

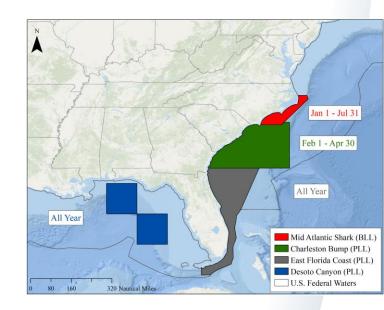
Atlantic Highly Migratory Species Amendment 15

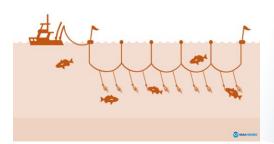
Spatial Fisheries Management and Pelagic Longline Electronic Monitoring Cost Allocation

Amendment 15 Components

2 Broad Components:

- Spatial Management: Consider modifications, data collection, and assessment for 4 spatial management areas
 - Mid-Atlantic Shark (bottom longline), Charleston Bump (pelagic longline), East Florida Coast (pelagic longline), and DeSoto Canyon (pelagic longline) closed areas
- <u>Pelagic Longline Electronic Monitoring Cost Allocation</u>: Consider shifting pelagic longline EM sampling costs from the Agency to industry







Spatial Management



- Currently, there are large areas in the Atlantic and Gulf of Mexico that restrict or prohibit longline fishing for HMS
 - Some in place for approximately 20 years
 - Goal was to reduce bycatch (e.g. sea turtles, undersized swordfish, billfish, some sharks)
- Closed areas can be effective in reducing fishing interactions between particular species and gears
 - Effective use of closed areas is a strong management and conservation strategy
- However, restricted fishing leads to a commensurate decrease in fisherygenerated data



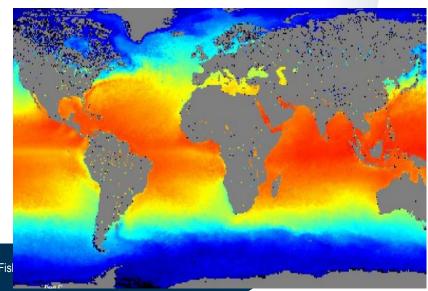




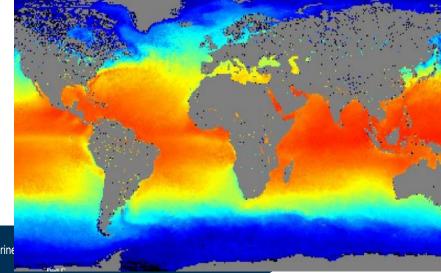
- Fishery-dependent data (e.g., observer reports, logbooks) are data that are collected during normal fishing operations
 - Often the most cost effective, highly relevant to assessing normal fishing impacts, and generate large amounts of information
- Without these data, difficult to assess the effectiveness of closed areas in meeting conservation and management goals



- Assessing closed areas is important
- Some current closed areas have not been evaluated for effectiveness due to lack of fishery-dependent data
- Since implementation of the closed areas, there have been many changes:
 - Different ocean conditions
 - Distribution of HMS and bycatch species (e.g., sea turtles, billfish, some sharks)
 - Species in need of protection
 - Fishery management tools



- HMS and bycatch species are particularly sensitive to ocean conditions (rather than less-variable bottom habitats) and have experienced shifts in distribution
- In the context of climate change and shifts in species distribution, static fishing closures could result in a mismatch among original conservation goals of closed areas, current goals, and ecological conditions

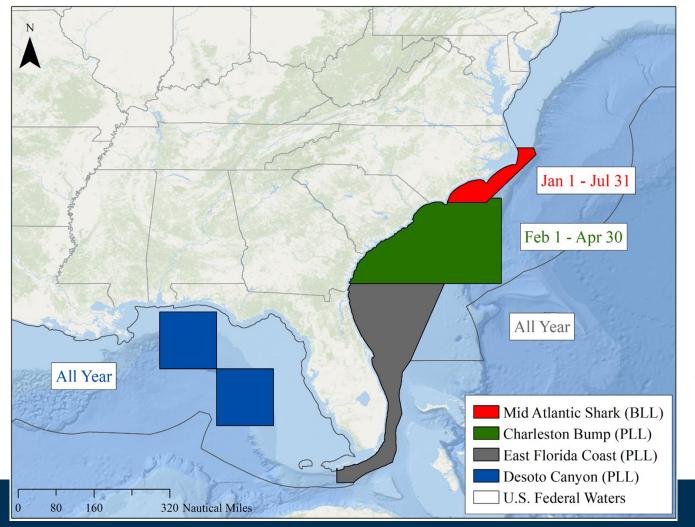


Objectives of Amendment 15's HMS Spatial Fisheries Management

- Minimize bycatch and bycatch mortality, to the extent practicable, while optimizing fishing opportunities
- Develop methods of data collection to assess effectiveness of spatial management areas
- Broaden spatial management considerations to include:
 - The highly variable nature of HMS and their fisheries
 - User conflicts
 - Data collection
 - Regular evaluation and performance review
 - Climate resilience
 - Environmental justice
- Evaluate the effectiveness of current HMS longline closed areas in meeting conservation and management goals including achieving an optimal balance of ecological, social, and economic benefits
- Consider modifications of spatial management areas, as necessary, to meet conservation and management goals



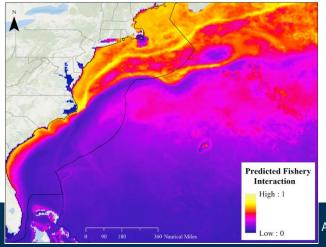
Background – Current Closed Areas



PLL = pelagic longline BLL = bottom longline

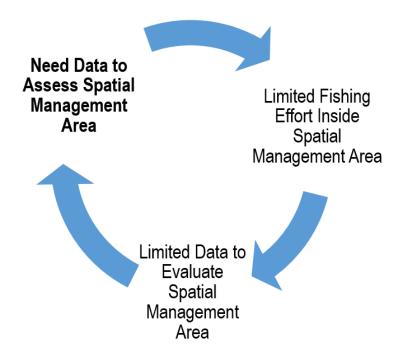


(PRedictive Spatial Modeling)



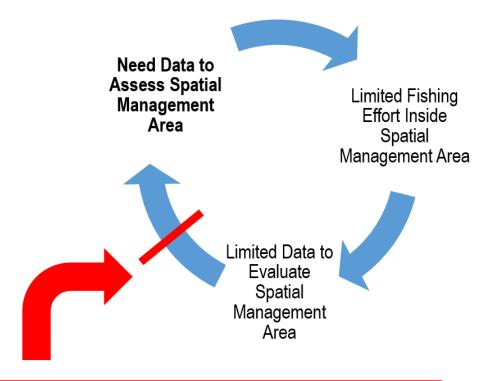


Spatial Management Area Evaluation





Spatial Management Area Evaluation

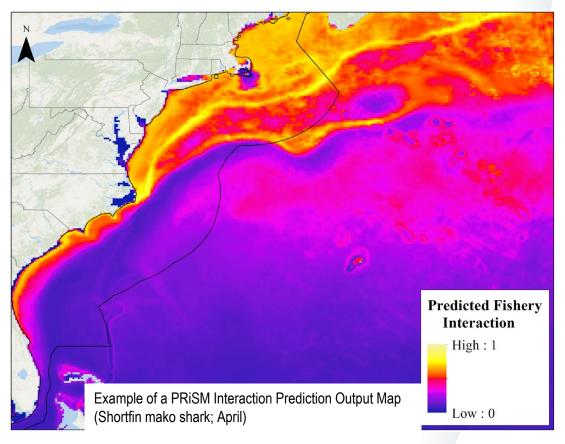


Use Computer Modeling To Predict Fishery Interactions (HMS PRiSM)

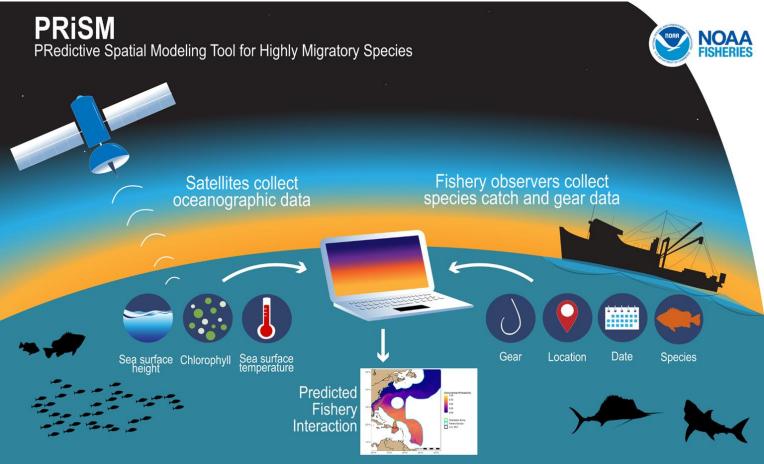


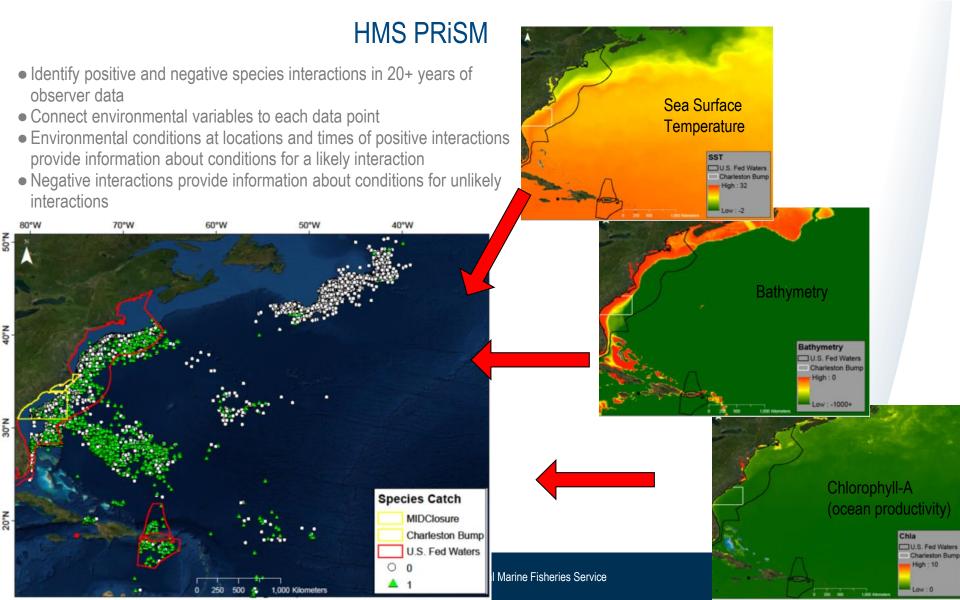
Computer Models to Predict Fishery Interactions

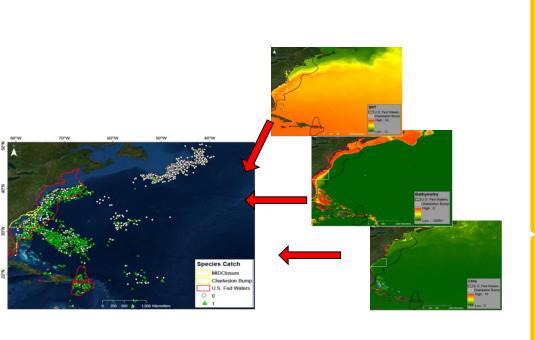
- The HMS Management
 Division created a modeling
 tool (HMS PRiSM) to predict
 fishery interactions based on
 oceanographic and fishery
 data
- HMS PRiSM can predict areas of high and low risk of fishery interaction including inside closed areas with limited fishery-dependent data



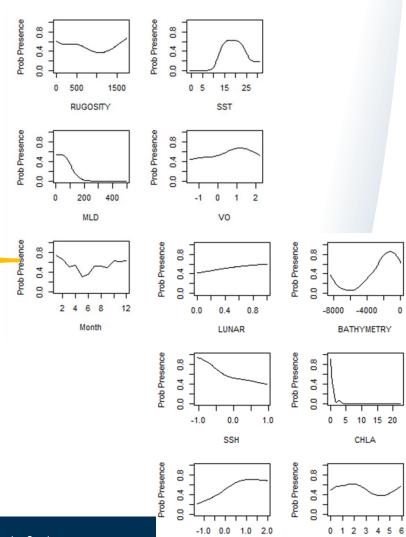






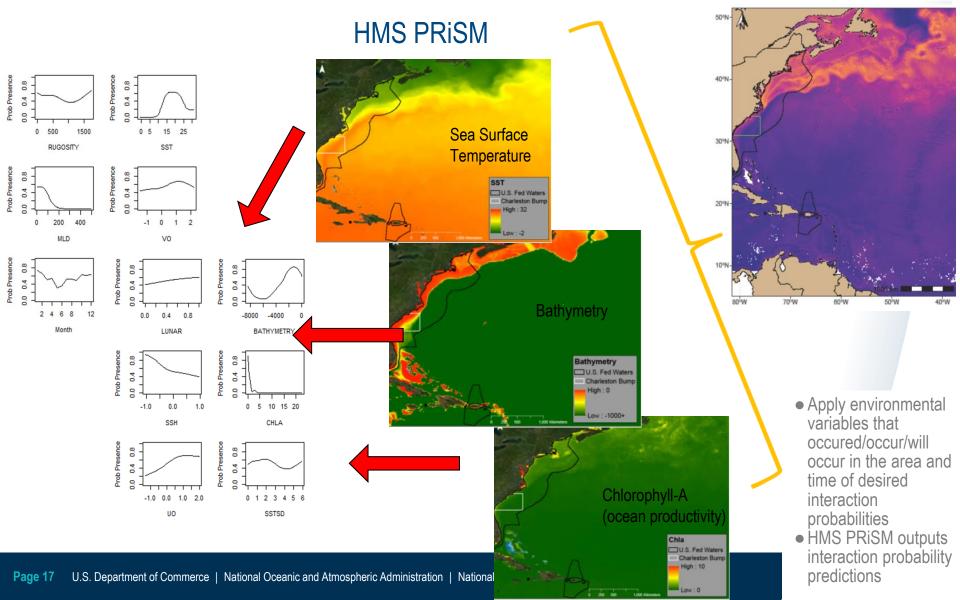


- Connections are made between positive/negative interactions and environmental variables
- Combined data run through HMS PRiSM model to establish relationships between interactions and environmental conditions
- These relationships can be represented graphically



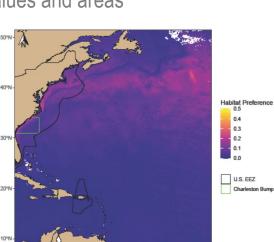
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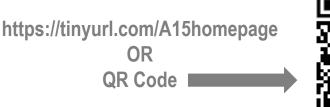
SSTSD



- More information about HMS PRiSM is available on the Amendment 15 website
 - StoryMap
 - HMS PRiSM manuscript
 - HMS PRiSM explainer website
- Additional information includes:
 - Model validation process
 - Species selection
 - Modification metrics
 - High- and low-bycatch-risk values and areas

Habitat Preference

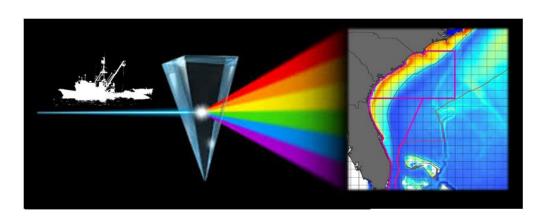






Habitat Preference

Amendment 15 **DEIS** and Proposed Rule





Organization of the Alternatives

"A" Alternatives:

Evaluation and Modification of Spatial Management Areas

"B" Alternatives:

Commercial Data Collection Programs

"C" Alternatives:

Evaluation Timing of Spatial Management Areas

<u>Preferred Alternative Packages</u>

Mid-Atlantic Spatial Management Area Preferred "A" Alternative

Preferred "B" Alternative

Preferred "C" Alternative

Charleston Bump Spatial Management Area

Preferred "A" Alternative

Preferred "B" Alternative

Preferred "C" Alternative

East Florida Coast Spatial Management Area

Preferred "A" Alternative

Preferred "B" Alternative

Preferred "C" Alternative

DeSoto Canyon Spatial Management Area

Preferred "A" Alternative

Preferred "B" Alternative

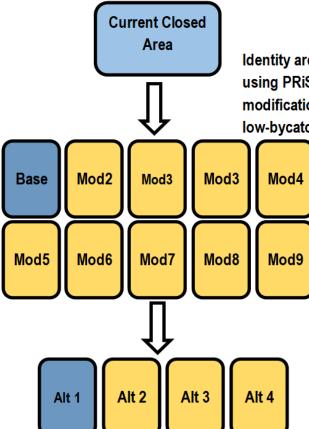
Preferred "C" Alternative



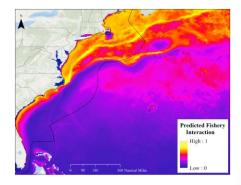
"A" Alternatives: Evaluation and Modification of Spatial Management Areas



"A" Alternatives Design Process



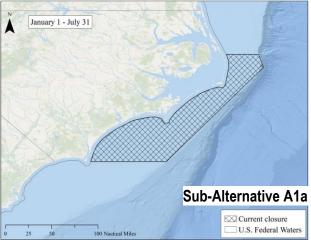
Identity areas of high- and low-bycatch risk using PRiSM model outputs. Develop several modification options to delineate high- and low-bycatch-risk areas.

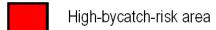


PRISM metrics are calculated for each delineation option and combined into a single overall score. Some of the top scoring options and the base option become alternatives.

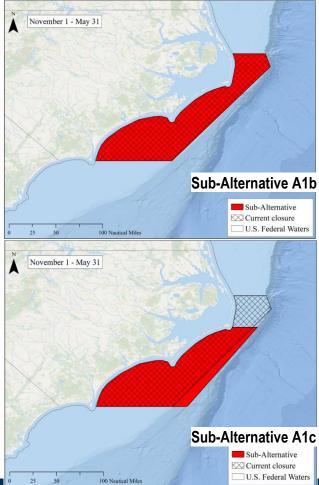


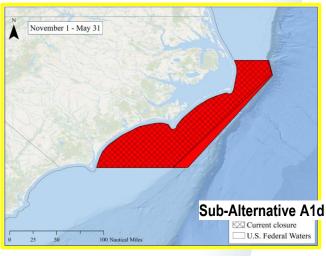
Mid-Atlantic Shark Spatial Management Area





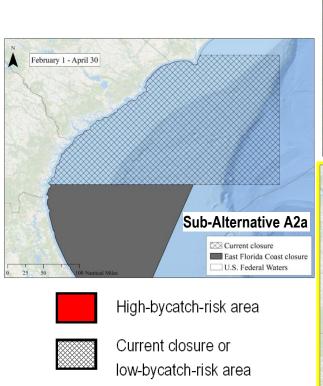
Current closure or low-bycatch-risk area

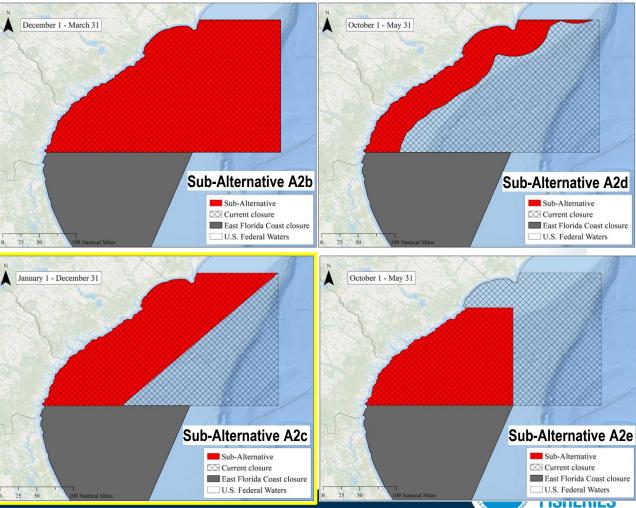




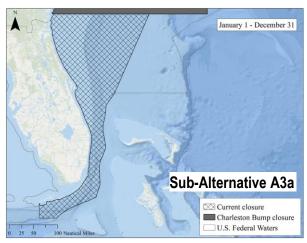


Charleston Bump Spatial Management Area



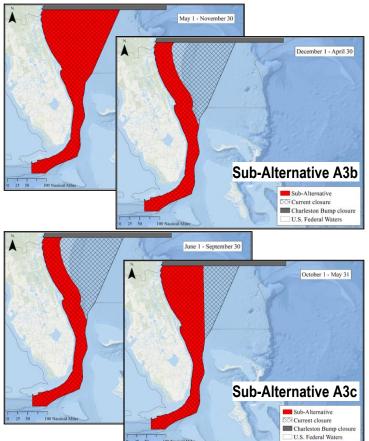


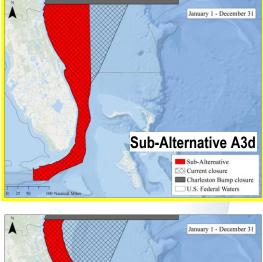
East Florida Coast Spatial Management Area

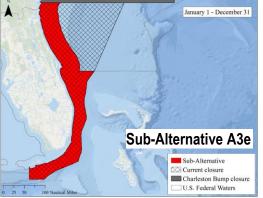


High-bycatch-risk area

Current closure or low-bycatch-risk area

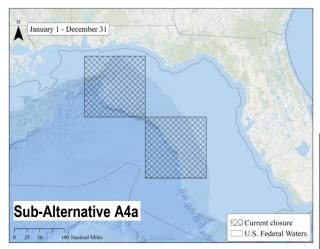


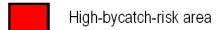




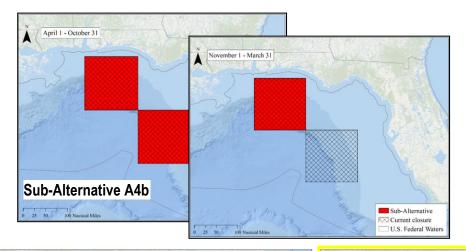


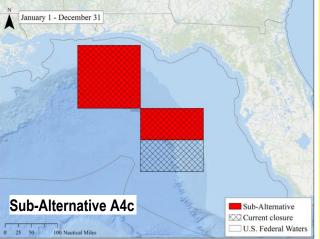
DeSoto Canyon Spatial Management Area





Current closure or low-bycatch-risk area



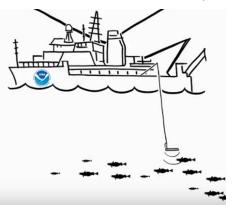




FISHERIES



- Data collection programs would be implemented in some areas/times that were previously closed to fishing
- Level of bycatch risk determines level/type of access
 - Areas with lower bycatch risk: Conditional commercial fishing that is heavily monitored with potential caps on fishing effort and catch (e.g., monitoring area)
 - Areas with higher bycatch risk: Precautionary/limited data collection through an exempted fishing permit





- Alternative B1: No Action
- Alternative B2: Spatial management area research fishery
 - Fishermen apply to be part of the program to fish in certain closed areas
 - NOAA Fisheries creates an overarching closed area research plan
 - Fishermen fish under the research plan design when operating under the research fishery
 - Controls in place to generate useful data while meeting conservation goals



Alternative B3: Monitoring areas

- Special access areas for data collection
- Commercial vessels would be authorized to fish in certain areas to collect data
- Strict effort and catch controls to avoid jeopardizing conservation goals
- Real-time reporting of select bycatch species after each set
- NOAA Fisheries could close and/or not reopen monitoring areas if conditions warrant

Sub-Alternative B3a: Effort Caps

- Mid-Atlantic Shark Area: 1 set/year
- Charleston Bump: 69 sets from Feb 1
 April 30
- East Florida Coast: 124 sets/year
- DeSoto Canyon: 104 sets/year

Sub-Alternative B3b: Bycatch Caps

- Caps for each modeled species ranging from 1-127/year
- Would close if mult. or consecutive caps are reached

Sub-Alternative B3c: Trip-Level Effort Controls

- Pelagic longline: 6 sets/trip
- Bottom longline: 2 sets/trip

Sub-Alternative B3d: Observer Coverage

 Vessel owner pays for 100% observer coverage on trips operating in monitoring areas

Sub-Alternative B3e: Electronic Monitoring

- Vessel owner pays for 100% electronic monitoring on trips operating in monitoring areas
- Operators must report effort and catch within 12 hours of the end of each set

Sub-Alternative B3f: Data Sharing and Communication

 Vessel operators must communicate bycatch events to other vessels in the area and relocate

- Alternative B4: Cooperative research via an EFP
 - EFP applications accepted to perform gear-specific research in a spatial management area
 - Particular consideration given to collaborative research projects with participation by two or more industry, recreational, academic, eNGO, or government groups
 - Additional conditions should be incorporated to be consistent with Amendment 15 analyses:
 - Effort Cap (50% of the monitoring area level)
 - Bycatch Caps
 - Reporting (must report all effort and catch)
 - Observers and electronic monitoring (100% observer or EM coverage)
 - Applicability of Study Design (research must be designed to provide useful management information)
 - Exclusion Areas (avoid areas of high bycatch or gear conflict, e.g. no research within 40 nm of shore)
 - Fleet Communication (participating research vessels must communicate bycatch events so other vessels can avoid the area)



"C" Alternatives: Evaluation Timing of Spatial Management Areas



"C" Alternatives **Evaluation Timing of Spatial Management Areas**

- "C" Alternatives consider future evaluation of spatial management areas to ensure continued assessment of performance
- Evaluation results would inform next steps such as consideration of potential spatial or temporal modifications to areas.
 - For example, if higher bycatch occurs during data collection than expected, additional protections or modifications to the high- and low-bycatch-risk areas could be considered.
 - Changes would be made through rulemakings with an opportunity for public comment.
- Alternative C1: No Action
- **Alternative C2**: Evaluate once three years of data are available (or since most recent evaluation)
- **Alternative C3**: Evaluate once five years of data are available (or since most recent evaluation)
- **Alternative C4**: Triggered Evaluation
- **Alternative C5**: Sunset Provision



"D" **Preferred Alternative Packages**

Preferred Alternative Packages Mid-Atlantic Spatial Management Area

Preferred "A" Alternative

Preferred "B" Alternative

Preferred "C" Alternative

Charleston Bump Spatial Management Area

Preferred "A" Alternative

Preferred "B" Alternative

Preferred "C" Alternative

East Florida Coast Spatial Management Area

Preferred "A" Alternative

Preferred "B" Alternative

Preferred "C" Alternative

DeSoto Canyon Spatial Management Area

Preferred "A" Alternative

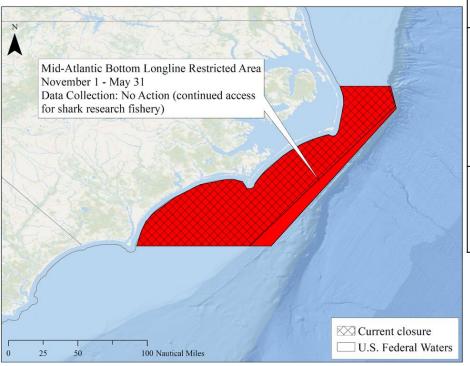
Preferred "B" Alternative

Preferred "C" Alternative



"D" Preferred Alternative Packages

Mid-Atlantic Shark Area

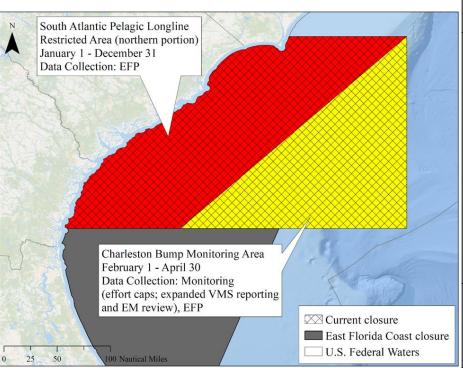


	Alternative	Preferred Alternative
	"A" - Evaluation and Modification of Areas	A1d - Extend eastern boundary; Shift closed timing to November 1 – May 31
	"B" - Commercial Data Collection	High-Bycatch-Risk Area: B1 - No Action, maintain current data collection programs
		Low-Bycatch-Risk Area: B1 - No low-bycatch-risk area defined
	"C"- Evaluation Timing	C2 - Evaluate every 3 years
		C4 - Triggered evaluation
П		



"D" Preferred Alternative Packages

Charleston Bump

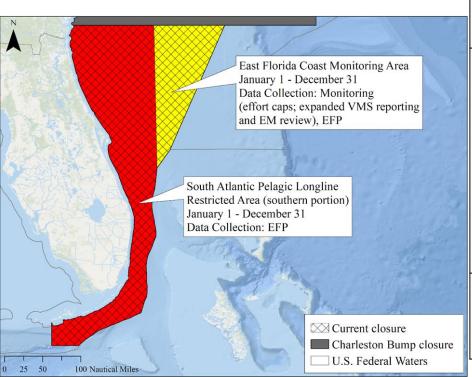


	Alternative	Preferred Alternative
	"A" - Evaluation and Modification of Areas	A2c -Shift eastern boundary to diagonal bisect; Inshore portion high-bycatch-risk area year-round; Offshore portion low-bycatch-risk area Feb. 1 - April 30
	"B" - Commercial Data Collection	High-Bycatch-Risk Area: B4 - Cooperative research via EFP
		Low-Bycatch-Risk Area: B3 - Monitoring Area; Sub-Alternative B3a (effort caps: 69 sets between Feb 1 and April 30) and Sub-Alternative B3e (electronic monitoring). Note that the Charleston Bump Monitoring Area would be open to normal pelagic longline fishing May 1 - January 31. and B4 - Cooperative research via EFP
	"C"- Evaluation Timing	C2 - Evaluate every 3 years
		C4 - Triggered evaluation

FISHERIES

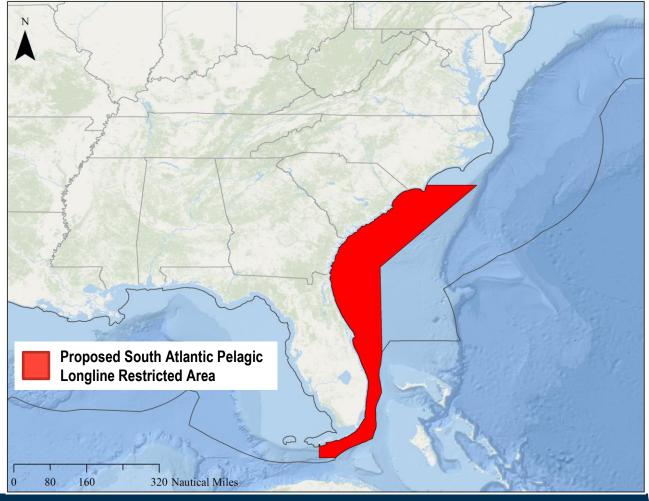
"D" Preferred Alternative Packages

East Florida Coast



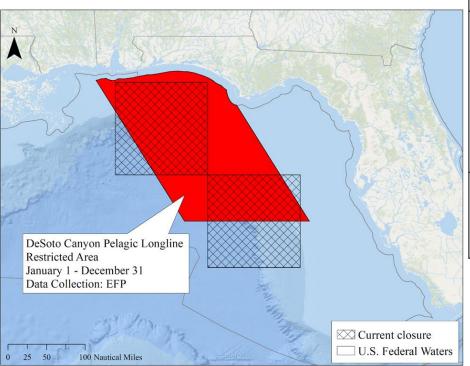
Alternative	Preferred Alternative			
"A" - Evaluation and Modification of Areas	A3d - Shift northeastern boundary to 79° 32' 46" W. long; Maintain year-round timing of high-bycatchrisk area			
"B" - Commercial Data Collection	High-Bycatch-Risk Area: B4 - Cooperative research via EFP			
	Low-Bycatch-Risk Area: B3 - Monitoring Area; Sub-Alternative B3a (effort caps - 124 sets/year) and Sub-Alternative B3e (electronic monitoring) and B4 - Cooperative research via EFP			
"C"- Evaluation Timing	C2 - Evaluate every 3 years			
	C4 - Triggered evaluation			
NORA				

South Atlantic Pelagic Longline Restricted Area



"D" Preferred Alternative Packages

DeSoto Canyon



Alternative	Preferred Alternative	
"A" - Evaluation and Modification of Areas	A4d - Parallelogram; Year-round high bycatch risk area	
"B" - Commercial Data Collection	High Bycatch Risk Area: B5 - Cooperative research via EFP	
	Low Bycatch Risk Area: B1 - No Action. The area would open to normal commercial pelagic longline fishing.	
"C"- Evaluation Timing	C2 - Evaluate every 3 years	
	C4 - Triggered evaluation	



Spatial Management Preferred Alternative Impacts

Ecological

Generally neutral to minor beneficial due to more efficient closed area design,
 conservation protection for data collection, and no large effort changes expected

Social and economic

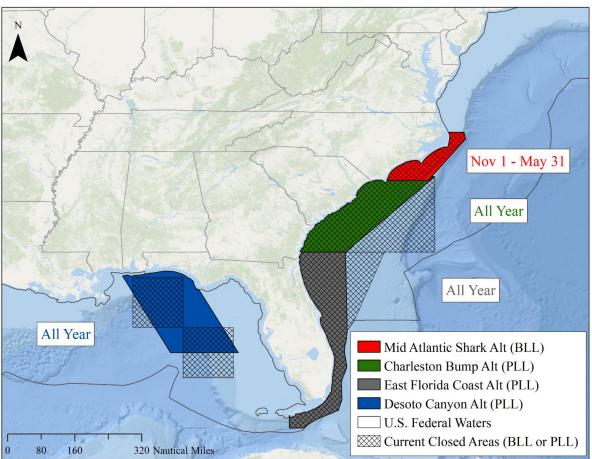
- Mid-Atlantic area: neutral due to low effort and minor closure changes
- Pelagic longline areas neutral to minor beneficial due to calculated increase in target catch

Area	Revenue change relative to No Action		
Charleston Bump	+ ~ \$236,000		
East Florida Coast	+ ~ \$38,000		
DeSoto Canyon*	- ~\$224,000		

^{*} Note that negative revenue changes in DeSoto Canyon unlikely to be realized since fishermen are unlikely to fish in areas with lower target catch



Preferred Alternatives Change in Scope



Closed Area	% change in Scope from Status quo (Area * Month = Scope	
Mid-Atlantic Shark	+14%	
Charleston Bump	+121%	
East Florida Coast	-26%	
DeSoto Canyon	+5%	



"E" Alternatives Spatial Management Area Regulatory Provisions

- Existing HMS regulations contain considerations for framework adjustments to add, change, or modify time/area closures and gear restricted areas
- "E" Alternatives consider changes to the regulatory provisions to include:
 - Regular review of areas
 - High-level design elements of specific objectives
 - Timing of evaluation
 - Data collection access
- Adoption of the preferred alternative would not result in short-term changes. Instead, it would guide future Agency spatial management rulemaking
- Alternative E1: No action
- Preferred Alternative E2: Add regulatory provisions for review of spatial management areas to 50 CFR 635.35(c)
 - Proposed regulatory text available in the DEIS and proposed rule



Conclusions

Preferred spatial management alternatives in Amendment 15 considerations

- Help achieve Magnuson-Stevens Act mandates to ensure sustainability of fish stocks and protect bycatch species while optimizing access for U.S. fishermen
- Respond to directives to consider climate change impacts on fishery management
- Consider ecosystem-based fishery management objectives
- Respond to environmental justice directives for fishing communities with disproportionate adverse socio-economic impacts
- New configurations of spatial management areas will be of greater conservation value than status quo, particularly in the context of shifting distributions due to climate change



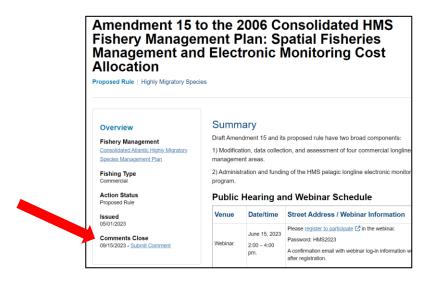
Additional Information and Next Steps



Additional Information and Next Steps

Comments

- Comment period ends September 15, 2023
- Comments can be submitted through the Amendment 15 website



Contact Information

- Steve Durkee (steve.durkee@noaa.gov)
- Larry Redd (larry.redd@noaa.gov)

Amendment 15 Website:

https://tinyurl.com/A15homepage

o Or QR Code:



Website includes:

- Outreach material, including StoryMap
- HMS PRiSM information
- Proposed Rule
- Draft Environmental Impact Statement
- Link to submit comments



Discussion Guide

- Clarifying Questions
 - HMS PRiSM development and use
 - DEIS structure (A, B, and C Alternatives; Preferred Alternative Packages)
 - Development of spatial modifications (modification options and modification alternatives)
- Comments and Questions
 - Modifications, data collection, and evaluation timing by area
 - Mid-Atlantic Shark Spatial Management Area
 - Charleston Bump and East Florida Coast Spatial Management Areas
 - DeSoto Canyon Spatial Management Area

A15 Homepage

tinyurl.com/A15homepage

A15 Spatial Management StoryMap

tinyurl.com/A15storymap

Pelagic Longline Electronic Monitoring Cost Allocation



- Since 2015, HMS pelagic longline vessels are required to install cameras on their vessels that record haulback of longline sets to monitor catch and discards
 - The program was initially implemented to ensure compliance with the bluefin tuna IBQ program and was later expanded to include shortfin make shark disposition
- Since implementation, NOAA Fisheries has paid for the program
 - Equipment installation (cameras, hard drives, etc.)
 - Data review, analysis, and storage (contract with single vendor)
- On May 7, 2019, NOAA Fisheries issued Procedure 04-115-02 "Cost Allocation in Electronic Monitoring Programs for Federally Managed Fisheries"
 - Outlines guidance and directives for EM cost allocation framework between fishery participants and the Agency



Need for Action

To comply with the Cost Allocation Policy and to address NOAA budget constraints,
 Amendment 15 considers transferring EM sampling costs from the Agency to the industry

Objectives

 Modify the HMS EM program to support management and address relevant NOAA Fisheries EM policies, including the 2019 Cost Allocation Policy

Goals

- Minimize impacts to bluefin tuna reporting compliance
- Minimize costs for vessel owners
- Provide flexibility for vessel owners and vendors to meet program goals



Sampling Cost Examples (Industry)

- Equipment purchases, installation, and maintenance
- Video and data review, processing, transmittal and storage
- Training for captain and crew
- Development and implementation of VMPs
- Service provider fees

Administrative Cost Examples (Agency)

- Program administration support
- Certification of EM service providers
- EM program sample design and performance monitoring
- Data analysis and storage of Federal records

- Alternative F1: No Action
 - Maintain current Agency-funded EM program
- Alternative F2: Transfer Electronic Monitoring Sampling Costs to Industry Preferred Alternative
 - Industry pays 100% of sampling costs
 - Phased-in over 3 years
 - Note there are 4 components to this alternative: vendor requirements, vessel requirements, vessel monitoring plan, and modification of EM IBQ spatial/temporal requirements
- Alternative F3: Remove current EM regulations regarding bluefin tuna and shortfin make
 - IBQ program would remain
 - IBQ usage tracked through VMS set reports and landings



- Alternative F2: Transfer Electronic Monitoring Sampling Costs to Industry -Preferred Alternative
 - Industry pays 100% of sampling costs
 - Phased-in over 3 years
 - Note there are 4 components to this alternative:
 - Vendor requirements
 - Vessel requirements
 - Vessel monitoring plan
 - Modification of EM IBQ spatial/temporal requirements
 - Designate "EM Data Review Areas"

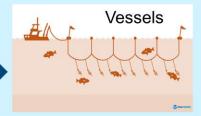


Proposed Modification to the HMS Pelagic Longline EM Program

Vendors apply to be approved by NOAA Fisheries

Approved vendor

Vessel Monitoring Plan (VMP), payment, and contract



Vendor requirements include:

- Install & maintain EM equipment
- Receive, store, & review EM video data
- Assist vessel owner with VMP development
- Review 10% of all sets submitted by vessel owner
- Retain video for 2 years & provide additional review if requested

VMP requirements include:

- · Placement of cameras
- Locations of fish retrieval in view of camera
- Instructions for equipment use and testing
- Procedure for data transmission

Vessel owner requirements include:

- Coordinate with a vendor to provide EM services
- Ensure EM equipment is functioning properly
- Work with vendor to develop a VMP
- Declare intention to fish in EM Data Review Area via VMS
- Continue reporting bluefin catch after each set



Vendor provides quarterly reports & all metadata to NOAA Fisheries with information from video review



Vendor requirements

- Solicit vendors to participate in the program
- Assist vessel with development of vessel monitoring plan
- Video must be reviewed by trained staff
- Quarterly, vendors review 10% of all sets submitted and at least 1 set/vessel
- Vendors must submit quarterly reports and all metadata to NOAA Fisheries
- Must be willing to provide additional video review at the request of NOAA Fisheries
- Must retain video data for 2 years

Vessel requirements

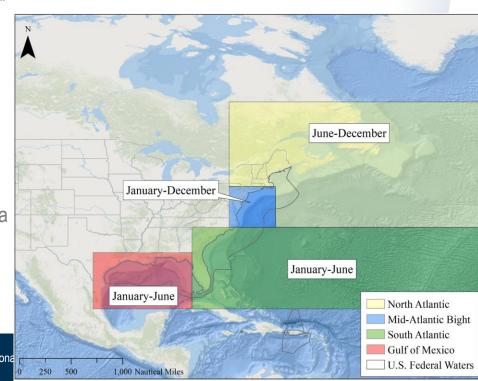
- Before embarking on a trip, must coordinate with a certified vendor to receive and review video data
- Negotiate cost structure directly with vendor
- Must work with vendor to create a vessel monitoring plan
- May not fish in areas requiring EM without a functioning system
- Must continue to report bluefin tuna catch within 12 hours of the end of each set

Vessel monitoring plan

- Current VMP requirements mostly unchanged with some revisions to incorporate EM vendors
- Includes information such as location of cameras and how to handle catch
- Created in partnership between the vessel owner and vendor
- Final approval provided by NOAA Fisheries or a NOAAdesignated entity

Proposed Modification of EM spatial/temporal requirements would:

- Operationalize the current video review sampling protocol so that it can be implemented by EM vendors
- Identify times and locations of likely bluefin tuna interactions
- Designate those areas as "EM Data Review Areas"
- Require vessels to activate EM and submit video only when operating in EM Data Review Areas during all or a portion of a trip
 - reduce cost
 - limit video submission to those areas that are more likely to be reviewed, providing vendors with more certainty
 - incentivize avoiding areas with likely bluefin tuna interactions
- Perform regular review of the EM Data Review Areas to account for changing bluefin tuna interaction distribution



Impacts

- Ecological impacts likely neutral
- Socioeconomic impacts likely moderate adverse
 - Comparison of Revenue and EM Costs, per trip
 - Preliminary and do not take into account cost mitigation measures

Cost per set	Cost per 6/set trip (median trip size)	Median profit per 6-set trip (2018-2020)	EM cost/profit per 6- set trip
\$280	\$1,680	\$8,991	19 %

Proposed Cost Mitigation Measures

- Cost shift would be phased in over 3 years
- Program structure would encourage multiple vendors to enter market to increase competition and leverage existing vendor infrastructure
- NOAA-Fisheries provided EM equipment could continue to be used.
- Flexibility in equipment and data transmission specifications
- EM requirement would be limited to EM Data Review Areas where bluefin tuna interactions are likely (follows current SEFSC sampling protocol)

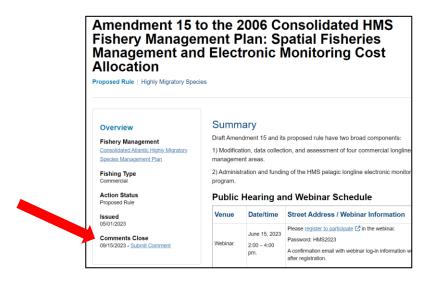
Additional Information and Next Steps



Additional Information and Next Steps

Comments

- Comment period ends September 15, 2023
- Comments can be submitted through the Amendment 15 website



Contact Information

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Amendment 15 Website:

https://tinyurl.com/A15homepage

Or QR Code:



Website includes:

- Outreach material, including StoryMap
- HMS PRiSM information
- Proposed Rule
- Draft Environmental Impact Statement
- Link to submit comments



