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Bottlenose Dolphin Take Reduction Team

A Summary of the Third Meeting

Virginia Beach, Virginia

February 27 – March 1, 2002

Prepared by
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Facilitators

March 25, 2002

Introduction

The third meeting of Bottlenose Dolphin Take Reduction Team (TRT) was held on February 27 to March 1, 2002 at the Sheraton Oceanside in Virginia Beach, Virginia. Kathy Wang of the National Marine Fisheries Service (NMFS) convened the meeting. The primary foci of the meeting were: (1) hearing about new abundance estimates from the winter survey, (2) responses to questions raised earlier by the TRT members, (3) refining the plans regarding blue crab pot fishing, and (4) developing preliminary and tentative plans for management units, that is, the Winter Mixed Stock and the South Carolina, Georgia, and Florida management units. This document summarizes the results of the third and fourth items.

Participants

TRT Members and Alternates

TRT members and alternates present for the third meeting were as follows:
David A. Beresoff, Tina Berger, Paul Biermann, David Cupka, Lewis S. Gillingham, Mike Greco, Bruce A. Halgren, Chris Hickman, Richard Luedtke, Emily Menashes, Fentress Munden, Robert E. Munson, Margaret Murphy, William Outten, Carl A. Poppell, Tim Ragen, Andrew Read, John Reynolds, Richard Seagraves, W. Mark Swingle, Leonard Voss, Kathy Wang, Robert E. West, A. D. Willis, David Woolman, Nina M. Young, Sharon Young, Ari Friedlaender (alternate for William McLellan), Doug Haymans (alternate for Barb Zoodsma), Russell Hudson (alternate for Mike Baker), Chris Ludford (alternate for Peter Nixon), Jeff Oden (alternate for Douglas Guthrie), and Dave Swanner (alternate for Mike Peele).

TRT members who were not present and not represented by an alternate were Gordon Colvin, Martin Dunson, Charlotte Gray, Fulton Love, Rick E. Marks, Dave Martin, Ken Moran, Sentiel Rommel, Jerry Schill, Christopher David Walker, and Christopher Zeman.

Presenters and Facilitators

Presenters at the third meeting were Bill Hogarth, Lance Garrison, Aleta A. Hohn, and Majorie Rossman. The facilitators were Jim Feldt and Hans Neuhauser.

Observers

Thirteen observers signed the registration sheets indicating their attendance at part or the entire TRT meeting. Their names and affiliations are provided in Appendix 1.

Discussion Following the Presentations

- What is PBR (Potential Biological Removal)? It is not just PBR, but moving to Zero Mortality Rate Goal (ZMRG). Let's not get locked into quantitative targets but have discussions about what would it look like if we moved nets x kilometers out or required all nets to be tended.
- What level of PBR is blue crab trying to reduce? It is more about ZMRG and not PBR for crab potting. Think up front about the ZMRG long-term goal.
- It is not clear what PBR we should shoot for—90 or higher or what? We should not get bogged down in specific numbers.
- Spiny dogfish fishery—a word of caution that the Fishery Management Plan (FMP) is not cast in stone. FMPs do change over time. So do not count on the FMPs to do the job for us. North Carolina might ask for the monkfish fishery to be reinstated or for some increase in spiny dogfish.
- It is not clear how much of the dolphin bycatch in overnight soaks is due to the length of time or because of reduced nighttime visibility. Look at overnight soaks as part of a reduction in soak times.
- What does ZMRG mean? It works out to be 10% of PBR. It is the long-term goal under the Marine Mammal Protection Act (MMPA).

- Category II fisheries were invited to participate because as a whole they have an impact.
- FMPs are not that easy to change. We are in the process of amending the spiny dogfish FMP. It takes 2 to 2.5 years to change the FMP. It will take about 18 years for the spiny dogfish population to recover, so we expect that the FMP will continue with only minor changes for many years. The spiny dogfish fishery was based on large hauls and large catches, due to low price. So, the FMPs and requiring tending of nets means that little effort will ever go back into this fishery.
- It may take time but FMPs can be changed. So we can't rely on it indefinitely.
- The numbers are weak. The boundaries are not clear. The new abundance estimates shine good light on things. The number of dolphin seems to be increasing. Lets not target ZMRG at this time. Let's be conservative and look at the positives.
- The numbers that this team is looking at are better than what other teams have head to deal with.
- If we are to deal with ZMRG, then ZMRG should be better defined. Over time, with better data, estimates, etc. we may know the extent to which we are moving to ZMRG.
- With spiny dogfish, if we are going to count on savings from this FMP we should then lock it in and say that we want the FMP locked into regulation.
- We are left with best fishing practices for blue crabs: ghost gear, inverted bait wells, etc.
- If we get bogged down in numbers, we end up leaving the decisions in NMFS hands. We need to make the most of this opportunity and find out what the fishermen think and can live with.
- We are all concerned with reducing takes, we need to follow the advice of moving forward with what we have and keep in mind the big picture. If this process is to succeed in the long term it will require the agency to provide the data to support developing a long-term plan to move to ZMRG.
- Let's be proactive and think about the Category II fishery and also suggest the down the road phasing in of other measures.
- I do not think it is appropriate to lock in FMPs in the Take Reduction Plan (TRP) to achieve the MMPA. Biologically we are locked into a long-term for the spiny dogfish FMP since it will take so long to build up the population.
- Is it possible that the meetings can be more than the planned for number of days? Not really. There are fishermen who are losing income while they are here.
- FMPs are subject to change. Isn't it possible for the TRP to change? Yes the plan can change and should be changed to reflect future developments.
- There are four or five of us here that are concerned about blue crabs exclusively. Let's go into small groups and let us look at blue crab and others at gill nets.
- Hans: Our suggestion is small groups to increase participation and then have the small groups report back to the full Team.
- We can move on from blue crabs. Let us move on and talk about gill nets. We are talking too much about things that we do not know about.

As a starting point, the analyses tell us some general messages:

- Benefit comes from eliminating the directed spiny dogfish fishery (FMP).
- Benefit will come from pushing nets further away from shore.
- Benefit will come from allowing the nets to be in the water for shorter times.
- With the data that we have, we will not be able to say that the elements of the plan will lead us to an xx% reduction. It does tell us that we will need to have a good monitoring system in place to tell us over time what effects the plan is having.

The MMPA:

- The plan cannot be set up by target species. It needs to be written in terms of gear and gear practices, i.e., we need to translate "no directed spiny dogfish fishery" into gear and practices. (Use the analyses from Deb.)
- The TRPs are "living documents" with provisions for periodic review/update. Review annually or as necessary.
- If we recommend that ASMFC or others do something, we (NMFS) cannot take credit for that take reduction under the plan. We can urge and call for outcomes to be achieved by NMFS working in cooperation with other parties (e.g., ASMFC, states, etc.)

Winter Mixed Stock Management Unit

The ideas about what to include in a TRP for this management unit were first developed by a breakout group. This group included a diverse set of representatives of the different interests. The group's ideas were presented to the entire TRT on Friday morning. The full team provided comments and additions. The sections that follow present the tentative elements to include in a plan for this management unit.

Virginia Fisheries

- From November to December there are problems. There are no dolphins in the area after those months.
- No strandings have occurred in January and February. The predominant strandings have been in October and November.
- The area discussed is south of the mouth of the Chesapeake Bay to the NC border.
- Changes will impact fishermen because of the loss of spiny dogfish and striped bass.
- The striped bass fishery closes December 31. (Fishermen use their tags up by December 31 and tags are not issued in January.)
- For the last few years VA fishermen have been moving into oceanic waters to harvest striped bass. The current actions by VMRC and the Commission are intended to limit oceanic harvests.
- There are soak time limitations in medium and large mesh fisheries (that is, no overnight soaks or required tending overnight). That means that fishermen remove gear at the end of the day. There is a sunrise to sunset provision.

Proposed Regulatory Measures for VA

- Mesh size is to be greater than or equal to 5".
- For November and December, south of the mouth of the Chesapeake Bay to the NC border, state waters.
- Soak time limitations in medium and large mesh fisheries (i.e., no overnight soaks or required tending overnight); remove gear at end of day; and a sunrise to sunset provision.
- Come back and look at to what extent to have the restrictions apply in November and December, south of mouth of the Chesapeake Bay to NC border, to federal waters.

Comments:

- VA fishermen did not agree to coverage of federal waters. Included medium mesh in the provisions but not federal waters.
- The shift to ocean is because of the time of the year and not to target bigger fish. Other fisheries have ended and it is cleaner in the ocean waters.
- The summary missed the question mark coverage of federal waters that had been on the flip chart. We said that we would look at including some but not all the federal waters.
- There is a potential technical difficulty in having Debbie look at the percentage reduction in take. The dolphin taken by VA fishermen may have been in NC waters or south of the border.
- There is no hitch in establishing this regulation.

NC Striped Bass Fishery

- NC can open and close fishing seasons at the Director's discretion. There are three primary fisheries—haul/beach seine, trawl, and gillnet.

- December 1—beach seine allows for 100,000 lbs; a 10-day season; use of twisted nylon and small mesh nets (traditional net characteristics); fish are also taken with monofilament haul seine nets (minimum of 2 hour soaks); an observed take occurred in monofilament gillnet deployed at the beach.
- Mid-December to early January—gillnet fishery (100,000 lbs).
- Early January—trawl fishery (100,000 lbs).
- Do not think that an overnight soak prohibition will have a huge impact on the fishermen.
- Would like to focus on the large mesh, monofilament gillnet fisheries.
- Proposed recommendation to extend striped bass fishing into EEZ waters (3-12 miles).

Proposed Regulatory Measures for NC Fisheries November 1 through April 30

Small Mesh (<5”)	Medium Mesh (5 – 7”)	Large Mesh (>7”)
Options for North of Cape Lookout Research & Monitoring: Adequate observer coverage for small mesh fisheries. Gear testing on twine size, configuration, and net depth. No untended gear overnight (**rejected** because there have been no takes in these nets—no justification)	**Options for North of Cape Lookout** No overnight sets of sinking gillnets within 6km or 3.6m from shore and bring gear home. Recognition that should the spiny dogfish fishery be reopened as a directed fishery, the TRT shall revisit the issue and consider the need for establishing regulations for that fishery and other fisheries (gear type, soak times, length of net, etc.).	**Options for North of Cape Lookout** Beach haul seine: require the use of a twisted nylon net, with a 4” or less mesh. (This is to be applied year-round.) **Non-consensus options:** No overnight sets of gillnets within 3 miles. or No overnight sets without tie-downs (a net mod required by Harbor Porpoise plan that keeps the net to bottom 4 feet of water) for all gillnets.
Options for South of Cape Lookout Research & Monitoring: Adequate observer coverage for small mesh fisheries. Need to provide observers of the SC fishermen who fish in southern NC waters. Gear testing on twine size, configuration, and net depth No untended gear overnight (**rejected**—rejected because it is not economically feasible).	**Options for South of Cape Lookout** No overnight sets of sinking gillnets within 6km or 3.6m from shore and bring gear home Recognition that should the spiny dogfish fishery be reopened as a directed fishery, the TRT shall revisit the issue and consider the need for establishing regulations for that fishery and other fisheries (gear type, soak times, length of net, etc.).	**Options for South of Cape Lookout** Beach haul seine: Require the use of a twisted nylon net, with a 4” or less mesh. (This is to be applied year-round.) **Non-consensus options:** No overnight sets of gillnets within 3 miles. or No overnight sets without tie-downs for all gillnets.

Comments and Discussion

- Need to clearly define what constitutes an overnight set.
- The fisheries north of and south of Cape Lookout are prosecuted differently.

Regarding small mesh:

- Why limit the research and monitoring to small mesh? Because this mesh is missing data. We also considered measures to limit nets to certain configurations, so we would see the research focused on the gear configuration (e.g., the depth of net, sewing panels together, etc.)
- RCGL license—small mesh recreational fishermen using commercial gear—could these users be observed? NC does not do observations. Mike Tork might use his boat to observe these users of gear. It would be a lot of effort to observe small nets (short like 100 yards). Recreational fishers would be okay with observation—it needs to be done from another boat, since the boats are small. Can we come back to this under monitoring? We know that there are takes in this recreational gear. So, it needs to be on the table for discussion.

Regarding medium mesh:
- If the spiny dogfish fishery were to reopen, we would need to also look at the effects on the other fisheries and not just that fishery by itself. Need to look at the whole ball of wax again.
- Generally spiny dogfish is prosecuted further offshore.
- We do not expect the fishery to recover for 18 to 22 years.
- The whole plan is dynamic and will need to be updated to reflect changes in takes, opening of new fisheries, etc.
- Need to assess the potential percentage reduction in take and the legal language that would be used to set these regulations.
- Clarify on spiny dogfish—if stocks rebuild we might have a directed fishery in about 15 years, we could allow a sustained harvest at about 20 to 30% of what it had been—be aware that the directed fishery would look very different than it had looked. If we follow the MA strategy, it would be 22 years before the stock would recover.
- The intent is for the plan to be dynamic, but it will need good data and monitoring to be able to make the adjustments.
- If the spiny dogfish fishery were to open again, it is intended that the Team would reconvene to consider the need for adjustment. The language in the plan should stipulate that the Team must reconvene and consider how the plan would be revised.
- Monitoring is a serious and fundamental issue. The data is too thin.

Regarding medium mesh and south of Cape Lookout:
- There has been a spiny dogfish fishery as far south as the SC border, so the same recommendations apply.
- Can the analysts use this information to gauge the effectiveness of the provisions? Deb will need to be consulted. Debbie is at sea for two more weeks. You will not likely get analysis much in advance of next meeting.
- Request for data: What gain might you get in the kingfish fishery if the depth of nets were limited, in increments of feet (13 feet, about 10 feet, and 6 feet)?

Regarding large mesh:
- Would prefer to see no overnight sets of gillnets within 3 miles—large numbers of turtles taken in the nets, even with tie downs.
- Aren't these still preliminary recommendations? Yes.
- We are not trying to micro manage. The two options on overnight gill net sets have big implications about whether to eliminate monkfish fishery in state waters. If we eliminate the gill nets within 3 miles, it creates great benefit for turtles and dolphin and only affects one boat. Leave the point as non-consensus for now.
- In the summer migratory management unit group we talked about stiffening the nets, especially at the ends of the nets and now the other group is looking at tie downs, which would make the net less stiff. How did we end up at two different strategies?
- Problems with tie downs, it is not clear how to rectify the tie downs with stiffening nets.
- Major concern about tie downs with 7-inch mesh net that might be used in close to the beach—group felt the need to prohibit sets within 3 miles.

- Another point on tie downs—enforcement force will not pull the net to check for the inclusion of tie downs.
- In the monkfish fishery, there is a NC proposal for rolling closure to eliminate interactions with sea turtles. We need to be aware of efforts to protect turtles. We want to keep the monkfish fishery and will use a hot spot strategy to protect turtles as a way to keep the fishery.

Regarding beach haul seines:
- Traditional gear has shifted to something that looks like gill nets, using monofilament gear. After discussion, the group recommends that beach seines use twisted nylon twine with a four inch or less mesh to be applied year round. But we need to go back and check with some fishermen for south of Cape Lookout.
- Did you discuss twine size of haul seines? Maybe we should discuss twine size—we want to avoid 8 or 8.5 inch net on the edge of the wing. It would be tragic if we were to allow use of multi-strand monofilament.
- On the beaches of NC if we only require nylon, we might end up with 8"mesh. If we call for 4" mesh we will pretty much get what we want.
- Twine sizes run from 4 to 120—we are talking about 15 to 18.
- Traditionally the twine size has run even smaller, more like 9 to 12 to 15. In traditional stripe bass nets there was 8-inch mesh on the wings, but this is mostly gone. The four-inch size will work to get what we want.

Regarding the proposed recommendation to extend striped bass fishing into EEZ waters (3-12 miles):
- We did not have consensus on this. It is fishery specific. It was just a discussion point.

Summer Northern. Migratory Management Unit (May thru October)

The ideas about what to include in a TRP for this management unit were first developed by a breakout group. This group was not comprised of as a diverse set of representatives of the different interests as was the group that looked at the Winter Mixed Stock Management Unit. Specifically, this group did not include representatives of the conservation community not did it include scientists. The group's ideas were presented to the entire TRT on Friday morning. The full team provided comment. The sections that follow present the tentative elements to include in a plan for this management unit.

Bottlenose dolphin take was above the allowed PBR for this area from 1996 to 2000. There were takes across all gear types, including shark fishery. (The shark fishery has since changed in this area.)

- We defined the regulated area as ocean-ward of the COLREGS line.
- Justification for leaving out internal waters:
  - No bottlenose dolphin population estimate in area landward of COLREGS.
  - No allocated PBR for above area.
  - Lack of fishery effort and harvest data in area.
  - No observed takes in area.
  - Few fisheries interaction strandings in area.
- Recommendations for waters landward of COLREGS:
  - Increased observer coverage.
  - Develop abundance estimates (and PBR estimates) for internal waters.
  - Include area in information & education (I&E) efforts.
- Within the regulated area we recommend:
  - No overnight, unattended net sets with mesh size $\geq$5 inch (need to check with stakeholders not present at meeting).
  - Gear modifications to prevent collapse of nets at distal ends (primarily on anchored gear).
  - Gear modification to eliminate spaces between net panels on a string by requiring net panels to be laced together.

- Investigate the possibility of reducing slack in lead lines of pound nets identified as interacting with bottlenose dolphin from stranding data (primarily VA and internal waters).

Comments and discussion:

- In regard to the mentioned internal waters take in the shark fishery—this was an illegal fishery. NJ had only recently changed regulations and it was a non-permitted federal fisherman who took the dolphin. Now all NJ shark fishermen are federally permitted. There are and will be problems with regulating illegal behavior.
- In the discussion about how far off shore the prohibition on over night sets should pertain—it was state waters.
- Some of these recommendations need further discussion. There is especially a need to talk with some pound net fishermen. Mark Swingle and Sue Barco will try to consult with them prior to March meeting.
- In regard to the slack in leads in pound nets—is this possible/needed? These nets may develop slack over time where the poly rope stretches. Chris Ludford will help to consult with pound net fishermen.

South Carolina, Georgia, Florida Management Units

The ideas about what to include in a TRP for these management units were first developed by a breakout group. This group was not comprised of as a diverse set of representatives of the different interests as was the group that looked at the Winter Mixed Stock Management Unit. This group did include fishermen and other representatives of these states. The group's ideas were presented to the entire TRT on Friday morning. The full team provided comment. The sections that follow present the tentative elements to include in a plan for these management units.

Needs and Take Reduction Recommendations:

- Ensure better enforcement.
- Conduct fisher education regarding dolphin attraction to bait/bycatch (as per the recreational. brochure).
- Require net tending (where tending was defined as a fisher or vessel within 100 yards of the net).
- Require gear to be identifiable to individual (e.g., CG doc. no.).
- Decrease depth of net (10' below surface?)* for the shark fishery.
- Gear Research:
  - Reflectivity (e.g. European experiment using metal disks w/in webbing)
  - Net stiffness
- Encourage best fishing practices.**
- Require a one-year apprenticeship as mate before allowing anyone to serve as captain of a shark gillnet vessel.

*Fishers indicated takes have all been up near the cork line, so the idea is to drop that below the surface to allow dolphins to swim over the net. The Pacific Offshore TRP had this requirement, but specified extenders of 36 fm on buoy lines. However, the Atlantic shark gillnet fishery uses nets of only about 30' deep and often targets surface schooling sharks.

**Fishers indicated that most takes occurred when an inexperienced captain was in charge. This captain fished under conditions under which an ordinary captain would not have fished to target sharks (i.e. calm, clear not, very little phosphorescence visible, etc.).

Comments, observations, discussion:

- One-year apprenticeship program—who will do this? Maryland does this and it requires a great deal of management; it is not a simple thing to do.
- Regarding tending to be within 100 yards, to whom would this apply? It applies to commercial fishers
- There is virtually no gill net fishing in state waters south of NC.
- Did you consider gill net acoustic alarms? Just briefly, but **dismissed** due to A. Read's research.
- In our northern migratory group there was support for the apprenticeship program as a way to ensure experienced and knowledgeable captains.

Monitoring

The same breakout group that discussed the FL, GA, and SC management units also discussed the issue of monitoring. The group's ideas were presented to the entire TRT on Friday morning. The full team provided some comment. The sections that follow present an initial set of elements to include in the plan.

- Increase level of observer coverage to provide statistically viable sample sizes throughout all fisheries and sub-fisheries interacting with bottlenose dolphin. Implement a rotational schedule to achieve observer coverage or alternative monitoring programs for all such category II fisheries.
- Improve quality of stranding and observer data:
  - Increase levels of stranding coverage (per crab pot recommendations).
  - Improve network training (especially of fisheries interaction identification).
  - Improve observer training.
  - Provide observers with adequate equipment (e.g. water proof digital cameras refer to crab pots).
  - Establish dedicated beach surveys in areas/during times where observer coverage is lacking.
- Improve frequency & coverage of abundance surveys – especially into southern states and estuarine waters.
- Improve monitoring via outreach/education.
  - Educate fishers regarding requirement to report takes.
  - Educate fishers regarding need to contact stranding network for disentanglement.
  - Educate enforcement agents (incl. state/local) about need to report strandings.

Comments and discussion:

- First, with regard to the recommendations to improve coverage, I agree and we need to be more explicit. I would like to see these ideas developed to reflect numbers that would reflect adequate coverage.
- Along with that, I would like to see a <u>power analysis</u> of how capable we are now to assess changes of 30%, 50% in the number of takes. We can then discuss needed improvements.
- Also suggest a <u>power analysis</u> to determine the ability to assess a 50% reduction in strandings due to fisheries interactions.
- The intent is to improve statistical meaningfulness.
- Improve communication between the stranding network and observer programs—ensure that there is a real time communication. That happens in the southeast, but does it happen in northeast? No. It does not, but could.
- There is a lot to think about here. <u>We propose that Tim Ragan lead a group to do homework on monitoring between now and March meeting.</u>
- We need to mention funding. We should hammer hard on providing adequate funding.
- This team should recommend that the northeast region send an observer to the next team meeting.
- Let's put dollar estimates next to what we recommend for monitoring and observer. This would give allies an amount for which they could lobby.
- Tim will lead a group to pull together some specifics on monitoring: Volunteers (and recruited

volunteers) include Debi Palka, Aleta Hohn, Andy Read, Sharon Young, Mark Swingle, Marjorie Rossman, Bill McClellan, Emily Menashes, John Reynolds, and Dave Potter. This group will look at monitoring by whatever means—strandings, observers, etc. It was stated that the group would like fishermen's input to join in this discussion on monitoring and assessment, especially to help with thinking through implementation. The following fishermen volunteered: Rob West, Dave Swanner, and Chris Hickman.

- Kathy Wang and Katie Moore are here to represent policy making of NMFS for the Southeast. We need their Northeast counterparts to be at the TRT meetings.
- How does NMFS see the regulations being developed? We have not talked about this internally. We (Southeast) will likely take the lead with Emily assisting. We are trying to get the Northeast to participate. We expected David Gouveia to be here for this meeting.

Education/Outreach

The same breakout group that discussed the FL, GA, and SC management units also discussed the issue of education and outreach. The group used the ideas that had been developed for education on blue crabs as a jumping off place for their discussion. The group's ideas were presented to the entire TRT on Friday morning. The full team provided some comment. The sections that follow present an initial set of elements to include in the plan.

- Improve the stranding hotline efficiency (e.g., multiple contact numbers should be reduced to one central service). Make it a toll-free number! Provide VHF contact for fishers without cell phones.
- Provide console stickers to fishers via MMAP mail outs, with information on what to do in case of stranding, interaction, or live entanglement. (Perhaps this could be combined with the required MMAP decal). Require fishers to have the sticker on their vessel.
- Provide brochures and laminated placards with summary information on the TRP via MMAP mail outs. Make these specific to the area and fishery/gear type. Require placards on vessels.
- Develop/distribute public service announcements (PSAs) to the Weather Channel.

Comments and discussion:

- PSAs—work more closely with states and their contacts with local media.
- There was discussion about Council involvement. The Mid-Atlantic Council has created a protected resources committee that might help with I&E. We can disseminate information through Council meetings and newsletters.
- Along with Weather Channel, might consider the National Weather Service as a way to disseminate information.
- VHF radio access—in NC we have a good relationship with the Coast Guard who will then pass on information on interactions. This is pretty much true for the entire Southeast.
- Mention that South-Atlantic Council is looking at creating a protected resources committee and that Council has Margaret as a protected resources staff person. The committee and Margaret could be used to help disseminate the information.
- Do councils have eco-systems committees? Yes

Blue Crab Pot Fisheries on the East Coast

Small groups provided draft language regarding the proposed elements of the plan to address takes in this

fishery. These drafts were reviewed and discussed by the whole TRT. Those team members who had written the draft language conferred with one another at the end of a day's session and revised their initial versions. These revised versions were reviewed on Friday morning. Some fairly minor comments and additions were made. The sections that follow present the resulting proposed elements of the plan.

Derelict Pot Removal

Goal: To reduce the potential for bottlenose entanglement in abandoned or lost blue crab pot gear (primarily floating line).

Method: The establishment of a program in every state that would identify and remove abandoned or lost blue crab pot gear.

Draft TRT Recommendation: States are strongly encouraged to develop, implement, and enforce a program for the removal of derelict blue crab pots and their associated lines from any and all water bodies frequented by bottlenose dolphins. If such a program exists within a state, that state is strongly encouraged to maintain and effectively enforce that program.

Comments and discussion:
The sinking line discussion mentioned other trap fisheries as well. The Blue crab pot fishery is specifically addressed it this is a Category II fishery. States should broaden this strategy to address any derelict pot gear.

Outreach and Education

NMFS should recommend the development and distribution of a brochure, videos, and articles. These should be used to illustrate learned behavior of bottlenose dolphin (i.e., pot tipping and bait stealing), recommend the use of sinking lines to reduce "ghost" pot production due to boat traffic and suspected entanglements in floating loops as a pro-active measure, and inform fishermen on the harm caused by derelict or abandoned gear and local disposal areas for their collection. This might be done in part through a hotline number and VHF radio setup.

A combination of the tools listed above should be used at trade shows, industry conventions and meetings of Waterman's Associations for the commercial sector. The material can also be dispensed when gear licenses are purchased. Posters could be displayed at the buyer's place of business and marinas.

It is equally as important (or more) to target recreational participants in the fishery and educate them on the use and dangers of their gear. The material should be dispensed with licenses and posted in public marinas and boat ramps. Articles should be run or ads placed in sport fishing magazines and web sites.

Comments:
- On small Georgia coast, there is limited number of places to buy commercial crab traps and only a few manufacturers. We could put the brochure inside the trap when it is manufactured.
- In SC a recreational crabber is allowed to use two pots.

Sinking Line Strategy

Objective: Reduce the potential for bottlenose dolphin interaction with crab pot hauling lines in the water column, and make the identification of interactions with stranded bottlenose dolphin with crab pot lines more definitive. It should be noted that all pot/trap fisheries in the estuaries and coastal waters of the mid-Atlantic region including whelk or conch pots, eel pots, and other fish pots potentially all have the same problem.

Potential Strategies: In areas that have an occurrence of bottlenose dolphin pot line entanglements:

1. Encourage the use of a sinking or negatively buoyant line, either nylon or polyester, so as to minimize excess line floating at the surface, or loops suspended in the water column.
2. Suggest a maximum scope or ratio of hauling line length to water depth, so as to reduce the overall length of line in the water column in areas of low tidal change.

Discussion:

- For clarification, we dropped the recommendation of a single type of line for use with blue crab pots.
- We also called for things to happen only where there is a need.

Stranding Network Options

Goal: Improve post-mortem assessments by the stranding network of potential interactions between bottlenose dolphins and commercial-type crab pot gear.

Actions:

1. NMFS should provide funding to organize and conduct a workshop/training session to bring together the information and people necessary to accomplish this objective.
2. The results of the workshop should be compiled in a document or other format (for example: training manual, photos, PowerPoint presentation, video) that would be used to train additional stranding network personnel.
3. The protocol should include the involvement of fishermen in the assessment of stranded dolphins with evidence of entanglement and in the examination of any gear retrieved.
4. NMFS should establish a repository for gear removed from stranded dolphins and other marine mammals. Gear would be stored and cataloged for future use.
5. Information about crab pot entanglements learned from the assessment of stranded animals should be conveyed to the fishermen through the outreach and education component of the plan.

Goal: Improve the observation of, reporting of, and response to stranded bottlenose dolphins in inside waters.

Actions:

1. In states where it does not exist, NMFS should provide funding for a toll-free reporting hotline to facilitate the timely reporting and response to stranded marine mammals.
2. NMFS should provide funding to organize and conduct formal trainings/workshops for state and local marine patrols (and other invitees) regarding marine mammal-fisheries interactions and their role in supporting the stranding network.
3. NMFS should formally request that federal, state and local marine patrols monitor inside waters for any evidence of bottlenose dolphin mortalities or fisheries interactions, including the blue crab fishery.
4. NMFS should formally request that federal, state and local marine patrols assist the stranding network in responding to stranded marine mammals.
5. NMFS should provide funding for directed aerial, vessel or shore-based surveys in areas and/or seasons of concern.

Comments:

- For those of us who fish in recreational tournaments, it is common to have volunteer observers on board who abstain from drinking and provide watchful coverage. Could we use volunteer observers to increase the number of trips covered by observers?

Estuaries, Sounds, and Bays

NMFS should obtain accurate estimates of the numbers of bottlenose dolphins and the nature and frequency of their interactions with crab pots in estuaries, sounds, and bays.

In some areas, such as the Indian River, Florida and the inshore waters of Georgia, bottlenose dolphins have been observed tipping crab pots to obtain bait or gain access to prey. Such behavior may lead to entanglement in the float line and the subsequent mortality of dolphins (*e.g.* W.D. Noke. 1999. M.S. thesis, University of Central Florida). In other areas, such as North Carolina and Virginia, small numbers of stranded dolphins have been observed with injuries that are consistent with entanglement in crab pot lines. In parts of Florida and Georgia, the frequency of behavioral interactions between dolphins and crab pots was decreased by modifying the bait well. Before such modifications are required or recommended in other areas, however, it is necessary to determine the frequency with which such interactions occur and the potential impact on both dolphin populations and crab fisheries.

Inverted Baitwells

For any areas that have a problem with bottlenose dolphin takes with crab traps we encourage them to make available to the crabbers the option of fishing an inverted baitwell in the crab traps.

Such an option would discourage the bottlenose dolphin from "working" a crab trap to feed on the bait, and stop the transfer of such learned behavior from one group of bottlenose dolphins to another group.

Wrap Up

As the meeting ended on Friday morning, there was some general discussion. The following presents the points that were covered.

- Message to analysts—please take a hard look at what we have suggested so far and start to give us feedback on what effects they might have. Look at the small group recommendations and give us some assessment of reduced take.
- Homework: For those portions of the options that are regulatory in nature, give it to attorneys and ask them to draft legal language for the options. Give us a couple of versions and let us see them.
- Regarding PBR: We have the stock assessment that stands as it is, the same data you have, and so the PBR does not change for now. We will not see changes while the TRT is working.
- We need to be using the new data.
- Biopsy—there is no effort to look at animals on the two sides of the lines. We never did a gap analysis from the offshore morphotype perspective. We should be using the new data and the higher PBR.
- What we have is data for abundance but not an apportionment of that data.
- The biopsy sample was collected opportunistically. The staff biopsied every group of dolphin we came upon. We can go back and look at all of the biopsy data to try to assess the coastal vs. off shore.
- The new data has not been peer reviewed, it is still very preliminary. The Team has asked repeatedly for reviewed data.
- We are sensitive to the desire to use new data and concerned that we still do not know what is going on with the dolphin population. We go from 4000 to 20000 animals. We are frustrated with the lack of good abundance estimates. We suggest we get a peer review of the new numbers and not have this discussion about the numbers now.
- We made good progress yesterday. Can get some fuzzy feedback on the potential reduction. Hope to establish some reasonable measures, monitor, etc.
- Given the poor data quality we do not want to put onerous requirements on fishers.
- Ask the SRG to review the new population estimate. What should we do with this information given the superior quality of the survey.
- As we develop the plan, we should be clear about the lack of good numbers, go ahead and do what we can have a set of measures, and then later/down the road see better estimates of population, etc.

Points of contact for the analysts in case they need clarification on what they have been asked to do:

- Northern migratory—Bruce Halgren.
- NC mixed stock—Red Munden.
- Power analyses—Tim Ragen and Andy Read.

April meetings:

- The April 23-25 meeting is the one that is in stone and in intended to be in Baltimore.
- The extra meeting would be in early April 8-10. Or the funding to do this meeting would be held to conduct a meeting later, during the NMFS rule making process.

Team's thoughts about the meetings:

- Go with the meeting during the rule making process and not the extra April meeting—it would be too soon after the March meeting.
- Pleased with the progress made yesterday and this morning. We could have a plan by the end of April without the extra April meeting.
- Harbor Porpoise team was outraged not to have the later meeting during the rule making process.
- Agree with the sentiment, however, we need an outline of the plan, who will write what, etc. to be addressed at the next meeting.
- On Tuesday, NMFS director Bill Hogarth met with the NC marine fishery commission and he agreed to have more public comment period during the later rule-making period. This would give fishermen opportunity to have feedback.
- We make recommendations and then what? Two alternatives. Bill Hogarth promised a public hearing. We propose an actual TRT meeting post publication of the proposed rule. This would pay your travel and give more time.
- Are our recommendations purely advisory? Is more weight given to our recommendations? What weight is given to our voice in the post-publication phase? More weight is given to the Team than is given to general public comment.
- What about following the public comment? Would the team help after that? The TRT would look at how the agency took the recommendations and turned them into the regulations. Small-scale changes can be made while large-scale changes require going to another proposed rule.
- Agree to postpone the meeting until the rule-making period.
- It is important to see the rules when they are in the regulatory language.
- Is there potential for the team to see the proposed rules prior to publication? While there might be no formal meeting, could the team or a subset of team see the draft prior to publication of the rules? The team should be explicit as possible when making recommendations. This team is advisory prior to rule making. The Administrative Procedures Act (APA) limits the agency as to what can be done with seeking team input once the rule-making phase is begun. The Act limits public participation in the actual rule-making phase.
- This group submits a proposed plan, which is published. The NMFS then writes its regulations and develops its plan that is published. Substantive concerns voiced by the Team and public must be attended to. The APA does not allow any agency to give the public the proposed rule prior to publication. The best thing is for the Team to be as specific as possible in its recommendations.
- In NJ the APA specifies that all the public be given the proposed rule at same time. It may be possible that NMFS can share pre-regulatory language, the specific summary of what will be put forward in Federal Register.
- NMFS will have to consult for clarification with NOAA general council on this point.
- The team influences the rules but at a time prior to the writing of the rules.
- Try to respond to Nina Young's suggestion that we try to get some regulatory language while the team is still working and prior to submitting the plan.
- The Councils are advisory and have some voice in drafting of the regulations, but the buck stops at Secretary of Commerce's desk. Could this team have voice in drafting of regulations, as do the Councils? It is not clear. This needs a legal opinion.

There was consensus among the members of the Team that there not be an early April meeting. So, there

will be two more meetings—March in Wilmington and April in Baltimore.

Appendix 1

Observers of the February 27 to March 1, 2002 TRT Meeting

Sue Barco
VMSM

Mike Beattie
NMFS

Doug Beckmann

Leslie Burdett
University of Charleston

Barbie Byrd
NOAA/NMFS

Tara Cox
Duke Marine Lab

Shepherd Grimes
NOAA GESE

Katie Moore
NMFS – SER

Jacqueline Poppell
Georgia Watermen's Assoc.

Ryan Robol
University of Charleston

David Schofield
National Aquarium – Baltimore

Mike Tork
NMFS – NEFSC

Daniel Waples
Duke Marine Lab

Appendix II

Public Comment

One individual provided comment as follows:

Regarding the aerial survey data and the "problem" of offshore *Tursiops* in "coastal habitat:"
Stranding network members in VA and NC have been collecting genetics samples for all *Tursiops* strandings for years, yet those samples have only been used if they were considered if they were considered positive for fishery interaction. All of the samples were analyzed (at no collection cost to NMFS). We might get an idea of the temporal and spatial presence of offshore *Tursiops* in the data. Biopsy sampling is

unlikely to help because we assume that there se relatively rare events.

Regarding options presented by Marjorie that were conducted by Debi Palka:

It seems counterintuitive to split these analyses along political/state boundaries. They should instead be analyzed based on putative stock boundaries.