

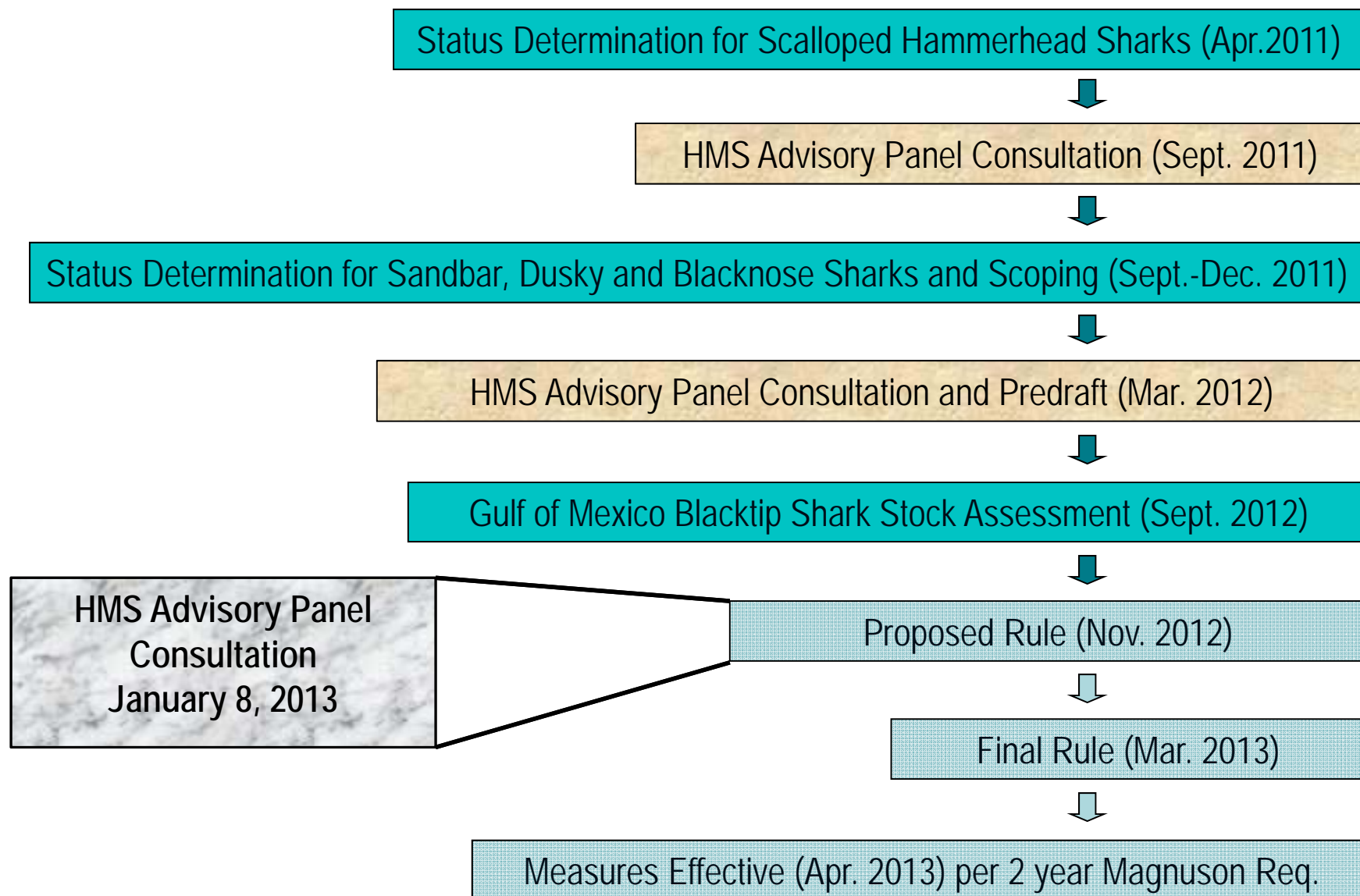


NOAA
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Atlantic Highly Migratory Species Management

Draft Amendment 5 to the 2006
Consolidated Highly Migratory Species
Fishery Management Plan

Two Years to Implement Management Measures



Stock Assessments and Proposed Actions

Shark Species	Overfished	Overfishing	Rebuild by	Proposed Actions
Scalloped Hammerhead	Yes*	Yes*	2023	Rebuild stock, end overfishing, establish total allowable catch (TAC) and commercial and recreational measures
Dusky	Yes	Yes	2099	Rebuild stock and end overfishing
Sandbar	Yes	No+	2070	Continue stock rebuilding
Blacknose: Atlantic	Yes*	Yes*	2043	Rebuild stock, end overfishing, establish TAC and commercial and recreational measures
Blacknose: Gulf of Mexico	Unknown*	Unknown*	Unknown	Establish TAC and commercial and recreational measures
Blacktip: Gulf of Mexico	No	No	NA	Establish TAC and commercial and recreational measures

*New stock status +Improved stock status from previous assessment

Specific Approaches

Management Unit	New Quotas	Time/Area Closures	Recreational Measures
Hammerhead	X		X
Dusky		X	X
Sandbar		X	X
Blacknose: Atlantic	X		X
Blacknose: GOM	X		X
Blacktip: GOM	X		X
“Aggregated LCS” Complex	X		X
Non-Blacknose SCS Complex	X		X

Dusky Shark Proposed Measures

- Dusky sharks have been prohibited from commercial and recreational retention since 2000, but the stock is still overfished and experiencing overfishing
- Stock assessment recommended approximate two-thirds reduction in fishing mortality
- Proposed measures aim for an approximate two-thirds reduction by fishery (pelagic longline, bottom longline, and recreational)

Total Dusky Shark Interactions / Harvest (2008-2010)

Fishery	2008	2009	2010	3-Year Total	3-Year Reduction Target*
Pelagic longline (logbook interactions)	396	624	737	1,757	667
Bottom longline (observed interactions)	21	106	198	325	123
Recreational (harvest estimate)	2,391	447	546	3,384	1,285

*Targets are a 62% or ~2/3 reduction in interactions / harvest over 3 years.

TACs, Quotas, and Recreational Alternative Suites



Shark Management

TACs and Quotas

- Most Atlantic sharks are grouped into complexes for management purposes.
- Over time we have been managing sharks more on an individual species basis if individual stock assessment information is available and appropriate for management purposes.
- Sandbar and blacknose sharks are managed individually (not included in Large Coastal Sharks and Small Coastal Sharks for Total Allowable Catch and quota purposes)

The Current Atlantic and Gulf of Mexico Large Coastal Shark (LCS) quotas consist of:
blacktip, bull, lemon, nurse, spinner, silky, hammerhead (great, scalloped, and smooth), and tiger sharks

The Current Small Coastal Shark quota consists of: Atlantic sharpnose, bonnethead, and finetooth sharks

Range of Alternative Suites

- Alternative Suite A1 (No Action):
 - LCS and SCS complex structure/linkages remain the same.
 - Quotas similar to previous years.
 - Other commercial and recreational regulations would remain the same.
 - Does not address recent stock assessment results.
- Alternative Suite A5: Close all shark fisheries in the Atlantic, Gulf of Mexico, and Caribbean.

Alternative Suite A2

Preferred Alternative

- Removes the hammerhead complex (great, smooth, and scalloped) from the LCS complex and establishes regional TACs and quotas.
- Removes GOM blacktip sharks from the GOM LCS complex and establishes a separate GOM blacktip TAC and quota.
- Establishes regional TACs and quotas for blacknose sharks.
- Establishes quota linkages between several complexes.
- Several recreational measures:
 - Increase minimum size requirements from 54" to 96" FL
 - Required reporting for hammerhead sharks
 - Outreach regarding dusky shark identification

Comparison of Current Quotas/Landings

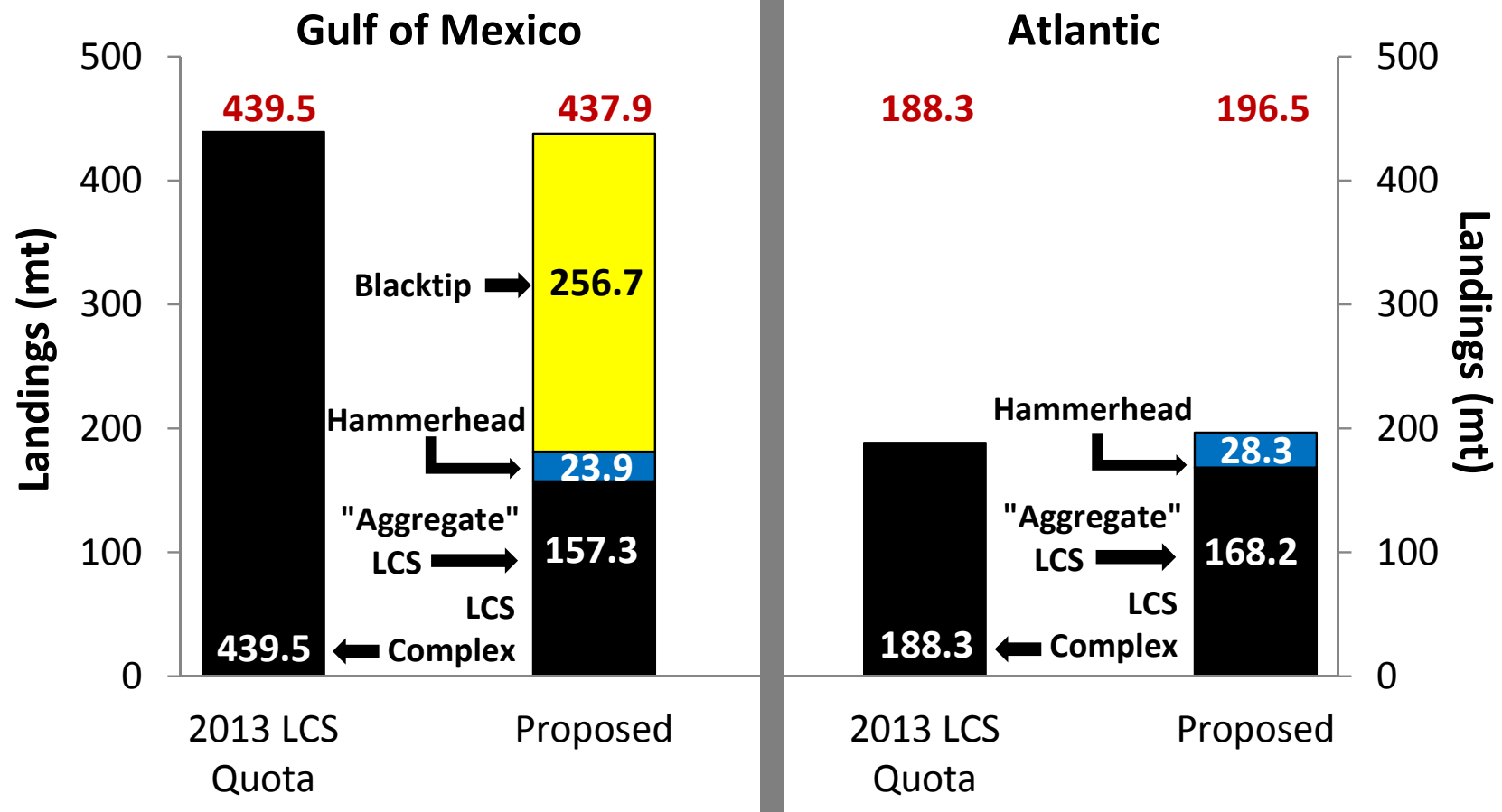
Shark Species	Current Average Landings 2008-2011 (mt dw)	Proposed Quota (mt dw)	Change mt dw (%)
Hammerhead Sharks (scalped, smooth, great)	GOM: 24.3 ATL: 28.8	GOM: 23.9 ATL: 28.3	GOM: -0.4 (-2%) ATL: -0.5 (-2%)
Dusky	Prohibited	Prohibited	N/A
Sandbar	87.9 ⁺	116.6 ⁺⁺	0 ⁺⁺⁺
Blacknose: Atlantic	19.1	18.0	-1.1 (-6%)
Blacknose: Gulf of Mexico	2.0	2.0	0
Non-blacknose Small Coastal Shark	GOM: 24.2 ATL: 201.8	GOM: 23.7 ATL: 197.9	GOM: -0.5 (-2%) ATL: -3.9 (-2%)
Aggregated Large Coastal Shark	GOM: 439.5 [#] ATL: 188.3 [#]	GOM : 157.3 ATL : 168.2	GOM: -282.2 (-64%)* ATL: -20.1 (-11%)
Blacktip: Gulf of Mexico	256.7	256.7	0

+2012 Quota ++Scheduled increase for 2013 quota +++No proposed change in quota in this rule

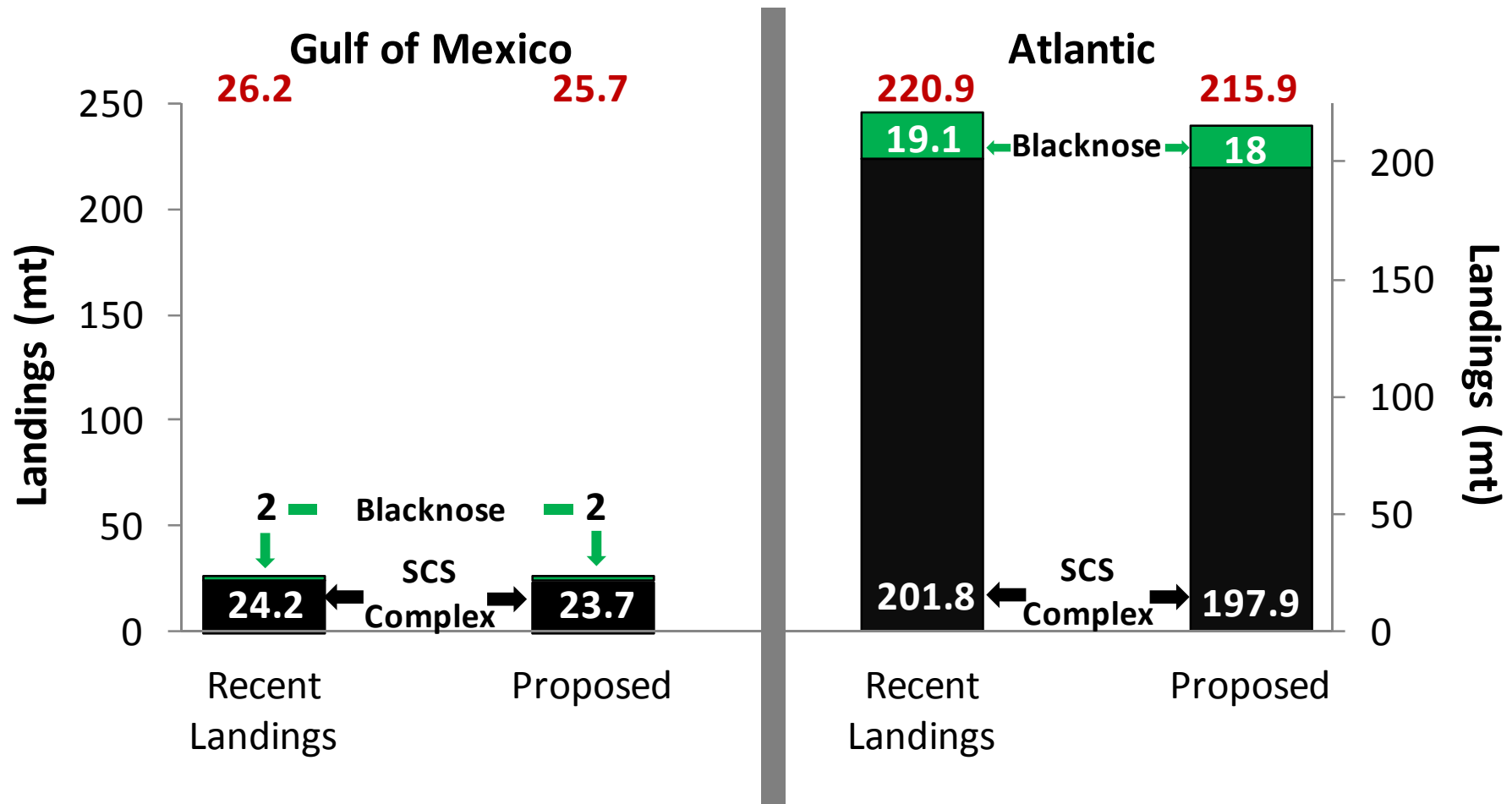
#2013 Non-sandbar LCS Quota

*64% reduction in Large Coastal Shark quota due to removal of hammerhead and blacktip; GOM = Gulf of Mexico; ATL = Atlantic

Impact on Large Coastal Shark Fisheries



Impact on Small Coastal Shark Fisheries



Total amount of quota across all Small Coastal Shark management units is in red.

Shark Management

Proposed Quota Linkages

- Quota linkages are applied to quotas for sharks that are generally caught together.
- When one quota closes, so does the other(s) to prevent overfishing from bycatch of the closed quota species.
- Proposed quota linkages:
 - Aggregated Large Coastal, Hammerhead, and Blacktip Sharks
 - Small Coastal and Blacknose Sharks

Proposed Quota Linkages

Large Coastal Sharks

CURRENTLY

Gulf of Mexico LCS Quota

CURRENTLY

Atlantic LCS Quota

PROPOSED

Gulf of Mexico Aggregated LCS Quota
(bull, lemon, nurse, spinner,
silky, and tiger sharks)

PROPOSED

Atlantic Aggregated LCS Quota
(blacktip, bull, lemon, nurse, spinner, silky,
and tiger sharks)

Gulf of Mexico
Blacktip Shark
Quota

Gulf of Mexico
Hammerhead
Shark Quota

Atlantic
Hammerhead
Shark Quota

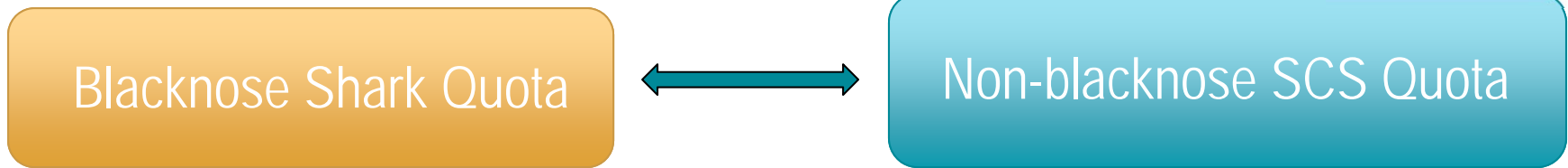


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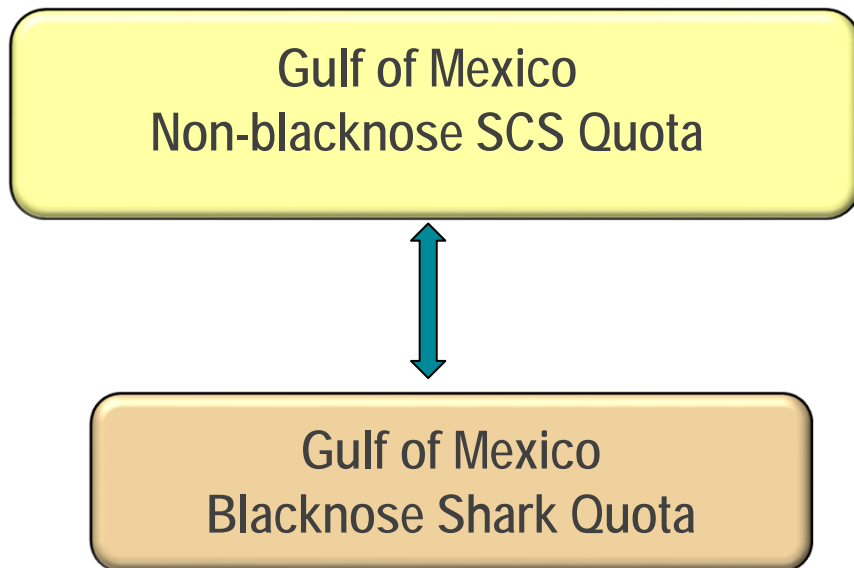
Proposed Quota Linkages

Small Coastal Sharks

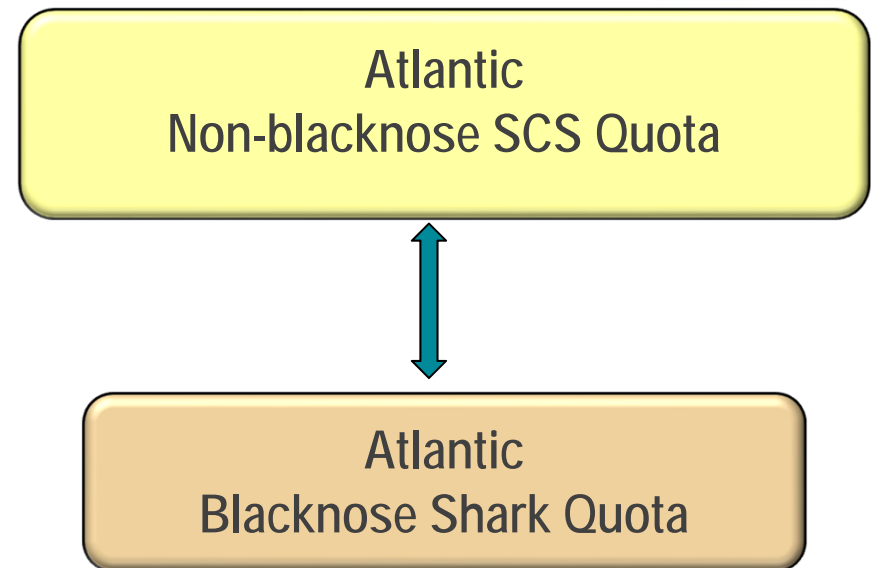
CURRENTLY



PROPOSED



PROPOSED



**Non-blacknose SCS quota split regionally for quota linkage purposes only*

Shark Management

Recreational Management History

- Recreational management has been by retention limits rather than by shark complex quotas
- Prior to 1999 FMP, retention limits generally set by complex, no minimum size, 5 prohibited species
- 1999 FMP: Change to 1 shark per vessel per trip (simplify regulations); minimum size set at 54" FL; exemption for Atlantic sharpnose sharks; dusky and other sharks prohibited from retention
- Amendment 1 to 1999 FMP (2004): Same retention and size limit, added exemption for bonnethead sharks
- Amendment 2 to 2006 FMP (2008): Limited 1 shark per vessel per trip to only non-ridgeback LCS, tiger sharks, SCS, and pelagic sharks; continued minimum size; sandbar and silky sharks prohibited from retention

Shark Management

Recreational Measures – Preferred Alternative

- Increase minimum size from 54" FL to 96" FL based on size at maturity of dusky sharks (Natanson et al., 1995; 93") and rounded to 8 feet FL for enforcement purposes
- Reporting of hammerhead sharks through the NMFS non-tournament reporting system
- Additional outreach to anglers regarding identification and prohibition of dusky sharks

Alternative Suite A3

- Single hammerhead complex quota for all areas;
- "Aggregated LCS" based on average landings (2008-2011)*;
- "Aggregated LCS" does not include hammerheads*;
- Blacktip quota 30% above current landings;
- No GOM blacknose quota available after accounting for discards; one non-blacknose SCS quota;
- No quota linkages; and
- Recreational measures include a new minimum size for hammerheads and additional outreach.

Alternative Suite A4

- Separate regional scalloped hammerhead quotas;
- "Aggregated LCS" based on highest one-year landings (2008-2011);
- "Aggregated LCS" includes smooth and great hammerheads;
- High blacktip quota based on projections;
- No GOM blacknose quota available after accounting for discards; even split of non-blacknose SCS quota;
- Includes quota linkages*; and
- Species specific recreational shark quotas and additional outreach.

*same as in Alternative Suite A2

Summary of Alternative Suite Differences

		Suite A2*	Suite A3	Suite A4
Scalloped Hammerhead	Quotas	All HH Regional Quotas	One HH Quota	Scalloped HH Regional Quotas
Aggregated LCS	Quotas	Regional based on avg landings	Same as A2	Regional based on highest landings
Gulf of Mexico Blacktip	TAC	Based on avg landings: 413.4 mt dw	30% increase from A2	Based on projections; 420% increase from A2
	Quotas	Based on avg landings: 256.7 mt dw	48% increase from A2	Based on projections; 676% increase from A2
Gulf of Mexico Blacknose	TAC	Based on 2011 GOM landings	Current blacknose TAC – New Atl. blacknose TAC	GOM landings percentage of current TAC
	Quotas	2 mt dw	0 mt dw	0 mt dw
Non-blacknose SCS	Quotas	Atl: 197.9 mt dw; Gulf: 23.7 mt dw Total: 221.6 mt dw	Status Quo (221.6 mt dw) – No Regions	Same as A2
Quota Linkage/Transfers		Yes/Yes	No/No	Same as A2
Recreational Measures		96" FL shark minimum size; hammerhead reporting; outreach	78" FL hammerhead shark minimum size; outreach	Species-specific shark quotas; outreach

*Preferred Alternative

PLL and BLL Effort Control Alternatives

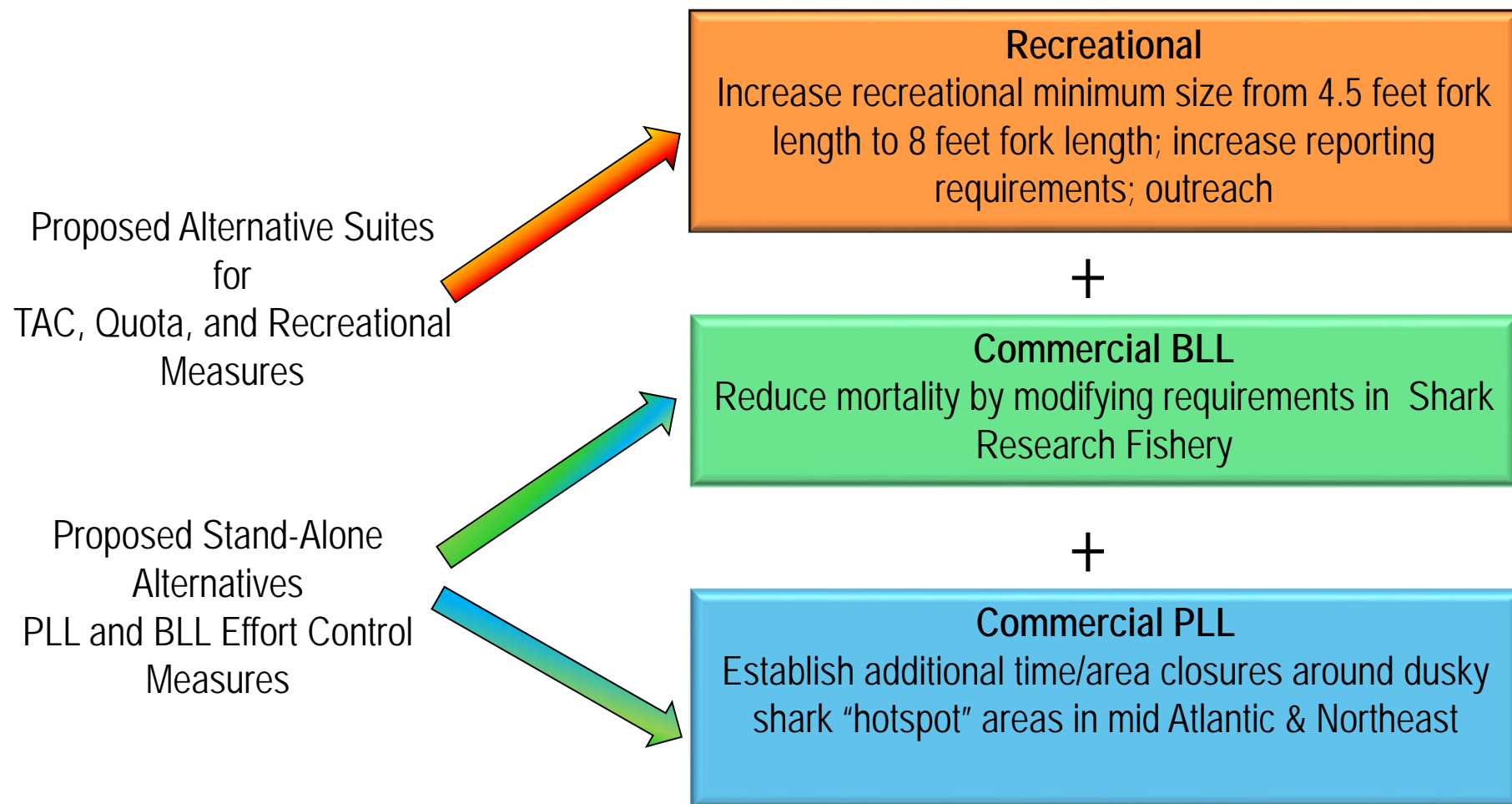


Total Dusky Shark Interactions / Harvest (2008-2010)

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Dusky Shark Proposed Measures



~ 2/3 Reduction in Dusky Shark Fishing Mortality

Data Used in Dusky Shark Effort Control Analysis

Data used to analyze the dusky shark effort control alternatives:

Pelagic longline: HMS logbook data from 2008-2010

Census data of the entire PLL fishery; self reported interactions

Bottom Longline: Bottom Longline Shark Observer Program Data from 2008-2010

Observed interactions; census of shark research fishery; subset of entire fishery interactions

Recreational: MRFSS, NMFS Headboat, and Texas Parks and Wildlife Recreational Fishing Survey from 2008-2010

Survey of recreational fishing activities from Maine to Texas; not a census; extrapolated results; limited locality information; surveys not specifically designed for rare event species (sharks/HMS)

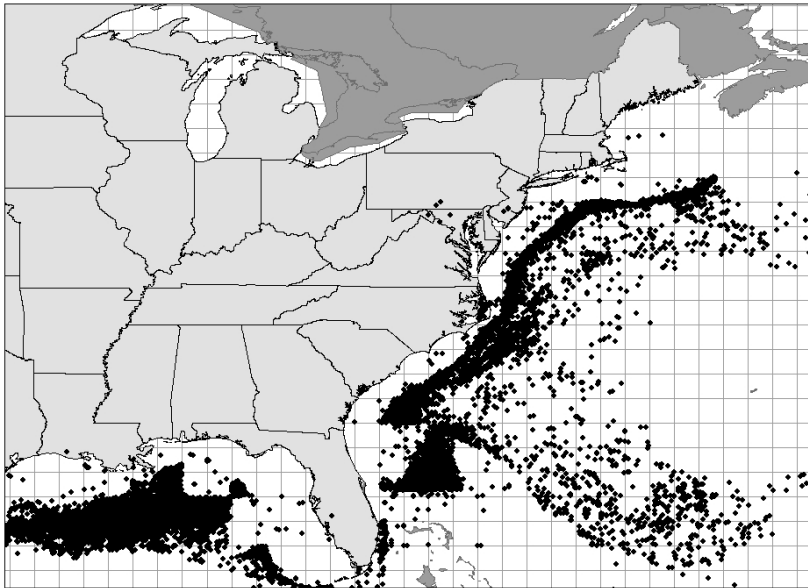
Range of Stand-Alone Alternatives

- Alternative B1 (No Action): Maintain existing time/area closures (no new closures).
- Alternative B7: Prohibit the use of pelagic and bottom longline gear in Atlantic HMS fisheries.

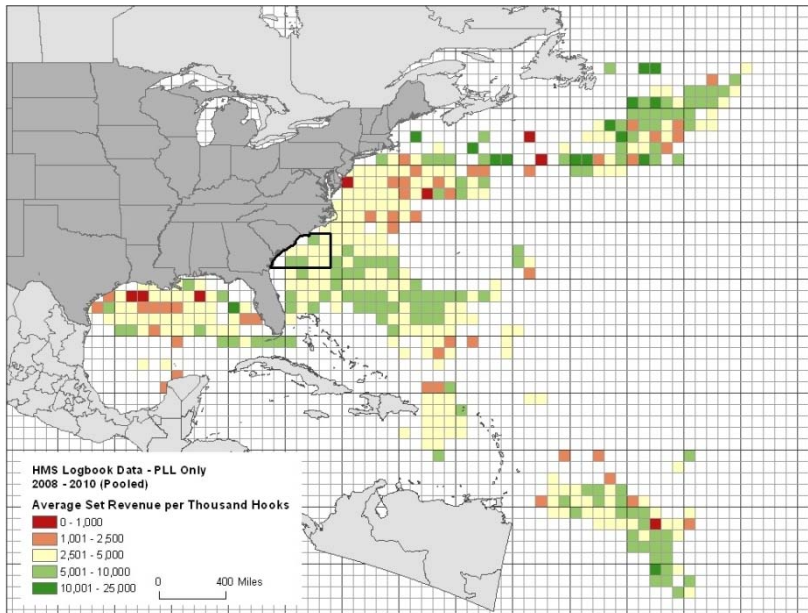
Dusky Shark Effort Control Alternatives

- Alternative B2: Extend the timing of the Charleston Bump Closure through May 31 of each year.
- *Alternative B3 (preferred): Establish additional pelagic longline time/area closures based on dusky shark interaction hotspots.*

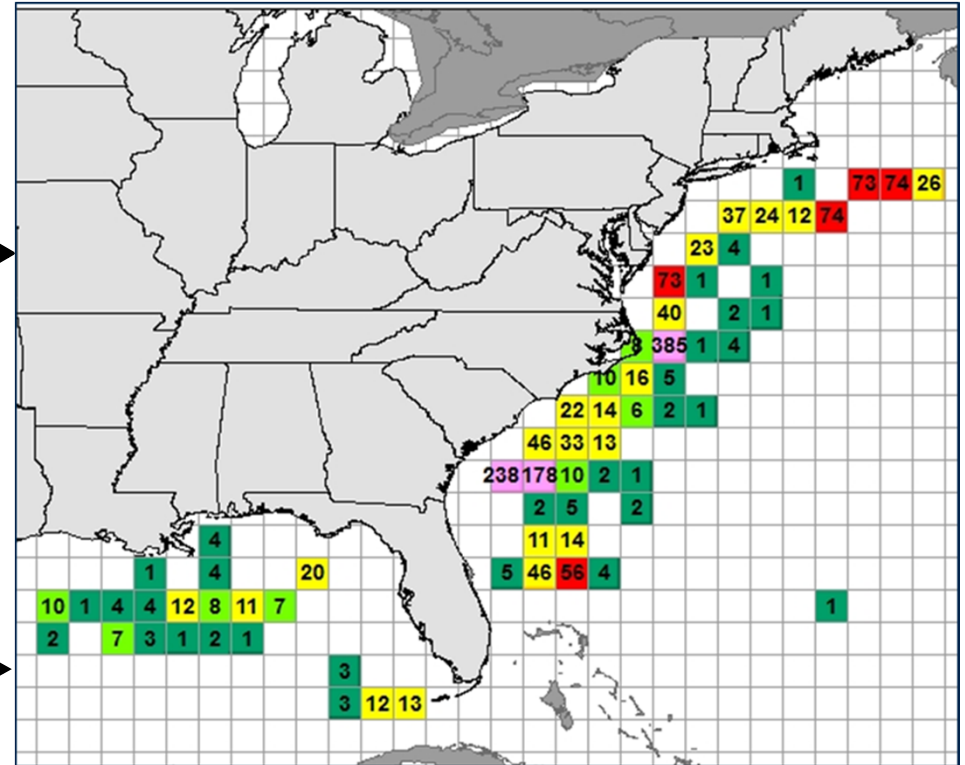
Dusky Shark Interactions



Pelagic Longline sets reported in the Highly Migratory Species Logbook from 2008-2010



Average set revenue reported in the Highly Migratory Species Logbook from 2008-2010



Numbers of dusky shark interactions per 1°x1° grid cell from 2008-2010

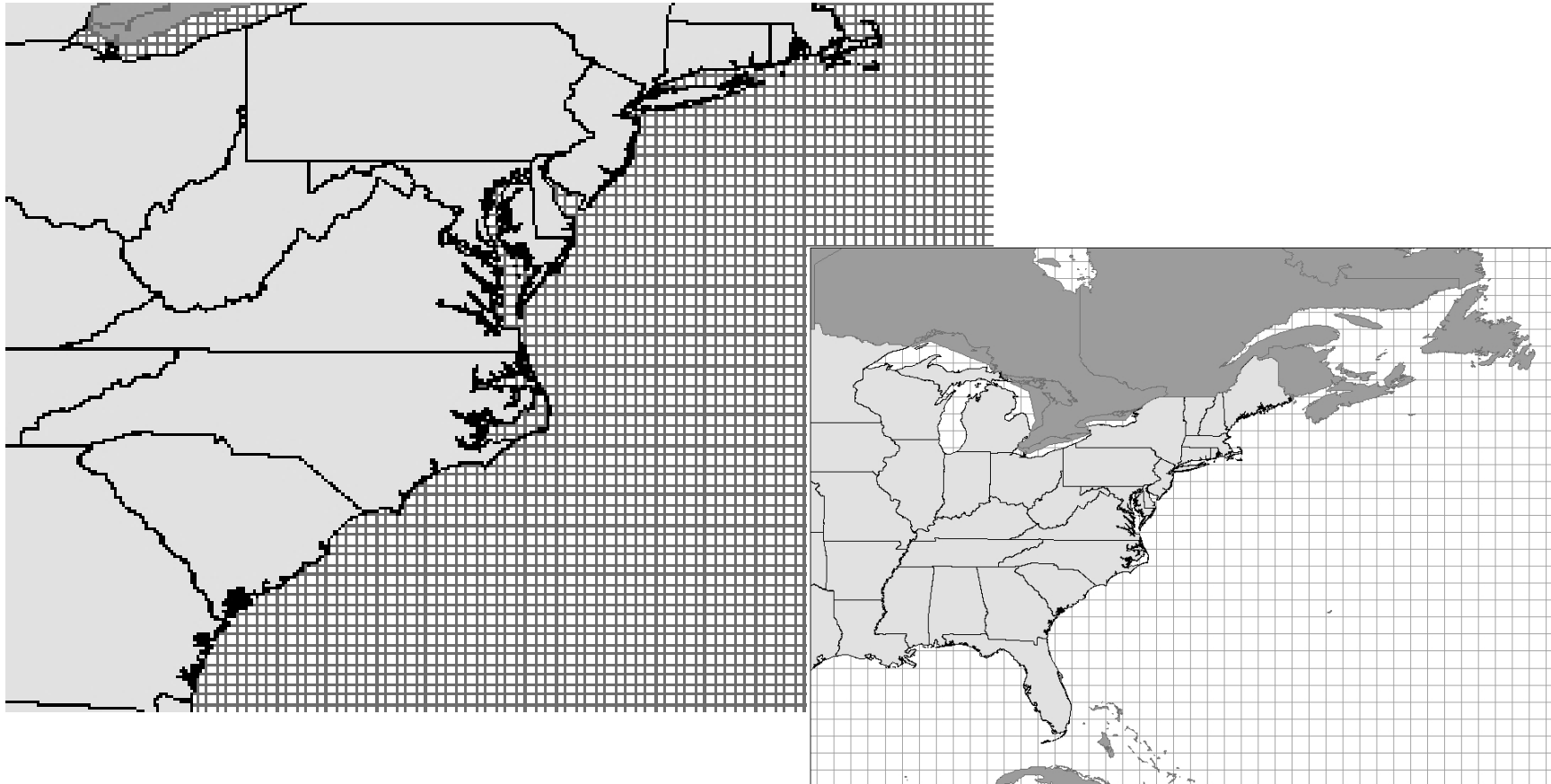
Use of Interactions to Estimate Fishing Mortality Reductions

- The proposed stand-alone measures would not reduce dusky shark at-vessel/post-release mortality in commercial fisheries
- Some at-vessel/post-release mortality measures were considered in the Predraft, but were not proposed in the Draft due to safety and enforcement concerns
- Comments received from the Predraft did not identify additional measures that could be used to decrease at-vessel/post-release mortality of dusky sharks in commercial fisheries

Therefore, the proposed approach is to reduce dusky shark interactions by ~2/3 in order to reduce fishing mortality on dusky sharks by ~2/3

Interactions could be used to establish a bycatch cap (Alternative B4)

Resolution of Hotspot Analysis

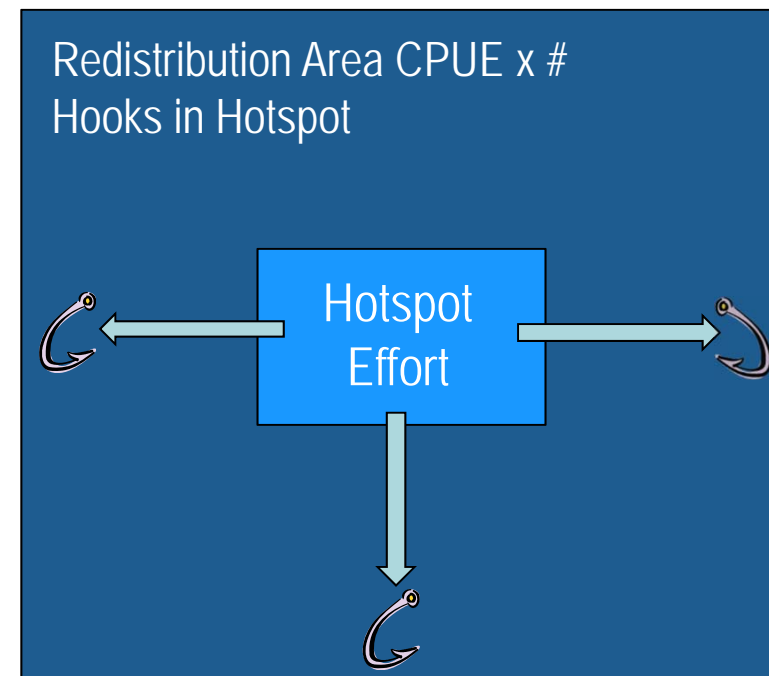
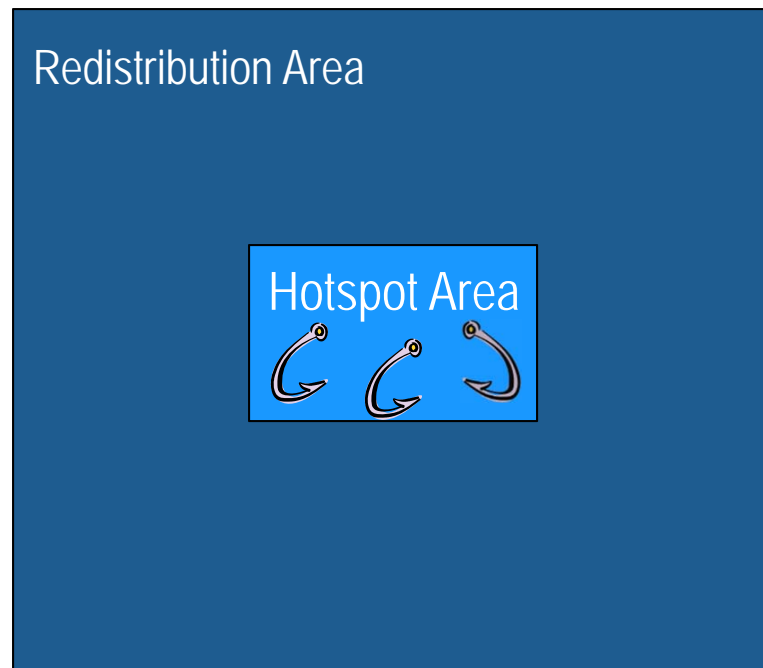


Fine-scale (10' x 10')

Coarse-scale (1° x 1°)

Fine-scale data analyzed but not shown due to confidentiality concerns; we are exploring options to display data at a finer scale

Redistribution of Effort Analysis



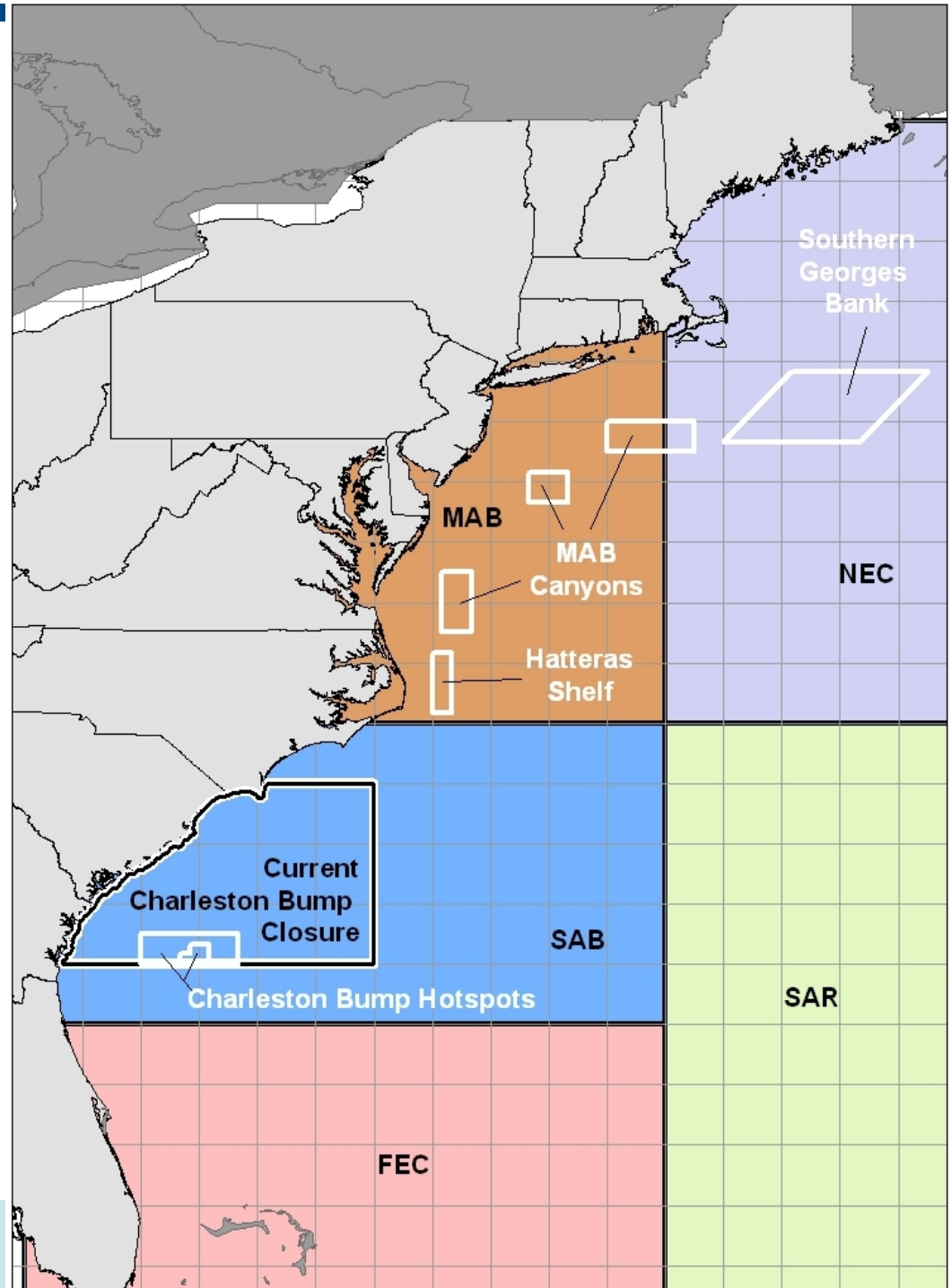
*See DEIS appendix for calculation tables for each proposed hotspot

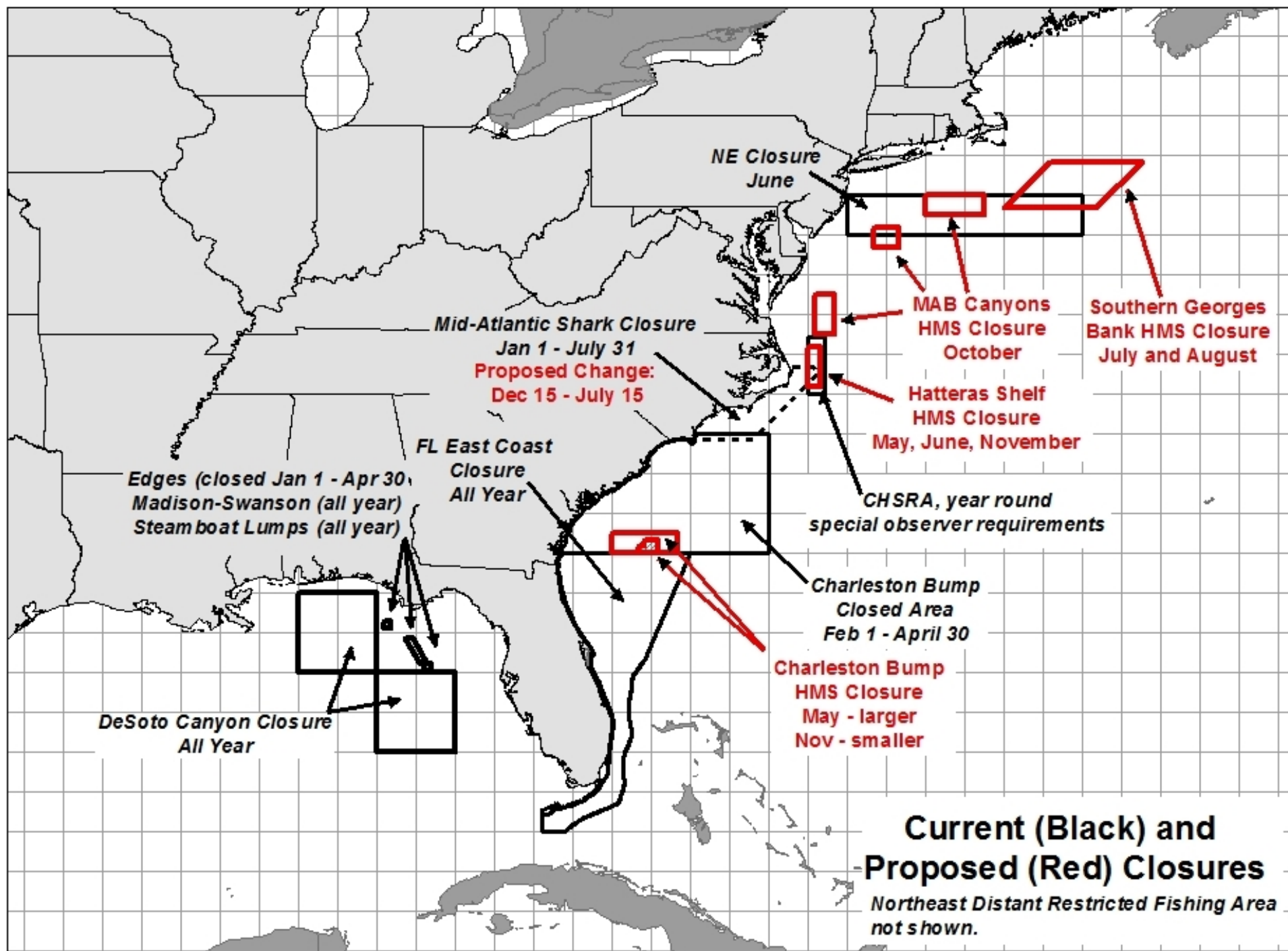
Redistribution of Effort Analysis

Southern Georges Bank ~ NEC
MAB Canyons ~ MAB
Hatteras Shelf ~ MAB
Charleston Bump Hotspot
~ Open Charleston Bump

Analyzed redistribution effects on:

- Dusky shark interactions
- Target/non-target PLL species
- Protected resources
- Economic impacts





Southern Georges Bank HMS Closure
July: -\$187,775; -94 dusky
August: -\$113,352; -79 dusky

MAB Canyons HMS Closure
October: +\$136,976; -109 dusky

Hatteras Shelf HMS Closure
May: -\$29,819; -11 dusky
June: -\$28,145; -207 dusky
November: -\$37,597; -96 dusky

Charleston Bump HMS Closure
May: -\$18,258; -205 dusky
Nov (smaller): -\$107,453; -53 dusky

Approximately 1% of Highly Migratory Species
Revenue

Total Economic Impact:	- \$385,423
Total Dusky Interactions (w/ redistribution):	- 854 sharks
Percent reduction in interactions:	- 49%

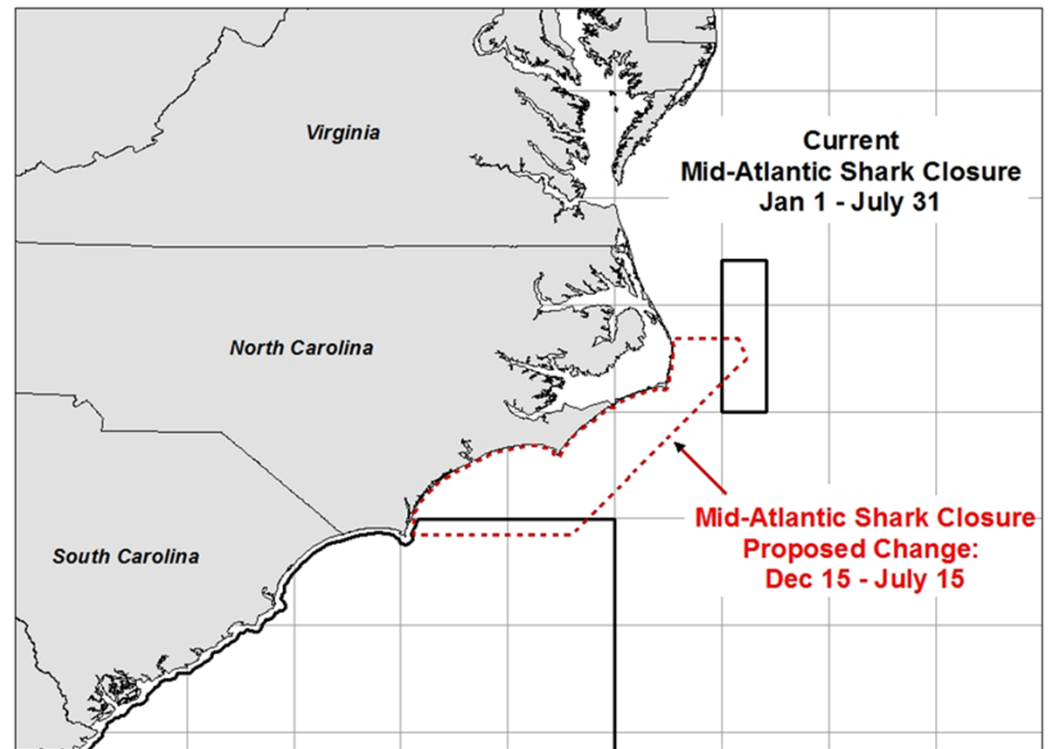
Alternative B4: Bycatch Caps

- Would allow pelagic longline fishing to continue in hotspot areas until a limited number of dusky shark interactions are reached.
- Dusky shark bycatch caps for each hotspot area would be set at 10 percent of redistributed interactions from 2008-2010 for a three-year period.
- Vessels fishing in the hotspot areas would have to be observed, and observed interactions would be counted against the bycatch cap.
- Once the bycatch cap for an area is reached, it would close for the remainder of the three-year period.
- Requesting public comments on how to administer a bycatch cap program for dusky sharks.

Equity Concerns: Mid-Atlantic Shark Closure

Alternative B5 - Preferred

- Atlantic States Marine Fisheries Commission Shark Nursery Closure: May 15 to July 15
- North Carolina feels the July 31 opening disadvantages its fishermen and is contrary to National Standard 4
- Proposed change would shift closure dates to Dec 15 – July 15 to maintain conservation and address equity concerns



Alternative B6: Shark Research Fishery Modifications

- *Alternative B6 (preferred): Modify the existing bottom longline shark research fishery to minimize dusky shark interactions.*
- Would take advantage of operational flexibility of the shark research fishery to reduce dusky shark interactions. Strategies include:
 - Limiting soak time, number of hooks per set
 - Restricting fishing areas
 - Reducing effort

Specific Requests for Public Comments

1. **Monitoring bycatch caps** – how could they be administered with limited resources available in the observer programs?
2. **The name “aggregated LCS”** – are there other options that are more descriptive or appropriate?
3. **Reduction of dusky shark mortality in the recreational fishery** - How to improve angler identification and angler awareness of dusky shark issues? Other approaches to reduce dusky shark mortality in the recreational fishery?
4. **Stowing longline gear to transit closed areas** – Concerns exist about safety at sea, additional economic burden, access to offshore fishing grounds. If gangions, hooks, and buoys are removed from the mainline and drum and stowed, should NMFS allow transit with longline gear?

Other Shark Actions

Petitions to list sharks under the Endangered Species Act

- Scalloped Hammerhead (August 2011)
- White (northeastern Pacific; June and August 2012)
- Dusky (November 2012)
- Great Hammerhead (December 2012)
- Whale (December 2012)

Shark Season Rule

- Commercial fishery opened Jan. 1, 2013; Porbeagle closed for 2013

Upcoming SEDAR Shark Assessments

- 2013: Atlantic sharpnose and bonnethead
- 2014: Finetooth and smoothhounds

Public Hearing Schedule

Venue	Date and Time	Location
Conference call / Webinar	Jan. 9 - 1pm to 4pm	(888) 469-2979 Passcode: 2809363
Public Hearing	Jan 15 – 4pm to 7 pm	Madeira Beach, FL
Public Hearing	Jan 15 – 5pm to 8 pm	Belle Chase, LA
Public Hearing	Jan 17 – 5 pm to 8 pm	Vero Beach, FL
Public Hearing	Jan 22 – 5 pm to 8 pm	Manalapan, NJ
Public Hearing	Jan 24 – 5 pm to 8 pm	Manteo, NC
Public Hearing	Jan 30 – 5 pm to 8 pm	Gloucester, MA
Public Hearing	Jan 30 – 5 pm to 8 pm	Ocean Pines, MD
Conference call / Webinar	Feb. 5 – 5 pm to 8 pm	(888) 469-2979 Passcode: 2809363
Public Hearing	Feb. 7 – 5 pm to 8 pm	Houston, TX

Request for Public Comments

Comment period closes on:

February 12, 2012

Please submit comments to:

<http://www.regulations.gov>

Keyword - "NOAA-NMFS-2012-0161"

Comments can also be submitted via fax: 301-713-1917, Attn: Peter Cooper

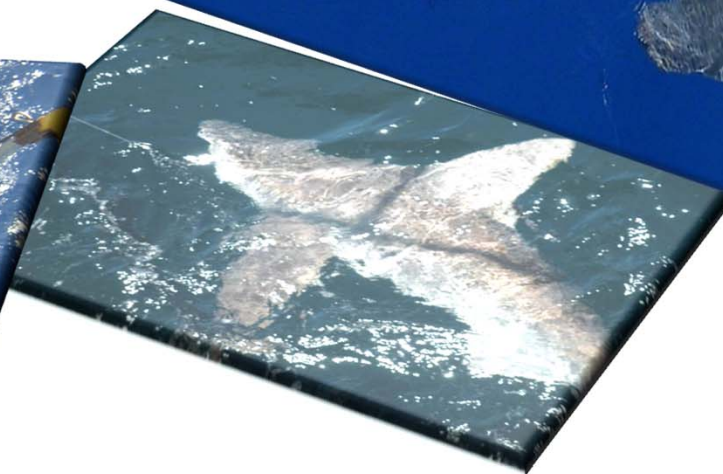
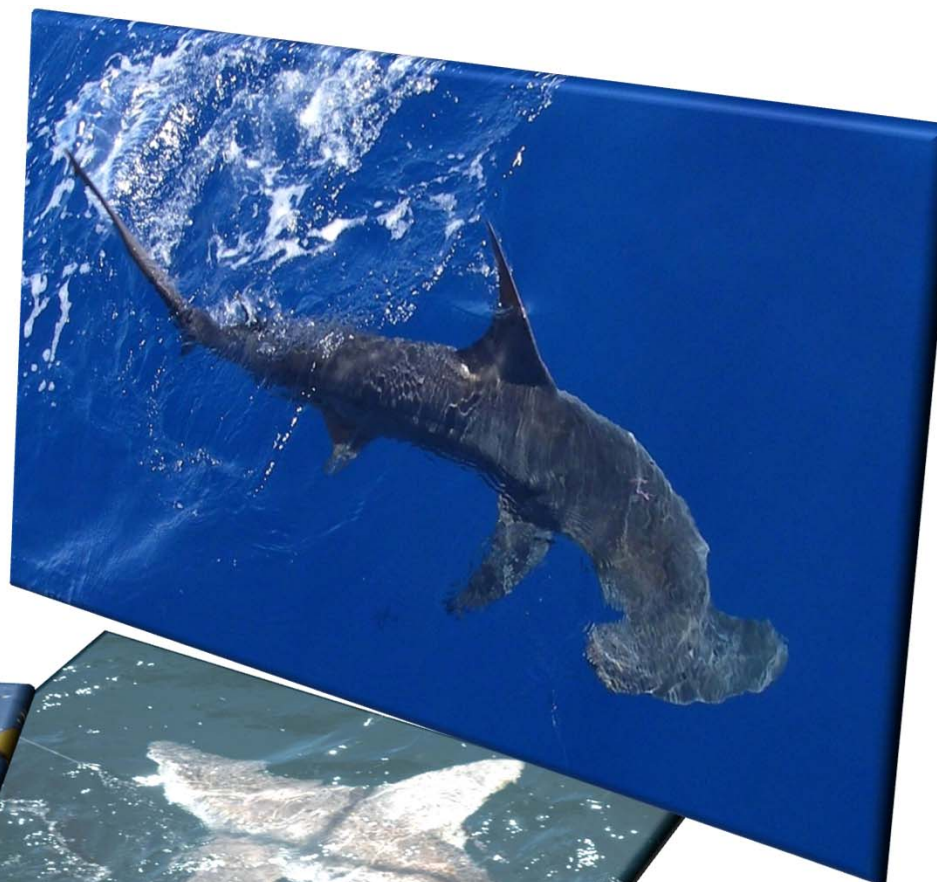
Or Mail: NMFS SF1, 1315 East-West Highway, Silver Spring, MD 20910

Please identify comments with NOAA-NMFS-2012-0161

For more information go to: <http://www.nmfs.noaa.gov/sfa/hms/>

Additional Questions?

peter.cooper@noaa.gov or 301-427-8503



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