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# Future of the Atlantic Shark Fishery

Presented to HMS AP  
April 7, 2011

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## Outline

- Background on Future of the Shark Fishery ANPR
- Summary of comments received during ANPR
- Summary of data analyses for the Atlantic shark fishery
- Next steps

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# Background on Future of the Shark Fishery Advanced Notice of Proposed Rulemaking



## The ANPR

- Published 9/20/2010, comment period ended 1/14/11
- Held 6 public meetings including at September 2010 HMS AP meeting
- Looked at several potential management solutions to address:
  - Continued concern over changes in quotas and short seasons
  - Improving or continuing the current status of shark stocks
  - Improving market factors
  - Exploring methods to establish flexible regulations that would address changing needs of the fishery
- Main question: What should the shark fishery look like?



## Potential Management Measures in ANPR

- Quota Structure Changes (e.g., Species-specific quotas)
- Permit Structure Changes (e.g., Permit stacking)
- Catch Shares (e.g., IFQs, Sectors)

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# Summary of Public Comments



## Public Comments on Quota Structure Changes

- Implement species-specific management (and stock assessments)
  - Stock assessments can't be performed quickly enough
  - Monitoring numerous quotas would be difficult
  - Only SCS managed as a complex
  - Blacktips and spinners should be combined (Medium Coastal Sharks)
- Structure the quotas and opening dates to coincide with regional shark availability
- The State of Louisiana should be allocated its own quota
- Implement bycatch caps to reduce interactions with protected species
- Changes to the regional administration of quotas should be considered (AP)



## Public Comments on Permit Structure Changes

- Permit Stacking...
  - May cause quota to be harvested even faster
  - Could increase economic benefits
  - Consider 3 permits for 2 trip limits
  - Could increase pressure on shark stocks
  - Should not apply to incidental permits (AP)
  - Affected by upgrading restrictions? (AP)



## Public Comments on Permit Structure Changes

- Use or Lose Permits...
  - Latent permits may become active (harvest quota more quickly)
  - Should not be implemented for incidental permits (AP)
  - Does NMFS have a control date?
  - Has NMFS considered a buyback?
  - 7-10 years is a reasonable period of inactivity; inactive permits should be transferred to a reserve pool (AP)
  - Could lead to more economically efficient outcomes



## Public Comments on Catch Shares

- NMFS should not implement catch shares
- The derby fishery is fine; everyone has equal opportunity to fish
- Will there be a referendum (vote) before adopting catch shares? (AP)
- How to address state water landings?
- How would quota be allocated across regions and states?
- Need to see the initial allocation and assumptions
- The initial allocation is always difficult but if the stock improves additional quota can be given to fishermen who did not receive an initial share. (AP)
- NMFS should consider a pilot program in the Gulf of Mexico



## Public Comments on Catch Shares

- If catch share/sector for gillnet fishery, cap existing number of vessels
- Gulf of Mexico red snapper a good model for IFQ
- Non-fishing interests (e.g., Environmental Defense Fund) may acquire catch shares (AP)
- Shark dealers can't handle market gluts from derby fishing
- Voluntary sectors (fishermen provide their catch history to determine initial allocation) should be implemented
- Most NC fishermen are opposed to catch shares (AP)
- Goal of catch share should be a year-round fishery; those who prefer derby conditions are only interested in fin value (not meat)
- Requirement to pay 3% (cost sharing) would be burdensome (AP)

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# Preliminary Summary of Data Analyses



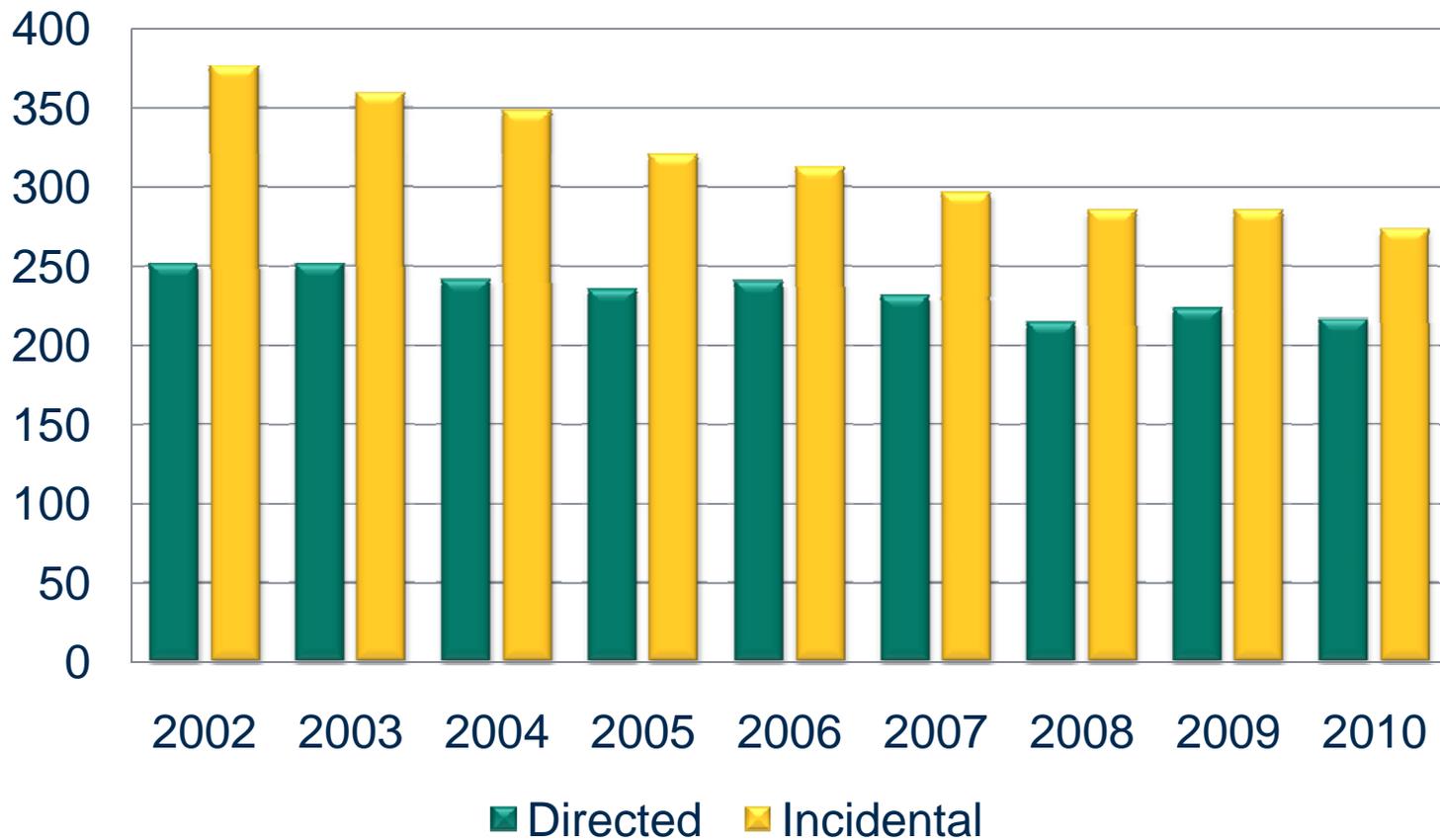
## Atlantic Shark Fishery: Analyses

- Participation in the shark fishery (permits, vessels, trips)
- Vessel activity
- Vessel fleet characteristics
- Distribution of shark landings (trips, regions )
- Species interactions



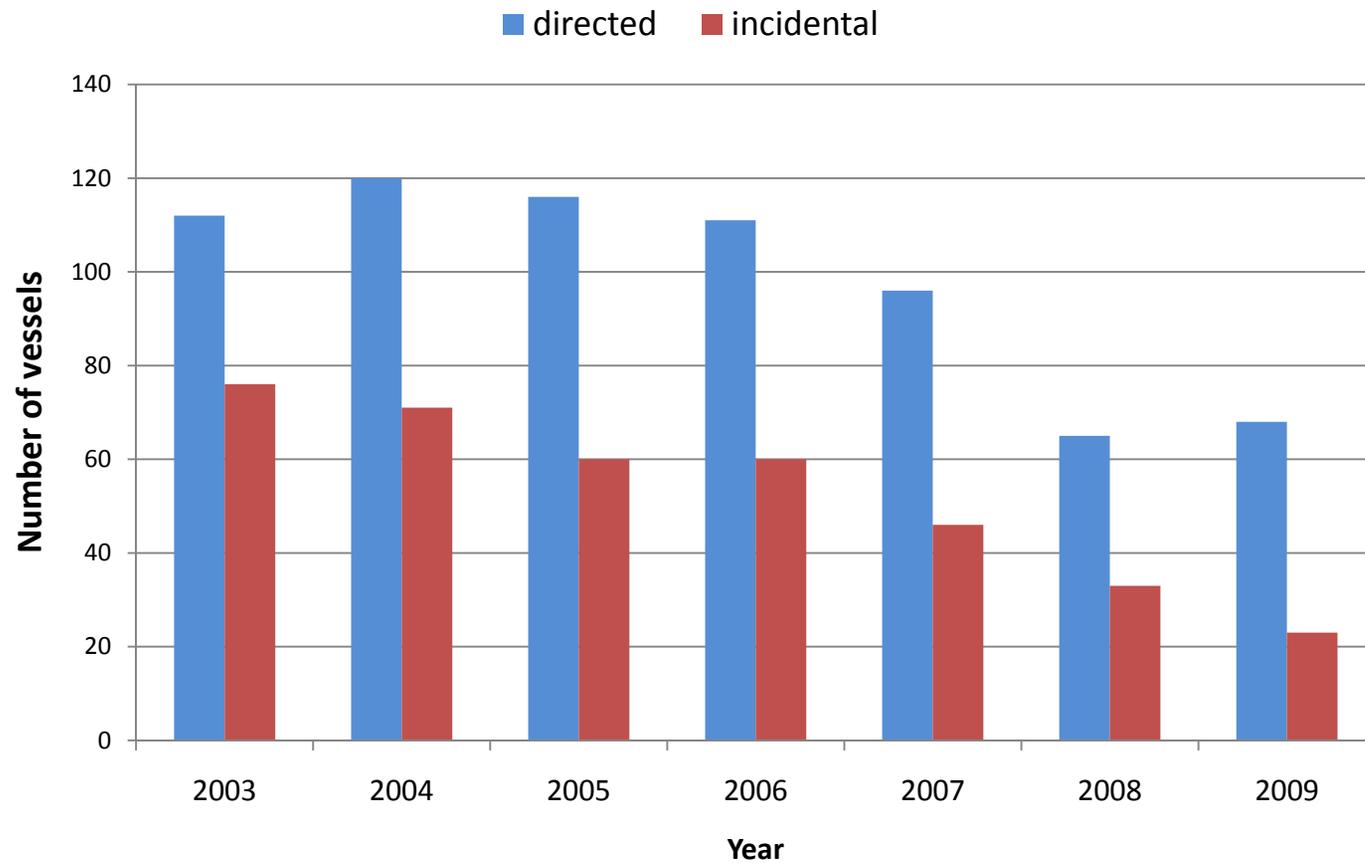
## Number of Permits

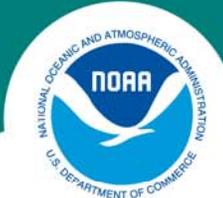
Before Limited Access, there were ~2,200 permits



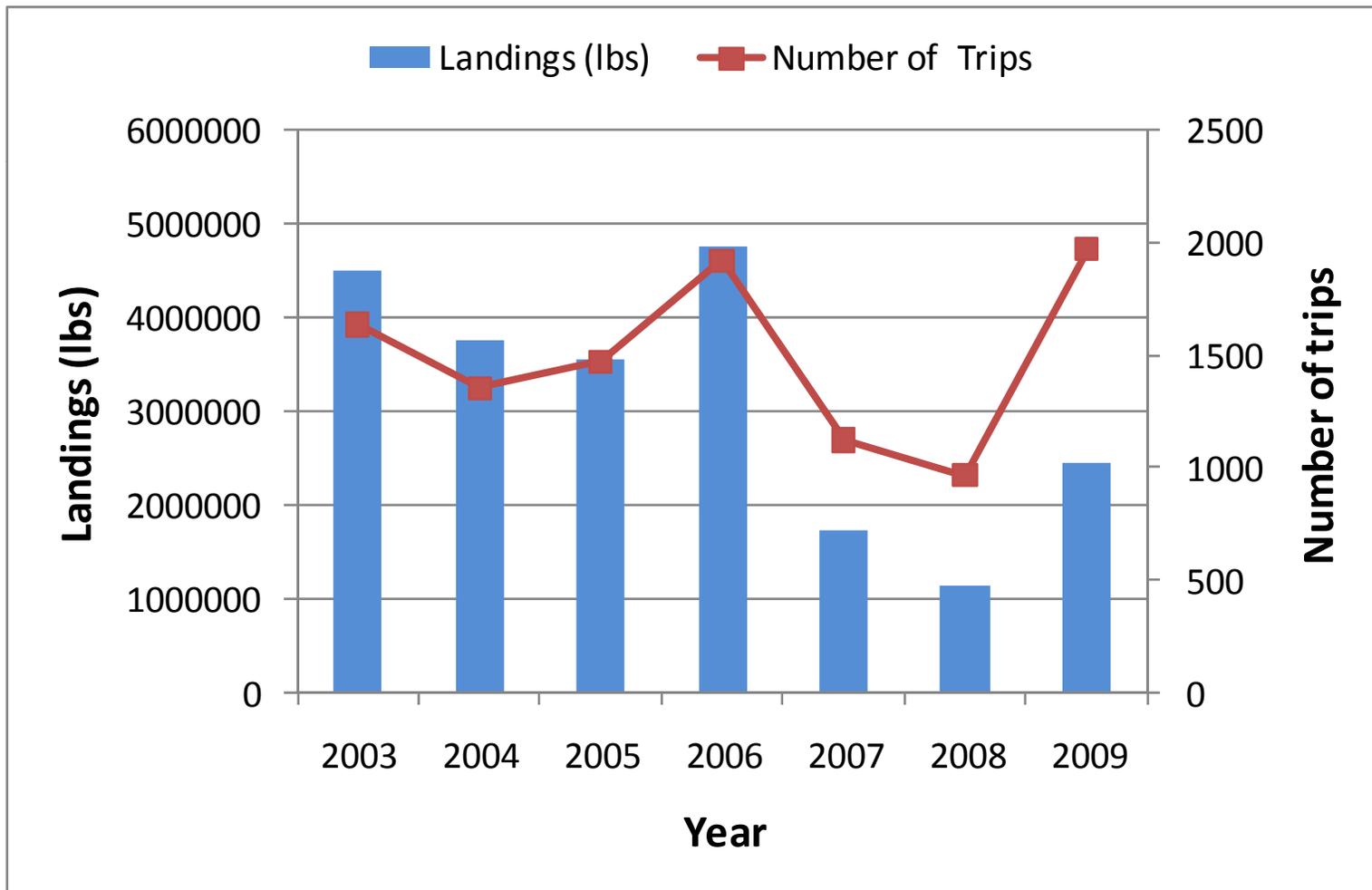


## Number of Active Vessels (2003-2009)



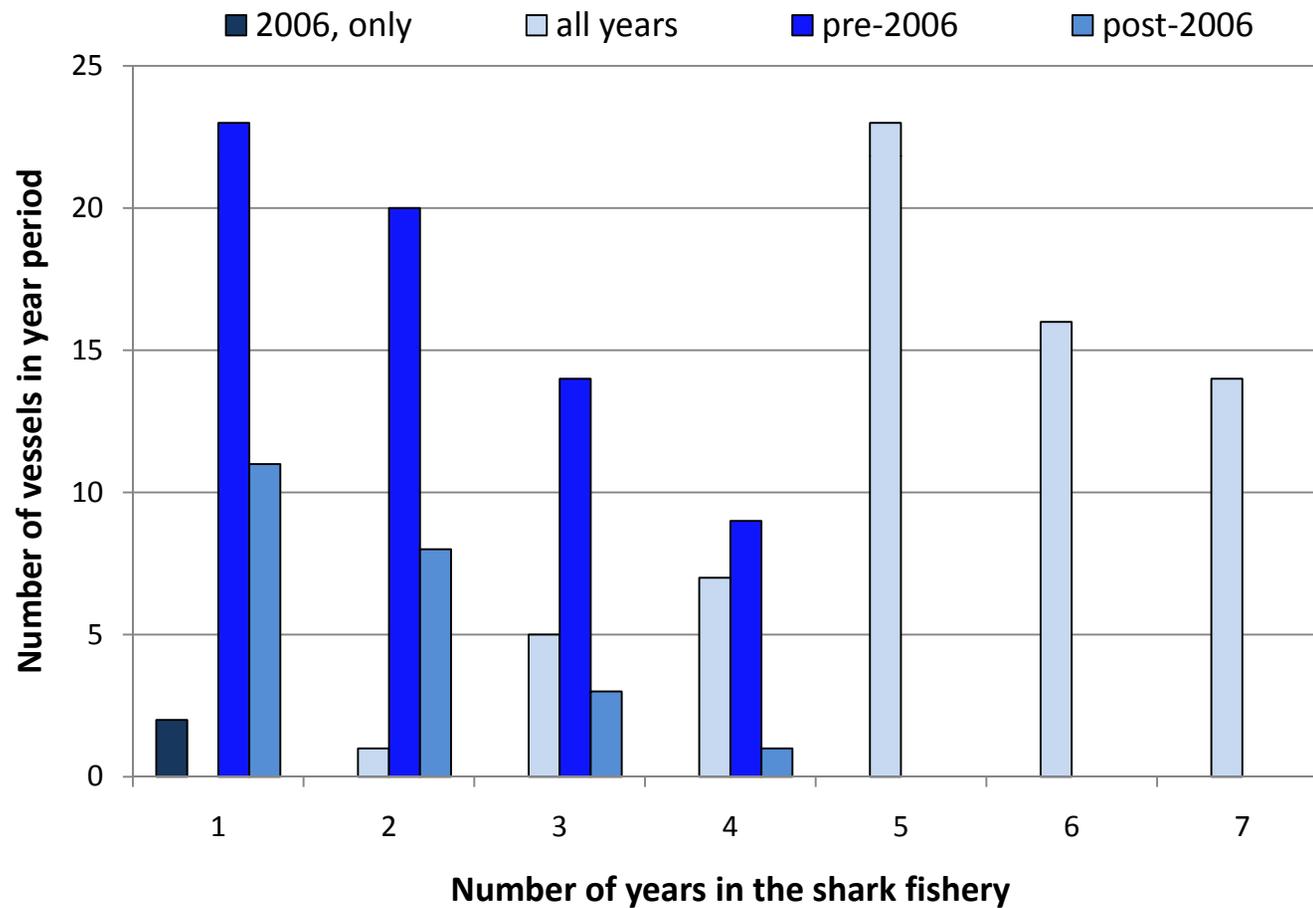


## Overall distribution of trips and landings



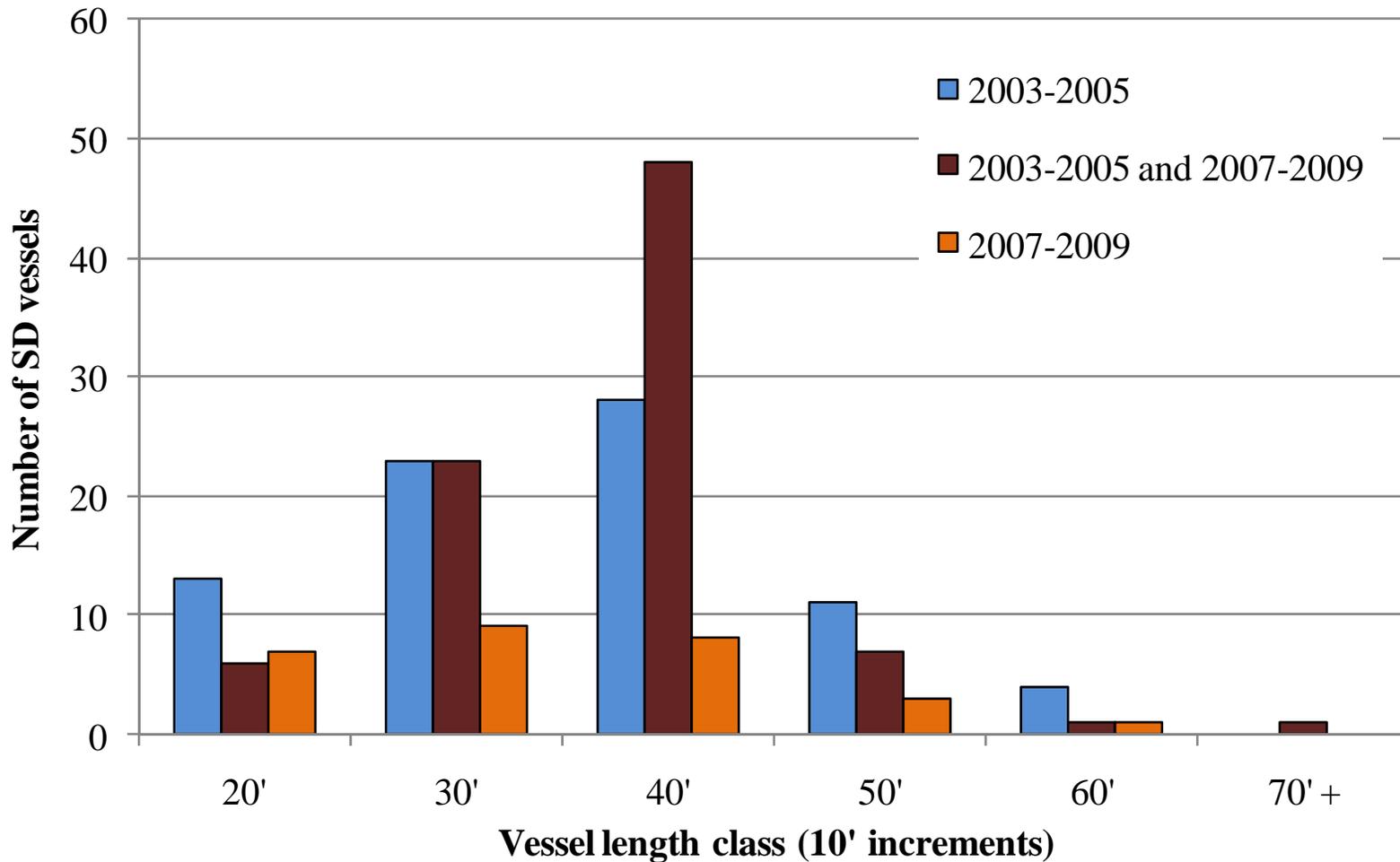


## Comparison of Recent Versus Past Effort



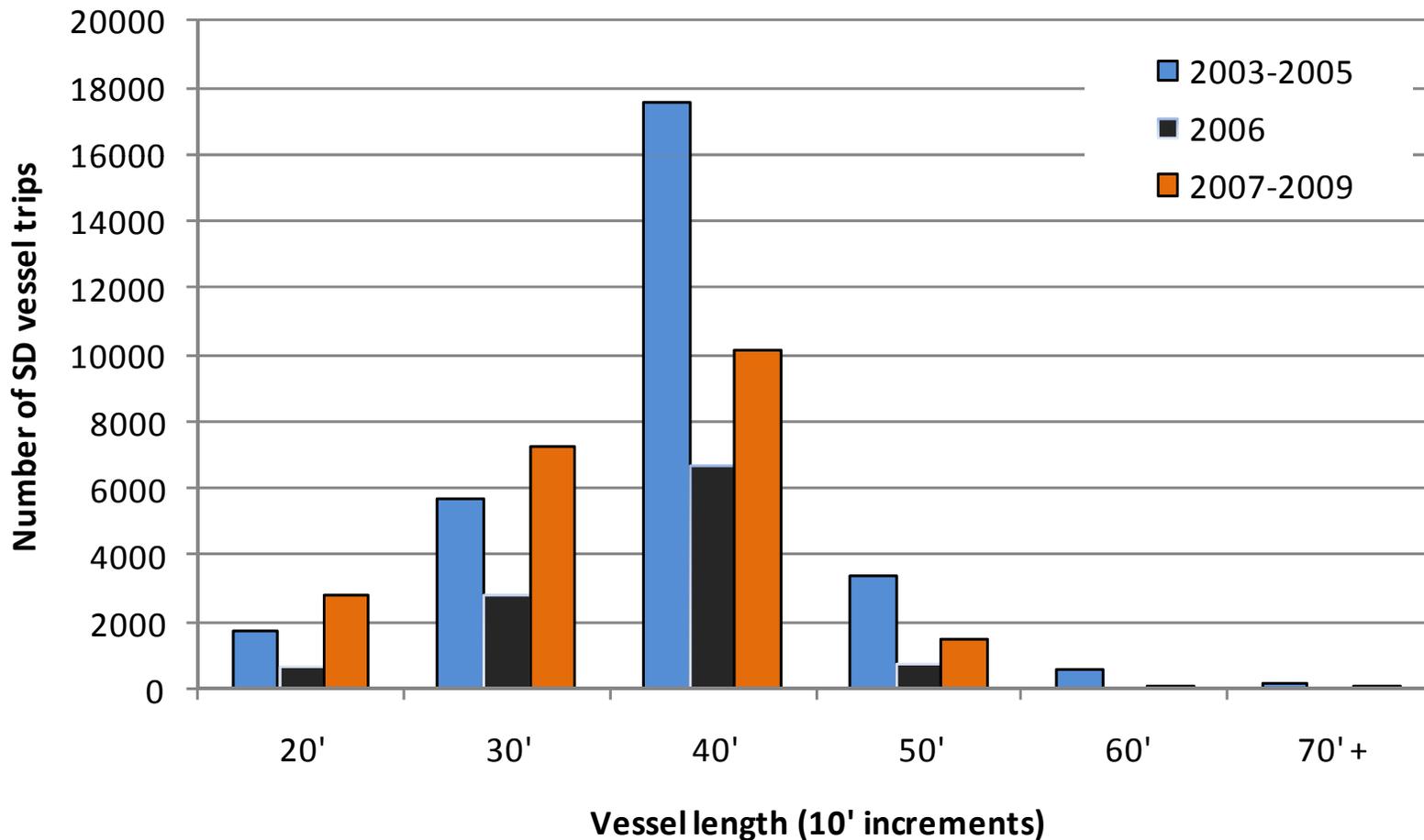


## Vessel Fleet Characteristics: Num. of Directed Vessels by Vessel Length



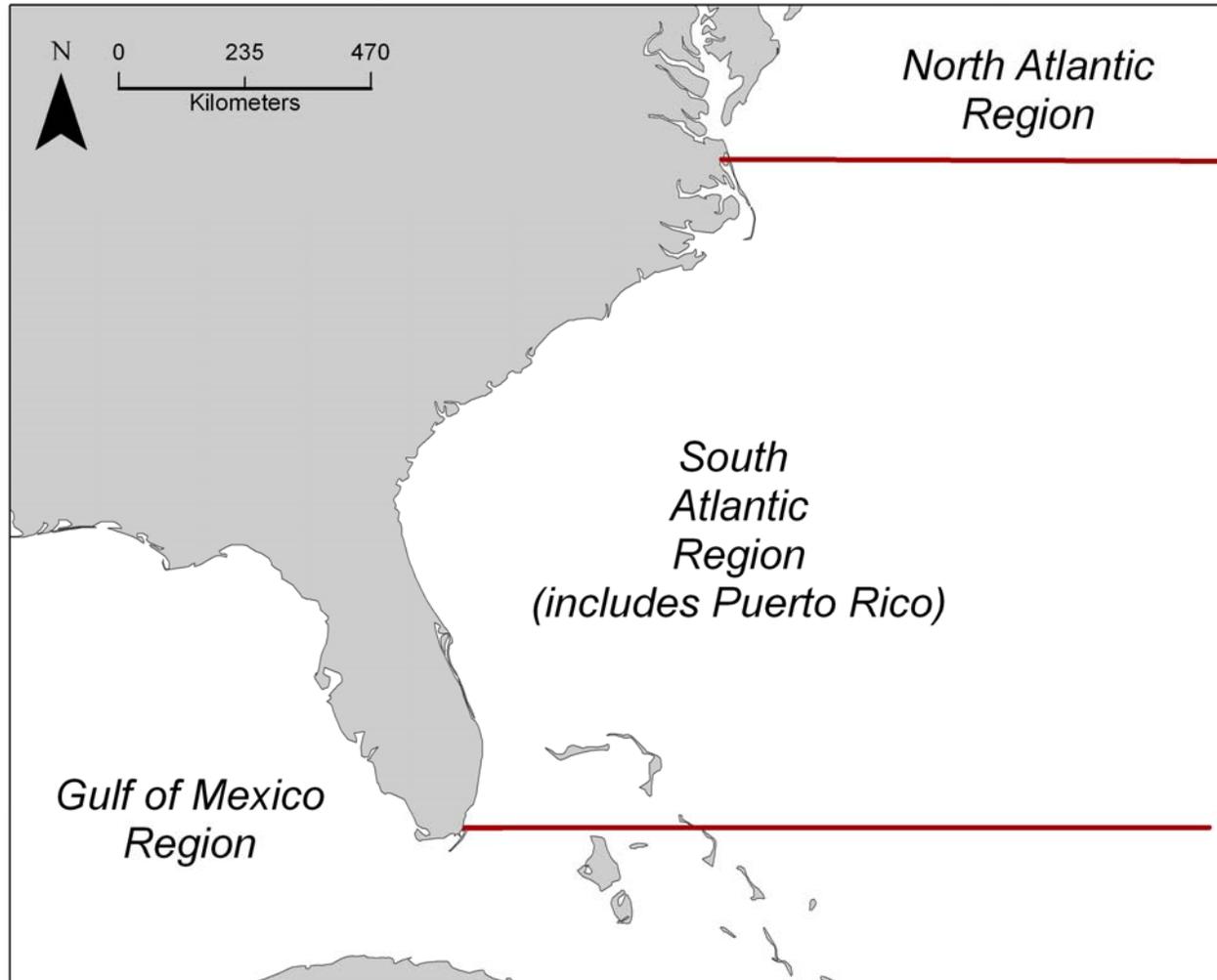


## Vessel Fleet Characteristics: Num. of Directed Trips by Vessel Length



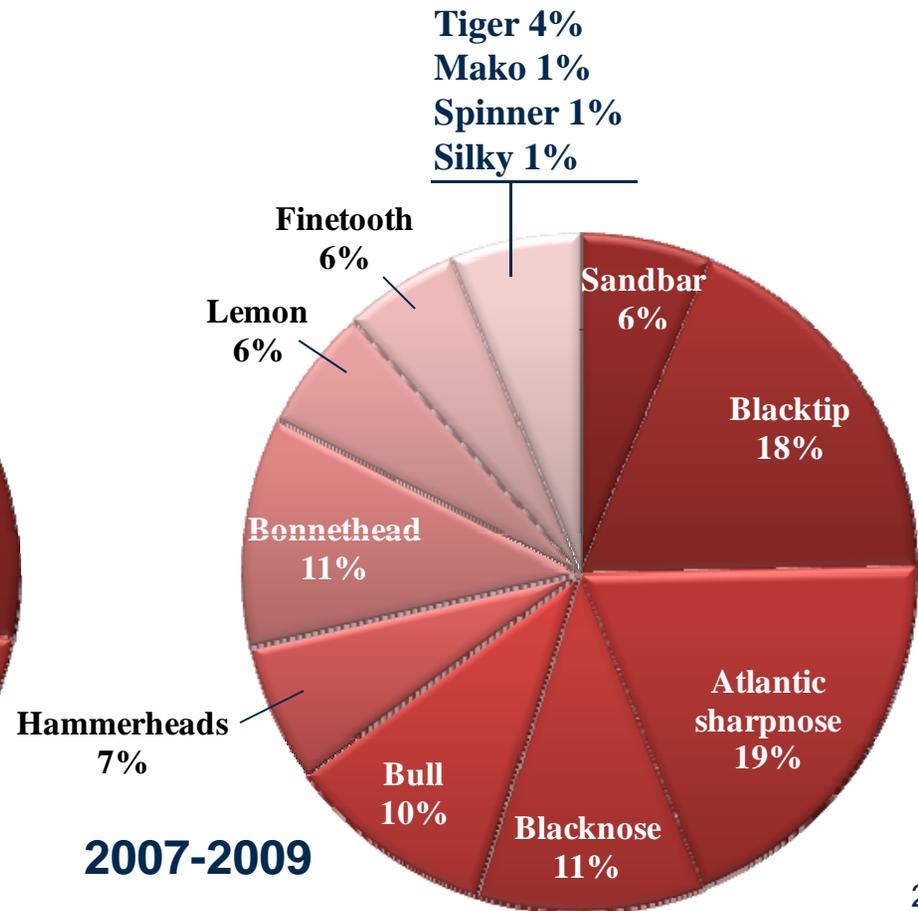
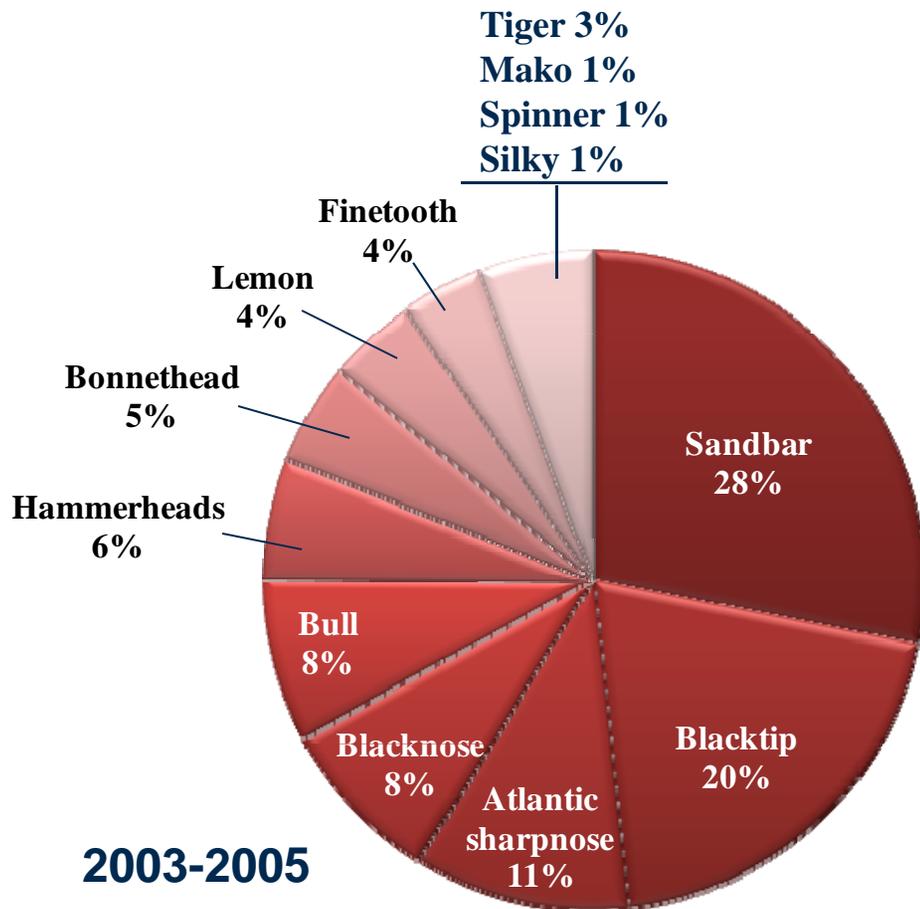


## Shark Regions Used in Analyses



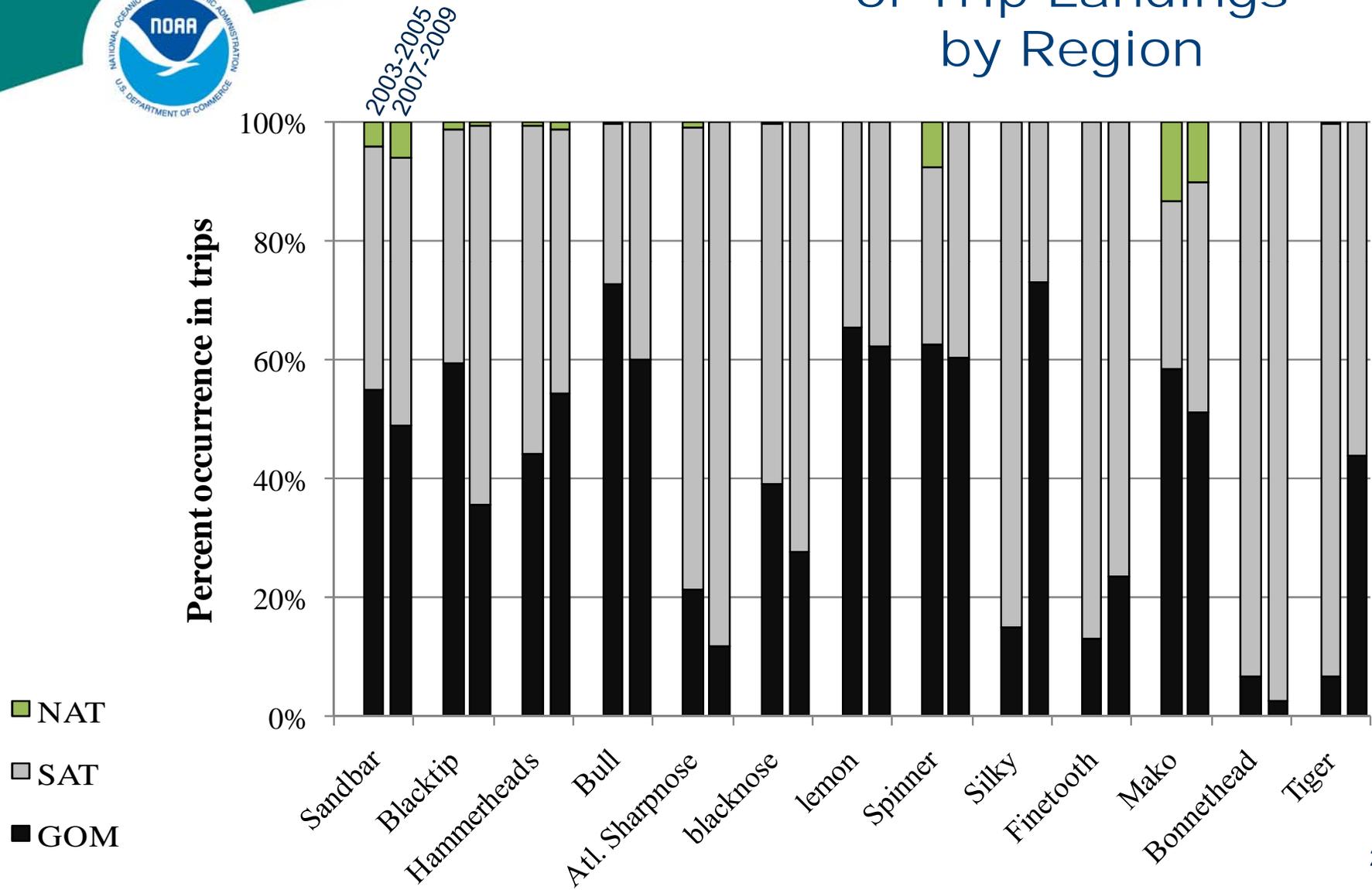


# Species Composition of Trip Landings: All Regions





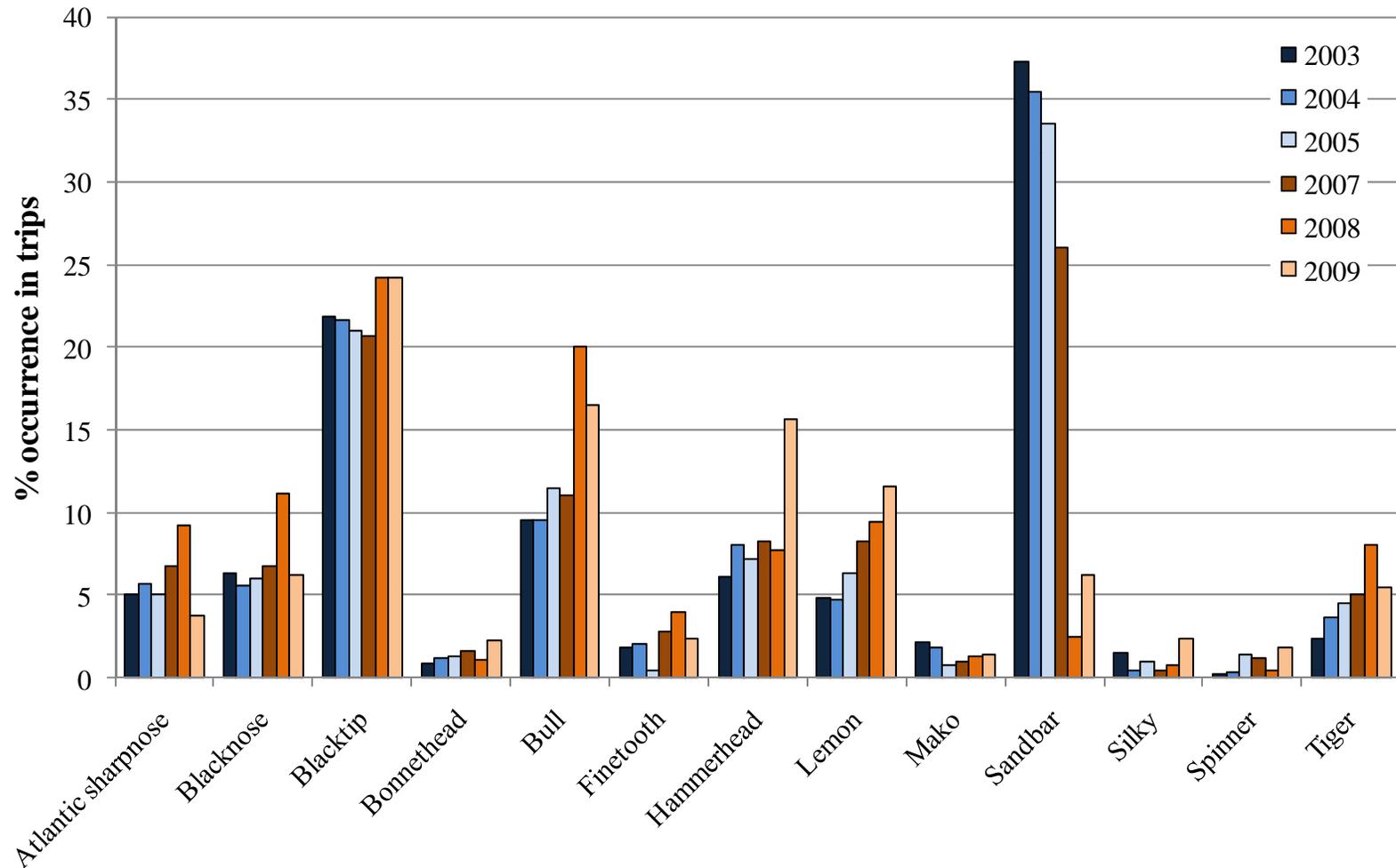
## Species Composition of Trip Landings by Region





# Species Composition of Trip Landings

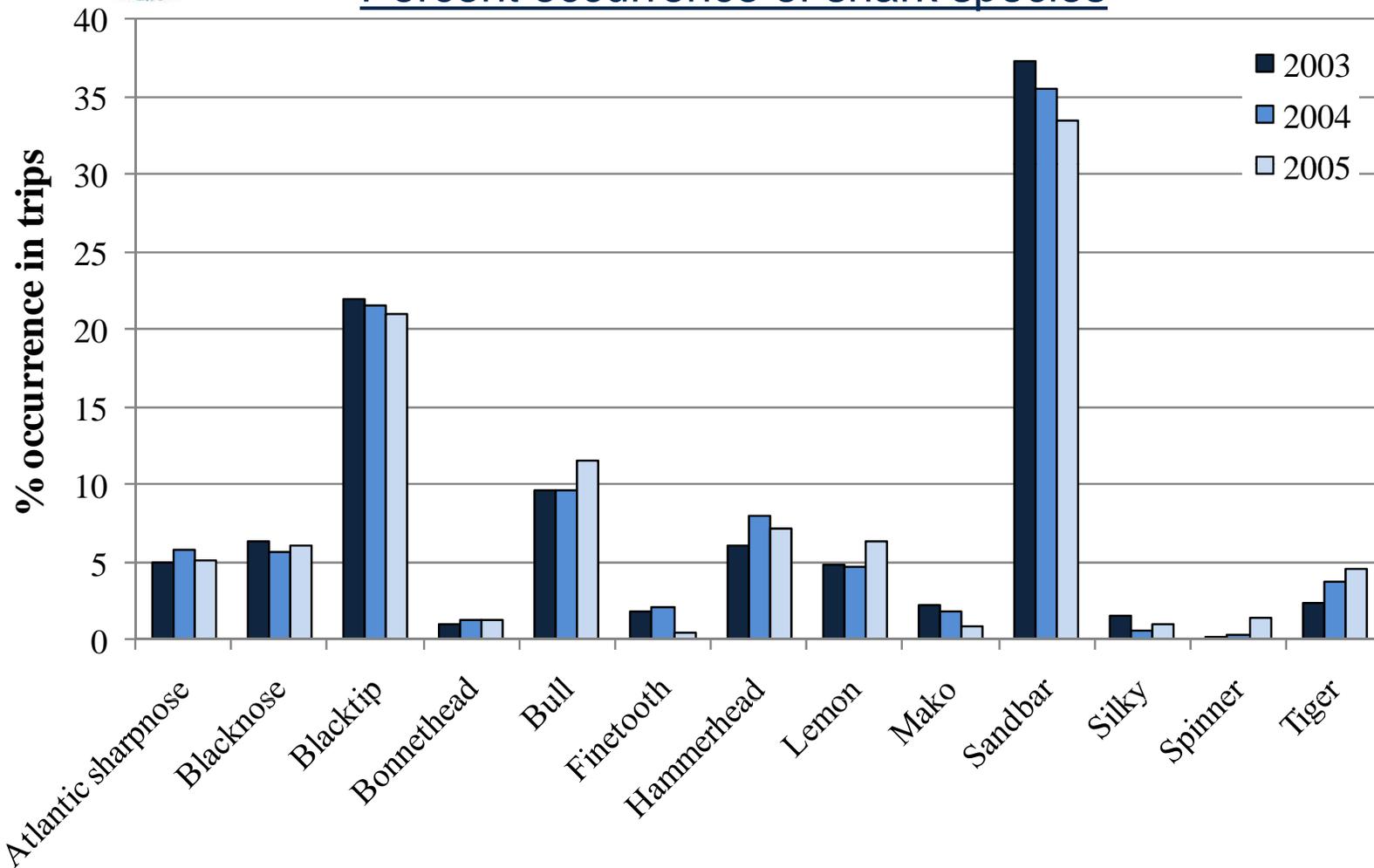
## Percent occurrence of shark species





## Species Composition of Trip Landings (2003 – 2005)

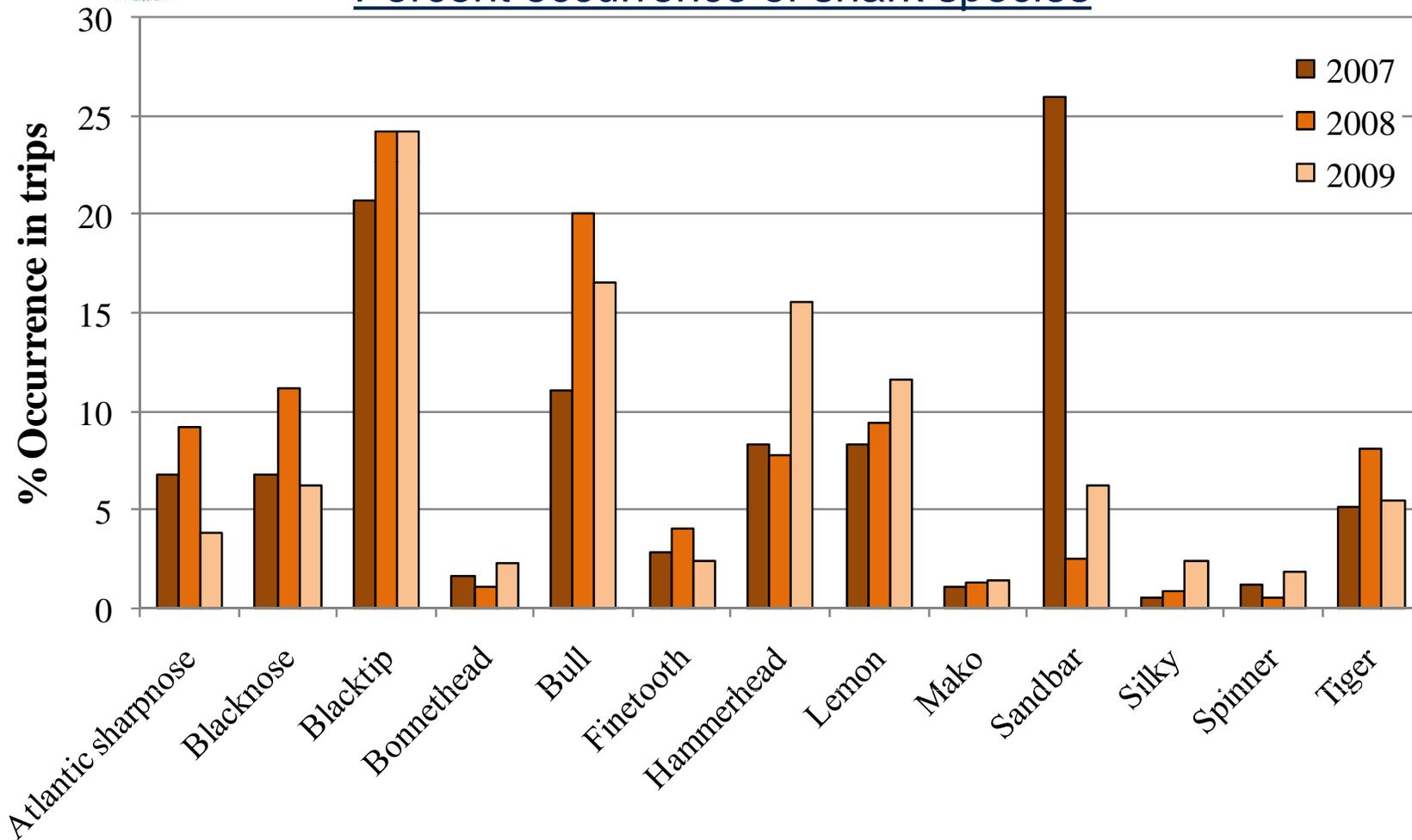
Percent occurrence of shark species





## Species Composition of Trip Landings (2007 – 2009)

Percent occurrence of shark species





## Co-Occurrence of Species in the CFLB Landings Data (2003 – 2005)

Percent of trips where species were reported at  $\geq 10\%$  of trip's total shark

Species	SBar	HH	Bull	AtlSN	Lemon	Spin	Silky	FineT	Mako	BHead	Tiger
Blktip	42	6	20	12	9	1	0	5	0	3	2
SBar		11	11	5	5	1	1	1	1	1	5
HH			8	10	8	1	3	1	18	1	10
Bull				12	18	2	1	2	0	1	3
AtlSN					2	1	0	6	1	8	3
Lemon						0	1	5	0	0	3
Spin							0	0	0	0	8
Silky								0	0	0	11
FineT									0	16	0
Mako										0	3
BHead											2
Tiger											



## Co-Occurrence of Species in the CFLB Landings Data (2007 – 2009)

Percent of trips where species were reported at  $\geq 10\%$  of trip's total shark landings

Species	SBar	HH	Bull	AtlSN	Lemon	Spin	Silky	FineT	Mako	BHead	Tiger
Blktip	12	14	32	15	17	2	1	9	0	7	8
SBar		28	11	4	7	2	1	1	0	4	9
HH			31	8	24	2	2	1	12	1	16
Bull				6	31	1	1	4	0	2	12
AtlSN					2	1	0	11	0	28	2
Lemon						0	0	4	0	5	10
Spinner							10	13	0	0	4
Silky								0	0	0	15
FineT									0	21	1
Mako										2	2
BHead											0
Tiger											



## Preliminary Results and Possible Future Analyses

- Take Home Messages
  - “Big Picture” overview of the shark fishery, including: participation (number of permits), landings, species composition, inter-specific interactions, vessel/fleet characteristics, active vs. latent effort
- Future Analyses
  - Review Dealer Information
  - Review HMS and Multi-species Logbooks
  - Other?



## Next Steps

- Pre scoping – Fall / Winter 2010
- Scoping and IO Paper – Summer 2011
- Proposed Rule –
- Final Rule -



## Questions for AP

- What options should we pursue?
- Do we need a control date and if so, what would that date be?
- If we are looking at regions, which ones do we focus on?
- What other analyses should we do?

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## More thoughts?

Your thoughts are important to us; please share them:

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