



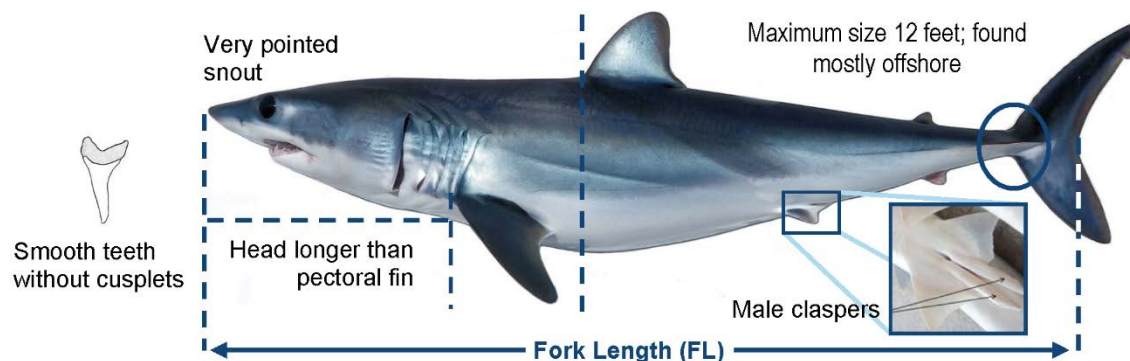
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Shortfin Mako Shark: Emergency Interim Final Rule and Amendment 11- Issues and Options

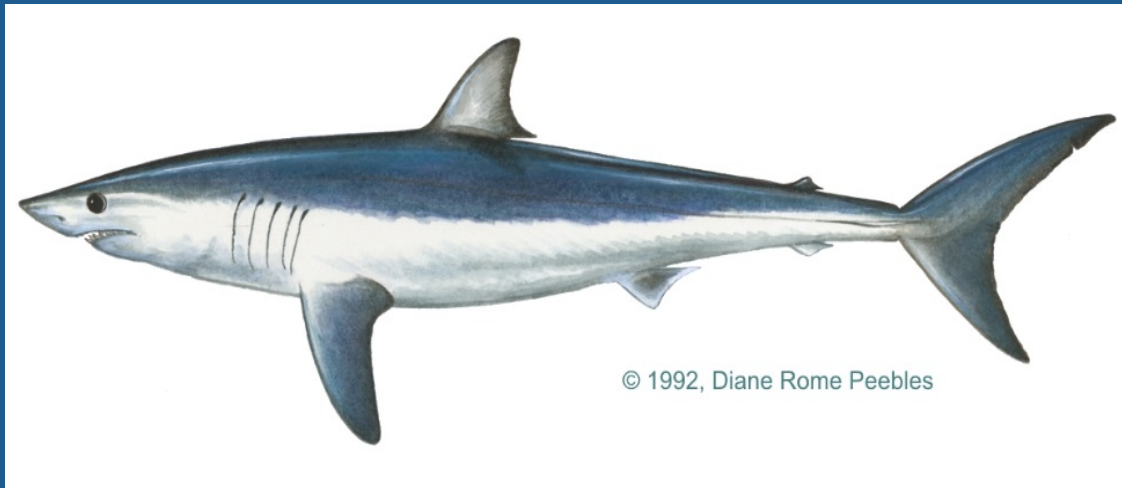
Highly Migratory Species Management Division
Spring 2018

Outline

- Management History and Stock Status
- Emergency Interim Final Rule
- Amendment 11: Potential Management Options
- Feedback



Management History and Stock Status



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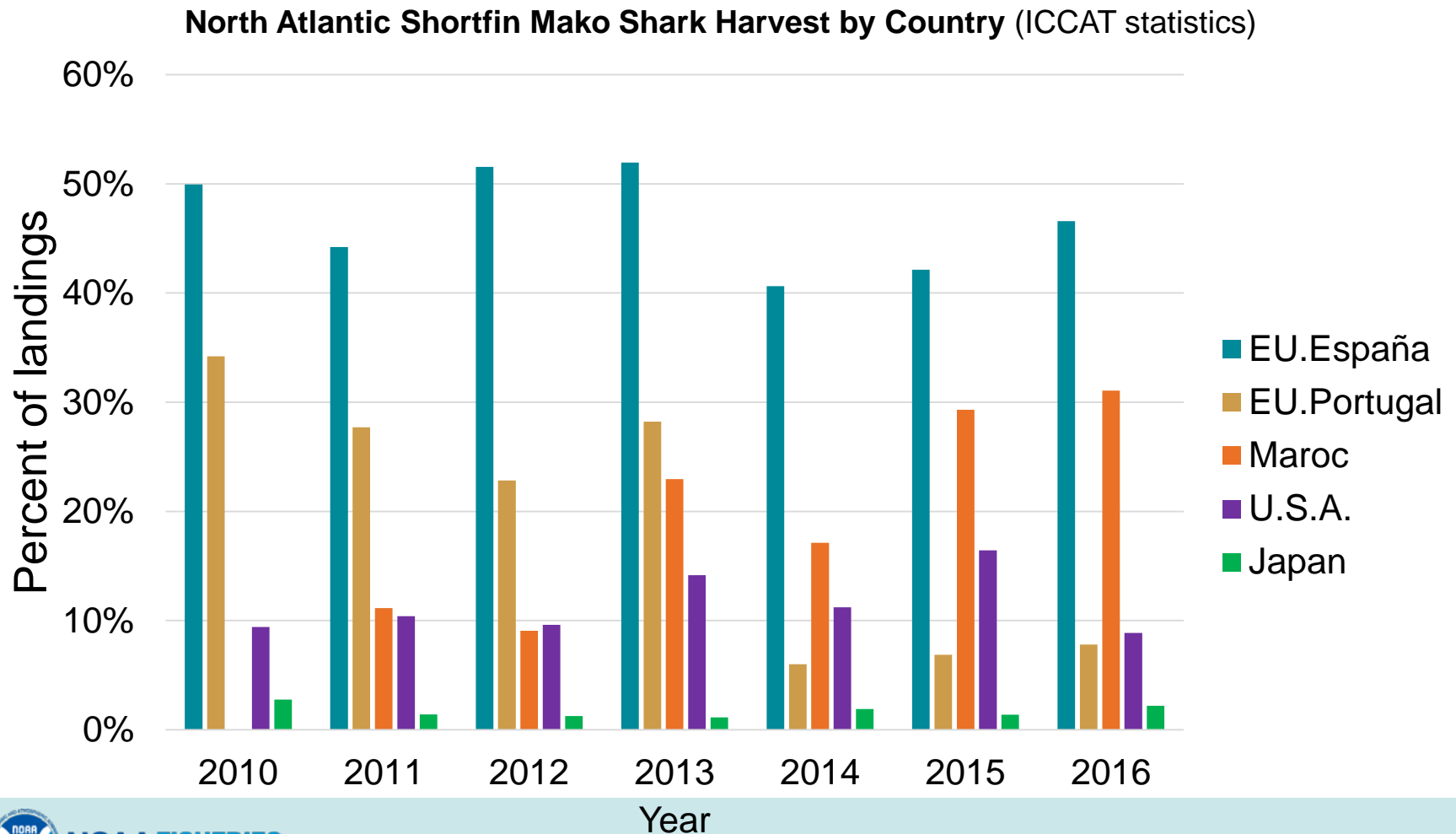
Management History

- 1993: 1993 Shark FMP
 - Shortfin mako sharks managed as part of the Pelagic Shark group
 - Implemented quotas for pelagic sharks (580 mt)
- 1999: 1999 FMP
 - Removed porbeagle and blue sharks from pelagic shark quota;
Reduced pelagic shark quota accordingly (488 mt dw)
- 2008: ICCAT Stock Assessment for North Atlantic Shortfin Mako sharks
 - Not overfished, overfishing occurring
- 2010: Amendment 3
 - Encouraged live release of shortfin mako sharks
- 2012: ICCAT Stock Assessment for North Atlantic Shortfin Mako sharks
 - Not overfished, No overfishing occurring
 - NMFS continued to encourage live release of Shortfin Mako sharks



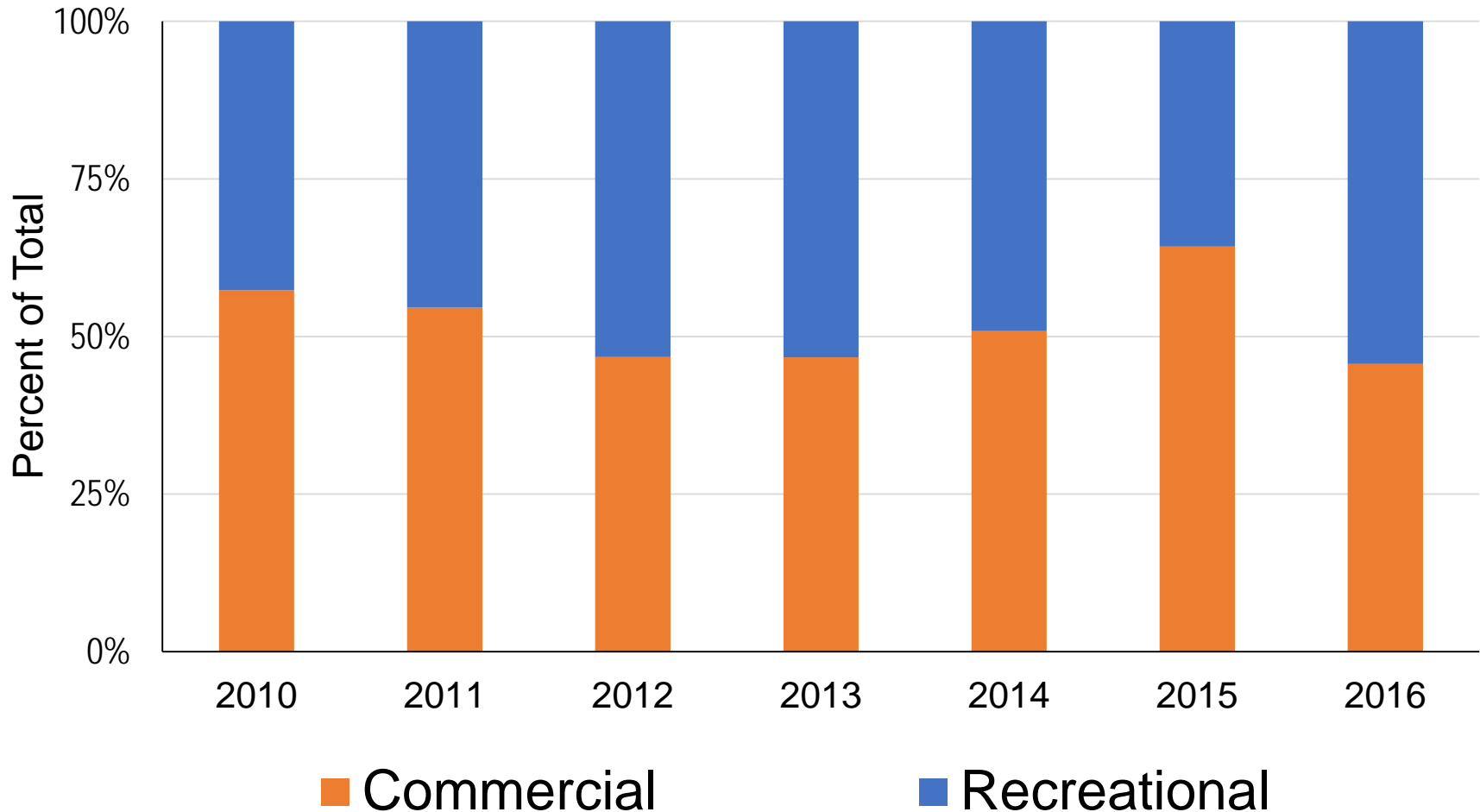
Management History

- U.S. shortfin mako catches represent ~11% of total North Atlantic catch



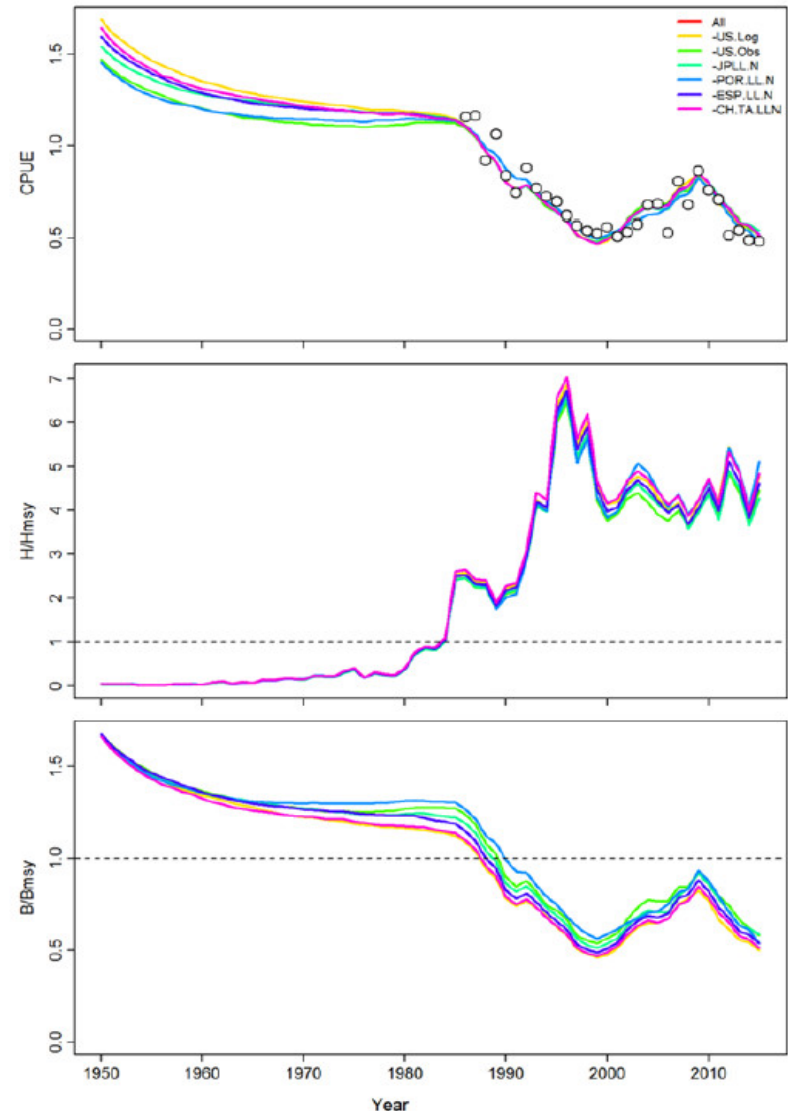
Management History

- U.S. commercial and recreational harvests are evenly split



ICCAT 2017 Stock Assessment

- ICCAT's SCRS conducted the assessment in Summer 2017
- Significant data updates from previous assessment (2012)
 - New model structure
 - Longer catch series (1950-2015)
 - Sex-specific biological parameters
 - Updated length compositions
 - New satellite tagging data



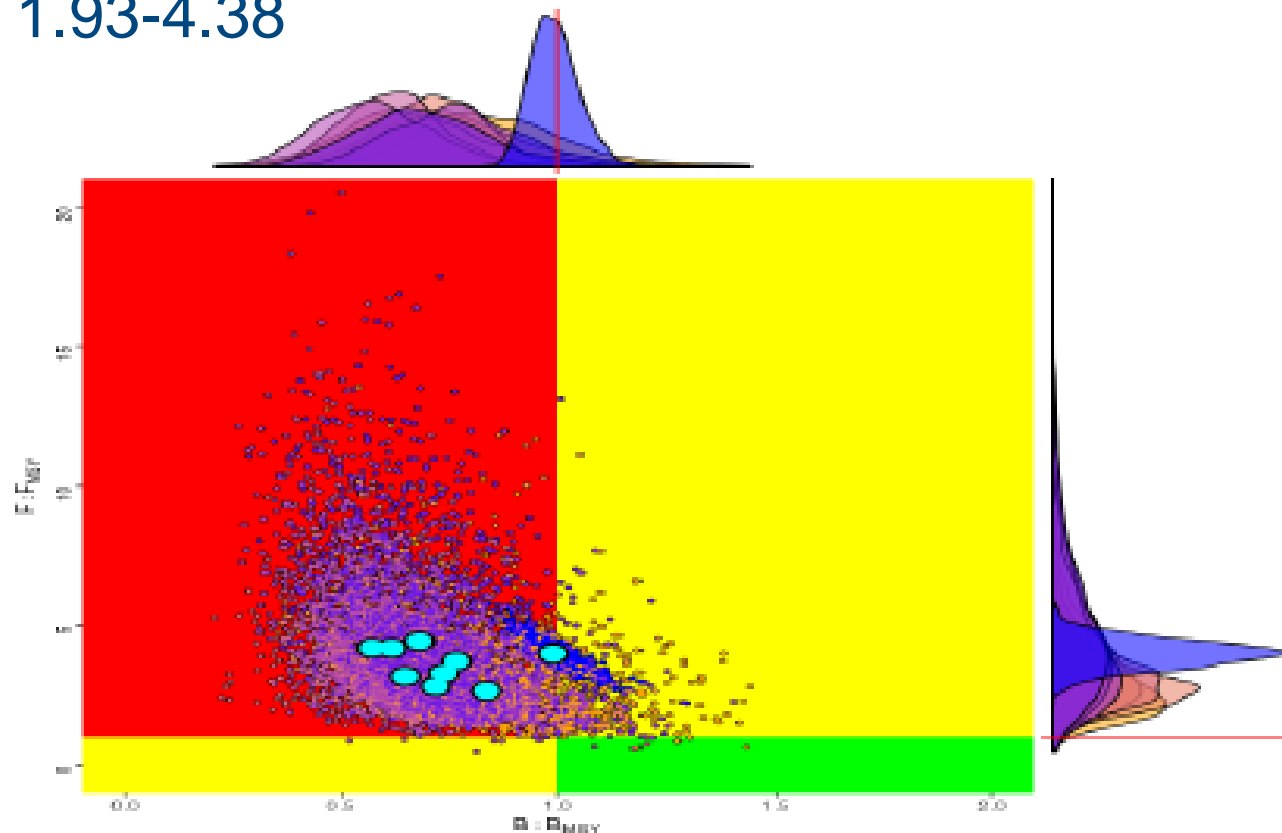
ICCAT 2017 Stock Assessment

➤ Overfished

➤ $B_{2015}/B_{MSY} = 0.57-0.85$, $SSF_{2015}/SSF_{MSY} = 0.95$

➤ Overfishing is occurring

➤ $F_{2015}/F_{MSY} = 1.93-4.38$



ICCAT 2017 Stock Assessment

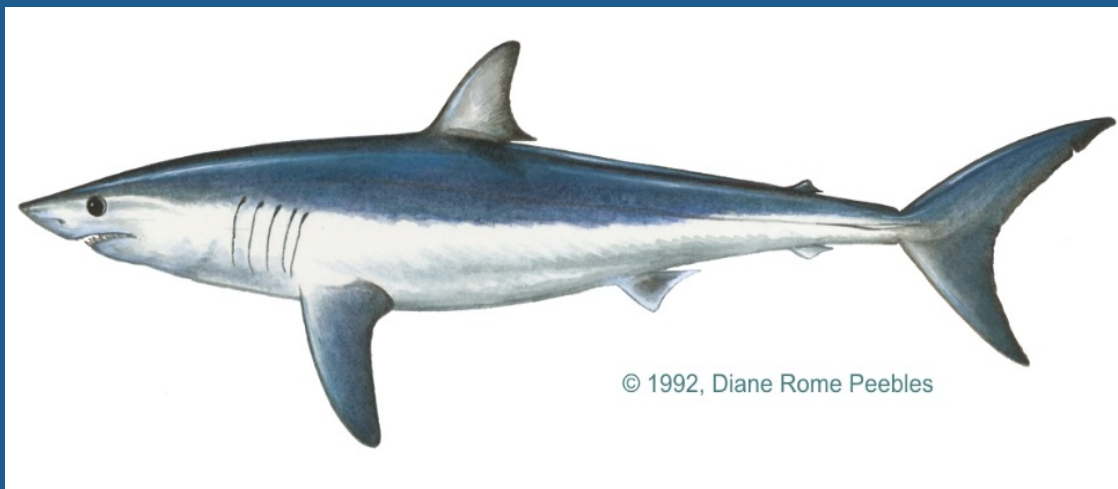
- Recent catches (all nations) are 3,600-4,750 mt per year
- Assessment indicates that catches should be reduced below 1,000 mt (72-79 percent reductions) to prevent further population declines
- A total allowable catch of 0 mt would be necessary to rebuild the stock by 2040



ICCAT Recommendation 17-08

- Adopted in November 2017
- Maximizes live releases
- Retention allowed under limited circumstances
 - If dead at haulback (requires observer and/or electronic monitoring (EM))
 - Minimum Size Limits: 180 cm FL male, 210 cm FL female
- November 2018 - review first six months of 2018 catches
- 2019 – SCRS evaluation of measure effectiveness, establish rebuilding plan
- U.S. is obligated to implement ICCAT recommendations as necessary and appropriate under the Atlantic Tunas Convention Act

Emergency Interim Final Rule (effective March 2, 2018)



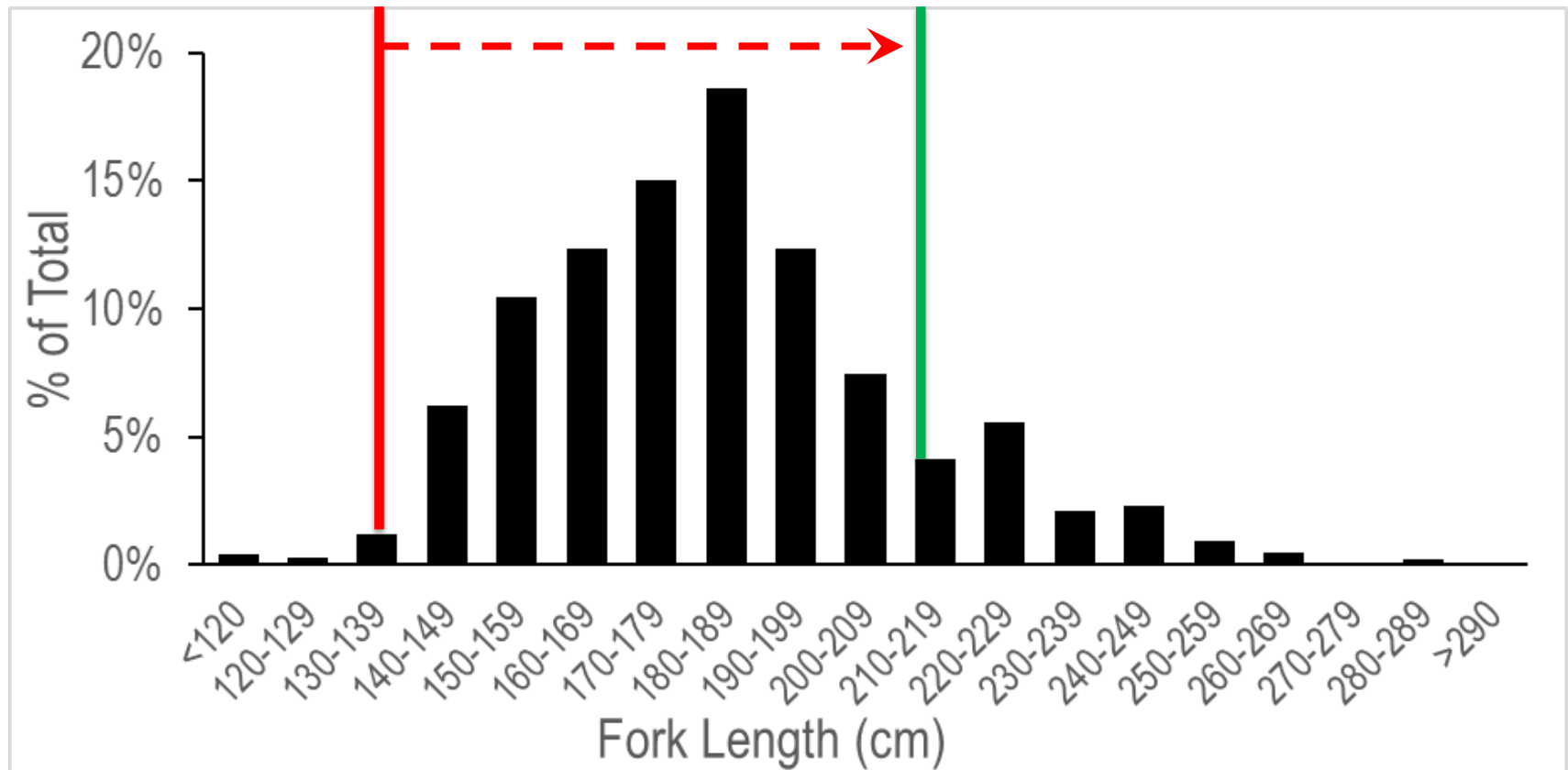
Interim Final Measures

- Live release of shortfin mako sharks in commercial pelagic longline fishery
 - Retention only if shark is dead at haulback and vessel has functioning EM
- Prohibition on retention of shortfin mako sharks caught on commercial gears other than pelagic longline (bottom longline, gillnet, etc.)
- Estimated 75% reduction in U.S. commercial landings

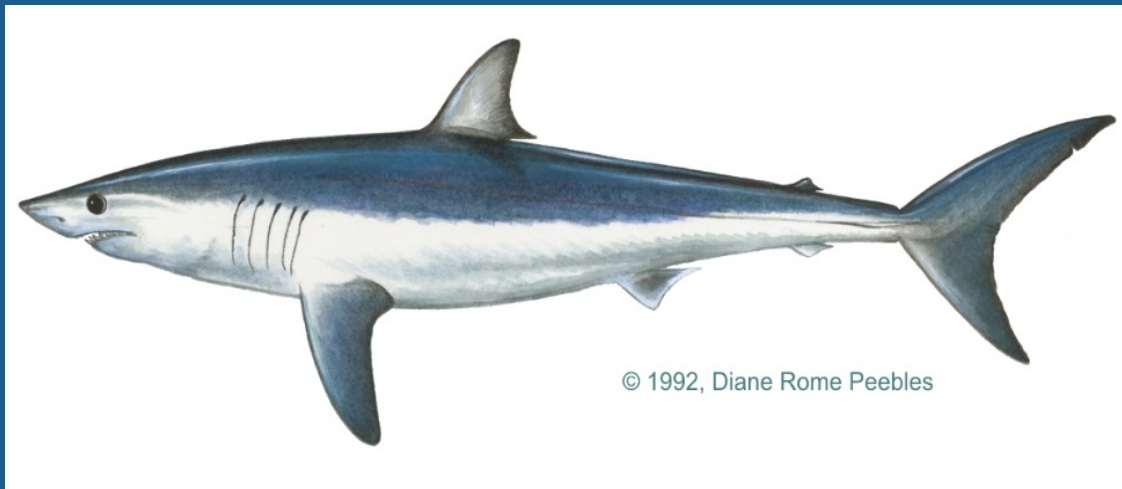


Interim Final Measures

- Increase recreational minimum size limit from 54 in to 83 in FL
- Estimated 83% reduction in U.S. recreational landings



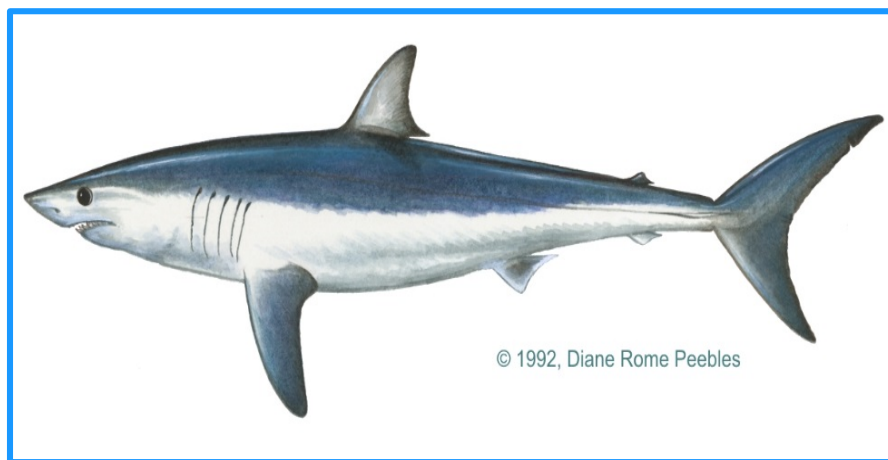
Amendment 11: Issues and Options



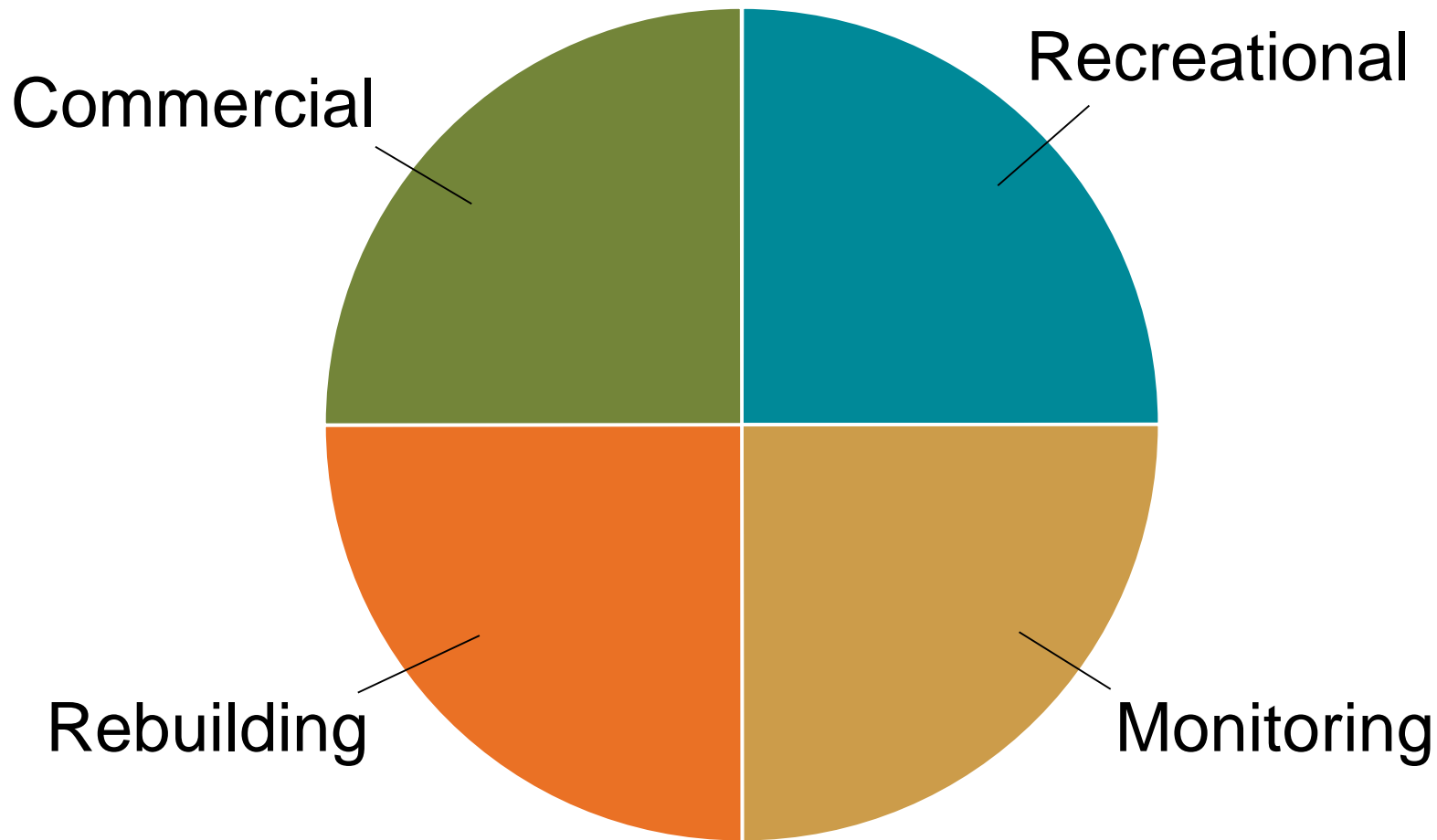
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Purpose

Implement management measures to address overfishing and help rebuild the North Atlantic shortfin mako shark stock



Range of Potential Options



Commercial Options

Option 1	No Action. Keep current regulations for shortfin mako sharks.
Option 2	Require live release of shortfin mako sharks in the commercial pelagic longline fishery.
Option 3 *	Allow retention of a shortfin mako sharks by persons with a directed or incidental shark limited access permit only if it is dead at haulback, caught incidentally with pelagic longline gear during fishing for other species, and there is a functional electronic monitoring system on board the vessel.
Option 4 *	Prohibit the landing of all shortfin sharks caught on non-pelagic longline gear (e.g., bottom longline, gillnet, handgear, etc).

* Option is from the emergency interim final rule for shortfin mako sharks

Commercial Options, cont.

Option 5	Remove shortfin mako sharks from pelagic shark quota; use recent landings to both establish a shortfin mako shark quota and adjust the pelagic shark quota.
Option 6	Allow retention of shortfin mako sharks greater than 83 inches FL by persons with a directed or incidental shark limited access permit caught on non-pelagic longline gear (e.g., bottom longline, gillnet, handgear, etc).
Option 7	Allow retention of shortfin mako sharks, that are dead at haulback, by persons with a directed or incidental shark limited access permit caught on non-pelagic longline gear (e.g., bottom longline, gillnet, handgear, etc.) only if an observer is on board.
Option 8	Prohibit the commercial landing of all shortfin mako sharks, live or dead.

Recreational Options

Option 1	No Action. Keep current regulations for shortfin mako sharks.
Option 2	Prohibit landing of shortfin mako sharks in the HMS recreational fishery (catch and release only).
Option 3	Increase the minimum size limit for the retention of shortfin mako sharks from 54 inches FL to 71 inches FL (180 cm FL) for male and 83 inches FL (210 cm FL) for female shortfin mako sharks.
Option 4 *	Increase the minimum size of all shortfin mako sharks from 54 inches FL to 83 inches (210 cm) FL.

* Option is from the emergency interim final rule for shortfin mako sharks.

Recreational Options, cont.

Option 5	Increase the minimum size of all shortfin mako sharks to 83 inches FL and allow retention in registered HMS tournaments only
Option 6	Establish a tagging or lottery program to land shortfin mako sharks greater than 83 inches FL recreationally
Option 7	Require use of circle hooks for recreational shark fishing in all areas (remove the current management line established for dusky sharks near Chatham, MA)
Option 8	Establish a minimum size limit for the retention of shortfin mako sharks that is greater than 83 inches FL
Option 9	Establish a variable inseason minimum size limit for shortfin mako sharks

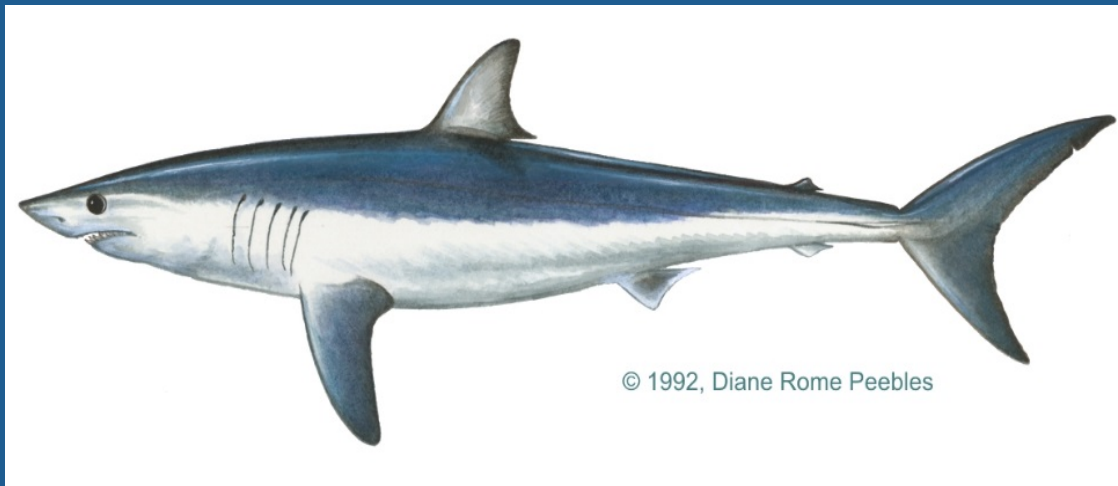
Monitoring Options

Option 1	No Action. Do not require reporting of shortfin mako sharks outside of current reporting systems.
Option 2	Establish mandatory reporting of shortfin mako catches (landings and discards) on VMS.
Option 3	Implement mandatory reporting of shortfin mako shark landings and discards in registered HMS tournaments (ATR).
Option 4	Implement mandatory reporting of all recreationally landed and discarded shortfin mako sharks (e.g., app, website, Vessel Trip Reports).

Rebuilding Plan Options

Option 1	No Action. Do not establish a rebuilding plan for shortfin mako.
Option 2	Establish a domestic rebuilding plan for shortfin mako sharks unilaterally (i.e., without ICCAT).
Option 3	Establish the foundation for developing an international rebuilding program for shortfin mako sharks.

Feedback



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Request for Public Comments

Comment period for both closes on:

May 7, 2018

Please submit comments to:

<http://www.regulations.gov>

Emergency Rule Keyword – “NOAA-NMFS-2018-0010”

Amendment 11 Keyword - “NOAA-NMFS-2018-0011”

Comments can also be submitted via mail: Attn: Guy DuBeck
NMFS SF1, 1315 East-West Highway, Silver Spring, MD 20910

For more information: <https://www.fisheries.noaa.gov/topic/atlantic-highly-migratory-species>

or Contact Tobey Curtis Tobey.Curtis@noaa.gov

Guý DuBeck Guy.DuBeck@noaa.gov or

Karyl Brewster-Geisz Karyl.Brewster-Geisz@noaa.gov

or Call (301) 427-8503.

Next Steps

- May 7, 2018: Comment Public Period Ends for both the Emergency Rule and Amendment 11 Scoping
- End of July 2018: Amendment 11 Proposed Rule possible publication (60 day comment period)
- August 29, 2018: Emergency Interim Final Rule expires (possible extension for 186 days)
- March 2019: Final Rule for Amendment 11

ICCAT will evaluate measures in November 2018



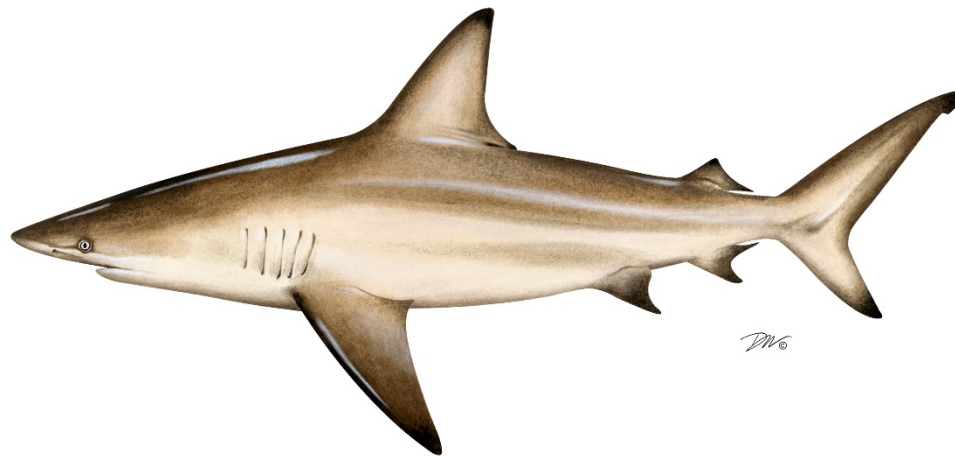
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Your questions and thoughts are important to us; please share them



Coastal Sharks TC Call Summary



Coastal Sharks Management Board
May 1, 2018

Outline



- Overview
- TC tasks and responses for
 - Atlantic Shortfin Mako Shark
 - potential management response options
 - Sandbar Shark
 - Oceanic Whitetip Shark

Overview



- Several tasks were posed to the TC by the Board Chair
- TC met via conference call on March 28 to discuss and respond to tasks

Atlantic Shortfin Mako



TC Task

- 1) Review the recent stock assessments for Atlantic shortfin mako sharks, and consider providing the Board any recommendations on potential management actions (that the states should take to backstop federal measures).
- 2) Review the recent emergency rule management measures implemented for Atlantic shortfin mako sharks, and provide the Board the potential conservation benefits of adopting complementary management measures in state waters for state permit holders.

TC Response



- Most Atlantic shortfin mako commercial landings come from federal waters; minimal landings from state waters
 - Species preference for open ocean/pelagic habitat
 - Rec harvest: less than 1% harvested in state waters based on MRIP and LPS datasets (2010-2016; 2011-2015)
- Given minimal landings, implementing emergency measures in state waters likely would not have significant impact
 - concerns raised about having inconsistent regulations between state-federal waters for recreational anglers & for-hire vessels
- Preference is to provide comments in Amendment 11 scoping process
- Overall, recommend states implement emergency measures if possible for consistency purposes



Questions?

Management Response Options



- No Action
- States individually implement NOAA Fisheries emergency rule measures

ASMFC Process

- Board implements measures under Emergency Action
 - Public comment period and public hearing
- Initiate an addendum to the FMP

Emergency Action



- ISFMP Charter (section 6)
 - Definition: provision applies if circumstance affects
 - Public health
 - Conservation of the coastal fishery resource
 - Attainment of the FMP objectives has been placed at risk by unanticipated changes in the ecosystem, the stock, or the fishery
 - Board can require emergency action for items not covered under the FMP; treated as amendment
 - 2/3 majority vote need
 - Within 30 days, at least four public hearings must be held
 - Action can be extended up to 180 days

Sandbar Shark



TC Task

Review the recent stock assessments for Sandbar sharks, and consider providing the Board any recommendations on potential management actions (that the states should take to backstop federal measures).

TC Response



- Sandbar Shark Fishery is research take only
 - No commercial fishery
- NOAA HMS has not adjusted management program in response to assessment
- No formal recommendations beyond maintaining status quo



Questions?

Oceanic Whitetip



TC Task

Consider the recent status determination for Oceanic whitetip sharks and provide the Board any recommendations on potential management response, (both for in-state shark fisheries and for vessels landing sharks taken in the EEZ or in transit from the EEZ through state waters).

TC Response



- Species most commonly found south of ASMFC states
- NOAA HMS has not adjusted management program in response to new ESA status
- TC recommends consider moving the species to the prohibited species list once consultations completed
- Maintain status quo measures



Questions?



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Summary of Sandbar Shark Stock Assessment: SEDAR 54

Presented to ASMFC Shark Board
May 2018

Scope of SEDAR 54 versus SEDAR 21

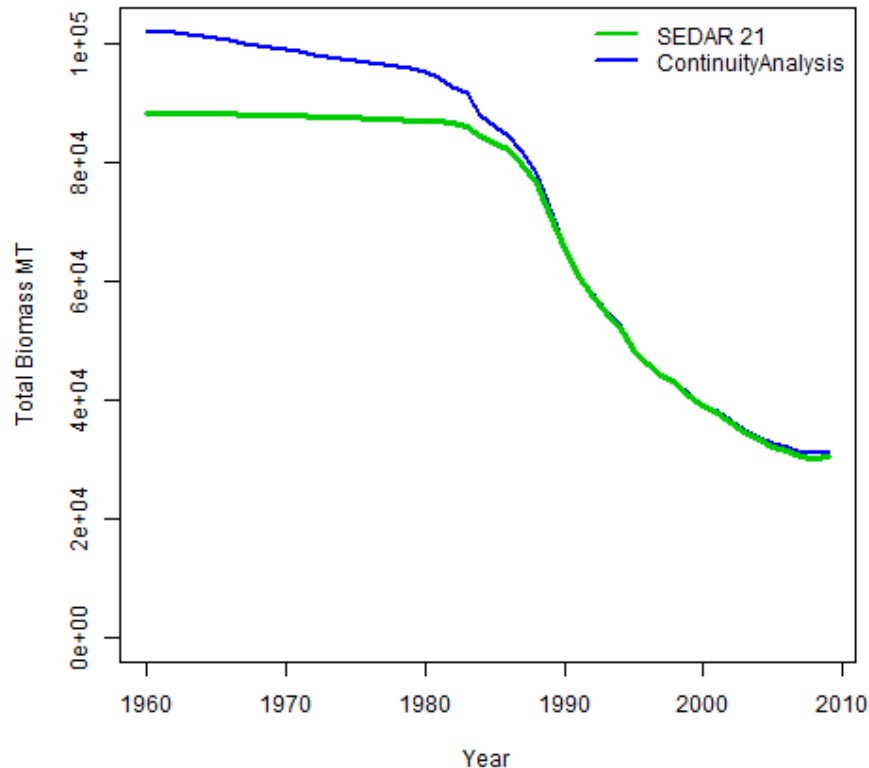
SEDAR 54

- Standard Assessment
- 1960-2015
- Gulf of Mexico and Atlantic
- Stock synthesis model
 - Extensive replication analysis

SEDAR 21

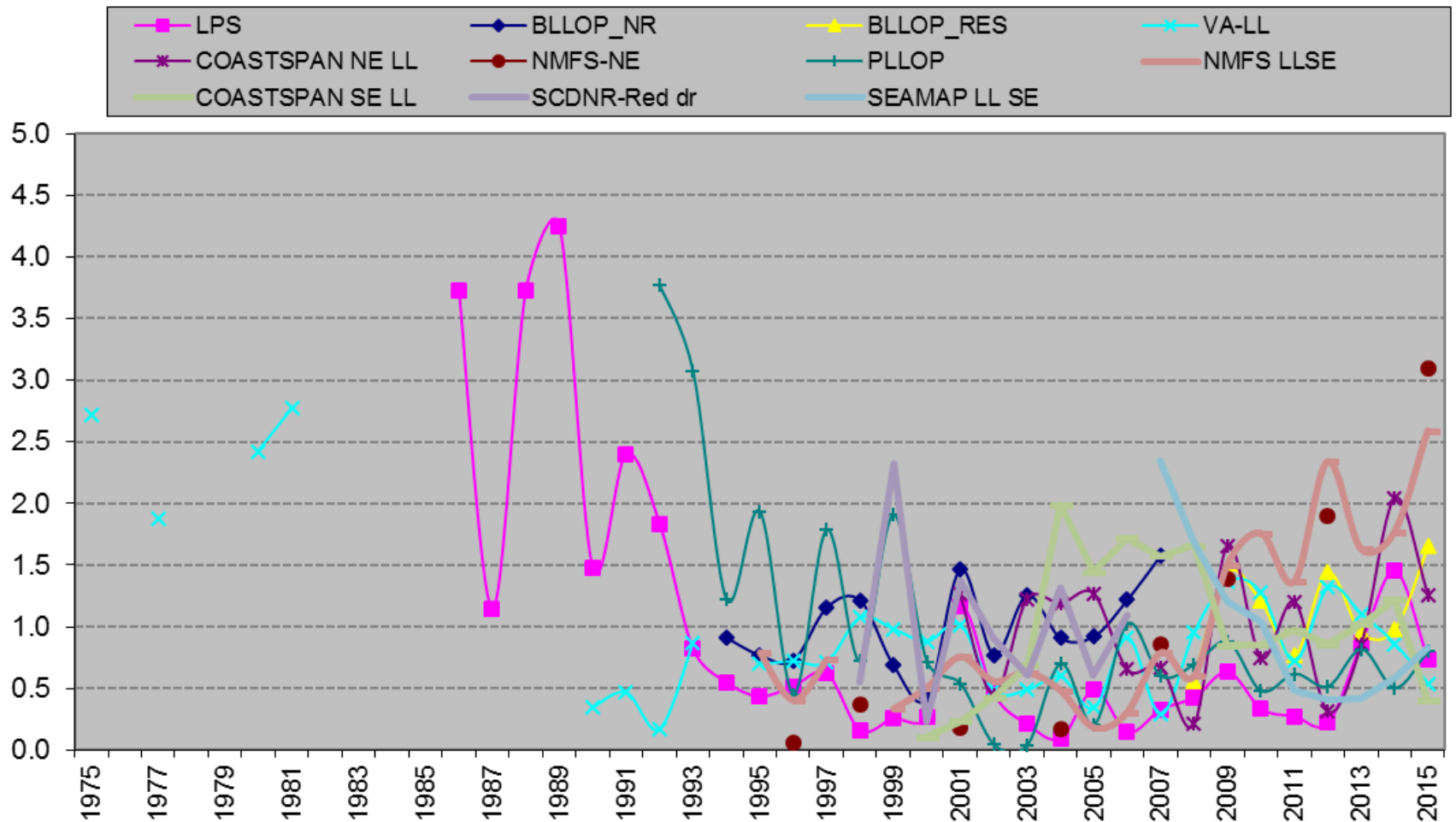
- Benchmark Assessment
- 1960-2009
- Gulf of Mexico and Atlantic
- State-space age structured production model (SSASPM)

Results of the Replication Analysis: uses the SEDAR 21 inputs in Stock Synthesis Model



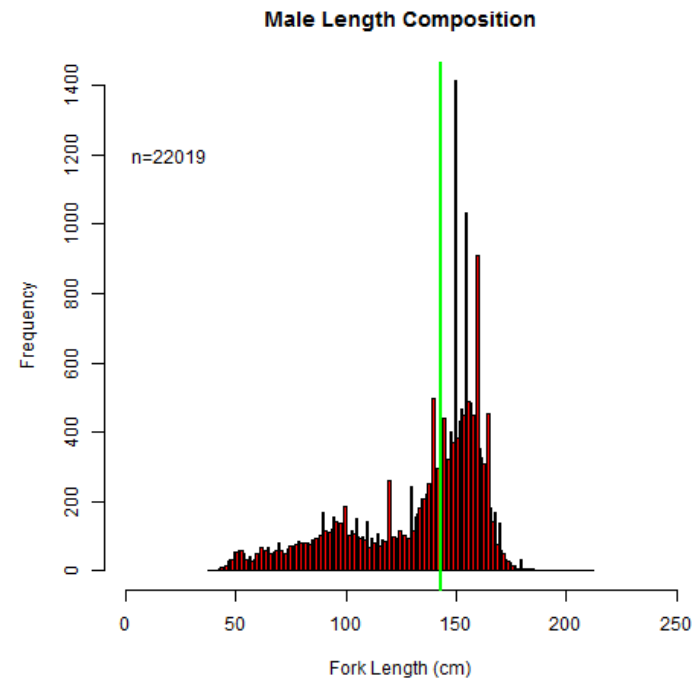
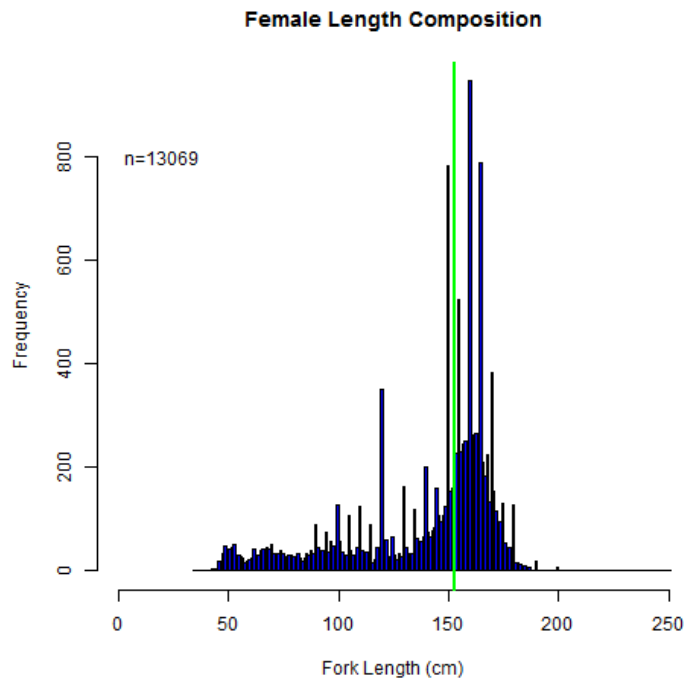
- Early time period not fit well due to lack of data.
- Data rich period nearly the same fit.
- Biomass estimates nearly the same.
- Stock synthesis model shows a slightly more productive stock (slightly higher F_{msy} value).
- Stock status the same: overfished, no overfishing.
- Stock synthesis successfully replicated results from SSASPM.

Indices of Abundance

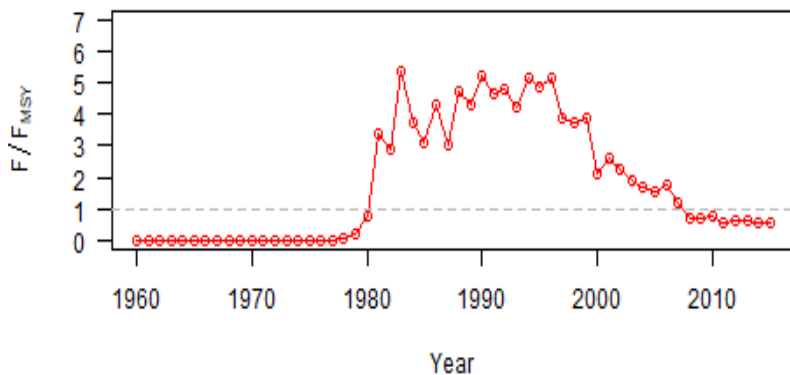
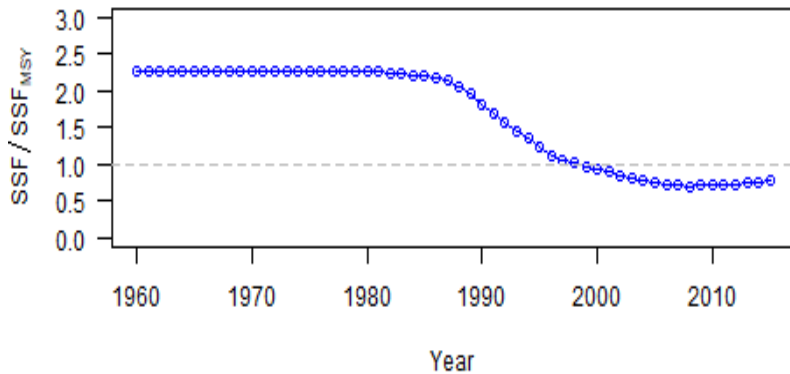


Changes with new model:

- Updated some parameters
 - Longevity
 - Maturity
- Added length data
- Added data in Iterative stepwise manner



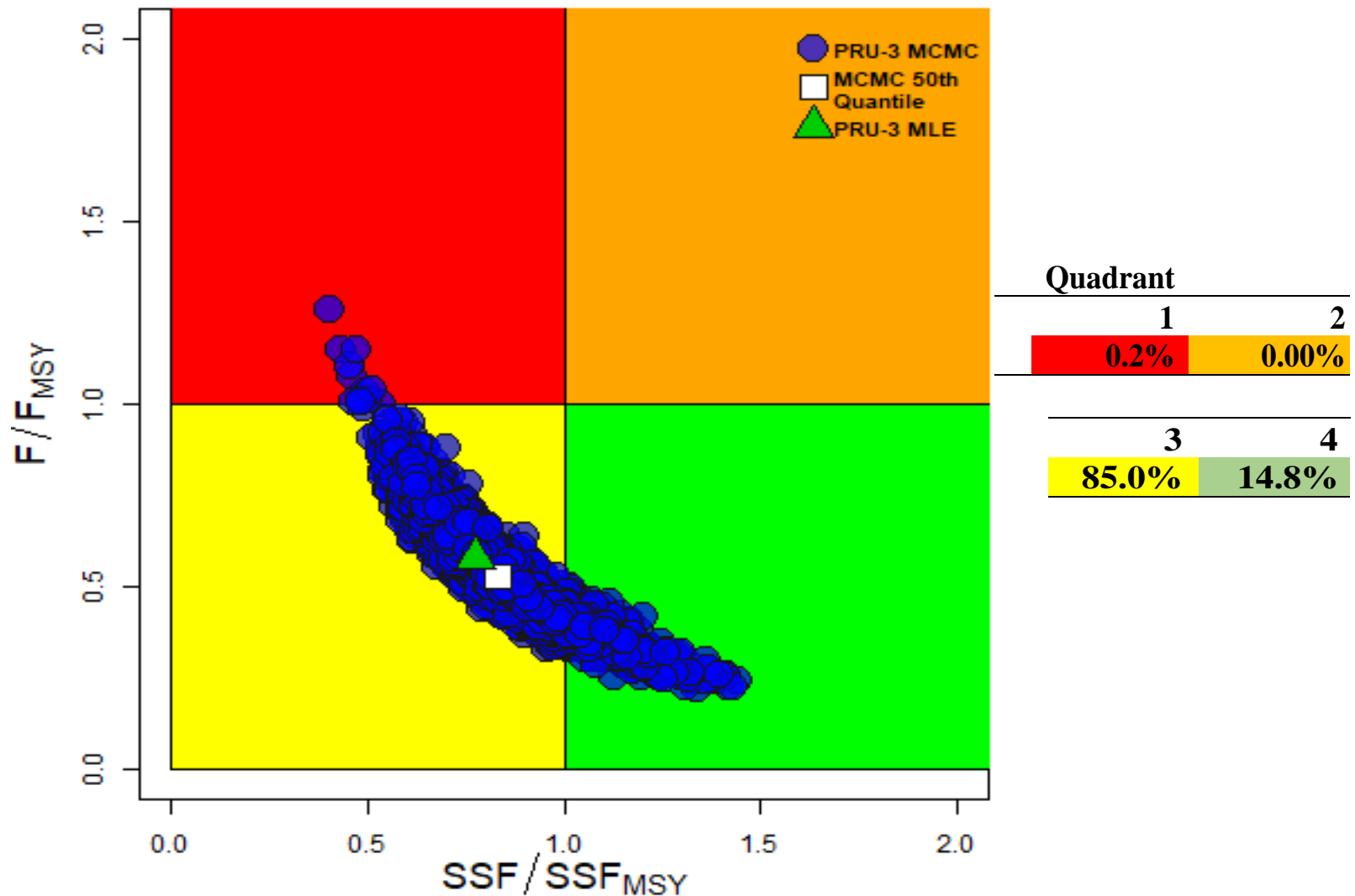
Biomass and Fishing Mortality Estimates



$Catch_{2015}/MSY$	0.45
MSY	435
B_0	99,769
B_{MSY}	43,952
SSF_0	1,545
SSF_{MSY}	681
SSF_{2015}/SSF_{MSY}	0.77
F_{MSY}	0.07
F_{2015}/F_{MSY}	0.58
SSF_{2015}	527
F_{2015}	0.04
B_{2015}	37,620
$MSST$	595

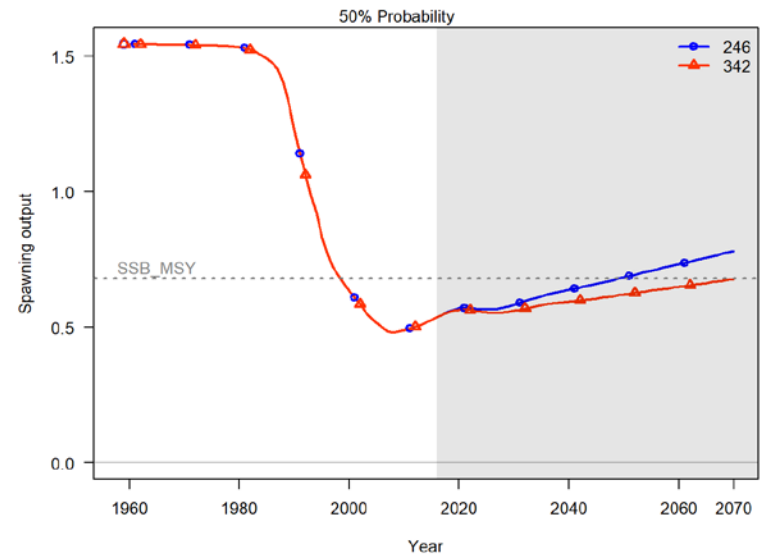
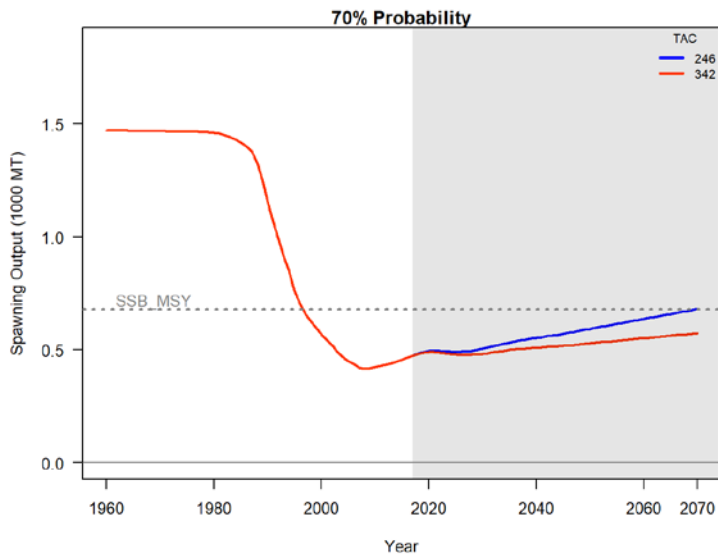
SSF = Spawning Stock Fecundity

Estimated Stock Status



Results of Projections

Probability of Rebuilding by 2070	TAC Based on MLE Projections	Current TAC	% Change
70%	246	220	12%
50%	342	220	55%





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Questions?



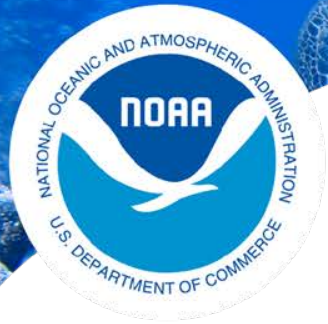
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Listing the Oceanic Whitetip Shark as Threatened under the ESA

Carcharhinus longimanus





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U.S. Endangered Species Act of 1973

“...to provide a means whereby the ecosystems upon which endangered and threatened species depend may be conserved, to provide a program for the conservation of such endangered and threatened species...”

Endangered species = any species which is **in danger** of extinction throughout all or a significant portion of its range

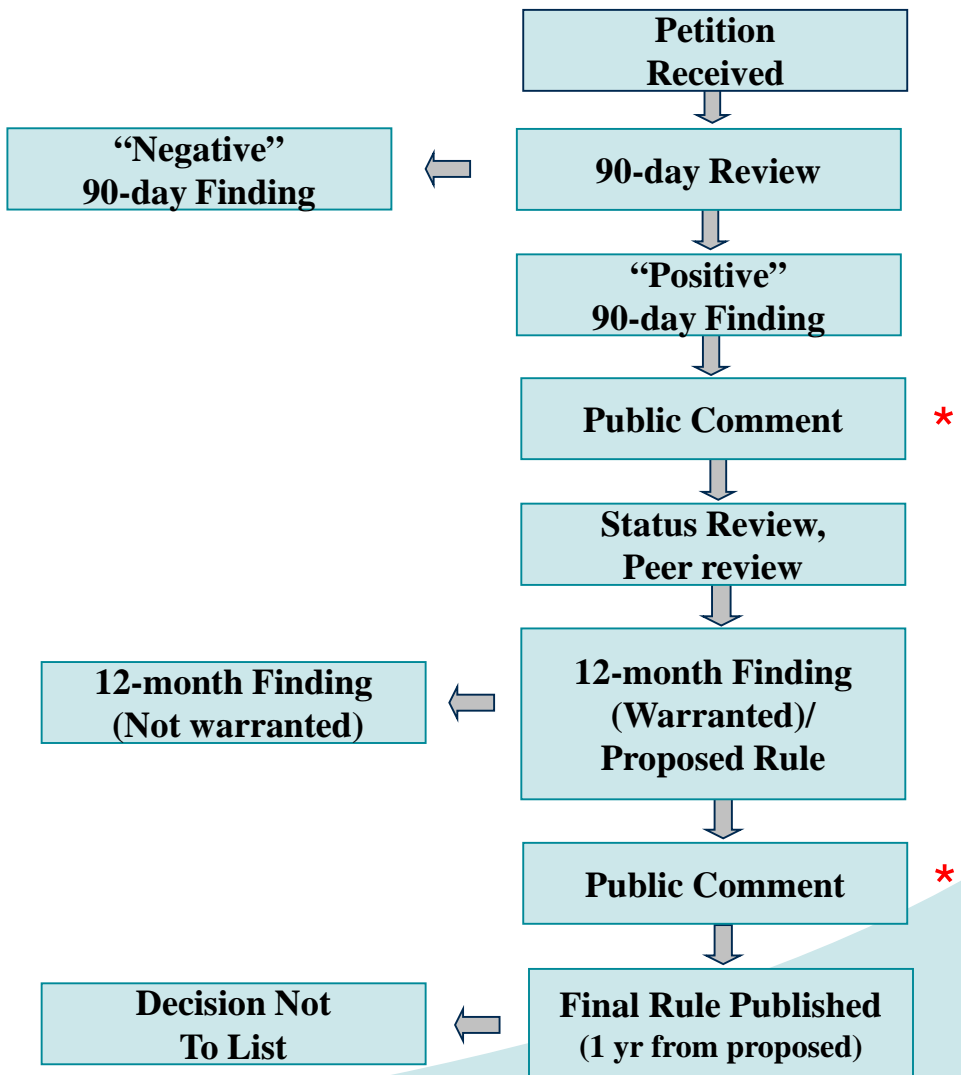
Threatened species = any species which is **likely to become an endangered** species **within the foreseeable future** throughout all or a significant portion of its range

Listing Process under the ESA



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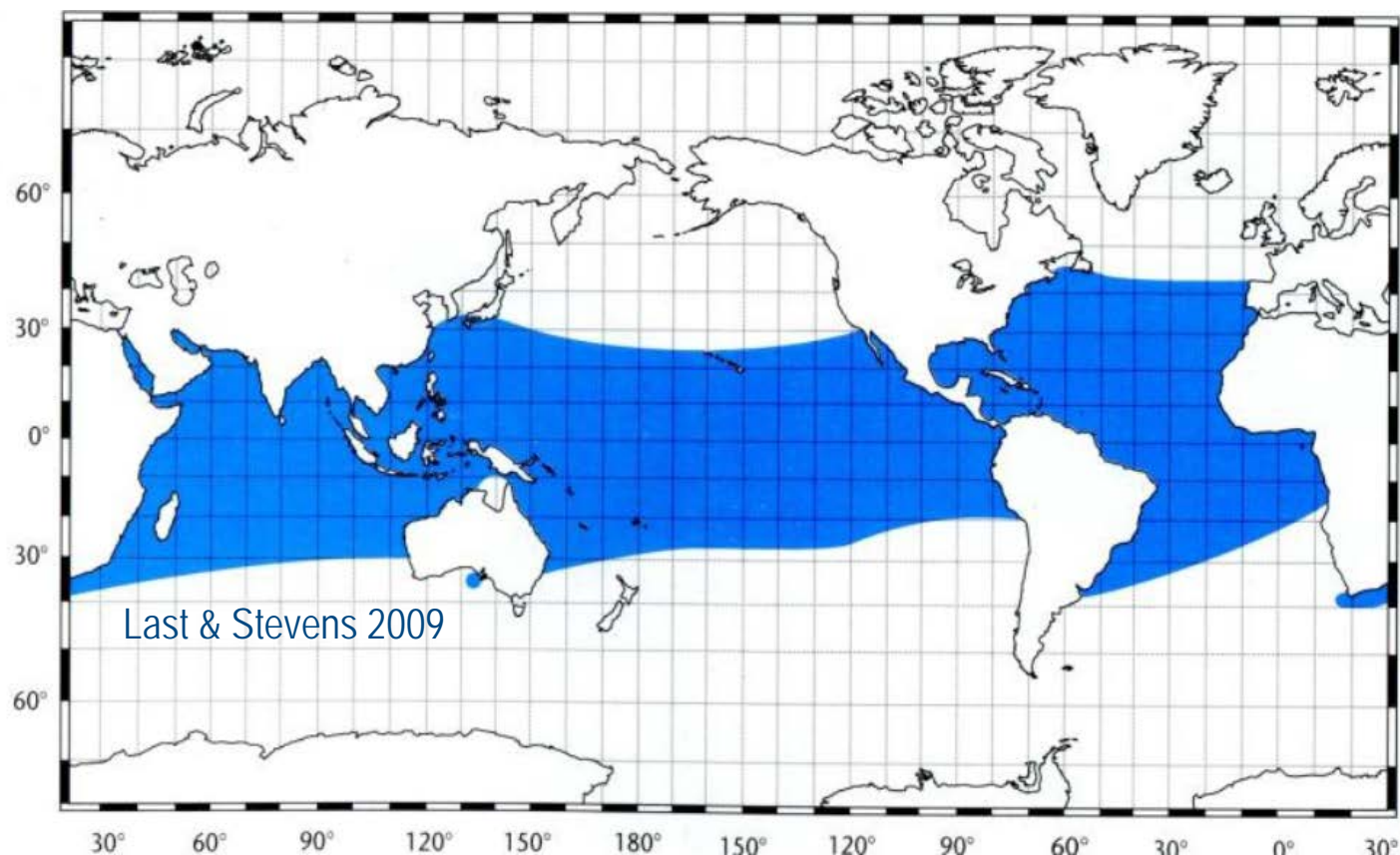


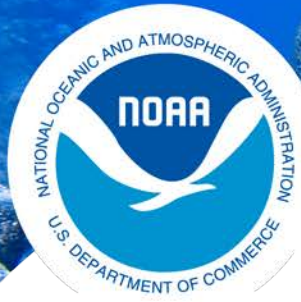
Background & Timeline

- September 21, 2015 – Defenders of Wildlife submitted petition to list global species OR 2 Distinct Population Segments (DPSs; Atlantic & Indo-Pacific)
- Positive 90-day finding on global species in January 2016
- Convened ERA Team in July 2016 comprised of 6 members from OPR, HMS, NEFSC, SEFSC, SWFSC, PIFSC
- Sent Status Review Report for peer review in August 2016: received 5 peer reviews and 2 regional reviews (PIRO; HMS)
- Proposed rule published December 29, 2016
- Final rule published January 30, 2018
- Effective date March 1, 2018

Global Distribution

- Clear preference for open ocean waters between 10°S and 10°N
- Depth distribution = upper mixed layer (1-152 m) but considered surface-dwelling shark
- Temperature preference = $>20\text{ }^{\circ}\text{C}$





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Life History Parameters

- Long lived (up to 20 years)
- Late age of maturity
 - 6-7 years (both sexes; SW Atlantic)
 - 8-9 years (females; N. Pacific)
- Lengthy gestation (9-12 months)
- Low fecundity (1-14 pups with average of 5-6 every 2 years)

Region	Historical	Current	% decline	Source
Eastern Pacific	↓	↓	80-95% (since 1990s)	Declines in tropical purse seine fishery (Hall and Roman 2013; IATTC observer database)
Western & Central Pacific	↓	↓	86 - >90% (since 1995)	Declines in LL and purse seine fisheries (Rice and Harley 2012; Brodziak et al. 2013) Rice et al. 2015)
NW Atlantic	↓	Likely stable →	57-70% (1992-2005;1992-2000)	Declines in pelagic LL fishery (Baum et al. 2003; Baum & Myers 2004; Cortés 2007)
Gulf of Mexico	↓		88% (1950s-1990s)	
South Atlantic	↓	Uncertain, but likely ↓	50-85% (since 1990s)	Declines in Brazil LL fishery (Hazin et al. 2007; ICCAT database; Santana et al. 2004)
Indian Ocean	↓	Uncertain, but likely ↓	25-90% (various; mainly since 1990s)	Longline and purse seine fisheries (Ramos-Cartelle et al. 2012; Semba and Yokawa 2012; Anderson et al. 2011; Tolotti et al. 2015)

Threats

Overutilization in commercial fisheries

- **Bycatch**

- Caught in large numbers globally in longline and purse seine fisheries (among others); large majority are juveniles
- At-vessel mortality rates 23-58% in longlines; >85% in purse seines
- Unknown post-release mortality

- **Fin Trade**

- Considered “preferred” species for fins
- Obtains US \$45-85 per kg = main economic driver for retention
- Comprises approximately 2% of global fin trade



Bullis, 1955



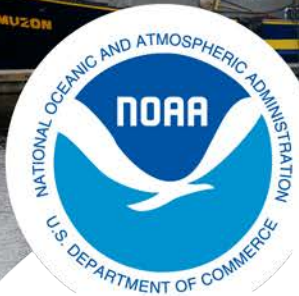
Threats cont...

Inadequate regulations

- **Retention bans**
 - Only shark species that has a no-retention measure in every RFMO
 - Does not prevent capture/mortality
 - Variable implementation/enforcement
 - Partially effective
- **Finning bans/regulations**
- **CITES Appendix II listing**
 - Several confiscated shipments to Hong Kong since 2014 listing
 - Colombia, Seychelles, UAE
- **IUU fishing and trafficking**
 - Illegal fins seized from Indonesia, Costa Rica, Taiwan (in Marshall Islands)



Extinction Risk



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Considering a foreseeable future of ~30 years:

Significant historical and ongoing abundance declines in all three ocean basins

+

slow growth, late maturity, low fecundity, and low genetic diversity

+

ongoing threats of overutilization and largely inadequate regulatory mechanisms

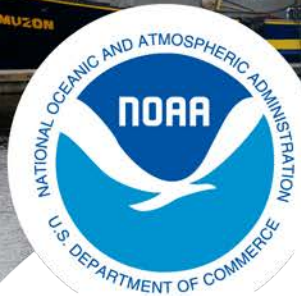
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Moderate risk of extinction → proposed and final **threatened** listing under the ESA

What happens next?

- **Section 7 consultations**
 - Required for any federal action that may affect the species
 - Already underway for Atlantic HMS PLL fishery and HMS All Other Gears
- **Critical habitat designation**
 - 1-year extension
 - Would be open to public comment/input
- **Protective regulations aka 4(d) rule**
 - Not developing a 4(d) rule at this time
 - May consider in the future if necessary for conservation
 - Would be open to public comment/input
- **Recovery planning**

Implications



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- “Take” is currently not prohibited under this listing
 - U.S. fishermen do not have to do anything different under current laws if/when they accidentally catch an oceanic whitetip
 - U.S. fishermen continue to operate under Federal fisheries regulations and RFMO measures they are currently subject to
- Fisheries that may affect the oceanic whitetip will undergo Section 7 consultation



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Questions?

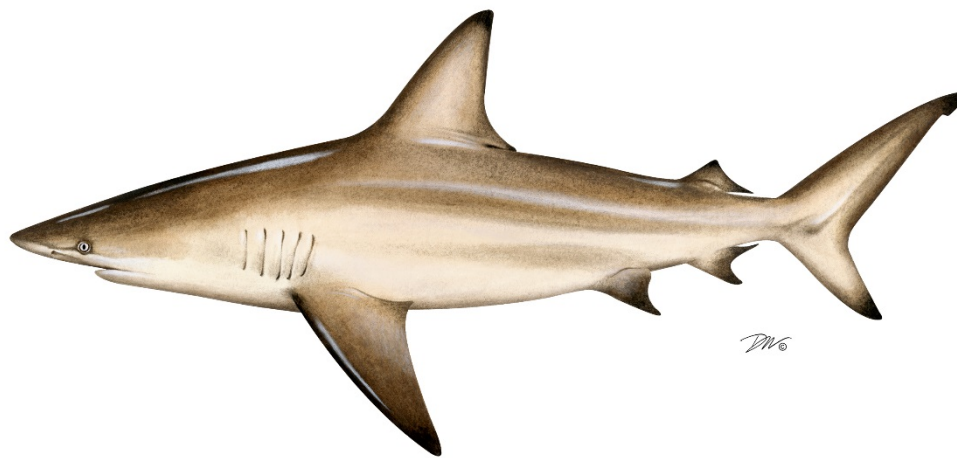


Photo: Andy Mann

Contact: Chelsey Young – chelsey.young@noaa.gov



Coastal Sharks: 2016 and 2017 FMP Review



Coastal Sharks Management Board
May 1, 2018

Outline



- Status of FMP
- Status of Stocks
- Status of the Fishery
- Implementation of Compliance Requirements
- PRT Recommendations

Coastal Sharks FMP



- Fishery Management Plan
(Implemented January 2009)
 - Addendum I (September 2009)
 - Addendum II (May 2013)
 - Addendum III (October 2013)
 - Addendum IV (August 2016)

- No new changes to FMP

Status of the Stocks

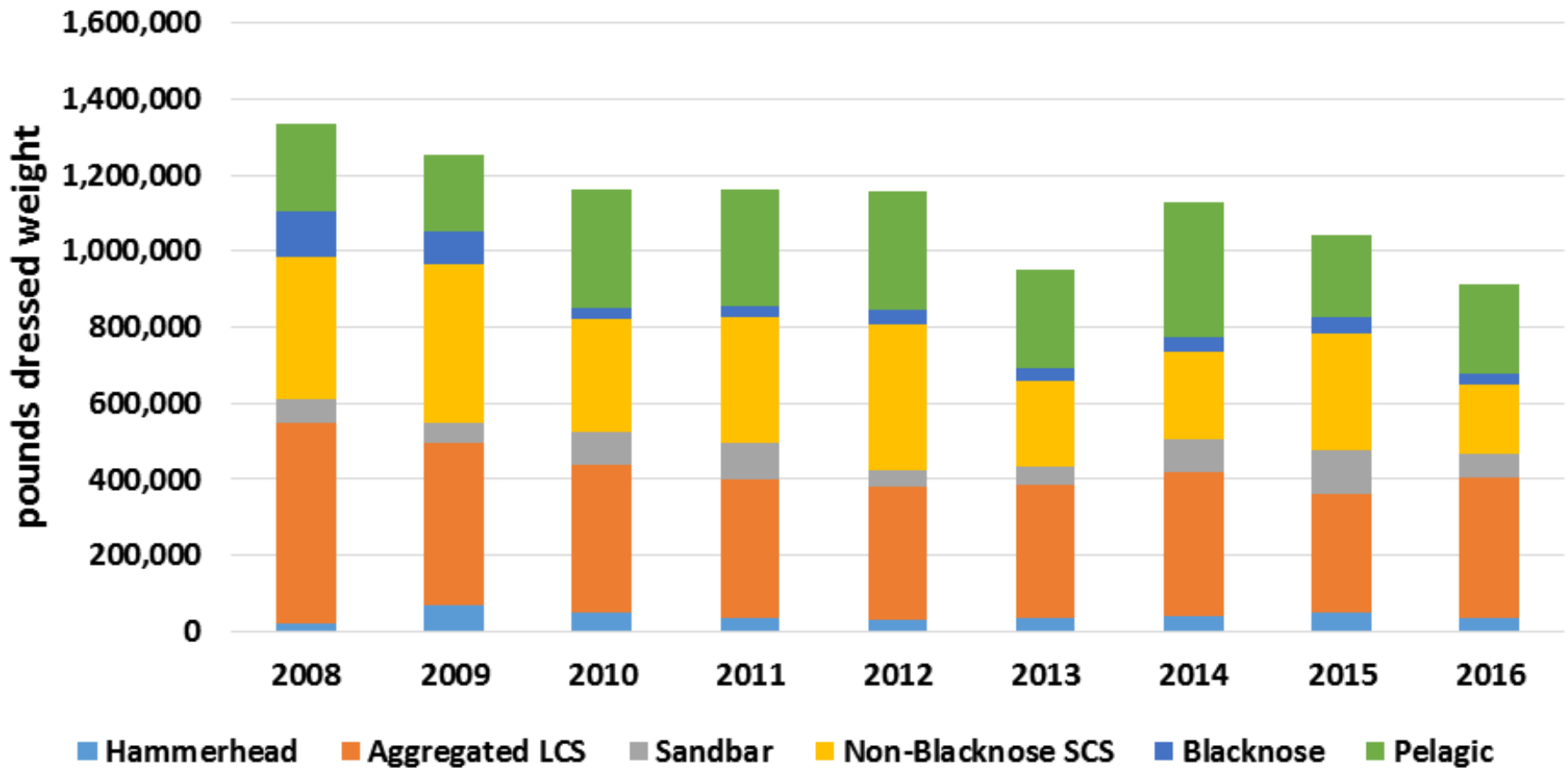


- Updates on Atlantic Shortfin Mako and Sandbar Sharks provided in earlier
 - Atlantic Shortfin Mako: Overfished and Experiencing Overfishing
 - Sandbar: Overfished not Experiencing Overfishing (no change)
- Oceanic Whitetip: now listed as 'Threatened' under ESA
- No other changes to status

Status of Fishery



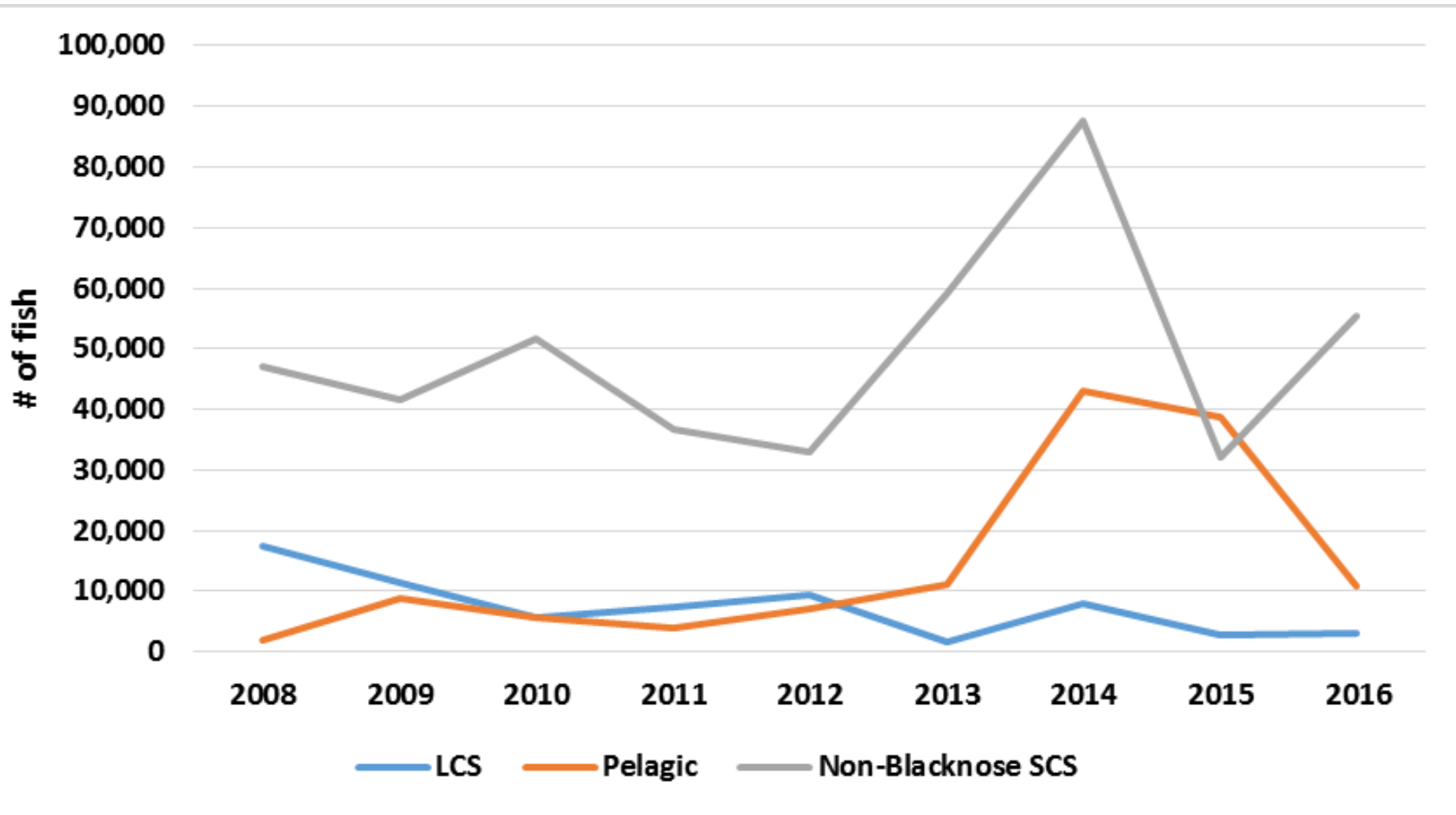
Commercial



Status of Fishery



Recreational



De Minimis



- States can request *de minimis* status on a case-by-case basis.
- Maine and Massachusetts are both requesting *de minimis* status
 - Both were previously granted *de minimis* requests

PRT Comments



- The Plan Review Team (PRT) found all states to have regulations that are consistent with the FMP and associated addenda.
- Law Enforcement sections were missing or lacking in a few compliance reports.
- Standardization of where samples are collected from would be helpful
- Potentially consider providing more specific criteria for de minimis requests



Questions