

## Overview of the Atlantic Pelagic Longline Take Reduction Team

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Photo Courtesy of K. Mullin, NMFS

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### Atlantic Pelagic Longline Fishery

- **Northwestern Atlantic ocean, Gulf of Mexico, Caribbean and International waters**
- **Characteristics of fishery**
- **Approximately 94 permitted vessels**
- **Target swordfish, tuna, shark**
- **Category I fishery**
- **ESA – 2004 Biological Opinion**
  - Time area closures
  - VMS
  - Safe handling protocols and equipment
  - Bait
  - Corrodible hooks
- **HMS consolidated FMP**
  - Mandatory Certification workshops



## Impetus for Convening a TRT for the Atlantic Pelagic Longline Fishery

- Settlement Agreement with Center for Biological Diversity committed NMFS to convening a team to address bycatch of pilot whale and common dolphins in the Atlantic longline fishery (by June 2005) and Atlantic trawl fisheries (by Sept 2006)
- Atlantic pelagic longline fishery is a Category I fishery due to frequently documented interactions with marine mammals.
- Observed serious injuries and mortalities of pilot whales, while below PBR, are above insignificant levels approaching a zero rate.

*NMFS may develop and implement a take reduction plan for any stock that interacts with a Category I fishery that has a high level of bycatch across marine mammal stocks (sec 118(f)(1))*



## Atlantic Pelagic Longline Take Reduction Team

- NMFS established TRT in June 2005
- Balanced group of stakeholders
- Team met 4 times
- Observer information, logbook data, fishing industry input, gear technology specialists, biological data and predictive modeling were used to form the Draft Plan
- NMFS contracted with CONCUR to organize and facilitate meetings
- Team submitted draft consensus plan to NMFS in June 2006



## Scope and Goal of the PLTRP

**Scope:**

Fishery: swordfish, tuna, and shark pelagic longline fishery

Species: long-finned pilot whale, short-finned pilot whale, Risso's dolphin

Geographic area: Mid-Atlantic Bight

**Goal:**

Across fisheries: reduce serious injuries and mortalities to below insignificant levels for all fisheries that interact with these species; or,

Within this fishery: reduce serious injuries and mortalities to lowest feasible level, taking into account economics of fishery, existing technology, and existing fishery management plan.



*Globicephala melas* (long-finned)

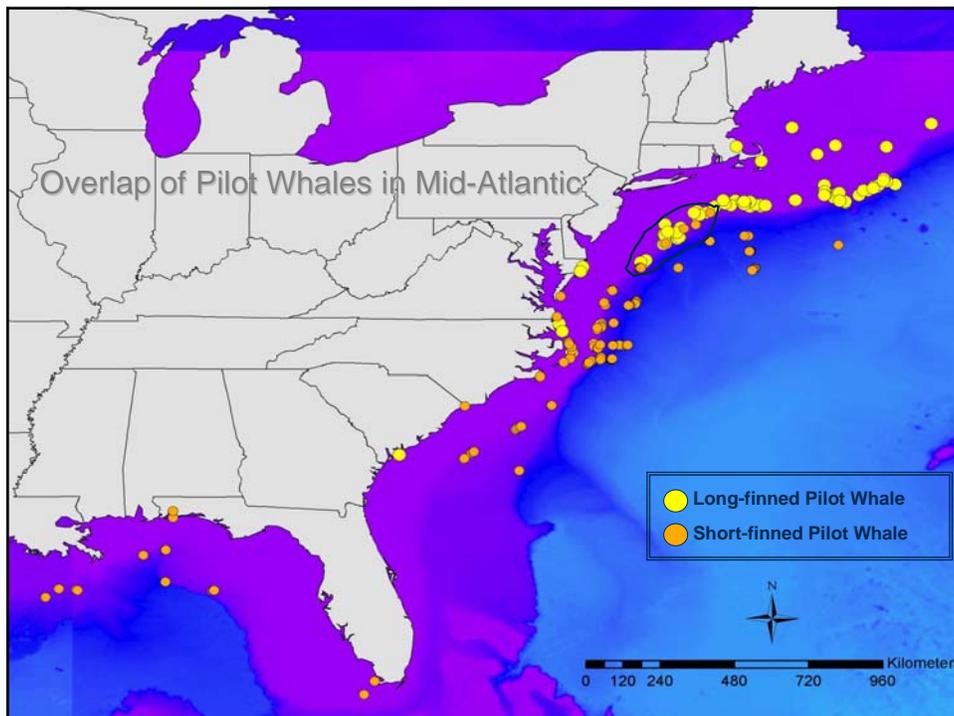


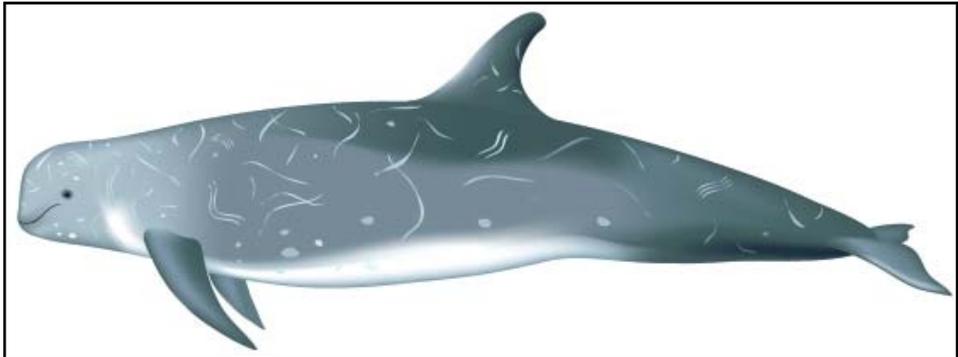
*Globicephala macrorhynchus* (short-finned)



## Challenges

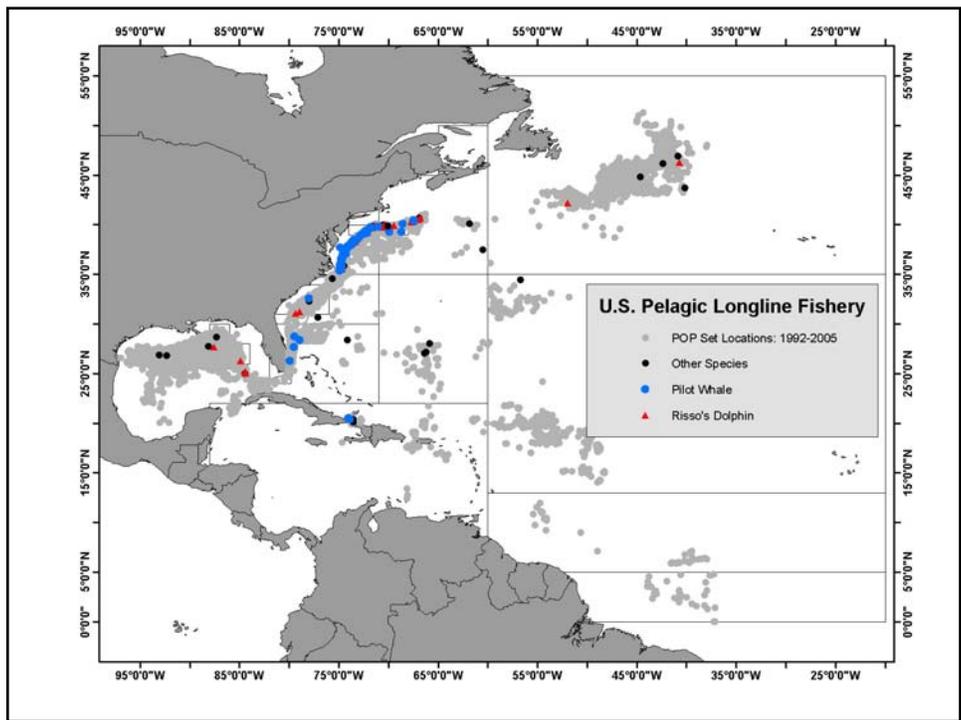
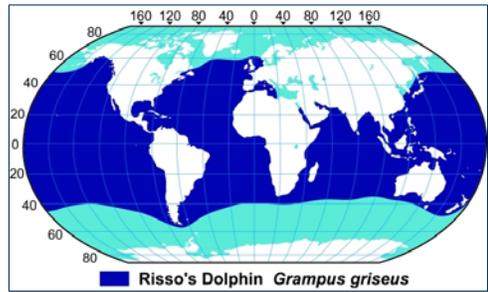
- Marine mammal interactions with fishing may occur during depredation on bait and/or catch (uncertain)
- Interactions may lead to hooked or entangled animals causing SI/M
- Short and long-finned pilot whales are difficult to distinguish in the field
- Overlap of pilot whale species where majority of interactions occur

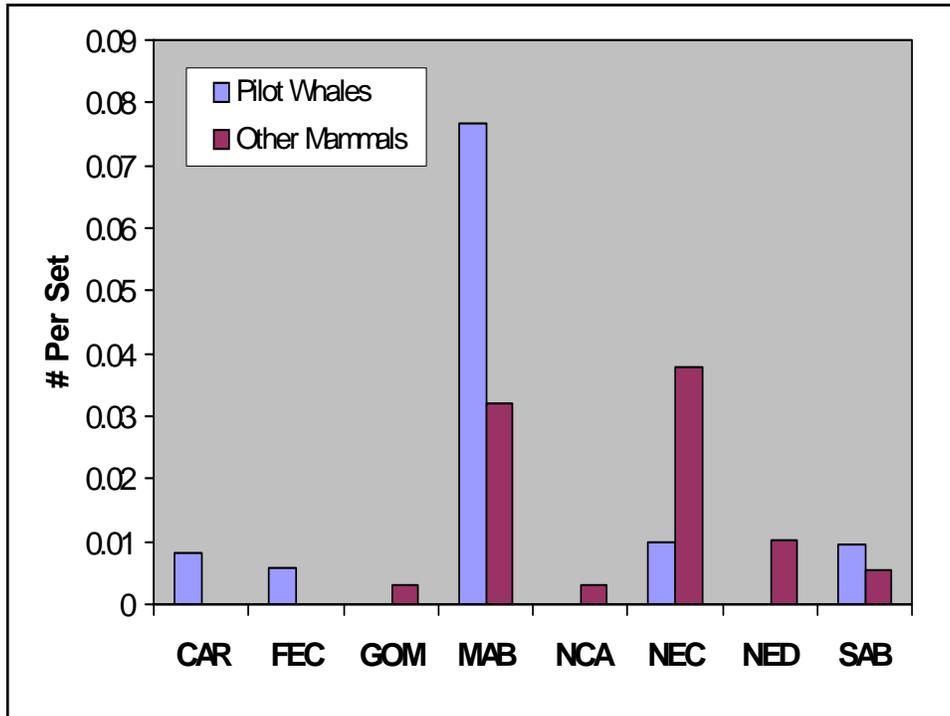




# Risso's Dolphin

AMERICAN CETACEAN  
SOCIETY FACT SHEET  
ILLUSTRATION  
Risso's Dolphin  
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## How did team reach consensus?

Meeting 1: Presented with information/data

Meeting 2:

- TRP Outline
- Predictive model introduced
- Conducted breakout groups to discuss:
  1. Strategies for avoiding exposure of whales to vessels/gear (large scale)
  2. Strategies for reducing probability of interactions
  3. Strategies for minimizing impacts of interactions, once they occur



## What Factors Contribute to Marine Mammal Interactions?

**Approach:** Develop a model to predict the affect of various factors on bycatch and/or catch, using observer and logbook data

**Goal:**

1. Identify fishery and environmental characteristics correlated with marine mammal interactions
2. Develop a quantitative framework with which to evaluate the effectiveness of potential mitigation approaches in reducing bycatch rates
3. Predict the impacts of various potential management measures on the annual expected number of interactions with the marine mammals in the longline fishery



## Factors Tested:

**Environment:** temperature, water depth, moon, wave height, wind speed, weather

- ◆ **Space:** Distance from 200m isobath, average location, fishing area, geographic area
- ◆ **Time:** month, quarter, year
- ◆ **Gear:** hook shape, hook size, light sticks, bait (type and live/dead), hook depth, haul time
- ◆ **Fishing Intensity:** mainline length, number of hooks, set/soak/haul/total duration, hook density, hook hours
- ◆ **Catch:** Type of catch, damage to catch



## Results of Predictive Model

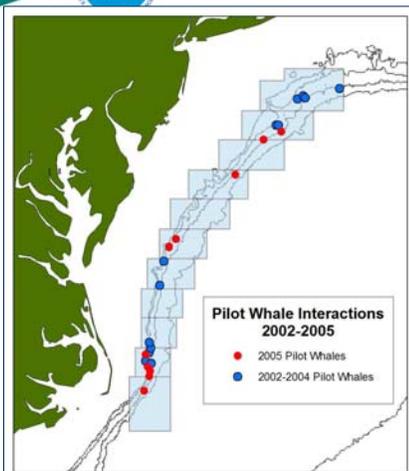
### Factors correlated with pilot whale interactions:

- Geographic area (MAB)
- Distance from 200m isobath (all interactions within 40km of shelf break)
- Average temperature (peak interaction rates between 70 - 80° F)
- Mainline length (interaction rates 2x higher in sets with mainline length  $\geq$  20 miles)
- Swordfish damage (interaction rates 3x higher in sets with damage to swordfish catch)

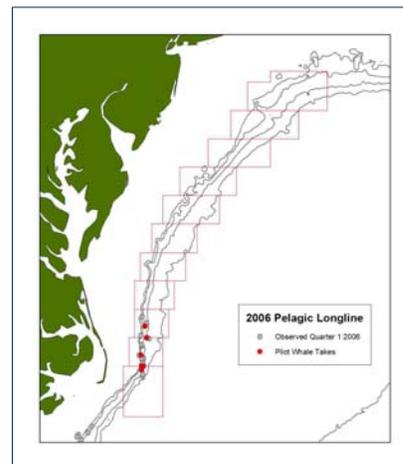
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## Pilot Whale Interaction Rates



2002-2005



2006

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## How did team reach consensus?

### Meeting 3:

- Additional results of predictive model presented as well as impacts of various management strategies
- Model helped TRT define a range of possibilities for reducing interactions
- Multi-interest ad-hoc work group offered a 4 point proposal to the team which became basis for consensus recommendations

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## How did team reach consensus?

### Meeting 4:

- Work teams presented briefings (e.g., research)
- Discussed, refined, and revised Draft TRP
- More predictive modeling
- Focus on Management measures and research

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4 point proposal + TRT Discussion =

Regulatory and non-regulatory consensus  
recommendations

Formed basis for Draft PLTRP

Proposed and Final Rule strongly reflect  
consensus recommendations



## PLTRP Regulatory Measures

1. Setting a 20 nautical-mile upper limit on mainline length for all pelagic longline sets within the Mid-Atlantic Bight (MAB), including the CHSRA;



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2. Requiring an informational placard describing marine mammal handling and release guidelines be posted in the wheelhouse and the working deck of all active pelagic longline vessels in the Atlantic fishery; and

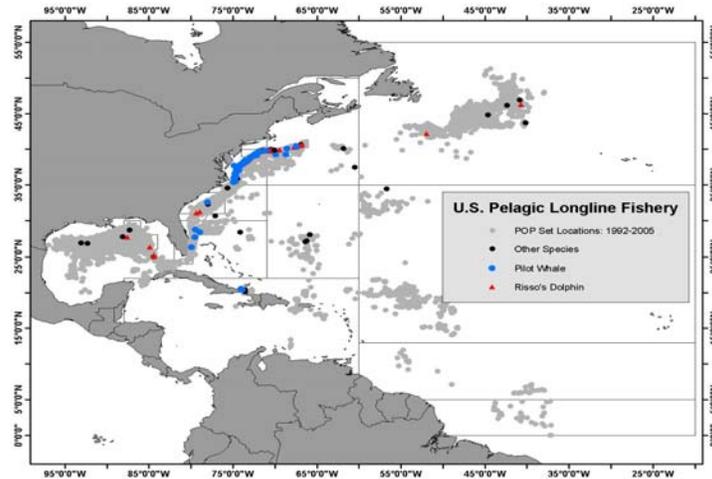


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3. Establishing a Cape Hatteras Special Research Area (CHSRA). Vessels fishing in this area must be willing and able to participate in research related to the PLTRP, and must carry research or government observers if requested



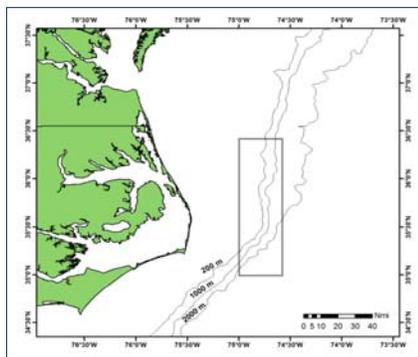
## Why the CHSRA?



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## Cape Hatteras Special Research Area (CHSRA)



Boundaries: Southern 35° N, Northern 36° 25' N, Western 75° W, Eastern 74° 35' W

### Special observer requirements:

- 48 hour call-in requirement
- If assigned an observer, vessel must take the observer during that trip (*If vessel refuses the observer, vessel is prohibited from deploying or fishing with PLL gear in the CHSRA or transiting the area with PLL gear onboard*)
- No waivers

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## Special Observer Requirements for the CHSRA

If you deploy or fish with pelagic longline gear in the CHSRA, or intend to do so, you must call NMFS Southeast Fisheries Science Center (SEFSC), 1-888-254-2558, at least 48 hours, but no more than 96 hours, prior to embarking on your fishing trip.

- This requirement is in addition to any existing observer coverage requirements under the Pelagic Observer Program.
- If assigned an observer, you must take the observer and comply with 50 CFR 229.7 and 50 CFR 600.746 observer regulations.
- No waivers for observers under 50 CFR 229.7(c)(3) or 50 CFR 600.746(f) will be granted.
- If you do not take the observer, you may not deploy or fish with pelagic longline gear in the CHSRA for that fishing trip.
- If you are informed by the NMFS SEFSC that no observer will be assigned and no special research requirements will apply, you may depart immediately.
- A vessel required to carry an observer, but which is inadequate or unsafe for the observer or his/her operations, is prohibited from deploying or fishing with pelagic longline gear in the CHSRA.



## Special Research Requirements for the CHSRA

Observers may conduct additional scientific investigations to support PLTRP goals.

- If you intend to fish, you must call for an observer; calling for an observer indicates agreement to take the observer and acknowledgment that you are willing and able to participate in research as requested, without any compensation, for the duration of the assignment.
- You must comply with additional investigations, modifications to fishing behavior, and/or gear directed by the observer.
- Instead of carrying an observer, you may be required to carry and deploy gear provided by NMFS or an observer, or to modify your fishing practices.
- If you do not participate in assigned research, you may not deploy or fish with pelagic longline gear in the CHSRA for that fishing trip.

There is an exception to these special observer and research requirements for transit through the CHSRA.



## PLTRP – Regulatory Measures

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3. Establishing a Cape Hatteras Special Research Area (CHSRA). Vessels fishing in this area must be willing and able to participate in research related to the PLTRP, and must carry research or government observers if requested by NMFS
4. Implement mandatory certification workshop



## Summary of PLTRP Regulatory Requirements by Geographic Area

Requirement	US Atlantic EEZ	EEZ Portion of MAB	CHSRA
Mainline length restriction: maximum 20 nmi			
CHSRA Special observer & research participation requirements			
Posting of marine mammal handling and release placard			



## PLTRP Non-regulatory Measures

1. Provide for 12%-15% observer coverage throughout all areas of the Atlantic PLL fishery with interactions with pilot whales or Risso's dolphins, within the constraints of available funding;



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3. Work with PLL fishing industry to develop new technologies, equipment, and methods for safer and more effective handling and release of marine mammals, and update the handling/release guidelines when appropriate; and



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2. Encourage vessel operators to maintain daily communications with other local vessel captains regarding protected species interactions;
3. Work with PLL fishing industry to develop new technologies, equipment, and methods for safer and more effective handling and release of marine mammals, and update the handling/release guidelines when appropriate; and
4. Distribute quarterly reports of bycatch of marine mammals in the PLL fishery to the PLTRT.



## PLTRP - Additional research and data collection

There is a significant lack of information concerning how pilot whales and Risso's dolphins interact with the pelagic longline fishery. Priority will be given to:

1. research on species with serious injury and mortality levels closest to or exceeding potential biological removal levels;
2. research to evaluate the effects of implemented management measures; and
3. research on species specific abundance, mortality, and post-hooking survivorship.



## Public Comments

- 10 comments received
- Generally supported the proposed rule
- Areas of concern:
  - 48 hour call-in requirement for the CHSRA
  - prohibition against transit through the CHSRA without calling in





## PLTRT Comments

### Observer Coverage:

Team members drafted and unanimously endorsed a consensus statement calling for NMFS to bolster funding to ensure the recommended observer coverage is put in place

There was limited discussion on captain's communications, research priorities, or quarterly reports.



## Changes from the Proposed to the Final Rule

NMFS made minor changes between the proposed and final rules. These include clarifying that:

- (1) vessels must call in at least 48 hours, but no more than 96 hours, prior to departing on a fishing trip to the CHSRA
- (2) fishing vessels may depart immediately for a fishing trip in the CHSRA, if no observer will be available
- (3) a vessel may transit through the CHSRA with pelagic longline gear onboard without meeting the observer and research requirements, if that gear is stowed.



## Atlantic Pelagic Longline Take Reduction Team (PLTRT)

June 2005 - NMFS established PLTRT

June 2005 to May 2006 - 4 meetings and 2 full-team conference calls held

June 2006 - PLTRT submitted consensus draft plan to NMFS

June 24, 2008 - Proposed rule published in *Federal Register* (73 FR 35623)

September 8-9, 2008 - PLTRT meeting held (73 FR 51446)

May 19, 2009 - Final rule published in *Federal Register* (74 FR 23349)

June 18, 2009 – Final rule becomes effective



## PLTRT research

- Duke University conducting research on interactions between pilot whales and PLL fishing gear in the MAB as recommended by the PLTRT.
- Kerstetter (NOVA Southeastern) Evaluation of variable strength hooks to reduce serious injury Pilot Whale interactions in the PLL fishery





## Next Steps and Priorities

- Monitor and evaluate effectiveness of PLTRP
- Quarterly bycatch updates to the PLTRT
- Research:
  - Continue obtaining better data for characterizing fishery interactions
- Collect samples to better distinguish between species of pilot whales

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## Current Compliance with the Rule

- Monitoring compliance with the CHSRA call-in requirement using VMS
- Compliance with the call-in requirement appears high



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## Some Lessons Learned

- Multi-interest groups, particularly ad-hoc, are extremely helpful to the process
- Ability to use predictive model in real time greatly enhanced TRT deliberations
- TRT focused on mutual interests and had consistent, active member participation
- Effective facilitation- break out groups and working groups with strong leaderships were productive
- Strongly encourage researchers to work with fishermen
- Enforceability of rules needs to be considered
- Think about how management measures translate to regulatory language



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