

Key Outcomes Memorandum

Date: July 15, 2005 ; Revised August 12, 2005

To: Atlantic Pelagic Longline Take Reduction Team (PLTRT) Members

From: Scott McCreary and Eric Poncelet, CONCUR, Inc.

Re: Key Outcomes Memorandum – June 29-30, 2005 PLTRT Meeting

cc: NOAA Fisheries staff

Executive Summary – Key Outcomes and Next Steps

On June 29-30, 2005, the Atlantic Pelagic Longline Take Reduction Team (PLTRT) participated in a kick-off meeting in Bethesda, MD. The primary objectives for the meeting were to: 1) introduce TRT members and project support staff, 2) review and adopt ground rules, 3) review project goals and roles of team members, 4) present and discuss key background information, 5) review major findings of stakeholder interviews, and 6) begin developing TRT work plan.

Key outcomes from the meeting are as follows:

- Adopted ground rules for the PLTRT (see Attachment 1)
- Presented briefings on project goals and team roles
- Established two multi-interest Work Teams to produce information to support future PLTRT meetings. The goals of the two Work Teams are as follows:
 - 1) Prepare a list of candidate mitigation measures; review existing and emerging measures and technologies.
 - 2) Prepare a predictive model to provide quantitative assessment of alternative mitigation measures.
- Identified eight additional informational briefings to support future PLTRT meetings. A combination of NOAA Fisheries staff and other PLTRT members will take the lead in producing these.
 - 1) Marine mammal behavior and sensory abilities
 - 2) Characteristics of the Atlantic pelagic longline fishery
 - 3) Nature of interactions between marine mammals and the longline fishery
 - 4) Communications protocols among captains
 - 5) Entanglement and hook removal procedures in use for sea turtles
 - 6) Update on Amendments to the Highly Migratory Species Fishery Management Plan
 - 7) 2005 Third quarter bycatch estimates
 - 8) Outline for Take Reduction Plan
- Agreed that the next PLTRT meeting will include development of options for reducing bycatch

The next PLTRT meeting will take place on September 27-29, 2005 in an East Coast location to be determined.

I. Introduction and Outline

On June 29-30, 2005, the Atlantic Pelagic Longline Take Reduction Team (PLTRT) participated in a kick-off meeting in Bethesda, MD. This Key Outcomes Memorandum summarizes the main results of the meeting. The memorandum is organized as follows:

- I. Introduction and Outline
- II. Workshop Objectives, Participants, and Materials
- III. Key Outcomes
 - A. Introductions
 - B. Briefing on project goals and roles
 - C. Ground rules introduced, revised, and adopted
 - D. Findings from stakeholder interviews
 - E. Review of background information
 - F. Consider the merits of expanding the scope of this PLTRT to include Risso's dolphins
 - G. Collaboration with Pacific Islands Region cetacean research and management efforts
 - H. Preliminary mitigation measures discussed
 - I. PLTRT Work Plan and Work Teams Identified
 - J. Website support
- IV. Next Steps and Schedule

II. Workshop Objectives, Participants, and Materials

The primary *objectives* for the meeting were as follows:

1. Introduce TRT members and project support staff
2. Review and adopt ground rules
3. Review project goals and roles of team members
4. Present and discuss background information
5. Review key findings of stakeholder interviews
6. Begin developing TRT work plan

PLTRT members in attendance included: Nelson Beideman (Blue Water Fishermen's Association), Jean Cramer (Thunder Mountain Consulting), Brendan Cummings (Center for Biological Diversity), Damon Gannon (Mote Marine Lab), Charlotte Hudson (Oceana), Gail Johnson (Fishing Vessel Seneca), David Kerstetter (Virginia Institute of Marine Science), Bill McClellan (University of North Carolina, Wilmington), Greg O'Neil (fisherman, alternate for Vince Pyle), Mike Simpkins (Marine Mammal Commission), Martin Scanlon (fisherman, alternate for Scott Rucky), Rich Seagraves (Mid-Atlantic Fishery Management Council), Nina Young (The Ocean Conservancy), Sharon Young (Humane Society of the United States), Vicki Cornish (NOAA Fisheries), and Kristy Long (NOAA Fisheries). PLTRT members Jim Budi and

Dan Mears were not able to attend. Glenn Delaney participated as an observer in lieu of Jim Budi.

NOAA Fisheries staff participating in an advisory capacity included: David Bernhart, Diane Borggaard, Tanya Dobrzynski, Lance Garrison, Karyl Brewster-Geisz, Margo Schulze-Haugen, David Johnston, Richard Merrick, Michael Payne, Patty Rosel, John Watson, Kate Wells, Chris Yates, and Rebecca Lent. Tim Ragen also attended from the Marine Mammal Commission as well as a small number of representatives of the general public.

The meeting was facilitated by Scott McCreary and Eric Poncelet of CONCUR, Inc.

Meeting materials for this PLTRT meeting may be found at the following website:
<http://www.nmfs.noaa.gov/pr/interactions/trt/pl-trt.htm>.

III. Key Outcomes

A. Introductions

Rebecca Lent (NOAA Fisheries Deputy Director) welcomed the members of the PLTRT. She encouraged the PLTRT to use its time effectively to come up with workable, exportable solutions.

All of the primary and alternate TRT members made brief self-introductions.

B. Briefing on project goals and roles

Vicki Cornish (NOAA Fisheries, Southeast Regional Office) provided a briefing of the Marine Mammal Protection Act (MMPA or Act) and described the provisions in Section 118 of the Act that prescribe the convening of Take Reduction Teams.

Section 118(f)(8) sets out the timelines and processes relevant to the development of a Take Reduction Plan (TRP) for the Atlantic Pelagic Longline fishery. The goal of the PLTRT is to develop a TRP within the next 11 months that reduces bycatch of marine mammals, within 5 years of implementation, to insignificant levels approaching a zero mortality and serious injury rate (the zero mortality rate goal, or ZMRG). The TRP is also to take into account the economics of the longline fishery, the availability of existing technology, and existing state or regional fishery management plans.

The group discussed the following *key issues*:

- **Definition of ZMRG.** Vicki emphasized that ZMRG can be met by reducing the annual serious injury and mortality level to 10% of the stock's potential biological removal (PBR) level across fisheries. She also stated that fisheries that meet the criteria for a Category III fishery would also be considered to have met the ZMRG.
- **Role of recreational fishers.** Some PLTRT members asked why recreational fishers were not involved in the PLTRT. They noted that the pelagic recreational fishery interacts with marine mammals, including pilot whales in the Mid-Atlantic area. NOAA

Fisheries staff stated that mechanisms under the MMPA for monitoring or managing recreational fishers are limited.

- **Exportable solutions and legal mandates.** PLTRT members expressed the aspiration of producing solutions to the problem of marine mammal bycatch that are exportable to other regions or nations. PLTRT members also recognized that this aspiration must also coincide with the mandate of satisfying the requirements of the MMPA.

C. Ground rules introduced, revised, and adopted

The PLTRT reviewed and discussed the proposed ground rules. Team members adopted the ground rules with the following main modifications:

- A ground rule was added that provided for the opportunity for caucusing among interest group members.
- The draft ground rule on Media Contact was expanded to include restrictions on contact with political representatives. It was also modified to guide PLTRT member contact with the media, should this occur. In particular, a rule was added requesting that members avoid representing the views of other participants, characterizing ideas or proposals under discussion, or prejudging outcomes. Finally, a statement was added specifying that the draft final TRP would be developed to include a media strategy.

A copy of the approved ground rules is enclosed as Attachment 1.

D. Findings from stakeholder interviews

The project facilitators reviewed key findings from the stakeholder interviews conducted with a cross section of the PLTRT members (12 total). The overarching finding was that PLTRT members were willing to commit to participating in the TRT and shared the common interest of reducing the bycatch of marine mammals.

The memorandum highlighted key concerns and potential challenges identified by the interviewees. These challenges stemmed from: divergent views on the need for the TRT, limitations of the existing data, uncertainty over the definitions of the ZMRG and serious injury, a history of antagonistic relations among stakeholders, mismatches between global- and national-level resource management issues and tools, differing conceptual approaches to protecting marine mammals, and the need for consistency between take reduction planning and implementation. The interviewees offered insights as to how the TRT might address these challenges. They also flagged key information needs and recommended potential ground rules for guiding the process.

E. Review of background information

Several presentations were made to the group from NOAA Fisheries staff on a series of key topics. PLTRT members discussed the information presented and raised issues they saw as having important implications for the project.

1. Abundance estimates

Lance Garrison (NOAA Fisheries, SEFSC) provided an update on abundance estimates for pilot whales stemming from 2004 surveys conducted by the Southeast Fisheries

Science Center (SEFSC) and the Northeast Fisheries Science Center (NEFSC). Lance described the sampling procedures involved, the survey methods used, the analytical approaches for estimation of abundance, and the design and results of the 2004 surveys. PLTRT members requested several clarifications on these methods. Lance discussed how the current abundance estimate of 30,847 pilot whales was determined, elements contributing to the precision of the estimate, and how the potential biological removal (PBR) number of 247 pilot whales was calculated. He characterized the quality of the 2004 abundance estimates as good compared to past estimates and attributed the increase in 2004 abundance estimates over previous years to the improved design of the surveys and accounting for visibility bias.

The group discussed the following *key issues* relative to the abundance estimates:

- **Uncertainty over stock structure.** Lance emphasized that current abundance estimates and PBR calculations are for a pooled population of both long-finned and short-finned pilot whales (taken collectively). He pointed out that long-finned pilot whales tend to be found in the northern portion of the survey ranges and short-finned pilot whales tend to be found primarily south of Cape Hatteras. He also noted that an area of overlap appears to exist in the Mid-Atlantic Bight (Cape Hatteras to New Jersey) where both species occur. He emphasized that the current stock assessment report does not distinguish between the two species but that further genetic research and analyses should assist in addressing this uncertainty.
- **Range of existing stocks.** PLTRT members asked if the current stocks ranged outside of the exclusive economic zone (EEZ) to other parts of the Atlantic. NOAA staff responded that research has not been conducted for regions outside of the EEZ and that no funding has been earmarked to support this. NOAA staff also expressed that, given what is known about marine mammal population structure and pilot whale life history, it is unlikely that there is a single stock of pilot whales extending across the North Atlantic ocean. Some PLTRT members were concerned that population abundance surveys conducted solely within the U.S. EEZ may not take into account the possibility that pilot whales off the eastern coast of Nova Scotia, the Grand Banks, and other areas of the North Atlantic are potentially the same stock as that which exists in U.S. waters.
- **Recent increase in abundance estimate.** PLTRT members asked if the increase in estimated abundance between 1998 and 2004 might continue again for 2005. Lance responded that this was not likely given the relatively high quality of the 2004 surveys and the combined geographic coverage of the SEFSC and NEFSC surveys.

2. Mortality estimates

Lance also provided an update on current estimates of mortality and serious injury for a wide variety of marine mammals in the Atlantic pelagic longline fishery, including pilot whales and Risso's dolphins. He reported that in 2004, an estimated 74 pilot whales were seriously injured or killed as a result of interactions (the 2000-2004 average was 92.7 serious injuries/mortalities per year). For Risso's dolphins, the 2004 serious injury and mortality estimate was approximately 27.

In his presentation, Lance described the key data sources—including logbook data and observer records—from which the estimates are derived. He reviewed the location and timing of observed marine mammal interactions between 1992-2004 as well as the relationship between interactions and gear characteristics. This included figures for the number of animals observed caught, dead, and presumed to be seriously injured. For pilot whales and Risso’s dolphins, he presented data showing whether the animals were mouth hooked, entangled, or both. Lance focused his presentation on marine mammal interactions in the Mid-Atlantic Bight, as this is where a significant proportion of the interactions have taken place. Lance discussed the potential uncertainties and biases in the analytical approach used to estimate total mortality including potential shortcomings of the delta-lognormal estimator and using hooks as the unit of effort.

The group discussed the following *key issues* regarding mortality estimates:

- **Uncertainty over stock structure.** PLTRT members acknowledged that uncertainty over stock structure means that it will be difficult to attribute serious injury and mortality estimates to short-finned versus long-finned pilot whales in areas where the two species overlap. PLTRT members noted that adding biopsy protocols to existing observer coverage could help provide clarity, although they acknowledged the difficulty and potential danger to fishermen and observers in obtaining such biopsies.
- **Impact of new longline fishing regulations and practices on bycatch rates.** PLTRT members discussed recent changes to the management regime and practices of the longline fishery that have resulted from efforts to reduce sea turtle bycatch (e.g., shift from J hooks to circle hooks and new handling and release procedures). Participants pointed out that very little data (approximately 6 months of observations) exist regarding interaction rates and/or serious injury and mortality since the fishery adopted this new management regime. These members suggested that given the dramatic and far-ranging gear characteristic conversion, the validity of data on interactions between pilot whales and longlines fished with J-style hooks needs to be reexamined.
- **Defining “serious injury”.** Lance Garrison described the 1998 criteria by which NOAA Fisheries currently defines “serious injury.” According to these criteria, animals that ingested hooks, were released trailing gear, or were released and swam away abnormally were considered to be seriously injured. Several PLTRT members pointed out that the fishery has undergone recent fundamental changes regarding gear and handling procedures. Moreover, these members suggested that these changes should have major implications for the current serious injury criteria. They recommended that the criteria for defining mortality and serious injury be re-evaluated while acknowledging that the PLTRT is not the appropriate forum for revisiting these criteria.
- **Incentivizing improved handling procedures.** Some PLTRT members cautioned that the existing criteria for defining “serious injury” may actually serve as a disincentive for fishermen to remove hooks and line from hooked or entangled marine mammals. They suggested that a positive approach would be to provide careful handling and release mitigation incentives similar to the revised post-release criteria related to sea turtle fishery interactions.
- **Long-term fate of bycatch.** PLTRT members acknowledged that the long-term fate of bycaught animals is not well known and that more research is needed in

this area. Participants recognized, however, that such research is complicated by the difficulty of getting marine mammals like pilot whales close enough to the boats for assessment. Some PLTRT members inquired about information from Dr. Andy Read at Duke Marine Lab relating to stranding investigations that have suggested that animals that have been hooked may survive for some time afterwards.

- **Potential for increasing the precision of estimates.** Lance pointed out that one way to improve the precision of mortality estimates would be to increase observer coverage in the Mid-Atlantic Bight. Some PLTRT members are concerned about what fishing effort data has been included in expansion estimates. They note, for example, that in the past, bottom longline effort directed at large coastal sharks has been incorrectly coded as pelagic longline effort for swordfish, tuna and oceanic shark. PLTRT members underscored the importance of conducting a detailed review to validate that only pelagic longline effort has been included in expansion estimates.

3. Genetic analysis of pilot whale stock structure

Patricia Rosel (NOAA Fisheries, SEFSC) presented information on the current knowledge and planned genetic analysis of stock structure of pilot whales in the Northwest Atlantic. She reviewed background information on stock delineation and described how genetic information and other proxies are used to define stocks. She described pilot whale distribution worldwide and outlined the goals of an ongoing pilot whale study. The intent of this study is to determine the degree of overlap in distribution of the two pilot whale species in the western North Atlantic and the stock structure of both species in the Northwest Atlantic and Gulf of Mexico. Improved knowledge of stock structure in the overlap area would enable development of a model to determine apportionment of mortality between the two species.

The group discussed the following *key issues* regarding genetic analysis of pilot whales stock structure:

- **Distinguishing between species in the field.** PLTRT members pointed out that fishermen and observers reporting pilot whale bycatch will need a simpler way of differentiating between the two pilot whale species than performing genetic analyses.
- **Population range determinations by genetic sampling.** Some PLTRT members inquired if genetic samples are available from Canada for pilot whales along the Scotian shelf. If such samples are available, they suggested that inquiries and/or requests be made to initiate such sampling.

4. Status of the Atlantic Offshore Cetacean TRP

Karyl Brewster-Geisz (NOAA Fisheries, HMS Management Division) summarized the recommendations in the Atlantic Offshore Cetacean Take Reduction Plan (AOCTRP), especially as it pertained to the longline fishery, and discussed the status of plan implementation. She distinguished between the provisions in the AOCTRP that are currently being implemented via fishery management plans (e.g., requirement that all vessels fishing for HMS move one nautical mile after entanglement; voluntary operator educational workshops; limited access for swordfish, shark and tuna longline fisheries) versus other provisions which have not been implemented for reasons of enforcement,

safety, or reduced target catch (e.g., requiring vessels in the Mid-Atlantic Bight to haul the longline in the order it was set).

5. Current regulations governing the longline fishery

Karyl also discussed existing fishery management plans and other general regulations providing the regulatory context for the PLTRT. She reviewed the existing time/area closures in effect and highlighted recent regulatory changes brought about by efforts to manage the bycatch of sea turtles. She also described concurrent efforts to develop a consolidated fishery management plan for highly migratory species (HMS). A draft HMS fishery management plan amendment is due to be published as a proposed rule in the *Federal Register* in late summer.

The group discussed the following *key issues* regarding the evolving regulatory climate.

- **Evolving longline fishery management regime.** PLTRT members acknowledged the importance of tracking the proposed rule amending the HMS FMP, as this may have implications for the longline fishery.
- **Concurrent Congressional reauthorization of the MMPA.** PLTRT members acknowledged that efforts are underway in Congress to reauthorize the MMPA. Participants recognized that the PLTRT is not the forum to debate this issue.
- **Effects of turtle mitigation measures on marine mammals.** PLTRT members recommended that information be gathered on the effects of sea turtle mitigation measures on marine mammal bycatch.

F. Consider the merits of expanding the scope of this PLTRT to include Risso's dolphins

Based on mortality estimates above ZMRG for Risso's dolphins, PLTRT members asked whether the PLTRT should address Risso's dolphins as well as pilot whales. Some TRT members noted that adding Risso's might dilute the focus from Atlantic Pilot whales; others noted that it might be a logical step. NOAA Fisheries will consider this question and provide a response to the group by the next meeting.

G. Collaboration with Pacific Islands Region cetacean research and management efforts

Dave Johnston (NOAA Fisheries, Pacific Islands Fishery Science Center) and Chris Yates (NOAA Fisheries, Pacific Islands Regional Office) provided an overview of current efforts in the Pacific Islands Region to address bycatch of false killer whales in the Hawaii-based longline fishery. The Western Pacific Regional Fishery Management Council recently convened a Marine Mammal Advisory Committee (MMAC) to address this issue. Dave and Chris handed out a summary of the MMAC's initial recommendations and noted instances where these recommendations appear to be closely aligned to the objectives of the PLTRT.

Dave and Chris noted their intention to follow the work of the PLTRT and share with PLTRT members relevant insights gained from their work with the MMAC.

H. Potential elements to be included in the Take Reduction Plan

While not a focus of this meeting, PLTRT members mentioned several potential measures that might fit in to a Take Reduction Plan. Examples included:

- Revised marine mammal handling guidelines and quick release practices (e.g., spring-loaded device to facilitate cutting of the leader close to the hook)
- “Weak” or corrodible hooks
- Improved communications among boat captains
- Possible deterrence measures (e.g., acoustic or chemical deterrents)
- Developing a revised observer data form that includes more information on bycatch
- Increased observer coverage in the Mid-Atlantic Bight, including currently unobserved vessels

These potential measures will be discussed at future TRT meetings.

I. PLTRT work plan and work teams identified

To assist in preparations for future PLTRT meetings, participants identified key information needs. PLTRT members requested that briefings be provided in the key areas indicated below. Multi-interest Work Teams were established to address two of the information needs. The rest will be addressed by a combination of NOAA Fisheries staff and/or other PLTRT members.

Work teams:

1. List of options for bycatch mitigation

Work Team: David Johnston (point person), Kate Wells, Sharon Young. This work team will draw from previous TRPs, workshops, and a literature search to compile a list of possible mitigation measures, including existing and emerging measures and technologies. The work team will also contact key individuals for more information in this area (e.g., McPhearson, Scott Kraus of New England Aquarium, gear manufacturers, Andy Read, Marine Mammal Commission). These measures will address the following three main scenarios: 1) keeping marine mammals away from boats, 2) keeping marine mammals away from fishing gear, and 3) minimizing potential for serious injuries once an interaction has taken place. This work team will provide a briefing on this topic at the second PLTRT meeting.

2. Predictive model to provide quantitative assessment of alternative mitigation measures

Work Team: Lance Garrison (point person), Damon Gannon, David Kerstetter, Jean Cramer, John Watson. This work team will begin preparing a predictive model to provide a quantitative assessment of alternative mitigation measures and their impacts on bycatch of marine mammals, target catch, and other bycatch. This work team will provide an update on their progress at the second PLTRT meeting. They are expected to complete their work by the third meeting.

Additional briefings:

1. Marine mammal behavior and sensory abilities

Lead: Damon Gannon and Bill McLellan.

They will provide a summary of existing information regarding the behavior (including foraging behavior) and sensory abilities of marine mammals, specifically pilot whales and Risso's dolphins.

2. Characteristics of the longline fishery

Lead: NOAA Fisheries staff (Andy Bertolino or Guillermo Diaz, SEFSC) will prepare background information on the Atlantic pelagic longline fishery, including the number of boats, the ports they sail from, the volume of the landings, the distribution of effort by season. Also, clarify and validate the data that are being used to determine effort for the pelagic longline fishery.

3. Nature of interactions between marine mammals and the longline fishery

Lead: TBD. NOAA Fisheries Observer Program staff (Dennis Lee, SEFSC) and longline fishermen experienced with pilot whale bycatch and interactions will provide insights into the nature of these interactions.

4. Communications protocols for boat captains

Lead: NOAA Fisheries staff will coordinate with key individuals (Nelson Beideman for the Atlantic, Eric Gilman for the Western Pacific, and their counterpart for the California rockfish fishery) to prepare a briefing on how boat captains may most effectively communicate to reduce bycatch.

5. Entanglement and hook removal procedures used for sea turtles

Lead: NOAA Fisheries staff will coordinate with longline fishery representatives to have a presentation made on procedures for entanglement and hook removal currently required for sea turtles.

6. Update on Amendments to the Highly Migratory Species (HMS) Fishery Management Plan

Lead: NOAA Fisheries staff (HMS Management Division) will provide an update on the draft HMS FMP.

7. 2005 Second Quarter Bycatch Estimates

Lead: Lance Garrison will provide summary of the most recent bycatch estimates from the second quarter of the 2005 longline fishing season.

8. Outline for Take Reduction Plan

Lead: NOAA Fisheries staff and Concur Inc. will work together to prepare a model outline of the anticipated Pelagic Longline TRP. NOAA Fisheries staff will also provide additional information on how anticipatory the Plan should be and the process by which it would be revised.

J. Website support

Meeting materials for the PLTRT meetings will be available on the NOAA Fisheries website at <http://www.nmfs.noaa.gov/pr/interactions/trt/pl-trt.htm>. The project facilitator, CONCUR, Inc., will develop a website for the PLTRT to provide preliminary TRP working documents.

IV. Project Schedule and Immediate Next Steps

A. Schedule of next PLTRT meeting

The next PLTRT meeting is scheduled for September 27-29, 2005. PLTRT meetings will be scheduled to take place around the week preceding and following the new moon to accommodate fishing schedules.

The meeting will take place in a location viewed as convenient for the fishermen representatives but that also has good airport access. The following locations were identified as possible sites for the September meeting: Long Island (near Islip), NY; Virginia Beach, VA; Atlantic City, NJ; and Wilmington, NC. Bethesda, MD was also recommended as a relatively convenient site.

B. Immediate next steps

Key next steps include the following:

- Work Team point persons to begin coordinating with Work Team members to schedule Work Team activities.
- Leads for the informational briefings to begin coordinating next step activities with other key participants.
- Project facilitators will coordinate with PLTRT members and NOAA Fisheries staff to select location of next PLTRT meeting and begin making venue arrangements.
- NOAA Fisheries to continue posting key project and informational documents on their website: <http://www.nmfs.noaa.gov/pr/interactions/trt/pl-trt.htm>.
- CONCUR to begin developing a project website to post draft TRP working documents.