commercial and recreational landings, see the [Atlantic Spanish Mackerel Fishery Overview](#).

commercial sector and 24% to the recreational sector. Amendment 4 to the CMP FMP revised sector allocations to be a 50/50 split. Council members at the time felt that because the resource was overfished from 1979-1985, the recreational sector experienced lower catch rates. Additionally, qualitative information indicated that recreational catch was high during the 1970s and was affected by the increase in commercial effort seen in the mid-1970s. Finally, the capacity and demand of both sectors had expanded such that either group could harvest all the available resource, making a 50/50 allocation the most equitable. The current allocation between the commercial (55%) and recreational sector (45%) was established via a 1998 Framework Action (effective September 1999). The commercial sector was regularly meeting or exceeding their allocation while the recreational sector was not reaching their allocation, so the Council shifted 5% of the sector allocation to the commercial sector.

Recreational ACT: The recreational ACT is based on adjusting the ACL by 50% or one minus the five-year average of the proportional standard error (PSE) from the recreational sector,

whichever is greater. The average PSE for the last five fishing seasons (2018-2022) was 13.8% (**Table 2**). The recreational ACT is utilized in the post-season recreational accountability measure for Atlantic Spanish mackerel. If the recreational landings exceed the recreational ACL and the sum of the commercial and recreational landings exceeds the total ACL, the bag limit may be reduced for the following fishing year by the amount necessary to ensure recreational landings may achieve the recreational ACT, but do not exceed the recreational ACL.

Table 2. The PSEs for Atlantic Spanish mackerel from harvest estimates for all recreational modes.

Fishing Year	2018/2019	2019/2020	2020/2021	2021/2022	2022/2023	5-Year Average
PSE Value	13.3	11.8	15.1	13.8	15	13.8

Commercial Quota Allocations Commercial quota allocations between the Northern Zone and Southern Zone were established in Amendment 20B to the CMP FMP (effective March 2015) and are based on the average proportion of commercial landings in each zone from the 2002/2003 fishing season through the 2011/2012 fishing season, resulting in an allocation of 19.9% to the Northern Zone and 80.1% to the Southern Zone.

Scoping Comments:

No scoping comments were submitted for Framework Amendment 13.

Mackerel Cobia Advisory Panel Comments:

- Allocation between the recreational and commercial sector and the commercial Northern Zone and Southern Zone will need to be addressed.
- There is no need for a buffer between the acceptable biological catch (ABC) and the annual catch limit (ACL).
 - The commercial sector has reliable reporting of Atlantic Spanish mackerel.
 - The recreational annual catch target (ACT) addresses uncertainty in private recreational landings.
- AP members expressed concern about how closures or a reduced bag limit in the commercial and recreational sectors, respectively, may affect dead discard estimates.
- There needs to be a mechanism to accurately account for private recreational landings and it should be similar to how commercial fishermen are required to report their catch.

MOTION 1: SELECT ALTERNATIVE 2 AS THE MACKEREL COBIA AP’S PREFERRED ALTERNATIVE.

Action 1. Revise the acceptable biological catch, annual optimum yield, total annual catch limit, sector annual catch limits, and commercial zone quotas and for Atlantic migratory group Spanish mackerel.

Alternative 2. Revise the acceptable biological catch for Atlantic migratory group Spanish mackerel and set it equal to the most recent recommendation from the Scientific and Statistical Committee. Revise the total annual catch limit and annual optimum yield for Atlantic migratory group Spanish mackerel and set them equal to the recommended acceptable biological catch. Revise the sector annual catch limits and commercial zone quotas based on current allocation percentages. The recommended acceptable biological catch is inclusive of recreational estimates from the Marine Recreational Information Program’s Fishing Effort Survey.

MOTION APPROVED (11-0-1)

Annual Catch Limit Analysis:

Analyses were conducted to determine whether or not closures would occur for the commercial and recreational sectors (**Appendix A** and **Appendix B**, respectively) under alternatives proposed in Action 1. Closures were predicted based on three different landings scenarios:

1. **Highest Landings:** highest single fishing year of landings for the last five years.
 - a. Commercial Northern: 2021/2022
 - b. Commercial Southern: 2018/2019
 - c. Recreational: 2021/2022
2. **Three-Year Average:** average landings for the last three fishing years.
 - a. 2019/2020-2021/2022
3. **Five-Year Average:** average landings for the last five fishing years
 - a. 2017/2018-2021/2022.

The earliest the **commercial Northern Zone** is predicted to close in federal waters is August 21st (**Alternative 4**, highest landings scenario). The latest the commercial Northern Zone is predicted to close is September 12th (**Alternative 2**, five-year average scenario) (**Table 3**).

Table 3. The projected closure dates for the Northern Zone commercial quotas proposed in Amendment 13 for three different landings scenarios.

	Closure Dates			
	Quota	Highest Landings	3-Year Average	5-Year Average
Alternative 2	882,640	3-Sep	6-Sep	12-Sep
Alternative 3	838,508	27-Aug	31-Aug	6-Sep
Alternative 4	794,376	21-Aug	25-Aug	30-Aug

The commercial **Southern Zone** is not predicted to close in federal waters under any of the alternatives and landing scenarios. However, the commercial Southern Zone operates under an adjusted quota trip limit system. The adjusted quota is equal to the total Southern Zone quota

minus 250,000 pounds. The trip limit at the start of the fishing year is 3,500 pounds. Once 75% of the adjusted quota has been met, the trip limit steps down to 1,500 pounds. Once the total adjusted quota has been met, the trip limit steps down to 500 pounds. Finally, once the full Southern Zone quota has been met, the fishery is closed in federal waters. Trip limit step downs are predicted to occur as early as January 5th (**Alternative 4**, highest landings scenario) or as late as January 17th (**Alternative 2**-, three- and five-year average scenarios) (**Table 4**).

Table 4. Spanish mackerel Southern Zone predicted dates when 75% of the Adjusted Southern Zone quota, Adjusted Southern Zone Quota, and Quota are met for the three different predicted landings scenarios.

	75% of Adjusted Southern Zone Quota Met	Adjusted Southern Zone Quota Met	Quota Met
Highest Landings			
Alternative 2	12-Jan	14-Feb	No Closure
Alternative 3	8-Jan	4-Feb	No Closure
Alternative 4	5-Jan	28-Jan	No Closure
3-Year Average			
Alternative 2	17-Jan	26-Feb	No Closure
Alternative 3	14-Jan	15-Feb	No Closure
Alternative 4	10-Jan	5-Feb	No Closure
5-Year Average			
Alternative 2	17-Jan	24-Feb	No Closure
Alternative 3	13-Jan	14-Feb	No Closure
Alternative 4	10-Jan	4-Feb	No Closure

The **recreational sector** is predicted to meet their ACL as early as August 10th (**Alternative 4**, highest landings scenario). The latest the recreational sector is predicted to meet their ACL is October 20th (**Alternative 2**, five-year average scenario) (**Table 5**).

Table 5. The projected closure dates for the recreational ACLs proposed in Framework Amendment 13 for three different landings scenarios.

	ACL	Closure Dates		
		Highest Landings	3-Year Average	5-Year Average
Alternative 2	3,610,800	23-Aug	13-Sep	20-Oct
Alternative 3	3,430,260	17-Aug	5-Sep	10-Oct
Alternative 4	3,249,720	10-Aug	28-Aug	30-Sep

COMMITTEE ACTION

DISCUSS IF AN LONG-TERM OY FOR ATLANTIC SPANISH MACKEREL IS APPROPRIATE.

REVIEW AND APPROVE ACTION AND ALTERNATIVES FOR INCLUSION IN COASTAL MIGRATORY PELAGICS FRAMEWORK AMENDMENT 13.

Appendix A: Predicting Closure Dates for the Atlantic Spanish Mackerel Commercial Sector

Prepared by Mike Larkin, NMFS SERO Staff.

Introduction

In 2022, a stock assessment was conducted for Atlantic migratory group Spanish mackerel (Atlantic Spanish mackerel) (SEDAR 78). Results from the assessment showed Atlantic Spanish mackerel is not overfished and not experiencing overfishing. Following the results of SEDAR 78, the South Atlantic Fishery Management Council (South Atlantic Council) is exploring changes to both the Northern Zone and Southern Zone commercial quotas for Atlantic Spanish mackerel in Framework Amendment 13 to the Fishery Management Plan (FMP) for Coastal Migratory Pelagic (CMP) Resources in the Gulf of Mexico and Atlantic Regions (CMP FMP). The Northern Zone is from the New York/Connecticut/Rhode Island line to the North Carolina/South Carolina line. The Southern Zone is from the North Carolina/South Carolina line to the Miami-Dade/Monroe County line in Florida. Additionally, the commercial quotas are set in pounds as reported (lbs).

Northern Zone

New York/Connecticut/Rhode Island line to the North Carolina/South Carolina line

Commercial landings data were provided from the Southeast Fisheries Science Center (SEFSC) on September 18, 2023. The Northern Zone has experienced closures in federal waters and quota overages in each of the past five fishing years (2017/2018 through 2021/2022). The federal water closures ranged from as early as June 28th to as late as November 7th. While there were closures in federal waters, Atlantic Spanish mackerel commercial landings could continue in state waters. Commercial landings in recent years were reviewed to determine the percentage of the Northern Zone commercial landings that came from federal waters. Both federal and state waters were open in the Atlantic Spanish mackerel Northern Zone from March through May in 2019, 2020, and 2021. Additionally, both federal and state waters were also open in June of 2018, 2019, and 2020. The data during these time periods resulted in the commercial landings in federal waters accounting for less than 1% of the total commercial landings. Therefore, the majority of the Atlantic Spanish mackerel commercial landings in the northern zone occur in state waters.

When federal waters are closed, states are not required to close state waters. However, in recent years, Maryland, Virginia, and North Carolina implemented a reduced 500-pound trip limit in state waters when the Northern Zone federal waters were closed. A comparison was conducted of monthly commercial landings from recent years with the federal waters open compared to the same month with the federal waters closed. For example, the Northern Zone had federal waters open in August of 2018 (156,001 lbs. landed) and was compared to August of 2021 (207,906 lbs. landed) which had federal waters closed. The results show that, in most months, the Northern Zone Atlantic Spanish mackerel commercial landings were higher when federal waters were closed then in the same months in a different year when the federal waters were open (**Table A-1**).

Table A-1. Northern Zone Spanish mackerel commercial landings (pounds) by month for the fishing years of 2017/2018 through 2021/2022.

Fishing Year	April	May	June	July	August	September	October	Federal Waters Closure Date
2017/2018	329	146,252	110,523	140,260	135,799	141,077	169,032	11/7/2017
2018/2019	620	116,562	144,224	88,867	156,001	114,286	204,656	11/4/2018
2019/2020	5,948	190,711	217,661	215,411	155,697	68,487	100,460	8/24/2019
2020/2021	4,704	231,417	284,444	153,912	121,717	104,939	212,162	7/22/2020
2021/2022	6,267	247,611	266,022	188,036	207,906	216,825	208,684	6/28/2021

Cells with no color had federal waters open the entire month. Cells highlighted in yellow had federal waters closed for part of the month. Cells highlighted in red had federal waters closed the entire month. Landings from March and also November through February had low landings (<5,000 lbs.) and excluded to protect confidentiality.

An estimate of future landings is required to explore if the Framework Amendment 13 proposed commercial quotas will be met, and the federal waters closed. The Atlantic Spanish mackerel commercial sector has a fishing year from March 1st to February 29th. Three different scenarios were used for predicting future Northern Zone commercial landings for March through May: 1) using the highest fishing year of commercial landings in the past five years (fishing year 2021/2022), 2) three-year average of landings for the past three fishing years (2019/2020 to 2021/2022), and 3) five-year average of landings for the past five fishing years (2017/2018 to 2021/2022) (**Figure A-1**). Due to closures in the Northern Zone after May a patchwork of monthly commercial landings was used for predicting June through February landings. Predicted June landings came from a three-year average of the June 2018, 2019, and 2020 landings. Predicted July through February landings came from the 2021/2022 fishing year since this is the most recent year of complete commercial landings.

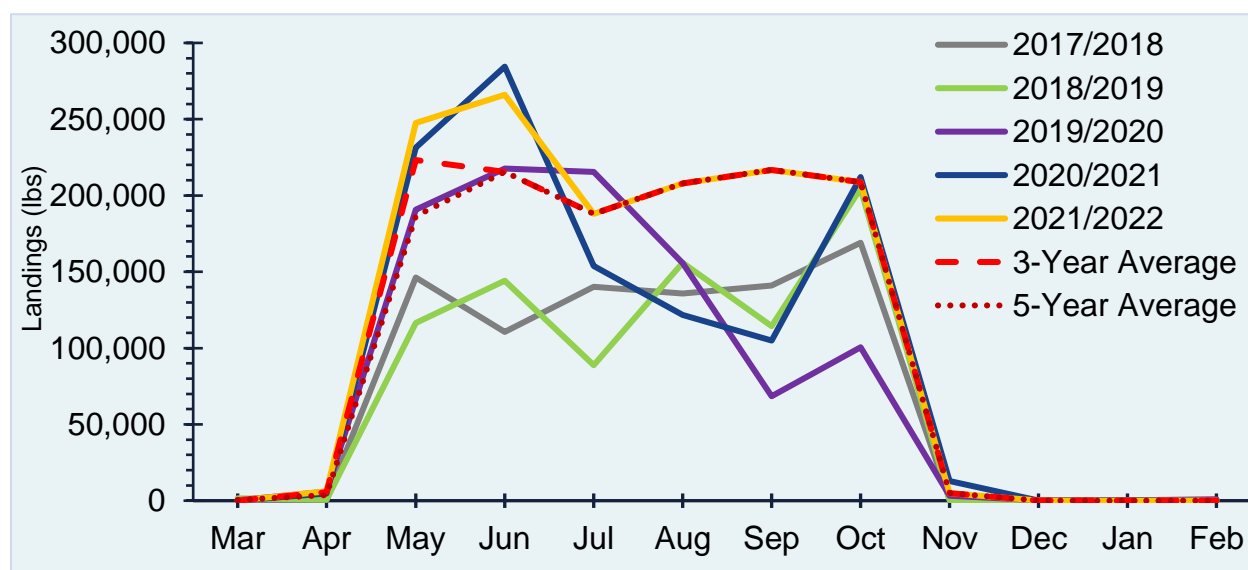


Figure A-1. Spanish mackerel Northern Zone commercial landings by month for the fishing years of 2017/2018 through 2021/2022.

Three different scenarios were used for predicting future Northern Zone commercial landings, and the scenarios are described in the text.

Closure dates were predicted by assuming uniform landings for each day in a month. Then the landings per day were cumulatively summed and compared to the proposed Northern Zone quotas in Framework Amendment 13. A closure date was determined as the day the cumulatively summed landings reached the quota. The predicted closure dates range from August 1st to September 12th (**Table A-2**).

Table A-2. The projected closure dates for the Northern Zone commercial quotas proposed in Amendment 13 for three different landings scenarios.

	Quota	Closure Dates		
		Highest Landings	3-Year Average	5-Year Average
Alternative 1	662,670	1-Aug	5-Aug	11-Aug
Alternative 2	882,640	3-Sep	6-Sep	12-Sep
Alternative 3	838,508	27-Aug	31-Aug	6-Sep
Alternative 4	794,376	21-Aug	25-Aug	30-Aug

Three different scenarios were used for predicting future Northern Zone commercial landings, and the scenarios are described in the text.

Southern Zone

North Carolina/South Carolina line to the Miami-Dade/Monroe County line in Florida

As stated earlier, commercial landings data were provided from the SEFSC on September 18, 2023. The Southern Zone has a specific trip limit reduction procedure that was implemented in Framework Amendment 2 (2015). The trip limit reductions are based on the adjusted Southern Zone quota, which is 250,000 less than the total Southern Zone quota. When 75% of the adjusted Southern Zone quota is reached the trip limit drops from 3,500 lbs. whole weight (ww) to 1,500 lbs. When 100% of the adjusted Southern Zone quota is met the trip limit drops to 500 lbs. When 100% of the total Southern Zone quota is met the fishery in federal waters is closed.

The Southern Zone has a fishing year from March 1st to the end of February. In the past six fishing years (2016/2017 to 2021/2022), the Southern Zone has experienced numerous trip limit reductions and closures in federal waters. The federal water trip limit reductions ranged from as early as December 24th and as late as February 6th. The closures in federal waters ranged from as early as January 5th and as late as February 5th.

An estimate of future landings is required to explore if the Framework Amendment 13 proposed commercial quotas will be met, and the federal waters closed. Three different scenarios were used for predicting future Southern Zone commercial landings for March through November: 1) Using the highest fishing year of commercial landings in the past five years (fishing year 2018/2019), 2) three-year average of landings for the past three fishing years (2019/2020 to 2021/2022), and 3) five-year average of landings for the past five fishing years (2017/2018 to 2021/2022) (**Figure A-2**). Due to both trip limit changes and closures in the Southern Zone after November a patchwork of monthly commercial landings were used for predicting December through February landings. Predicted December landings came from a two-year average of the most recent years that did not have a trip limit reduction (December landings in 2020 and 2021). January landings came from the most recent January landings without a trip limit reduction or

closure (January 2021). February landings came from the most recent February landings without a closure or a trip limit reduction (January 2016).

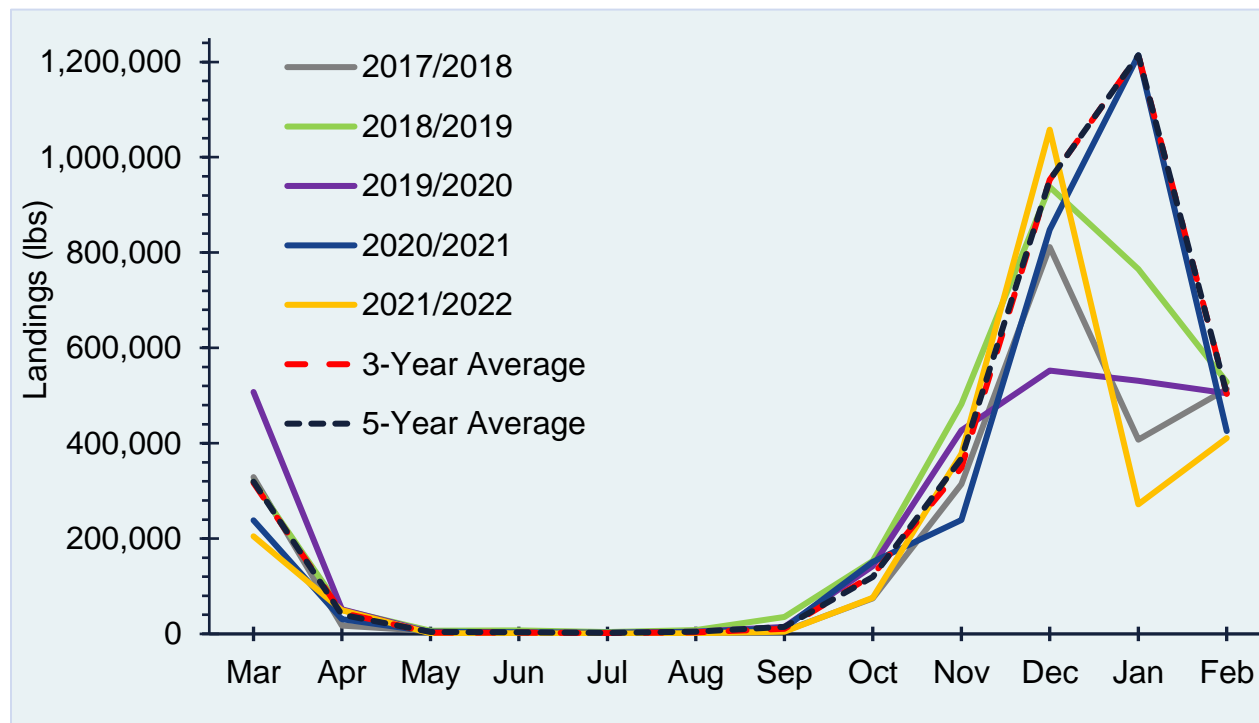


Figure A-2. Spanish mackerel Southern Zone commercial landings by month for the fishing years of 2017/2018 through 2021/2022. Three different scenarios were used for predicting future Southern Zone commercial landings, and the scenarios are described in the text.

Framework Amendment 13 has four different alternatives for Southern Zone quotas (**Table A-3**). Following the trip limit reduction and closure procedure of the Southern Zone, an impact on the landings from the trip limit reduction is needed to predict when the quota will be met. Commercial logbook data was provided from the SEFSC on March 1, 2023, and this logbook data was analyzed to determine the potential impact from trip limit reductions. The impact was calculated by choosing recent data from a time period where there were no trip limit changes or closures. The commercial data from December in 2020 and 2021 was used because it is relatively recent data and did not have any trip limit reductions or closures. The trip limits were analyzed by first modifying the catch per trip to match the trip limit under consideration then determining how much the new trip limit would decrease the landings. For example, when analyzing a reduction on the trip limit to 500 lbs., a trip with 800 pounds would be reduced to 500 pounds. Estimated reductions were calculated based on the difference in landings with no trip limit change (left at status quo of 3,500 lbs.) compared to landings when a trip limit was imposed. These reductions were converted to percentages based on the total harvest. Additionally, the trip limit reductions assume the trip limits will be imposed in both federal and state waters. The trip limit reduction analysis was done for a reduction down to 1,500 lbs. and 500 lbs. (**Table A-4**)

Table A-3. Spanish mackerel Southern Zone commercial quotas (pounds) being considered in Framework Amendment 13.

	75% of Adjusted Southern Zone Quota	Adjusted Southern Zone Quota	Quota
Alternative 1	1,812,998	2,417,330	2,667,330
Alternative 2	2,460,420	3,280,560	3,530,560
Alternative 3	2,328,024	3,104,032	3,354,032
Alternative 4	2,195,628	2,927,504	3,177,504

Table A-4. Percent decreases in landings for the trip limit reductions of 1,500 lbs. and 500 lbs. for Atlantic Spanish mackerel in the Southern Zone.

Trip Limit (lbs)	Percent Reduction
1,500	20.3%
500	62.3%

Data was generated from commercial logbook data from December of 2020 and 2021.

Closure dates were predicted from assuming uniform landings for each day in a month. Then the landings per day were cumulatively summed and compared to the Southern Zone quota Alternatives in Framework Amendment 13 (**Table 3**). Predictions were first made when 75% adjusted southern zone quota is met. When 75% of the adjusted quota is met the time period after that date had the predicted landings reduced by 20.3% to reflect the trip limit reduction from 3,500 lbs. down to 1,500 lbs. Then when 100% of the adjusted quota is met the time period after that date had the predicted landings reduced by 62.3% to reflect the trip limit reduction from 1,500 lbs. down to 500 lbs. These landings are cumulatively summed per day until 100% of the Southern Zone quota is met. The federal closure date is determined when 100% of the Southern Zone quota is met. The predicted federal waters closure dates (when the Southern Zone quota was met) range from January 31 to no closure (**Table A-5**).

Table A-5. Spanish mackerel Southern Zone predicted dates when 75% of the Adjusted Southern Zone quota, Adjusted Southern Zone Quota, and Quota were met for the three different predicted landings scenarios.

	75% of Adjusted Southern Zone Quota Met	Adjusted Southern Zone Quota Met	Quota Met
Highest Landings			
Alternative 1	25-Dec	14-Jan	31-Jan
Alternative 2	12-Jan	14-Feb	No Closure
Alternative 3	8-Jan	4-Feb	No Closure
Alternative 4	5-Jan	28-Jan	No Closure
3-Year Average			
Alternative 1	1-Jan	20-Jan	13-Feb
Alternative 2	17-Jan	26-Feb	No Closure
Alternative 3	14-Jan	15-Feb	No Closure
Alternative 4	10-Jan	5-Feb	No Closure

	75% of Adjusted Southern Zone Quota Met	Adjusted Southern Zone Quota Met	Quota Met
5-Year Average			
Alternative 1	31-Dec	19-Jan	10-Feb
Alternative 2	17-Jan	24-Feb	No Closure
Alternative 3	13-Jan	14-Feb	No Closure
Alternative 4	10-Jan	4-Feb	No Closure

References

SEDAR 78. 2022. South Atlantic Spanish mackerel stock assessment. Southeast Data, Assessment and Review. North Charleston, South Carolina.
<http://www.sefsc.noaa.gov/sedar/>.

Appendix B: Predicting Closure Dates for the Atlantic Spanish Mackerel Recreational Sector

Prepared by Mike Larkin, NMFS SERO Staff.

Introduction

In 2022, a stock assessment was conducted for Atlantic migratory group Spanish mackerel (Atlantic Spanish mackerel) (SEDAR 78). Results from the assessment showed that Atlantic Spanish mackerel is not overfished and not experiencing overfishing. Following the results of SEDAR 78 the South Atlantic Fishery Management Council (South Atlantic Council) is considering changing the annual catch limit (ACL) for the Atlantic Spanish mackerel stock in Framework Amendment 13 to the Fishery Management Plan (FMP) for Coastal Migratory Pelagic (CMP) Resources in the Gulf of Mexico and Atlantic Regions (Framework Amendment 13). Additionally, following SEDAR 78, the new ACLs proposed in Framework Amendment 13 were set with Marine Recreational Information Program (MRIP) Fishing Effort Survey (FES) data instead of the previously used MRIP Coastal Household Telephone Survey (CHTS).

Data Sources and Predicted Landings

Recreational landings data for Atlantic Spanish mackerel are a combination of recreational landings from MRIP-FES and the Southeast Region Headboat Survey. These data were provided from the Southeast Fisheries Science Center (SEFSC) on August 25, 2023, and the recreational landings are organized by two-month waves. Framework Amendment 13 proposes a range of recreational ACLs. An estimate of future landings is required to estimate if the Framework Amendment 13 proposed recreational ACLs will be met, and the recreational sector will be closed. The Atlantic Spanish mackerel recreational sector has a fishing year from March 1st to February 29th. Three different scenarios were used for predicting future Atlantic Spanish mackerel recreational landings for the fishing year: 1) Using the highest fishing year of recreational landings in the past five years (fishing year 2021/2022), 2) three-year average of landings for the past three fishing years (2019/2020, 2020/2021, and 2021/2022), and 3) five-year average of landings for the past five fishing years (2017/2018 to 2021/2022) (**Figure B-1**).

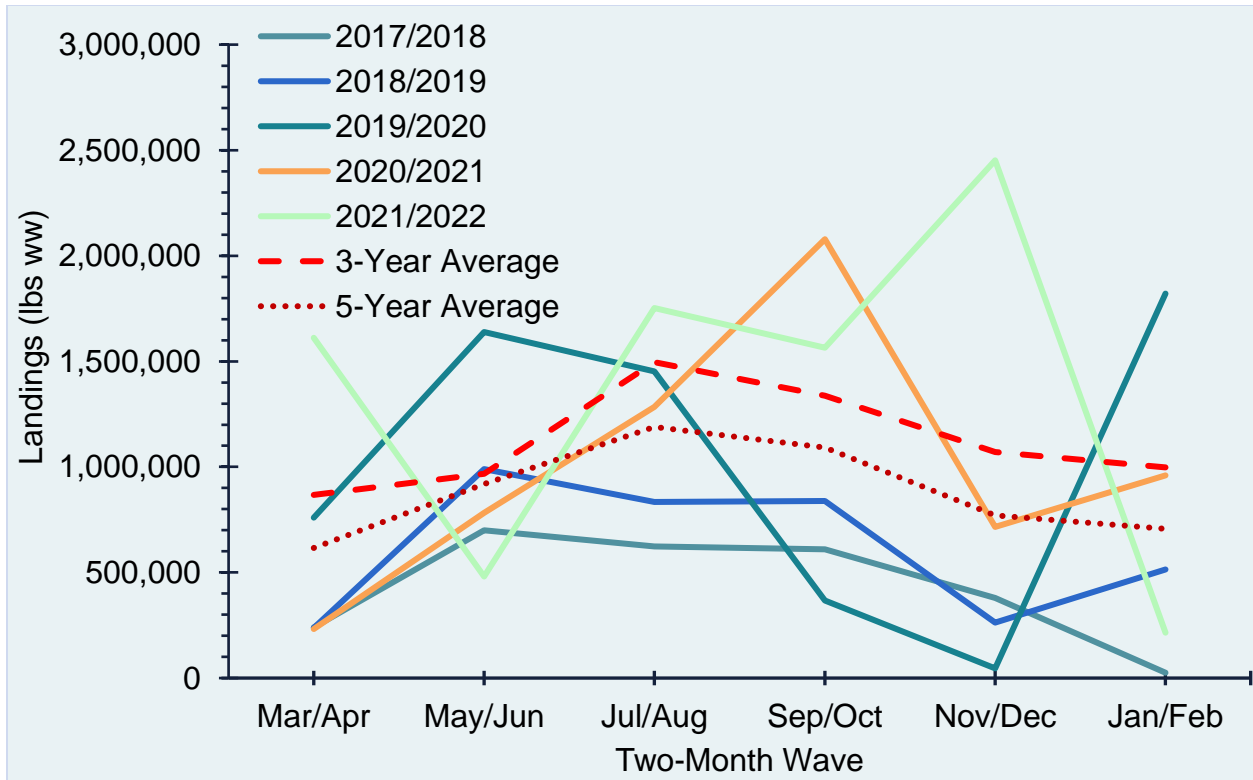


Figure B-1. Atlantic migratory group Spanish mackerel recreational landings by two-month wave for the fishing years of 2017/2018 through 2021/2022, and also the three- and five-year averages. All landings are in pounds whole weight (lbs ww).

Predicted Closure Dates

Closure dates were predicted by assuming uniform recreational landings for each day in a two-month wave for the three landings scenarios. Then the landings per day were cumulatively summed and compared to the recreational ACL alternatives in Framework Amendment 13. A closure date was determined as the day the cumulatively summed landings met or exceeded the ACL. The predicted closure dates range from August 10 to October 20th (**Table B-1**).

Table B-1. The projected closure dates for the recreational ACLs proposed in Framework Amendment 13 for three different landings scenarios.

	ACL	Closure Dates		
		Highest Landings	3-Year Average	5-Year Average
Alternative 1	2,727,000	Not Applicable		
Alternative 2	3,610,800	23-Aug	13-Sep	20-Oct
Alternative 3	3,430,260	17-Aug	5-Sep	10-Oct
Alternative 4	3,249,720	10-Aug	28-Aug	30-Sep

No prediction was made for Alternative 1 (No Action) since that recreational ACL was set in MRIP-CHTS which is no longer consistent with the best scientific information available and not a viable alternative.

References

SEDAR 78. 2022. South Atlantic Spanish mackerel stock assessment. Southeast Data, Assessment and Review. North Charleston, South Carolina.
<http://www.sefsc.noaa.gov/sedar/>.