

ATLANTIC STATES MARINE FISHERIES COMMISSION

REVIEW OF THE INTERSTATE FISHERY MANAGEMENT PLAN

FOR SPANISH MACKEREL
(Scomberomorus maculatus)

2015 FISHING YEAR



Prepared by the Plan Review Team

Approved by the South Atlantic Management
Board October 2016

Table of Contents

I.	Status of the Plan	1
II.	Status of the Stocks.....	2
III.	Status of the Fishery	3
IV.	Status of Assessment Advice	3
V.	Status of Research and Monitoring	4
VI.	Status of Management Measures.....	4
VII.	Implementation of FMP Compliance Requirements for 2015	7
VIII.	Recommendations of the Plan Review Team	8
IX.	References	9
X.	Figures.....	11
XI.	Tables	13

I. Status of the Plan

<u>Date of FMP Approval:</u>	Original FMP – November 1990
<u>Amendments:</u>	Omnibus Amendment to Spanish Mackerel, Spot, and Spotted Seatrout (Amendment 2) – August 2011 Addendum I – August 2013
<u>Management Area:</u>	The Atlantic coast distribution of the resource from New York through the east coast of Florida
<u>Active Boards/Committees:</u>	South Atlantic State/Federal Fisheries Management Board; Spanish Mackerel Plan Review Team; South Atlantic Species Advisory Panel

The Fishery Management Plan (FMP) for Coastal Migratory Pelagic Resources (1983 and subsequent amendments) and the Interstate Fishery Management Plan for Spanish Mackerel (1990) manage Atlantic migratory group Spanish mackerel (Atlantic Spanish mackerel) in federal and state Atlantic waters from New York through the east coast of Florida. All states in that range, excluding Pennsylvania, have a declared interest in the Interstate FMP for Spanish mackerel. The South Atlantic State/Federal Fisheries Management Board serves to manage Spanish mackerel for the Commission. The Interstate FMP for Spanish mackerel is a flexible document intended to track the federal FMP; thus, the South Atlantic Fishery Management Council (SAFMC) has the lead on Atlantic group Spanish mackerel management.

The SAFMC manages Atlantic Spanish mackerel based on guidance from its Scientific and Statistical Committee (SSC). The SAFMC determines needed adjustments to regulatory measures, including allowable catch, bag limits, size limits, and trip limits. The SAFMC deliberations are assisted by a Mackerel Cobia Committee that includes representatives from the Mid-Atlantic Fishery Management Council, and an Advisory Panel with South Atlantic and Mid-Atlantic industry representation. Since the Coastal Migratory Pelagic Resources FMP is a joint plan with the Gulf of Mexico Fishery Management Council (GMFMC), any amendments to this FMP must be approved by both Councils. The FMP also includes a framework procedure that allows each Council to make some changes to the management of stocks in that Council's jurisdiction without the other Council's approval through a framework amendment.

The SAFMC and GMFMC approved Amendment 18 to the Coastal Migratory Pelagic Resources FMP in December 2011 which established a new Allowable Biological Catch (ABC) based on the SSC recommendation of using median landings of the last 10 years (2001-2011). With this change, the ABC was set equal to the Annual Catch Limit (ACL) and Optimum Yield (OY) [ABC=ACL=OY] at approximately 5.29 million lbs. With this the commercial ACL was 3.13 million lbs and the recreational ACL was 2.56 million lbs.

Under the federal FMP, the 2013-2014 fishing year ran from March 1, 2013 to February 28, 2014. The 2014-2015 fishing year began on March 1, 2014. The federal FMP divides the commercial fishery into a quota system between the Atlantic and Gulf migratory groups. Within

the Atlantic migratory group, there are two zones- the Northern (consisting of the states from New York through North Carolina) and the Southern (South Carolina to Florida). For the Atlantic migratory group, the 2013/2014 year, the full quota was 3.13 million pounds and the adjusted quota was 2.88 million pounds. The adjusted quota is used to determine trip limit reductions. For the 2014/2015 fishing season, the full quota was increased to 3.33 million pounds following CMP Framework Amendment 1 (See *Section VI*).

The federal commercial trip limit was a year-round 3,500 pound daily possession/landings limit for the states from New York through Georgia, with Florida's commercial trip limit varying depending on the percent of quota remaining. Following the implementation of Amendment 20B and CMP Framework Amendment 2, the federal trip limit for the Southern zone (SC through FL) decreases as quota is caught. When 75% of the "adjusted" Southern Zone quota¹ (1,812,998 lbs ww) is caught, the trip limit is reduced from 3,500 lbs to 1,500 lbs. When 100% of the adjusted Southern Zone quota (2,417, 330 lbs ww) is caught, the commercial trip limit is further reduced to 500 lbs. When 100% of the Southern Zone quota is met, harvest is prohibited for the remainder of the fishing year. In both the Northern and Southern zones, the recreational bag limit is set at 15 fish. The minimum size limit for both fisheries is 12" fork length or 14" total length.

The goals of the interstate FMP are to complement federal management in state waters, to conserve the Atlantic group Spanish mackerel resource throughout its range, and to achieve compatible management among the states that harvest Spanish mackerel. In accordance with the 2011 Omnibus Amendment, the updated FMP's objectives are to: (1.) Manage the Spanish mackerel fishery by restricting fishing mortality to rates below the threshold fishing mortality rates to provide adequate spawning potential to sustain long-term abundance of the Spanish mackerel populations. (2.) Manage the Spanish mackerel stock to maintain the spawning stock biomass above the target biomass levels. (3.) Minimize endangered species bycatch in the Spanish mackerel fishery. (4.) Provide a flexible management system that coordinates management activities between state and federal waters to promote complementary regulations throughout Spanish mackerel's range which minimizes regulatory delay while retaining substantial ASMFC, Council, and public input into management decisions; and which can adapt to changes in resource abundance, new scientific information and changes in fishing patterns among user groups or by area. (5.) Develop research priorities that will further refine the Spanish mackerel management program to maximize the biological, social, and economic benefits derived from the Spanish mackerel population. See Table 1 for state Spanish mackerel regulations in 2014.

II. Status of the Stocks

The resource is not overfished, nor experiencing overfishing (SEDAR 2012). The SEDAR 28 Stock Assessment Report estimates current stock biomass at $SSB_{2011}/MSST=2.29$, and current fishing level (exploitation rate) at $F_{2009-2011}/F_{MSY}=0.526$, with $F_{2011}/F_{MSY}=0.521$. The overfished ratio (B/B_{MSY}) shows that high fishing mortality caused a decline in biomass, though biomass has increased in recent years and remains above B_{MSY} (Figure 1). The overfishing ratio (F/F_{msy}) shows that fishing mortality increased from the late 1970s through 1994 but has since declined

¹ The adjusted quota is the Southern Zone quota minus 250,000 lbs.

(Figure 2). Fishery-dependent data also indicate increasing biomass, excepting the decline seen over the last four years. The current fishing mortality rate does not seem to be inhibiting stock growth.

III. Status of the Fishery

Spanish mackerel are an important recreational and commercial fishery in South Atlantic waters, with recreational landings north of Maryland limited and sporadic (Tables 2 and 4). Trip limits implemented in state and federal waters continue to prevent premature closure of the commercial fishery. Total landings of Spanish mackerel in 2015 are estimated at 3 million pounds (compared to the 6.063 million pound ACL). The commercial fishery harvested approximately 70.5% of the total, and the recreational fishery about 29.5%.

From 1960 to 2015, commercial landings of Atlantic coast Spanish mackerel have ranged between 1.9 and 11.1 million pounds, although that range is limited to between 1.9 and 6.0 million pounds if the unusually large harvests in 1976-77 and 1980 are excluded. Since 1981, total landings have averaged 5.09 million pounds. Coastwide commercial landings have generally been below 4 million pounds since 1995 (exception of 2010; landings of 4.53 million pounds); this coincided with the entanglement net ban in Florida. Gill nets were the dominant commercial gear in Florida prior to the ban. After the ban was instituted, the use of cast nets increased. The 2015 commercial landings were 2.32 million pounds (Figure 3), of which 1.74 million pounds were landed in Florida (75% of the harvest). North Carolina harvested approximately 24% of the total 2014 landings (Table 2).

Recreational anglers harvested 628,379 Spanish mackerel (695,208 pounds) in 2015, a decrease from the 886,235 fish caught in 2014 (Tables 3 and 4). The number of recreationally harvested fish appears to show a cyclical trend, with low harvests in the early to mid-80s and mid to late 90s, interspersed with higher harvests (Figure 4). Florida and North Carolina have historically accounted for the majority of recreational landings in both number and weight. In 2015, South Carolina harvested an increased proportion of recreational landings in both number (21.2%) and weight (15.6%), relative to their average annual proportions since 1981 (7.5% of numbers and 7.9% of weight). Florida harvested 13.2% and North Carolina harvested 61.8% of recreational fish. The number of recreational releases of Spanish mackerel has generally increased over time, reaching a peak of over one million fish in 2008 (Table 5, Figure 4). Recreational releases in 2015 were 406,535 fish, decreasing from 490,261 fish in 2014.

IV. Status of Assessment Advice

The most recent stock assessment was completed in 2012 through the Southeast Data, Assessment, and Review (SEDAR) process (SEDAR, 2012). The input data (through 2011) were applied to two assessment models, with the primary model being a statistical catch at age model called the Beaufort Assessment Model (BAM); while a secondary surplus-production model (ASPIC) provided a comparison of model results. The Review Panel concluded that the statistical catch at age model was the most appropriate model to characterize the stock status for management purposes.

The SSC reviewed the assessment during its December 2012 meeting and accepted the SEDAR 28 Spanish mackerel stock assessment as best available science. The SSC concurred with the

Review Panel's conclusion that the stock is not experiencing overfishing and the stock is not overfished.

V. Status of Research and Monitoring

The National Marine Fisheries Service (NMFS) Southeast Fisheries Science Center (SEFSC) continues to monitor length and weight at age and size frequencies, fishing mortality, and migration; collect age data and catch per unit effort by area, season, fishery, and gear; monitor shrimp trawl bycatch; investigate methods to predict year class strength; calculate estimates of recruitment, and develop conservation gear to reduce bycatch. The NMFS is also collecting discard data through a bycatch logbook in the mackerel and snapper-grouper fisheries. The Gulf and South Atlantic Fisheries Development Foundation and several states (North Carolina, South Carolina, Georgia, and Florida) have evaluated finfish bycatch in the southeastern shrimp trawl fishery, including bycatch of Spanish mackerel. The South Atlantic component of the Southeast Area Monitoring and Assessment Program (SEAMAP) collects Spanish mackerel data in its coastal trawl survey from Cape Hatteras to Cape Canaveral. Additionally, the Northeast Area Monitoring and Assessment Program (NEAMAP) began regular spring and fall surveys between Martha's Vineyard and Cape Hatteras in the fall of 2007.

Abundance trends continue to be monitored primarily through fishery-dependent sources. The states and the SEFSC monitor catch data through the cooperative commercial statistics collection program and the recreational fisheries survey. Commercial trip reports are tallied more frequently in the winter and early spring by the state of Florida and NMFS as the commercial quota is approached.

North Carolina also conducts fishery independent monitoring. Three fishery independent gill net surveys were initiated by the North Carolina Division of Marine Fisheries in May of 2001, 2003 and 2008, respectively. These surveys utilize a stratified random sampling scheme designed to characterize the size and age distribution for key estuarine species in Atlantic Ocean and Pamlico Sound as well as the Pamlico, Pungo, Neuse, Cape Fear and New rivers. The overall Spanish mackerel CPUE was very low for all areas except the Atlantic Ocean where the 2015 CPUE was 0.36 (n=4).

VI. Status of Management Measures

2008 Framework Adjustment (Federal)

In February 2008, NOAA Fisheries finalized a framework adjustment to change the beginning date for trip limits in the Atlantic Spanish mackerel fishery off the east coast of Florida. The 3,500 pound trip limit begins March 1 each year to correspond with the beginning of the fishing year (as changed in Amendment 15).

Omnibus Amendment (Interstate)

In August 2011, the Management Board approved an amendment to the Spanish Mackerel FMP to address three issues: compliance measures, consistency with federal management in the exclusive economic zone, and alignment with Commission standards. Through the Omnibus Amendment, the following fisheries management measures are required for states within the management unit range;

Recreational Fishery

- 12" Fork Length (FL) or 14" Total Length (TL) minimum size limit
- 15 fish creel limit
- Must be landed with head and fins intact
- Calendar year season
- Prohibited gear: Drift gill nets prohibited south of Cape Lookout, NC
- Decrease in the recreational quota the following year via reduced bag limits if the Total Annual Catch Limit (ACL) is exceeded and stock is overfished.

Commercial Fishery

- Prohibited: purse seines; drift gill nets south of Cape Lookout, NC
- 12" FL or 14" TL minimum size limit
- March 1 – end of February season
- Trip limits (per vessel, per day)
NY-GA: 3500 lbs
FL: 3500 lbs, 3/1-11/30;
3500 lbs Mon-Fri & 1500 lbs Sat-Sun, 12/1 until 75% adjusted quota taken;
1500 lbs, when 75% adjusted quota taken until 100% adjusted quotas taken;
500 lbs after 100% of adjusted quotas taken (the adjusted quota compensates for estimated catches of 500 lbs per vessel per day to the end of the season)
- Commercial quotas decreased the following year if Total ACL is exceeded and stock is overfished

Amendment 18 (Federal)

In August 2011, the Gulf of Mexico and South Atlantic Fishery Management Councils approved Amendment 18 to the joint FMP for Coastal Migratory Pelagics. The primary action under consideration established Annual Catch Limits (ACLs) and Accountability Measures (AMs) for Gulf and Atlantic stocks of cobia, king mackerel, and Spanish mackerel. The amendment designates ACLs and Annual Catch Targets (ACTs) for each of the two migratory groups of Spanish mackerel (Atlantic and Gulf). For the Atlantic migratory group, the commercial sector ACL is set equivalent to the commercial sector quota of 3.13 million pounds. The AM for the commercial sector is that the commercial sector will close when the commercial quota is reached or projected to be reached. In addition, current trip limit adjustments will remain in place. When the commercial sector closes, harvest and possession of Spanish mackerel would be prohibited for persons aboard a vessel for which a commercial permit for Spanish mackerel has been issued. If stock ACL is exceeded and the stock is designated as overfished, the following year's commercial ACL will be reduced by the amount over the commercial ACL.

For the recreational sector, the ACT is set to 2.32 million pounds, while the ACL is set at 2.56 million pounds. Regarding the AM, if the stock ACL is exceeded in any year, the bag limit will be reduced the next fishing year by the amount necessary to ensure recreational landings achieve the recreational ACT, but do not exceed the recreational ACL in the following fishing year. A payback will be assessed if the Atlantic migratory group Spanish mackerel is determined to be overfished and the stock ACL is exceeded. The payback will include a reduction in the sector ACL for the following year by the amount of the overage by that sector in the prior fishing year.

Addendum I

In August 2013, the Commission's South Atlantic State-Federal Fisheries Management Board approved Addendum I to the Omnibus Amendment to for Spanish mackerel, Spot, and Spotted Seatrout.

Addendum I to the Omnibus Amendment establishes a pilot program that would allow states to reduce the Spanish mackerel minimum size limit for the commercial pound net fishery to 11 ½ inches during the summer months of July through September for the 2013 and 2014 fishing years only. The measure is intended to reduce waste of these shorter fish, which are discarded dead in the summer months, by converting them to landed fish that will be counted against the quota.

The Addendum responds to reports about the increased incidence of Spanish mackerel ¼ to ½ inch short of the 12 inch fork length minimum size limit in pound nets during the summer months. While the fish are alive in the pound, once the net is bunted and bailing commences, they die before being released. This may be due to a combination of temperature, stress and crowding. While individual fishermen have experimented with different wall or panel mesh sizes depending on the target species, there is no consistent use of cull panels. Those who have used cull panels have noted the difficulty and lack of success in being able to release the undersized fish quickly enough to prevent dead discards during this time of year.

The measures in Addendum I only applied for the 2013 and 2014 fishing seasons. In August 2015, the South Atlantic Board formally extended the provisions of Addendum I for the 2015 and 2016 fishing seasons. Reports by North Carolina, the only state to reduce their minimum size, will be reviewed annually.

Amendment 20A (Federal)

Effective July 2014, this Amendment addresses the sale of bag limit caught Spanish mackerel. The amendment rose from concerns that the recreational sales of bag limit caught fish, which are counted toward commercial quotas, are contributing to early closures of the commercial sector. In addition potential double counting of these fish could be causing erroneous landings estimates. In response, the Amendment prohibits bag limit sales with the exception of recreationally caught fish from state permitted tournaments in the South Atlantic region. This amendment also included an action to remove income requirements for federal CMP permits.

South Atlantic CMP Framework Action 2013 (Federal)

Effective December 2014, this action allows Spanish mackerel, harvested with gillnet gear in the South Atlantic in excess of the trip limit, to be transferred to another federally permitted vessel that has not yet harvested the trip limit. The Framework Action stipulates that the transfer can only occur if: 1) allowable gillnet gear was used to harvest Spanish mackerel; 2) the transfer takes place in federal waters between vessels with valid commercial permits; 3) the receiving vessel does not have more than 3 gillnets aboard after the transfer; 4) all fish remain entangled in the meshes of the net until the transfer; 5) the quantity of the fish transferred does not exceed the daily trip limit; and 6) there is only one transfer per vessel per day.

CMP Framework Amendment 1 (Federal)

This Framework Amendment, effective December 2014, increases the Atlantic Spanish mackerel ACL to 6.063 million pounds. The modification to the ACL followed the 2013 stock assessment which concluded that the stock is not overfished and overfishing is not occurring. The Amendment divides the ACL between the commercial sector (3.33 million pounds) and the recreational sector (2.727 million pounds).

Amendment 20B (Federal)

Effective March 2015, this Amendment separates commercial quotas of Atlantic Spanish mackerel between a Northern zone (north of NC/SC line) and a Southern zone (South of NC/SC line). The Amendment rose from concerns that the commercial quota could be filled by fishermen in one state before fish are available to fishermen in another state. In order to prevent this from happening, a zone is closed when its respective quota is met. Quota for each zone was based on landings from 2002/2003-2011/2012.

CMP Framework Amendment 2 (Federal)

Implemented July 2015, this Amendment modifies the commercial trip limit system in the Southern zone. The rule establishes a trip limit of 3,500 lbs for Spanish mackerel in Federal waters offshore of South Carolina, Georgia, and Florida. When 75% of the adjusted southern zone commercial quota is caught, the commercial trip limit is reduced to 1,500 lbs. When 100% of the adjusted southern zone commercial quota is met, the commercial trip limit is further reduced to 500 lbs. This limit remains until the end of the year or the quota is met.

VII. Implementation of FMP Compliance Requirements for 2015

All states must implement the requirements specified in section 5 (5.1 Mandatory Compliance Elements for States; 5.1.1 Mandatory Elements of State Programs; 5.1.1.1 Regulatory Requirements). The PRT finds all states in compliance.

De Minimis Requests

A state qualifies for *de minimis* status if its previous three-year average combined commercial and recreational catch is less than 1% of the previous three-year average coastwide combined commercial and recreational catch. Those states that qualify for *de minimis* are not required to implement any monitoring requirements, as none are included in the plan.

The states of New Jersey, Delaware, and Georgia request *de minimis* status. The PRT notes that all three states meet the requirements of *de minimis*.

Regulation Changes

North Carolina

One proclamation was issued under rule 15A NCAC 03M .0512 to remain in compliance with the Atlantic States Marine Fishery Commission. Addendum I to the Omnibus Amendment establishes a pilot program that would allow states to reduce the Spanish mackerel minimum size limit for the commercial pound net fishery to 11 ½ inches during the summer months of July through September. The measure is intended to reduce waste of these shorter fish, which are discarded dead in the summer months, by converting them to landed fish that will be counted against the quota. The Division issued a proclamation suspending the 12-inch fork

length size limit and adopting the 11 ½ inch fork length size limit in the commercial pound net fishery from July 4, 2016 to September 30, 2016.

Florida

Effective October 12, 2015:

68B-23.006 Other Prohibitions.

(1) It is unlawful for any person to possess, transport, buy, sell, exchange or attempt to buy, sell or exchange any Spanish mackerel harvested in violation of this chapter.

(2) The Commission shall issue a permit pursuant to Rule 68B-2.010, F.A.C., to authorize Spanish mackerel caught in an organized tournament to be donated to a licensed wholesale dealer.

(3) The prohibitions of this chapter apply as well to any and all persons operating a vessel in state waters, who shall be deemed to have violated any prohibition which has been violated by another person aboard such vessel.

VIII. Recommendations of the Plan Review Team

Research and Monitoring Recommendations

High Priority

- Length, sex, age, and CPUE data are needed for improved stock assessment accuracy. Simulations on CPUE trends should be explored and impacts on VPA and assessment results determined. Data collection is needed for all states, particularly from Virginia north.
- Evaluation of weight and especially length at age of Spanish mackerel.
- Development of fishery-independent methods to monitor stock size of Atlantic Spanish mackerel (consider aerial surveys used in south Florida waters).
- More timely reporting of mid-Atlantic catches for quota monitoring.
- Provide better estimates of recruitment, natural mortality rates, fishing mortality rates, and standing stock. Specific information should include an estimate of total amount caught and distribution of catch by area, season, and type of gear.
- Develop methodology for predicting year class strength and determination of the relationship between larval abundance and subsequent year class strength.
- Commission and member states should support and provide the identified data & input needed to improve the SAFMC's SEDAR process.
- The full implementation of ecosystem-based management and the implementation of monitoring/research efforts needed to support ecosystem-based management needs should be conducted.

Medium Priority

- Yield per recruit analyses should be conducted relative to alternative selective fishing patterns.
- Determine the bycatch of Spanish mackerel in the directed shrimp fishery in Atlantic Coastal waters (partially met: Branstetter, 1997; Ottley et al., 1998; Gaddis et al., 2001; Page et al., 2004).
- Evaluate potential bias of the lack of appropriate stratification of the data used to generate age-length keys for Atlantic and Gulf Spanish mackerel.

- Evaluate CPUE indices related to standardization methods and management history, with emphasis on greater temporal and spatial resolution in estimates of CPUE.
- Consideration of MRFSS add-ons or other mechanisms for collection of socioeconomic data for recreational and commercial fisheries.
- Determine normal Spanish mackerel migration routes and changes therein, as well as the climatic or other factors responsible for changes in the environmental and habitat conditions which may affect the habitat and availability of stocks.
- Determine the relationship, if any, between migration of prey species (i.e., engraulids, clupeids, carangids), and migration patterns of the Spanish mackerel stock.

Low Priority

- Final identification of Spanish mackerel stocks through multiple research techniques.
- Complete research on the application of assessment and management models relative to dynamic species such as Spanish mackerel.
- Delineation of spawning areas and areas of larval abundance through temporal and spatial sampling.

IX. References

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X. Figures

Figure 1. Estimated total biomass (metric tons) at start of year. Horizontal dashed line indicates B_{MSY} (SEDAR, 2012).

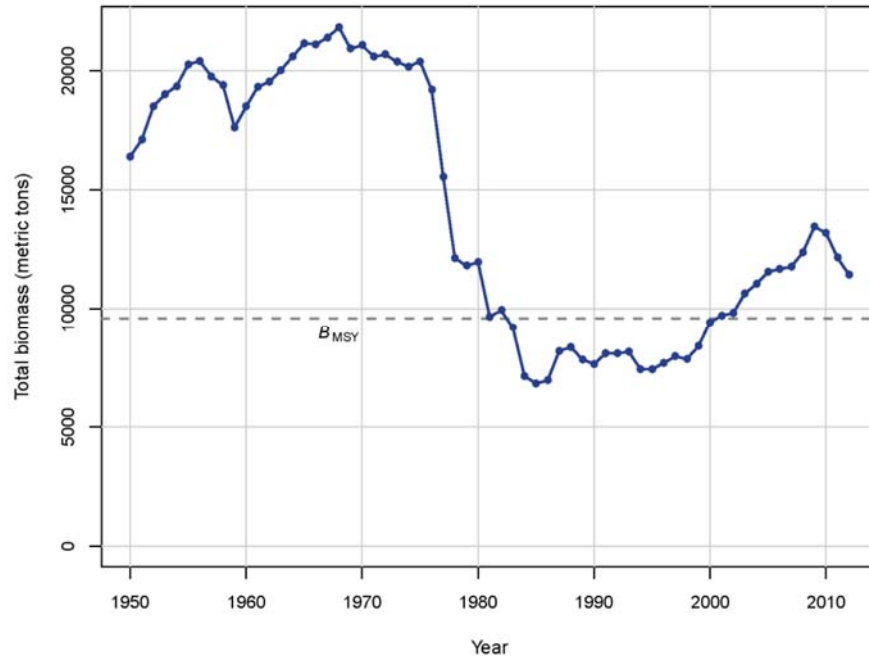


Figure 2. Estimated time series of Atlantic group Spanish mackerel fishing mortality rate (F) relative to F_{MSY} benchmark. Solid line indicates estimates from base run of the Beaufort Assessment Model; gray error bands indicate 5th and 95th percentiles of the Monte Carlo Bootstrap analysis trials (SEDAR, 2012).

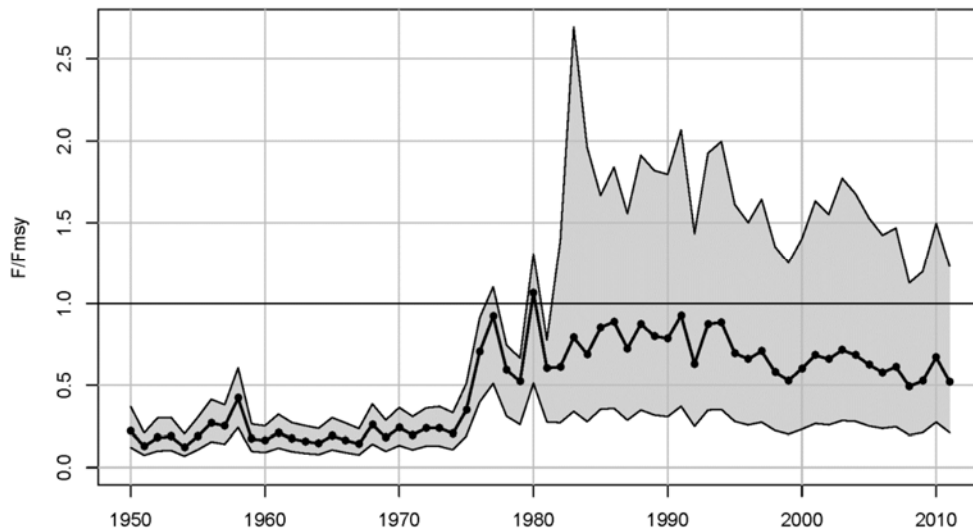


Figure 3. Commercial and recreational harvest (pounds) of Spanish mackerel, 1960-2015
 (Recreational data available from 1981-present only; see Tables 2 and 4 for values and sources)

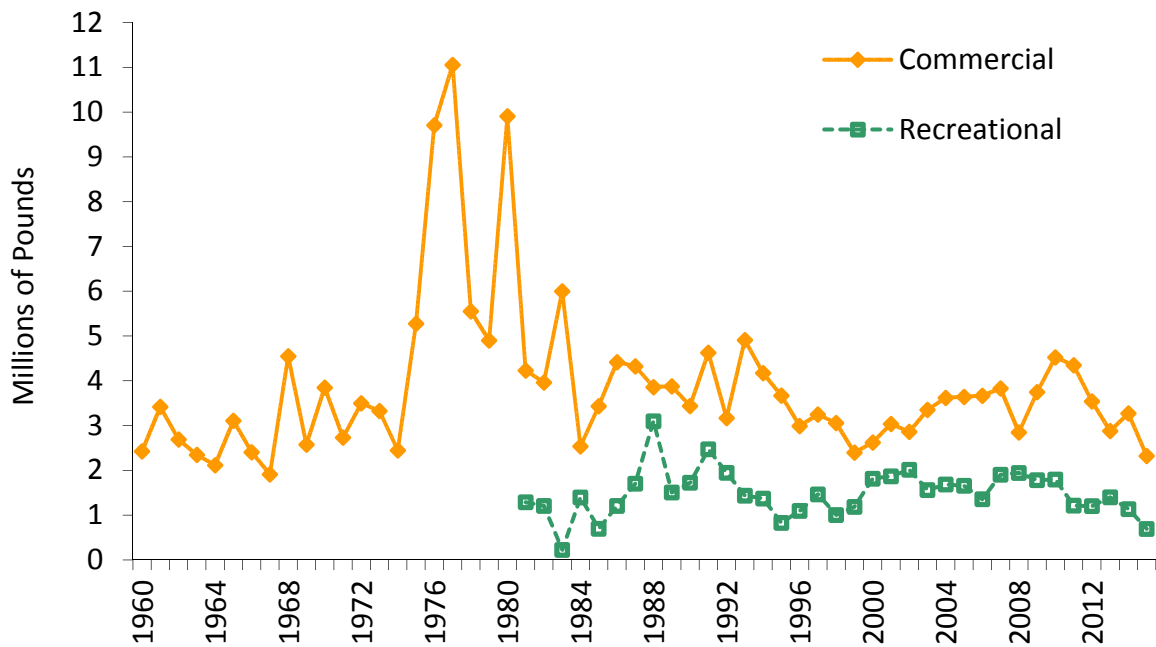
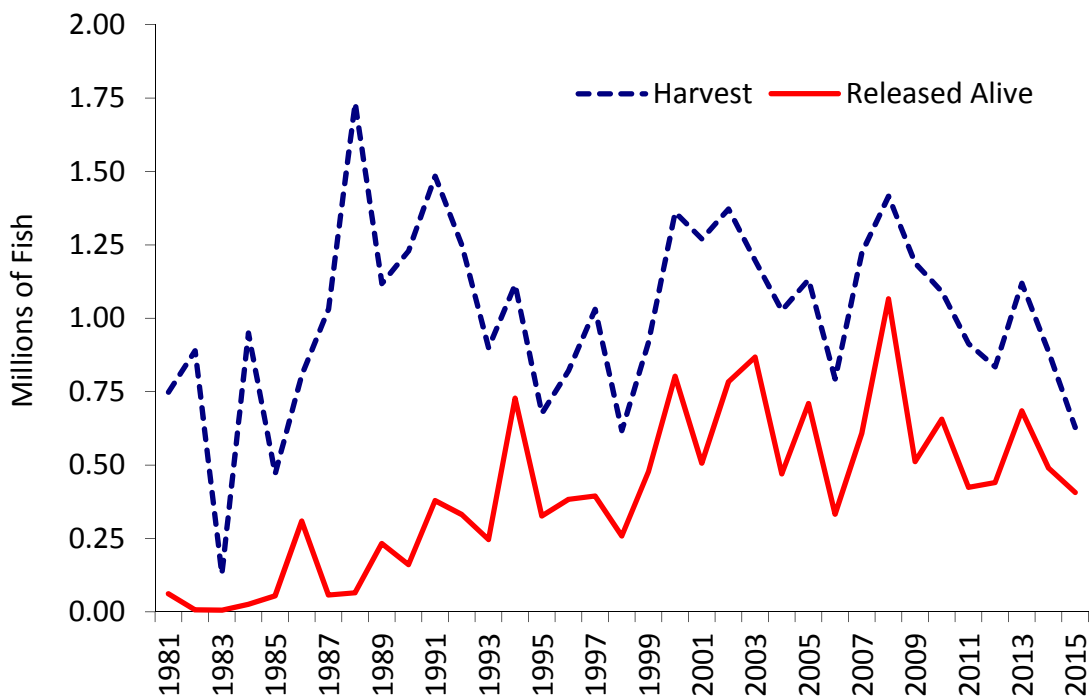


Figure 4. Recreational harvest and releases (numbers of fish) of Spanish mackerel, 1981-2015
 (See Tables 3 and 5 for values and sources)



XI. Tables

Table 1. Summary of state regulations for Spanish mackerel in 2015

Notes: A commercial license is required to sell Spanish mackerel in all states; other general gear restrictions apply to the harvest of Spanish mackerel. Purse seines and drift gill nets are prohibited south of Cape Lookout, NC.

State	Recreational	Commercial
NY	14" TL, 15 fish	14" TL. 3,500 lb trip limit.
NJ	14" TL, 10 fish	14" TL. 3,500 lb trip limit.
DE	14" TL, 15 fish	14" TL. 3,500 lb trip limit.
MD	14" TL, 15 fish	14" TL. 3,500 lb trip limit. March-Feb.
PRFC	14" TL, 15 fish	14" TL. Closure if/when MD and VA fisheries close.
VA	14" TL, 15 fish	14" TL. 3,500 lb trip limit. Closure if/when federal waters close.
NC	12" FL, 15 fish	12" FL; 11.5" FL in pound net fishery July 4 th – Sept 30 th , 2016. 3,500 lb trip limit for combined Spanish and king mackerel landings.
SC	12" FL, 15 fish	12" FL. 15 fish. 3,500 lb trip limit. March-Feb. Closure if/when federal waters close.
GA	12" FL, 15 fish	12" FL. 3,500 lb trip limit.
FL	12" FL or 14" TL, 15 fish. Cast nets less than 14' and beach or haul seines within 2" stretched mesh allowed	12" FL or 14" TL. Trip limits: April 1 until Nov. 30 - 3500 lb; Dec. 1 until 75% of adjusted quota reached – 3500 lb Mon-Fri. & 1500 lb Sat-Sun; >75% adjusted quota until quota filled -1500 lb; > 100% of adjusted quota - 500 lb. Restricted Species Endorsement Required Allowed gear: beach or haul seine, cast net, hook and line, or spearing.

Table 2. Commercial landings (pounds, calendar year) of Spanish mackerel by state, 1981-2015
(Source: NMFS Fisheries Statistics Division)

Year	NY	NJ	MD	VA	NC	SC	GA	FL	Total
1981	500	500		3,500	51,639		518	4,174,432	4,231,089
1982	1,000	200		12,700	189,217	1,081	745	3,758,603	3,963,546
1983	600	100		3,500	41,336	706		5,947,102	5,993,344
1984	300	100		10,000	127,467	1,321		2,397,373	2,536,561
1985	100			15,300	173,186	847		3,244,980	3,434,413
1986	3,200	1,500		168,400	232,197	6,375	1,335	4,003,738	4,416,745
1987	16,600	24,000	4,800	251,200	504,063	961	255	3,497,135	4,299,014
1988	19,200	16,900	4,300	291,600	438,222	1,029	726	3,071,687	3,843,664
1989	17,700	24,100	10,400	354,400	589,383	1,605		2,853,177	3,850,765
1990	24,329	28,336	43,411	491,651	838,914	384	491	1,979,081	3,406,597
1991	149,321	77,151	62,688	447,127	858,808	444	197	2,986,871	4,582,607
1992	31,873	51,751	37,930	271,313	738,362	1,952	71	2,022,961	3,156,213
1993	42,063	23,036	9,445	335,688	589,868	480	95	3,902,240	4,902,915
1994	124,733	19,915	3,363	376,818	531,355	362		3,099,780	4,156,326
1995	9,136	2,153	3,089	168,732	402,305			3,064,926	3,650,341
1996	17,980	40,821		283,750	401,546			2,244,667	2,988,764
1997	31,107	12,122	3,033	164,639	766,901			2,269,289	3,247,091
1998	37,238	13,242	13,204	121,109	372,440			2,498,461	3,055,694
1999	47,831	17,144	21,604	251,626	459,120			1,566,706	2,364,031
2000	35,825	11,757	26,607	168,679	659,431			1,675,473	2,577,772
2001	13,851	9,401	18,899	178,849	653,491			2,115,782	2,990,273
2002	18,741	11,196	20,725	102,454	698,463			1,995,212	2,846,791
2003	18,339	5,432	5,239	103,409	456,794			2,740,632	3,329,845
2004	16,921	3,060	4,881	66,482	456,243			3,066,186	3,613,773
2005	5,197	2,074	7,750	43,126	446,013			3,133,772	3,637,932
2006	5,720	1,456	290	43,192	470,669			3,142,721	3,664,048
2007	7,244	2,075	3,734	58,064	487,891	0	0	3,264,452	3,823,460
2008	2,513	1,210	7,136	156,011	415,416	0	0	2,262,661	2,844,947
2009	3,462	3,324	11,570	138,292	961,836	0	0	2,629,343	3,747,827
2010	3,713	829	4,939	47,562	911,878	0	0	3,553,155	4,522,076
2011	1,149	305	5,054	36,314	871,217			3,432,932	4,346,971
2012	2,294	2,806	3,630	18,317	916,439			2,596,981	3,540,467
2013	4,468	265	2,397	7,746	620,752	0	0	2,247,993	2,879,153
2014	3,081	292	1,644	7,859	673,974	17	0	2,585,473	3,272,352
2015	*	2746	2,219	14,493	561,423	*	*	1,741,726	2,322,637

2016 REVIEW OF THE ASMFC SPANISH MACKEREL FMP

Table 3. Recreational harvest (numbers) of Spanish mackerel by state, 1981-2015
(NMFS Fisheries Statistics Division)

Year	NY	NJ	DE	MD	VA	NC	SC	GA	FL	Total
1981						231,744	25,058	1,786	485,395	743,983
1982						694,420	21,092	408	173,649	889,569
1983						6,156	3,279	2,109	117,532	129,076
1984						618,313	79,855	3,718	248,048	949,934
1985						344,965	36,606	4,809	84,226	470,606
1986		1,479		457	6,942	431,021	147,358	25,257	195,385	807,899
1987	1,417			8,036	1,520	815,920	65,846	20,925	118,184	1,031,848
1988					101,691	1,312,070	82,136	4,403	233,582	1,733,882
1989	1,010	22,067			73,236	679,360	121,115	7,444	213,665	1,117,897
1990	1,726	2,495	319	1,355	63,821	821,334	81,375	31,567	225,263	1,229,255
1991	7,608	25,071	2,054	41,250	68,102	676,717	132,198	2,391	517,290	1,472,681
1992	1,325	10,549	210	4,847	71,265	701,974	62,546	25,736	370,809	1,249,261
1993	2,681	3,457		43,050	73,832	451,523	92,621	12,979	219,458	899,601
1994		7,910		43,710	145,872	535,949	113,991	15,235	252,668	1,115,335
1995				26,216	86,899	285,882	34,355	16,726	226,334	676,412
1996		1,172			69,399	355,036	134,282	16,948	245,085	821,922
1997					68,517	585,765	101,067	28,396	246,885	1,030,630
1998		4,046	186	3,633	33,140	239,052	65,584	28,002	244,235	617,878
1999		1,335	226	1,220	75,972	476,019	27,477	9,007	327,621	918,877
2000	4,453	923		15,219	71,249	671,353	28,283	20,545	547,315	1,359,340
2001	802			8,025	29,590	400,706	43,501	11,013	774,065	1,267,702
2002					17,433	401,982	24,235	1,927	926,600	1,372,177
2003				6,975	17,063	349,170	24,879	11,235	784,385	1,193,707
2004		1,531		8,800	21,012	308,996	144,394	7,906	532,956	1,025,595
2005				20,792	20,525	331,601	70,273	12,140	676,973	1,132,304
2006		465		3,118	40	305,343	42,867	2,441	439,324	793,598
2007				12,360	16	491,357	104,741	13,795	601,335	1,223,604
2008		470		5,777	83,903	686,501	58,465	14,519	566,397	1,416,032
2009		655		24,725	16,451	703,393	60,925	6,306	375,512	1,187,967
2010				7,526	20,524	470,212	93,574	4,723	494,586	1,091,145
2011				10,554	35,054	367,086	87,109	7,486	406,068	913,357
2012				2,962	11,874	491,238	80,204	2,119	246,866	835,263
2013			31	2,905	61,237	497,329	22,414	1,299	534,042	1,119,257
2014		0	0	5,494	17,521	398,398	80,935	1,903	381,839	886,090
2015	0	0	0	11,366	12,072	388,157	133,445	527	82,811	628,379

2016 REVIEW OF THE ASMFC SPANISH MACKEREL FMP

Table 4. Recreational harvest (pounds) of Spanish mackerel by state, 1981-2015
(NMFS Fisheries Statistics Division)

Year	NY	NJ	DE	MD	VA	NC	SC	GA	FL	Total
1981						423,801	53,292	4,306	808,808	1,290,207
1982						928,201	29,546	483	251,115	1,209,345
1983						14,725	8,274	4,198	199,331	226,528
1984						848,537	116,083	5,540	427,501	1,397,661
1985						507,545	34,445	3,547	152,113	697,650
1986		2,500		1,008	9,709	639,105	256,157	47,941	251,673	1,208,093
1987	2,890			14,345	2,011	1,296,732	117,053	40,681	230,725	1,704,437
1988					160,407	2,136,806	140,896	5,141	656,047	3,099,297
1989	3,560	35,415			81,107	877,911	197,982	6,162	303,485	1,505,622
1990	2,332	3,320	470	1,790	86,932	1,084,167	153,932	45,748	346,585	1,725,276
1991	19,612	36,096	3,062	57,249	72,708	1,056,524	291,717	3,717	887,777	2,428,462
1992	3,880	16,526	302	9,634	76,411	947,065	145,451	79,818	669,160	1,948,247
1993	7,590	5,280		68,757	93,272	664,815	135,287	22,209	439,555	1,436,765
1994		8,614		44,969	160,610	588,035	152,836	66,949	350,679	1,372,692
1995		0		34,705	110,433	329,466	40,995	12,072	302,632	830,303
1996		0			80,505	385,922	184,655	31,856	413,687	1,096,625
1997		0			22,233	862,497	143,297	37,877	400,148	1,466,052
1998		9,189	379	5,725	57,467	305,630	106,209	112,562	408,872	1,006,033
1999		2,207	240	1,715	79,602	469,258	44,917	10,031	578,123	1,186,093
2000	10,798	1,119		20,642	83,297	671,616	30,543	47,137	946,395	1,811,547
2001	1,168	0		14,526	42,047	499,829	46,945	23,056	1,232,506	1,860,077
2002		0			12,163	475,742	47,057	4,795	1,475,232	2,014,989
2003		0		9,762	22,030	446,052	29,107	34,855	1,021,204	1,563,010
2004		2,150		14,434	36,497	558,968	147,609	11,799	915,099	1,686,556
2005		0		38,946	14,459	359,927	138,517	16,296	1,088,720	1,656,865
2006		2,914		6,400	70	454,749	83,069	2,487	807,327	1,357,016
2007	0	0	0	25,276	29	729,687	119,207	26,513	1,003,340	1,904,052
2008	0	513	0	11,550	112,619	783,330	75,583	31,041	930,923	1,945,559
2009	0	302	0	42,300	24,663	892,632	101,614	13,272	708,270	1,783,053
2010		0		13,995	26,338	582,550	136,648	5,168	1,034,480	1,799,179
2011		0		22,630	41,325	194,521	72,631	9,439	873,604	1,214,150
2012		0		5,223	17,806	665,168	98,316	4,536	412,001	1,203,050
2013	0	0	43	6,949	68,146	625,035	50,856	2,158	646,996	1,400,183
2014	0	0	0	12,440	19,522	441,511	126,345	2,356	534,575	1,136,749
2015	0	0	0	16,820	10,746	431,082	108,423	1,879	126,258	695,208

2016 REVIEW OF THE ASMFC SPANISH MACKEREL FMP

Table 5. Recreational releases (numbers) of Spanish mackerel by state, 1981-2015
(NMFS Fisheries Statistics Division)

Year	NY	NJ	DE	MD	VA	NC	SC	GA	FL	Total
1981						5,616			56,374	61,990
1982									6,613	6,613
1983								515	4,929	5,444
1984						2,931	1,300		21,797	26,028
1985						27,753	3,862		23,316	54,931
1986					74	280,252	7,879	605	20,469	309,279
1987					13,947	28,136	5,506	2,916	7,197	57,702
1988						17,413	27,019	2,456	18,334	65,222
1989					10,286	64,749	73,983	391	83,682	233,091
1990	257				21,094	76,940	26,929		35,520	160,740
1991		2,674	1,092	1,747	28,777	133,601	19,331	57	190,602	377,881
1992					18,072	180,235	15,515	3,859	113,062	330,743
1993		1,160		2,684	70,081	81,927	15,966		74,052	245,870
1994	1,059	50,743			91,832	241,082	207,055		136,041	727,812
1995	7,297	1,269		1,562	24,467	145,845	14,159	2,594	129,469	326,662
1996					28,951	103,067	83,543	139	167,411	383,111
1997			338		22,658	140,704	62,356		168,815	394,871
1998				1,075	49,429	80,700	32,087	7,351	87,804	258,446
1999	1,415	2,670			36,276	205,870	46,400	495	185,106	478,232
2000			608	1,656	82,227	300,384	47,273	16,479	353,042	801,669
2001	1,657	4,907	825	7,265	30,158	160,591	9,711	3,188	285,738	504,040
2002				4,449	9,923	196,967	9,206	8,641	554,743	783,929
2003				6,994	20,539	164,787	223,116	6,501	445,965	867,902
2004				753	13,738	121,531	114,157	3,527	213,577	467,283
2005				4,937		174,140	153,584	8,983	367,862	709,506
2006				1,620	8,973	89,912	33,328	6,609	192,010	332,452
2007				13,657	7,837	277,710	83,513	27,643	197,856	608,216
2008				4,672	66,593	541,764	93,009	6,823	353,098	1,065,959
2009		13,363		6,906	24,848	241,540	49,472	627	175,042	511,798
2010				0	29,586	268,356	54,297	128	303,829	656,196
2011				0	28,526	170,926	67,144	10,131	147,399	424,126
2012				0	17,150	234,905	98,371	1,724	88,592	440,742
2013			94		5,583	289,216	24,862		365,107	684,862
2014				881	3,450	240,731	36,082	851	208,266	490,261
2015	0	0	0	357	4,224	216,011	99,530	466	85,947	406,535