

APPENDIX C1

Comments and Responses to Public Comments Received on Draft Supplemental Environmental Impact Statement (DSEIS) and Proposed Rule for the Reduction of Sea Turtle Bycatch and Bycatch Mortality in the Atlantic Pelagic Longline Fishery

Numerous comments were received on this proposed rule and associated DSEIS, draft Regulatory Impact Review (RIR), and Initial Regulatory Flexibility Analysis (IRFA). Comments received were submitted either via letter, fax, E-mail, or at public hearings. This appendix contains a summary of the major comments received and NOAA Fisheries' response. NOAA Fisheries would like to thank all people and agencies who took time to prepare written comments or attend public hearings. A list of persons and agencies who submitted written comments are below.

E-Mail Comments

1. 2/18/2004 E-Comment from B. Sachau
2. 2/25/2004 E-Comment from Sarah Lambert
3. 2/25/2004 E-Comment from Steven Carl, Hi-Liner Fishing Gear & Tackle, Inc.
4. 2/25/2004 E-Comment from Andy Peters
5. 2/25/2004 E-Comment from Scotty Warren
6. 2/26/2004 E-Comment from Aaron Small, Wright and McGill Mfg.
7. 2/26/2004 E-Comment from Scott Bean, Technical Consultant, Jungle Laboratories Corporation
8. 2/27/2004 E-Comment from Randy Pence
9. 3/6/2004 E-Comment from Capt. Mike Carden, F/V Adam-C
10. 3/7/2004 E-Comment from Mark Nicholas
11. 3/11/2004 E-Comment from Ronald B. Hamlin, Dixie Fish Company, Inc.
12. 3/11/2004 E-Comment from Captain Woody Davis, F/V Sea Angel
13. 3/11/2004 E-Comment from Robert J. Jansenius, F/V Shearwater
14. 3/14/2004 E-Comment from Alan B. Bolten, Archie Carr Center for Sea Turtle Research, University of Florida
15. 3/14/2004 E-Comment from Gail Johnson, F/V Seneca, Pocahantas, Inc.
16. 3/14/2004 E-Comment from David Kaszer, F/V Rebel Lady
17. 3/15/2004 E-Comment from Al Mercier, F/V Kristen Lee
18. 3/15/2004 E-Comment from Stephen S. Boynton, President, International Foundation for the Conservation of Natural Resources
19. 3/15/2004 E-Comment from Roderic B. Mast, Co-Chair, IUCN-Species Survival Commission - Marine Turtle Specialist Group
20. 3/15/2004 E-Comment from Lou Orsini, Chief, U.S. Coast Guard Office of Law Enforcement
21. 3/15/2004 E-Comment from Jerry Schill, President, NC Fisheries Association, Inc.

Written Comments

- HC1. 3/4/2004 Letter from Michael Nguyen, Commercial Longline Tuna Fishermen Group (124 copies of signed originals)
- HC2. 3/15/2004 Letter from Al Mercier, Captain, F/V Kristen Lee
- HC3. 3/13/2004 Letter from Glen A. Hopkins, F/V Watersport
- HC4. 3/12/2004 Letter from Carol Bickmeyer, Robert W. Borden, Joseph Sadorski, Catherine Barrier, and Ed B.
- HC5. 3/12/2004 Letter from Captain Rich Wight
- HC6. 3/10/2004 Letter from Mark & Suzanne Bodick, Gulfport Seafood Co. Inc., F/V Rebel Queen
- HC7. 3/2/2004 Letter from James Levy, Sales & Purchasing, MacLean's Seafoods
- HC8. 3/3/2004 Letter from Captain Dana Kaiser
- HC9. 3/9/2004 Letter from Shawn Dick, President and CEO, Aquatic Release Conservation
- HC10. 3/9/2004 Letter from James Fletcher, United National Fishermen's Association
- HC11. 3/3/2004 Letter from Don Nehls, Lindgren-Pitman, Inc.
- HC12. 3/10/2004 Letter from Don Nehls, Lindgren-Pitman, Inc.
- HC13. 3/7/2004 Letter from Steven Hoang
- HC14. 3/15/2004 Letter from Beau "Butch" Midgett, Etheridge Fishing Supply Co. Inc.
- HC15. 3/5/2004 Letter from Daniel J. Shoudear, Captain, F/V Sea Hawk
- HC16. 3/15/2004 Letter from Captain Rick Ross, President, Offshore Harvesters, Inc.
- HC17. 3/15/2004 Letter from Sierra B. Weaver and Marydele Donnelly, The Ocean Conservancy
- HC18. 3/15/2004 Letter from James Budi
- HC19. 3/15/2004 Letter from Nelson R. Beideman, Executive Director, Blue Water Fishermen's Association
- HC20. 3/15/2004 Letter from Charlotte Gray Hudson, Todd Steiner, and Brendan Cummings, Oceana
- HC21. 3/15/2004 Letter from Heinz J. Mueller, Chief, NEPA Program Office, U.S. EPA
- HC22. 3/2/2004 Letter from Tobey Denault, General Manager, MacLean's Seafoods
- HC23. 3/2/2004 Letter from David Horton, MacLean's Seafoods

Written Comments Received at Public Hearings

- PH1. 3/2/2004 Submittal from James Goncalo, MacLean's Seafoods
- PH2. 3/4/2004 Submittal from Nils Stolpe, Fisheries Research Institute
- PH3. 3/4/2004 Submittal from Woody Davis, F/V Sea Angel
- PH4. 3/4/2004 Submittal from Phillip Rush, Jensen Tuna, Inc.

Summary of Comments Received on Proposed Rule and DSEIS/RIR/IRFA

General Comments

Comment 1: Commenters indicated that oceanographic, biological and physical differences between the Northeast Distant (NED) area, south Atlantic, and Gulf of Mexico (GOM) must be taken into consideration. Specifically, commenters stated that the results of an experiment in the NED should not be used to project impacts or implement management measures in other areas, because there are differences in oceanographic conditions, water temperature, currents, thermoclines, turtle abundance, turtle sizes, fish abundance and fish sizes.

Response: For three years, the Agency committed substantial resources to evaluating fishing gear modifications and strategies to reduce and mitigate interactions between endangered and threatened sea turtles and pelagic longline (PLL) fishing gear. The area for the research was the NED statistical reporting area in the Western Atlantic Ocean. Between 2001 and 2003, over 1,200 pelagic longline sets were made to test, among other things, the benefits of using large circle hooks. The research yielded robust and promising results. Based on that research, consideration of geographical differences, and other available information on sea turtle bycatch reduction efforts, described more in responses to Comments 2-5, the use of large circle hooks (as compared to “J”-hooks) and careful release techniques are expected to be successful in reducing sea turtle interactions and mortality rates throughout the whole fishery.

Comment 2: Several commenters stated that the Agency must recognize differences in the prosecution of the PLL fishery in the NED, south Atlantic, and GOM. PLL vessels in the GOM frequently target yellowfin tuna (YFT) and other tuna species; PLL vessels in the mid-Atlantic often engage in mixed trips for smaller tunas (YFT and albacore), swordfish, dolphin, and wahoo; and, PLL vessels in the NED primarily fish for larger swordfish and bigeye tuna (BET). Commenters noted that there may be differences in the fishing gears used, fishing techniques, depth of gear deployed, prey species, target species, and socio-economic factors. For vessels fishing outside the NED, many of these comments opposed preferred alternative A3 in the DSEIS (18/0 offset circle hook with mackerel of 18/0 non-offset circle hook with squid) and were supportive of non-preferred alternative A5 (16/0 hook with an offset not to exceed 10 degrees). Many commenters supported preferred alternative A10 in the DSEIS (18/0 offset or non-offset circle hook with mackerel or squid bait, respectively) for fishing in the NED.

Response: The U.S. PLL fishery for Atlantic HMS is a far-ranging fishery that targets swordfish, YFT, or BET tuna in different areas and in different seasons. Secondary target species include dolphin, albacore tuna, pelagic sharks, and several species of large coastal sharks. Permit holders range from Maine to Texas, and fishing techniques vary by region according to target species. Vessel operators may be opportunistic, switching gear style and making subtle changes, oftentimes during the same trip, to maximize economic opportunities. In addition, the economic characteristics of vessels fishing in New England (including the NED) and the Caribbean regions differ from those fishing predominantly in the mid-Atlantic, south Atlantic and Gulf of Mexico regions. Economic studies confirm that PLL vessels fishing predominantly in New England and the Caribbean regions generate approximately five times the amount of net revenues per trip when compared to vessels fishing predominantly in the mid-Atlantic, south Atlantic, and GOM regions (Porter *et al*, 2001).

Extensive public comment indicated that the proposed measures could cause severe economic hardship, leading to possible business foreclosures in the mid-Atlantic, south Atlantic, and GOM. Based upon public comment and a re-examination of data pertaining to reductions in bycatch and bycatch mortalities associated with various hooks and baits (see responses to Comments 3 and 5), the Agency has modified the final regulations to address geographical differences by allowing, outside the NED, either 18/0 circle hooks with an offset not to exceed ten degrees, or 16/0 non-offset circle hooks, and either squid or whole finfish bait. These modifications will provide additional flexibility to target species that are more frequently encountered outside the NED. The final circle hook and bait regulations, and the requirements to possess and use sea turtle handling and release gears, are expected to significantly reduce sea turtle interactions and mortalities throughout the PLL fishery. Therefore, to the extent practicable, this final rule minimizes adverse economic impacts on fishing communities, as required by National Standard 8 of the M-S Act, and complies with other applicable Federal law. However, as described in a Biological Opinion issued on June 1, 2004 (2004 BiOp), if the management measures contained in this final rule do not achieve certain specified levels of reductions in leatherback mortalities, the Agency must initiate a future rulemaking to consider other additional measures, consistent with the 2004 BiOp.

Comment 3: Additional research on circle hooks and baits, including their subsequent effects on turtle interactions, post-hooking mortality rates, and target species catches, should be undertaken in areas that more closely exemplify conditions in the south Atlantic and GOM, and the final regulations should be based on these studies.

Response: Existing scientific studies, including the NED research experiment, and GOM observer data support the use of large circle hooks and careful release techniques to reduce sea turtle interaction rates and mortality rates throughout the PLL fishery. Based upon a review of available information, the Southeast Fishery Science Center's (SEFSC) principal investigators for the NED research experiment have advised allowing the use of a 16/0 non-offset circle hook in the GOM and other areas outside the NED. Available data indicate potential adverse impacts of a larger hook on target species (particularly, yellowfin tuna) catches.

A significant reduction in loggerhead sea turtle mortality is anticipated through use of the 16/0 non-offset circle hook. Studies in the Azores PLL fishery in 2000 and 2001 (Bolten *et al.*, 2002) and in Canada (Javitech Ltd., 2002) showed a significant percentage of 16/0 circle hooks hooking loggerhead turtles in the mouth. Circle hooks improve the probability of survival after an interaction, relative to "J"-hooks, because they usually hook in the jaw and are not swallowed; this appears to be true for many marine species and circle hook sizes (Lucy and Studholme, 2002). Observer data from the GOM (Garrison, 2003b), showing no loggerhead turtles observed captured on circle hooks, and a lower average catch rate of leatherback turtles on 15/0 and 16/0 circle hooks compared to 7/0 and 8/0 "J"-hooks, support this conclusion.

Leatherback sea turtle interactions primarily result from "foul hooking," i.e., hooking in the flipper, shoulder, or armpit. Circle hooks are expected to reduce foul hooking because the point turns in towards the shank and is effectively shielded. The NED experiment demonstrated that

18/0 and 20/0 circle hooks reduce the number of turtles foul hooked by PLL gear. Canadian observer data (Javitech Ltd., 2002) and GOM observer data (Garrison, 2003b) also show reductions in catch rates of leatherback turtles on 16/0 circle hooks as compared to “J” hooks. SEFSC scientists expect that a 16/0 non-offset circle hook will be just as efficient as an 18/0 circle hook at reducing foul hooking of leatherback turtles, and possibly more efficient, because the gap between the point and the shank on a 16/0 hook is smaller than that of an 18/0 hook. The requirement that 16/0 circle hooks be non-offset is an additional precautionary measure to reduce the likelihood that the smaller hooks will get swallowed or lodged in a turtle’s throat or esophagus, or result in foul-hooking.

This final rule, which allows the use of 16/0 or larger non-offset circle hooks outside the NED, is based upon the above-described studies and other data, which constitute the best available scientific information at this time. These measures are expected to have significant benefits for sea turtles. However, the Agency will continue to monitor and conduct research to evaluate bycatch mitigation techniques and impacts on target and non-target species. In fact, there is research currently underway in the GOM to compare target catches using 16/0 and 18/0 circle hooks, but that information is preliminary and is not sufficiently developed to be considered in this rule. The 2004 BiOp also requires additional research and/or analysis on the effects of different offsets, evaluation of the leatherback bycatch reduction, confirmation of the effectiveness of the hook and bait combinations, and improved data collection and reporting from observed trips to aid in completing these analyses.

Comment 4: Some commenters indicated that portions of the GOM and the Northeast Coastal (NEC) area should be closed to PLL fishing (as described in non-preferred alternatives A12, A13, A14, and A15 of the DSEIS) because sea turtles taken in those regions are larger than those taken in the NED, and because the hook and bait treatments tested in the NED are unproven in warmer waters.

Response: This final rule will require the use of large circle hooks and the possession and use of specific gear removal equipment. In addition, the Agency will engage in outreach and education efforts, and pursue training and certification in sea turtle handling and release protocols throughout the PLL fishery. These management actions are expected to provide significant conservation benefits to sea turtles of all sizes. Additional adaptive management measures, including consideration of a Gulf of Mexico or alternative closure(s), would be instituted if monitoring indicates that requirements set forth in the 2004 BiOp for this fishery are not being met. Because this action would require circle hooks throughout the fishery, any such closure(s) would involve further rulemaking to account for the changed baseline due to the application of circle hooks. Potential redistribution of effort, impacts on sea turtles and other target and non-target species, and costs and benefits of any future closures would, similarly, need to be assessed using this new baseline. Please refer to the response to Comment 3 for information regarding the anticipated effects of circle hook and bait treatments outside of the NED.

Comment 5: Several comments relating to the data used to develop the DSEIS and proposed rule included: (1) Other studies such as the Azores study (Bolten *et al.*, 2002) and the Garrison

analysis (2003) should have been included; (2) the NED data are preliminary and should not be relied upon; (3) the number of observed sea turtle interactions is probably too low; and, (4) there is no information in the DSEIS regarding the number of sea turtle mortalities. Several other data comments are discussed under “protected resources issues” below.

Response: The best scientific information available has been used in developing the final rule, including information from Bolten et al. (2002) and Garrison (2003). Hook and bait treatments that were found to be effective during the three-year NED research experiment will be directly applied to PLL fishing in the NED closed area. The NED experimental data are robust, and measures to be applied in the NED are expected to replicate the impressive bycatch reduction results that were obtained there. In other areas, slightly smaller (16/0 or larger), non-offset circle hooks, or 18/0 circle hooks with an offset not to exceed 10 degrees, will be required. These measures are supported by the studies and recommendations described in the response to Comment 3.

The number of observed sea turtle interactions is derived directly from trips with observers onboard (3.7 percent of sets were observed with 273 observed interactions in 2001; 8.9 percent of sets were observed with 335 interactions in 2002). The total estimated number of interactions is calculated by determining sea turtle catch per hook using observed sets, and then expanding that by the total number of hooks fished as reported in the mandatory PLL logbook. A total of 1,208 leatherback interactions were estimated during 2001, and 962 during 2002. A total of 312 loggerhead interactions were estimated during 2001, and 575 during 2002. Potential sources of bias and uncertainty in these estimates are provided in “Estimated Bycatch of Marine Mammals and Turtles in the U.S. Atlantic Pelagic Longline Fleet During 2001 - 2002,” (Garrison, 2003a). That report estimates 13 loggerhead instantaneous mortalities (*i.e.*, dead when brought to the boat) and 0 leatherback instantaneous mortalities in 2001. For 2002, 0 loggerhead instantaneous mortalities and 33 leatherback instantaneous mortalities are estimated. Post-interaction mortality estimates are discussed in the 2004 BiOp.

Proposed Restrictions on Allowable Baits

Comment 6: Many commenters stated that requiring only Atlantic mackerel or squid bait, depending upon whether the hook is offset or not, would not provide enough flexibility to adapt to changing conditions that may occur during longer PLL fishing trips. Commenters stated that both types of baits should be allowed to be possessed and used. One commenter requested that there be no bait restrictions, stating that hook type, and not bait, is the most important factor in reducing sea turtle interactions. Several commenters stated that PLL vessels in the GOM typically utilize thread herring and Spanish sardines for bait, thus, requiring non-indigenous bait could result in adverse economic impacts due to the non-availability of such bait or potential reductions in the catches of target species. Other commenters stated the use of any finfish other than whole Atlantic mackerel could significantly reduce turtle conservation benefits.

Response: The final rule has been modified to allow the use of both Atlantic mackerel and squid bait inside the NED, and whole finfish and squid bait outside the NED, with specified circle

hooks. The NED research experiment demonstrated that significant sea turtle conservation benefits may be obtained using large circle hooks with certain baits (Watson *et al.* March 2, 2004). Relative to the 9/0 “J”-hook baited with squid, the combination of 18/0 circle hooks and mackerel bait reduced the loggerhead interaction rate by 86 - 90 percent, and the leatherback interaction rate by 65 percent. The 18/0 circle hooks baited with squid reduced the loggerhead interaction rate by 65 - 87 percent, and the leatherback interaction rate by 64 - 90 percent. In 2002, mackerel bait and squid bait were both tested on 9/0 “J” hooks to investigate the effect of bait on turtle interaction rates. When compared to squid bait, mackerel bait reduced loggerhead interactions by 71 percent, and leatherback interactions by 66 percent. Mackerel bait also increased swordfish catch but significantly reduced tuna catch on the control 9/0 “J”-hooks, compared to squid. Because both mackerel and squid are effective at reducing turtle interactions, and there are differences in the effectiveness of the baits with regard to the target species catches, the final rule allows either mackerel or squid to be possessed and used in the NED, but only with 18/0 or larger circle hooks with an offset not to exceed 10 degrees. This modification will allow fishermen to adapt to changing conditions, and replicate the impressive bycatch and bycatch mortality reductions that were achieved in the NED experiment.

The response to Comment 3 explains the significant sea turtle conservation benefits that are anticipated by requiring the use of either 16/0 or larger non-offset circle hooks, or 18/0 circle hooks with an offset not to exceed 10 degrees outside the NED. To provide additional flexibility and to mitigate for potential adverse economic impacts associated with non-availability of Atlantic mackerel or reduced catches due to the use of non-indigenous baits, the final rule allows both whole finfish and squid bait to be used outside the NED, with either of the specified hook types. This rule, along with outreach, education, training and other related actions, are expected to have significant conservation benefits for sea turtles. See the response to Comment 4 for further explanation.

Comment 7: One commenter stated that observed PLL sets in the GOM for 1992 - 2002 showed that circle hooks with squid produced the highest interactions with leatherback sea turtles whereas circle hooks with fish (primarily dead Spanish sardines) had the lowest catch rates.

Response: While circle hooks baited with squid in the GOM did show higher leatherback interactions than circle hooks baited with fish, there were a very low number of circle hook sets that were baited with squid. Consequently, it is not possible to draw a statistically significant conclusion regarding bait effects from the GOM data (Garrison, 2003). The Agency will continue to examine the effects of bait type throughout the PLL fishery.

Comment 8: One commenter indicated that specifying only Atlantic mackerel or squid bait could result in the overfishing of these species.

Response: Atlantic mackerel (*Scomber scombrus*), shortfin squid (*Illex illecebrosus*), and longfin squid (*Loligo pealeii*) are managed by the Mid-Atlantic Fishery Management Council under the provisions of the Atlantic Mackerel, Squid and Butterfish Fishery Management Plan (FMP). Any landings of these species for bait in the PLL fishery must be in accordance with the

provisions of this FMP. Atlantic mackerel are managed using an annual quota. Management measures for shortfin squid include limited entry, annual quota specifications, and trip limits when 95 percent of the annual quota is reached. Management measures for longfin squid include limited entry, seasonal quota specifications, and gear restrictions. As of January 2000, the Atlantic mackerel resource was not overfished, and overfishing was not occurring. The stock status of shortfin squid was unknown through 2002; however, overfishing was not likely to be occurring (NEFSC 37th SARC). Longfin squid were not likely to be overfished, nor was it likely that overfishing was occurring, as of 2001 (NEFSC 34th SARC). Because squid and mackerel are currently being effectively managed through the existing FMP, the Agency does not expect the management measures in this final rule to result in an appreciable increase in fishing effort for these species, or cause overfishing.

Proposed Restrictions on Allowable Hooks

Comment 9: The Agency received a wide range of comments regarding circle hooks, in general. One commenter stated that circle hooks will not reduce sea turtle bycatch or bycatch mortality, and that the existing data are too preliminary to be relied upon. Another comment stated that the recent increase in turtle interactions in the GOM was attributable to many vessels switching from circle hooks to small “J”-hooks following the prohibition on live bait, and that the proper solution is to require circle hooks. Several commented that the most significant benefits to sea turtles would be realized by using circle hooks rather than “J”-hooks, and that the size of hooks is a less important factor. One commenter opposed the use of circle hooks because they are ineffective at catching fish, are difficult to work with, take more time to remove, and may cause more injury to leatherback turtles than “J”-hooks when they are removed. Finally, one commenter applauded the move away from “J”-hooks towards circle hooks and requested that the Agency act as quickly as possible.

Response: Requiring the use of circle hooks throughout the PLL fishery is an important step that will have significant conservation benefits for sea turtles. Several studies described above, including three years of research in the NED, have documented the effectiveness of circle hooks at reducing bycatch and/or bycatch mortality of sea turtles. In addition, in the GOM, PLL fishermen deployed an appreciable amount of circle hooks for several years, and observer data from that area show that estimated leatherback and loggerhead turtle interactions were generally lower when circle hooks (16/0) were most frequently used (1992, 1998, and 1999), and generally higher when circle hooks (16/0) were least frequently used (1996, 1997, 2000, 2001, and 2002).

The NED experiment conducted 29 sets during 2003 to compare offset 16/0 circle hooks with 18/0 offset circle hooks. Although the results indicated higher interactions with the 16/0 offset hooks than with the 18/0 offset hooks, the Agency anticipates that allowing 16/0 hooks without any offset outside the NED will significantly reduce turtle mortalities and could result in fewer turtle interactions involving foul hooking. The NED experiment additionally demonstrated that catches of target species can be increased or, at least, remain constant using circle hooks.

As with any new gear, there probably will be period of time during which fishing crews adjust to circle hooks. However, these hooks are not expected to be prohibitively difficult to work with, as some vessels already use them. The final rule additionally requires that pelagic longline vessels possess and use several pieces of sea turtle release gear, and adhere to careful handling and release protocols. When properly used, these gears will facilitate hook removal and reduce turtle injuries occurring as a result of interactions. Fishing crews should familiarize themselves with the proper use of the release gear and the careful release protocols, because the final rule requires removal of as much fishing gear as possible without causing further injury to a sea turtle prior to its release.

Comment 10: A large proportion of comments were opposed to the use of 18/0 circle hooks outside the NED, primarily because they are too large to catch some target species, including small YFT, albacore tuna, dolphin, wahoo and other pelagics. For this reason, the commenters stated that requiring 18/0 circle hooks outside the NED would reduce catches and create adverse economic impacts. Many of these comments were supportive of a requirement to use 16/0 circle hooks, as contained in non-preferred alternative A5 of the DSEIS. Some cited studies conducted in the Azores (Bolten et al., 2002) and observer data in the GOM as evidence that a 16/0 hook would be effective at reducing turtle mortalities. Others stated that a 16/0 hook would pose less risk than an 18/0 hook at foul-hooking leatherback turtles, the species most commonly interacted with in the GOM, because of the smaller gap between the barb and the shank.

Response: As described in the responses to comments 1-5, the final management measures have been modified to allow the use of 16/0 or larger non-offset circle hooks outside the NED.

Comment 11: Many commented that requiring the use of only either flat or offset circle hooks, depending upon whether squid or mackerel bait is used, would not provide flexibility to adapt to changing conditions on longer PLL trips, thus both types of hooks should be allowed. One commenter stated that maintaining the sharpness of a flat (non-offset) circle hook is more difficult than with offset hooks and could potentially reduce catches if flat hooks (with squid) are used. To the contrary, others stated that offsetting a circle hook greatly reduces its design advantages and that the use of large mackerel bait may have confounded the results obtained with the offset 18/0 circle hook in the NED experiment. These commenters stated that, until a robust experimental design is established to test the impact on loggerheads of the 18/0 non-offset circle hook vs. the 18/0 offset circle hook, the final regulations should only allow for the use of 18/0 non-offset circle hooks.

Response: The NED research experiment concluded that there is no significant difference in model-based reduction rates due to non-offset 18/0 circle hooks with squid baits and offset 18/0 circle hooks with squid baits for loggerhead and leatherback sea turtles. Therefore, the final regulations require vessels within the NED to possess and use only 18/0 or larger circle hooks with an offset not to exceed 10 degrees, and either Atlantic mackerel or squid bait. Vessels fishing outside the NED must possess and use 18/0 or larger circle hooks with an offset not to exceed 10 degrees or 16/0 circle hooks, but only if the hook is flat (non-offset). The requirement that 16/0 circle hooks be non-offset is a precautionary measure to reduce the likelihood that the

smaller hooks will get swallowed or lodged in a turtle's throat or esophagus, or result in foul-hooking.

Comment 12: Commenters requested that the requirement to use corrodible hooks in the PLL fishery be removed, because there is no scientific or biological rationale to justify their use.

Response: The requirement to use corrodible hooks and crimps was implemented as part of the Reasonable and Prudent Alternative (RPA) in the June 14, 2001 BiOp (2001 BiOp). It is intended to improve the survival of sea turtles that are hooked when external hooks cannot be removed, or when hooks are deeply embedded and no attempt to remove the hook can be made. The Agency intends to collect and analyze additional information on hook removal rates resulting from implementation of this final rule and, depending upon those rates, will consider removal of the requirement to use corrodible hooks in a future rulemaking.

Sea Turtle Release Gear and Careful Handling Protocols

Comment 13: Most of the comments received concerning the requirements to possess sea turtle release gear and to adhere to careful handling protocols (alternative A16) were supportive of the proposed measures. Several commenters suggested either voluntary or mandatory training (in-person, online, or via other media such as CD, DVD, or videotape) for captains and/or crew members to improve the effectiveness of the gear and compliance with the protocols. Another suggestion was that the Agency provide either a certificate of completion or attendance and that a person or persons possessing the certificate be required onboard all PLL vessels.

Response: The requirements to possess and use sea turtle release gear and to adhere to careful handling protocols are important components of this final rule. Under this rule, an Agency-approved document describing sea turtle careful release protocols is required to be onboard each PLL vessel. Fishing captains and crew members should familiarize themselves with the proper use of release gear and the protocols, as the final rule requires removal of as much gear as possible without causing further injury to a sea turtle prior to its release. Consistent with the 2004 BiOp, the Agency has established a Point of Contact (POC) to, among other things, answer questions that fishermen may have regarding the release gear and handling protocols. POC information is provided in the final rule, and also on the HMS website at <http://www.nmfs.noaa.gov/sfa/hms>. In addition, an educational video mpeg file entitled "Removing Fishing Gear from Longline Caught Sea Turtles" is currently available at: www.sefsc.noaa.gov/seaturtlefisheriesobservers.jsp, and will be distributed to PLL vessels during the summer of 2004. This video mpeg demonstrates the proper use of the required and recommended release turtle gear in the rule. The Agency will conduct additional education and outreach efforts and pursue mandatory training and certification for the fishery. Workshops or other training programs are already under consideration in the development of Amendment 2 to the HMS FMP.

Comment 14: Several commenters stated that the "turtle tether" should be required onboard all PLL vessels in the final regulations, rather than only recommended in the protocols.

Response: Further refinements in the design standards and procedural protocols for use of the “turtle tether” are still being developed. After further development and testing, the Agency may reconsider requiring the turtle tether in a future rulemaking.

Comment 15: Commenters stated that the proposed regulations only generally address the removal of hooks from sea turtles, and do not specify how to bring turtles onboard, how to restrain them, and how to release them.

Response: Because of the many contingencies that may arise when a turtle is encountered, the final rule does not attempt to address every possible contingency. The rule specifies certain important requirements, such as removing as much gear as possible and releasing the turtle without causing further injury, and refers to the “Careful Release Protocols” for additional guidance and requirements. As noted in the response to Comment 13, the Agency will conduct outreach and other educational efforts relating to safe handling and release of turtles.

Comment 16: Some commenters wrote that the proposed requirements to possess and utilize sea turtle handling and release gears (alternative A16) were not reasonable, because the gear is difficult to obtain and costly.

Response: Sea turtle handling and release equipment will impose initial compliance costs estimated to range from \$485.00 - \$1056.50, depending upon whether the equipment is fabricated from available materials or purchased from suppliers. The design standards for line clippers have changed only slightly, and one model that meets the existing standards also meets the new design standards. The design standards for dipnets have similarly only been slightly modified, by specifying the length and carrying capacity of the handle. Other required equipment, including bolt cutters, monofilament cutters, boat gaffes, and needle-nosed pliers are relatively inexpensive and available at most hardware or boating supply stores. Dehookers are also available from commercial suppliers. A standard automobile tire to hold boated turtles should not be difficult to obtain. Finally, a variety of mouth openers/gags have been approved, specifically to reduce costs. For example, the two required mouth openers/gags could consist of a block of hard wood and two pieces of rope covered with hose, provided they meet the design specifications in the final rule. Some of the release equipment can be fabricated from readily available materials in order to reduce costs. The Agency acknowledges that the requirements to possess and use this equipment according to the “Careful Release Protocols” impose both financial and logistical burdens on the public; however they are essential for the PLL fleet to reduce sea turtle mortalities.

Environmental Impacts and Analyses

Comment 17: Several commenters requested that the Agency prohibit pelagic longlines (alternative A11), implement large “no-fishing” areas for pelagic longlines (alternatives A12, A13, A14, & A15), prohibit swordfishing in the Atlantic basin, or allow only rod and reel or handline fishing for HMS, to provide greater protection for sea turtles and other marine life.

Response: Prohibition of PLL gear was considered but not further analyzed because other effective sea turtle bycatch and bycatch mortality reduction alternatives are available. See response to Comment 4 regarding possible, future consideration of closures. In addition, prohibition of PLL fishing is not needed to rebuild the Atlantic swordfish stock. Overfishing is not occurring, and the stock is in recovery with biomass at the beginning of 2002 estimated to be at 94 percent (range: 75 to 124 percent) of the biomass needed to produce maximum sustainable yield (MSY). This estimate is up from an estimate of 65 percent of MSY, as provided in the 1998 assessment. The 2001 fishing mortality rate was estimated to be 0.75 times the fishing mortality rate at MSY (range: 0.54 to 1.086) (SCRS, 2002).

It is important to emphasize that unilateral efforts by the U.S. to protect sea turtles and HMS in the Atlantic Ocean would likely be insufficient to rebuild populations of these species, because the U.S. fleet constitutes only a small part of the international fleet that competes on the high seas for catches of swordfish and tunas. In fact, U.S. PLL landings account for approximately 5.4 percent of total Atlantic landings of HMS (SCRS, 2003). Therefore, the successful adoption and timely implementation of circle hook and release gear technology by the U.S. PLL fleet is of paramount importance. U.S. industry support in demonstrating the success of these technologies, both in reducing turtle mortalities and in maintaining catches of target species, will be vital in future efforts to convince other foreign fishing nations to implement similar management measures.

Comment 18: Several commenters stated that the “exportability” of circle hook and release gear technology is the most important aspect of this rule, because U.S. PLL turtle bycatch is relatively small compared to that of foreign vessels Atlantic-wide. If the proposed one hook-type/one bait requirements cause U.S. business foreclosures or economic losses, the technology would likely not be “exportable” to foreign nations. The unintended consequence of the proposed regulations could be increased sea turtle interactions as foreign PLL vessels, which currently account for the largest percentage of sea turtle interactions, increase fishing effort. Similarly, if some U.S. PLL vessels go out of business or reflag to foreign nations, the U.S. could lose part of its ICCAT swordfish quota to foreign nations that do not have such protective requirements, and sea turtle interactions by foreign PLL vessels could increase. Therefore, these commenters stated that it is imperative to implement a final rule that does not result in business closures and is transferable to other ICCAT nations. Some commenters suggested that non-preferred alternative A5 in the DSEIS (16/0 circle hook with an offset not to exceed 10 degrees, outside the NED) would provide an acceptable compromise for both domestic and foreign vessels.

Response: As discussed above, international cooperation is critical to reduce overall Atlantic sea turtle interactions and mortalities. For this reason, the Agency committed substantial financial resources and scientific expertise to the NED research experiment to develop cost-effective technologies to reduce sea turtle interactions and mortalities, without negatively impacting catches of target species. The U.S. already has shared the experimental results at ICCAT and in other international fora to promote and encourage sea turtle bycatch reduction measures in international fisheries. In response to public comment, the Agency re-examined the

preferred alternatives and modified the final management measures to provide flexibility regarding the use of offset and non-offset hooks, bait requirements, and hook sizes outside the NED. These modifications are expected to reduce turtle interactions and mortalities significantly, and demonstrate to foreign nations that adoption of circle hook technologies is feasible and will have positive benefits for both sea turtles and the PLL fishery.

Comment 19: Several commenters stated that the PLL fishery is only one of many factors affecting the continued existence of sea turtles. Other factors include: chemical water pollution; habitat loss; poaching of nesting sites; artificial beach lighting; shrimp trawling; predation by pets; driving on beaches; beach sweeping activities; outboard motor emissions, and speeding motor boats. Commenters noted that these other factors receive little regulatory attention, yet the PLL fishery is being required to comply with perceived unnecessarily strict proposed regulations. One commenter suggested that turtle hatcheries should be used to augment turtle populations.

Response: This Agency and the U.S. Fish and Wildlife Service (USFWS) share responsibility for threatened and endangered sea turtles under a Memorandum of Understanding implementing the ESA. In general, marine-related activities, such as fishing, are within the purview of this agency, whereas terrestrial activities are within the purview of the USFWS. The ESA requires that federal agencies ensure that the actions that they authorize, fund or carry out do not jeopardize the continued existence of listed species. If there is no federal agency nexus to a proposed action, the action is not subject to section 7 consultation and the production of biological opinions under the ESA. Thus, this final rule focuses upon the protection of adult and sub-adult turtle populations in the marine environment that are affected by fishing activities authorized by this Agency. Other provisions of the ESA, or other laws, may be applicable to other actions that pose threats to sea turtles. For example, recovery plans for leatherback and loggerhead sea turtles have been in place for several years. Many of the activities mentioned by the commenters are addressed within these recovery plans, including marine pollution, habitat protection, beach lighting, beach nourishment, protection of nesting sites, egg poaching, beach driving, and beach sweeping. The management measures contained in this final rule are expected to reduce significantly mortality attributable to pelagic longlines, both domestically and, through export of circle hook technologies, internationally.

Comment 20: One commenter raised concerns that the sea turtle incidental take statement (ITS) was exceeded, even with the NED closed.

Response: Recent increases in sea turtle interactions occurred mainly in the GOM and other areas outside the NED. This final rule would prohibit “J”-hooks and require gear modifications and the use of release gear throughout the entire fishery, and is expected to have significant conservation benefits for sea turtles. Because of the conclusion of the NED experiment, this rulemaking, and the exceedance of the ITS from the 2001 BiOp, the Agency reinitiated consultation on the fishery. The new consultation, finalized in the 2004 BiOp, analyzed the circumstances and potential causes of the exceedance, as well as the expected impacts of the fishery on sea turtle populations, and is incorporated into this final rule.

Comment 21: A commenter stated that the number of boats fishing in the NED could increase beyond the 12 vessels that were analyzed in the DSEIS, because of a recent bilateral agreement that would allow U.S. vessels to land their catch in Canada.

Response: Data over the last six years indicate that less than 12 vessels, on average, have fished in the NED. The Agency will continue to monitor changes in the fishery and, if a significant increase in the number of vessels occurs in the NED, will take other action as needed. Moreover, sea turtle interactions have been documented throughout the PLL fishery. As overall effort in the PLL fishery is restricted by limited access permits, any additional fishing effort in the NED would necessarily result in less fishing effort elsewhere. Furthermore, vessels fishing in the NED will be required to use larger circle hooks than vessels fishing outside the NED.

Social/Economic Impacts and Analyses

Comment 22: Many commenters stated that there would be potentially reduced revenues from the preferred alternatives due to: (1) the lack of flexibility for fishermen to select various hook and bait combinations; (2) potentially reduced catches of target species, both inside and outside the NED, due to the proposed 18/0 circle hooks; and, (3) potentially reduced catches outside the NED due to the proposed “exotic” baits (*i.e.*, squid or Atlantic mackerel only). Several commenters stated that more concern should be focused on the potential loss of jobs and social costs. Regarding the economic analyses in the DSEIS/RIR/IRFA, two commenters stated that the ex-vessel prices presented in the analyses were not up to date. Another commenter stated that the analyses overstate potential increases in target catches and understates potential losses in target catches. Commenters also requested that the following additional factors be considered: (1) overhead costs will increase because of the need to buy new hooks and more expensive, non-indigenous baits outside the NED; (2) there would be irretrievable lost costs because existing inventories of fishing hooks would become obsolete; and, (3) U.S. PLL fishermen could be put at a competitive disadvantage to foreign vessels because of potentially increased costs and decreased revenues.

Response: As explained in the responses to Comments 1-12, the Agency has modified the final rule, in response to public comment, to provide more flexibility regarding baits, offset and non-offset circle hooks, and minimum hook sizes outside the NED. However, pursuant to the 2004 BiOp, additional rulemaking may be necessary to consider a new time and area closure(s), which could have adverse economic impacts. The economic impacts of such a closure, if necessary, would be analyzed and addressed in that rulemaking.

In response to the comment that the IRFA used outdated ex-vessel price information, the Agency has updated the RIR and FRFA using actual 2002 ex-vessel prices. The IRFA utilized 2001 ex-vessel prices adjusted to 2002 dollars, using the Consumer Price Index on-line adjustment calculator. The result of this adjustment is that the 2002 annual gross vessel revenue estimate used in the economic analyses has been lowered from 187,074 to \$178,619, due to generally lower ex-vessel prices received in 2002.

With regard to estimated potential losses or gains in target species catches and ex-vessel revenue, the estimated changes in catches were derived directly from the results of the NED research experiment and then multiplied by ex-vessel prices to estimate changes in ex-vessel revenue. The DSEIS/RIR/IRFA and final documents each provide a range of impacts to illustrate the variability associated with the different hook and bait combinations and their effects on catches of target species. A range of economic impacts is necessary because the final regulations provide flexibility in the choice of different hook and bait combinations. The ranges of impacts associated with each alternative in the FSEIS have changed somewhat from the ranges that were provided in the DSEIS. This is because, since publication of the DSEIS, the reduction rates associated with experimental treatments (hook and bait combinations) have been standardized to control for several variables, including sea surface temperature, daylight soak time, total soak time, vessel effect, and pairing effect in case of matched-paired hook types per set. Also, as described above, the estimate of annual gross vessel revenue changed.

This action would result in initial compliance costs associated with the purchase of new hooks (between \$675.25 - \$1,650.00 for 2,500 18/0 hooks, and \$697.50 - \$1,241.75 for 2,500 16/0 hooks). However, after initial hook purchase, replacement costs for circle hooks are expected to be comparable to, or less than, the replacement costs for “J”-hooks. The DSEIS originally estimated annual hook costs at approximately \$20,176 per vessel for a years supply. However, this estimate has been removed from the FSEIS because not every hook is expected to be lost on every set. NOAA Fisheries acknowledges that there may be irretrievable lost costs due to existing inventories of “J”-hooks becoming obsolete. However, a 30-day delay in the effective date of the final measures outside the NED may help vessel owners retrieve some of the costs associated with the prior purchase of “J”-hooks. The compliance costs for the purchase of release equipment are estimated to range from \$485.00 to \$1056.50. As discussed in the response to Comment 16, some of the release equipment can be fabricated from readily available materials in order to reduce costs.

While there are short term costs associated with the final rule, this action is not expected to place U.S. PLL vessels at a competitive disadvantage relative to foreign vessels. If fishermen choose an appropriate combination of circle hooks and bait, the NED research has shown that catches of target species can be increased or, at least, remain constant by using circle hooks.

Comment 23: Several commenters stressed that it is important for NOAA Fisheries to reopen the NED to PLL fishing (as contained in alternatives A6, A7, A8, A9, and preferred alternative A10 of the DSEIS), because several vessels are very dependent upon income derived from fishing in that area.

Response: This final rule will allow PLL vessels to fish in the NED closed area, provided that they use specified hook and bait treatments that were proven to be effective at reducing sea turtle interactions and mortalities during the three-year NED research experiment.

Comment 24: One commenter stated that the Community Profiles section of the DSEIS relies upon old data. For example, an annual Blessing of the Fleet no longer occurs in one fishing community.

Response: The Community Profiles sections of the DSEIS and FSEIS (Chapter 9) draw upon a variety of sources, including census data, logbook data, local Chamber of Commerce information, academic studies, and professional observations. Information contained in the DSEIS and FSEIS constitute the best available information at this time.

Comment 25: A commenter stated that the cost-earning analyses are outdated and should be corrected so that the Agency can properly evaluate the economic impacts of its regulations.

Response: The economic analyses in the DSEIS and FSEIS use the best available information. The Agency strives to improve its information collection, and in 2003, initiated mandatory cost-earnings reporting for selected vessels, specifically to improve the economic data available for all HMS fisheries. However, this new economic information was not available at the time of preparation of the DSEIS or FSEIS because the data are still being collated and checked for accuracy. Additional economic data, including cost and earnings information, will continue to be collected from vessels to further evaluate the impacts of this final rule.

Additional Comments Regarding the Alternatives and Other Management Measures

Comment 26: Several commenters expressed support for the proposed regulations (preferred alternatives A3, A10, and A16 in the DSEIS), stating that they would be effective at reducing sea turtle bycatch and post-hooking mortality. One commenter stated that the measures provide the most environmentally advantageous and socially just approach to lessening impacts on sea turtles while safeguarding human interests. The proposed regulations are based upon three years of meticulous research and should provide a commonsense and practical model for both domestic and foreign PLL fleets.

Response: As discussed above, the proposed measures have been modified after considering public comment, the NED experiment, and other available information. The final rule is expected to have significant ecological benefits while mitigating for potentially adverse economic impacts. Successful implementation of this rule will provide a catalyst for promoting the adoption of similar measures by foreign fishing nations.

Comment 27: Many commenters opposed the continued use of traditional “J”-hooks (contained in alternatives A1, A4, and A9 of the DSEIS), because they do not reduce the bycatch and bycatch mortality of sea turtles.

Response: Under this final rule, “J”-hooks will no longer be allowed in the U.S. Atlantic PLL fishery.

Comment 28: Several commenters indicated that other, more general, fishery-related factors should have been examined in the DSEIS, such as further efforts to eliminate overfishing of swordfish and tunas and an overall reduction in the number of PLL permits.

Response: The purpose of this rulemaking is to reduce interactions with, and post-release mortality of, threatened and endangered sea turtles in the PLL fishery. Addressing overfishing of HMS and the permitting of PLL vessels is beyond the scope of this action; however, these issues are being addressed in other actions. Management and conservation of Atlantic HMS requires international cooperation. The U.S. participates in negotiations at the International Commission for the Conservation of Atlantic Tunas (ICCAT) to develop recommendations on quota allocations and other measures. As part of the international rebuilding efforts, the U.S. implements ICCAT-adopted recommendations. The Agency has issued a proposed rule to implement an ICCAT swordfish quota recommendation (68 Fed. Reg. 36967 (June 30, 2003)), and in Amendment 2 to the HMS FMP, currently in development, will examine additional HMS management measures, including permitting issues.

Comment 29: Several commenters suggested that other alternatives should have been considered in the DSEIS including: (1) allowing nighttime longline sets only; (2) using water temperature guidelines to restrict PLL fishing activity; (3) implementing 100-percent observer coverage and a hard cap on turtle takes, whereby the PLL fishery would be closed if the turtle cap is reached; (4) “real time” observer reporting to monitor for ITS exceedances; and (5) implementing effort controls in the NED on numbers of vessels, trips, sets, or hooks. One commenter stated that effort controls are needed because of the possibility of increased effort in the NED resulting from a recent agreement that would allow U.S. vessels to land fish in Canada.

Response: Several alternatives mentioned in this comment, including 100 percent observer coverage, a hard cap on turtle takes, and limits on numbers of sets, were recently implemented in the shallow-set component of the Hawaii-based longline fishery. There are notable differences between the Hawaii-based and Atlantic PLL fisheries. For example, the Hawaii-based shallow-set fishery is predominantly a swordfish fishery. In the Atlantic Ocean, however, swordfish and tuna PLL fishing is generally managed as a single fishery, with the exception of quotas, size limits, retention limits, and other species-specific measures, because the Atlantic PLL fleet is mobile and may target a variety of species on the same trip. Because sea turtles are regularly captured on both swordfish sets and tuna sets in the Atlantic Ocean and GOM, management measures are necessary for the PLL fishery as a whole, regardless of target species. Another difference is that the Atlantic fishery is managed under certain species- and country-specific ICCAT quotas, whereas the Hawaii fishery is not.

An alternative prohibiting daytime sets was not considered because the NED research experiment and the Azores study ((Bolten *et al.*, 2002) both found that loggerheads are becoming hooked mainly during daylight, and the NED experiment found that leatherbacks become hooked during the night. A prohibition on either daylight or nighttime sets would not be effective at protecting both of these species. Therefore, this alternative was not included in the DSEIS, especially when other measures (*i.e.*, circle hooks) are available.

For enforcement, operational, administrative, and other reasons, the other suggested alternatives were not included in the DSEIS. Although turtle catch rates can be influenced by water temperature, it would be extremely difficult to enforce regulations restricting vessels to fishing within certain specified temperatures. In addition, a “real time” hard cap on the number of turtle takes is not practicable without 100 percent observer coverage. At this time, it would be operationally difficult, and expensive, to implement 100 percent observer coverage for the 148 active PLL vessels fishing in the Atlantic Ocean and GOM, because this is a large geographical area with several remote ports. In 2002, observer coverage averaged 8.9 percent (NED - 100 percent, non-NED - 3.7 percent), and coverage has averaged 3.6 percent for the years 1995 - 2001. The Agency is continuing to explore options in Amendment 2 to the HMS and Billfish FMPs to enhance existing observer coverage, including industry funding, increased permit fees, and quota set-asides. The Agency also will endeavor to improve its monitoring in other ways. The VMS requirement for all PLL vessels, implemented in September 2003, may provide the ability to gather more timely information about apparent effort. In addition, the Agency will take steps to enhance its monitoring of turtle interactions.

Fishing effort controls are not currently being implemented in the NED because sea turtle interactions occur throughout the Atlantic basin. The final regulations requiring circle hooks and release equipment throughout the fishery are anticipated to have significant turtle conservation benefits. As discussed in the response to Comment 4, the Agency also will engage in outreach, education, and training activities and take further action, as necessary, to conserve and protect sea turtles.

Comment 30: A commenter indicated that there was no alternative in the DSEIS that would keep the NED closed and require circle hooks, bait requirements, and release equipment in the remainder of the fishery.

Response: The DSEIS and FSEIS include alternatives that would impose hook and bait and release gear requirements on the Atlantic pelagic longline fishery and keep the NED closed. Specifically, in Section 4.0 of the FSEIS, the analyses for alternatives A2 - A5(b) indicate the ecological, economic, and social impacts of requiring circle hook and bait requirements for the fishery, excluding the NED.

Comment 31: A commenter suggested that a small number of “J”-hooks (less than 30) should be allowed to accommodate a handline fishery by PLL vessels when fish are schooling.

Response: The final regulations do not allow any “J”-hooks to be possessed or used onboard HMS PLL vessels. To allow any “J”-hooks would compromise the enforceability and effectiveness of this rule. The final regulations have been modified to provide more flexibility with regards to allowable circle hook and bait combinations, and circle hook sizes outside the NED. The required use of circle hooks throughout the PLL fishery is a significant and important step that will have significant conservation benefits for sea turtles.

Comment 32: One commenter stated that the Agency had indicated that the goal of the rulemaking is to reduce interactions below the ITS, yet the June 14, 2001, BiOp stated that the objective is to reduce mortalities of sea turtles. Because there were no dead sea turtles in the NED experiment, alternative A5 in the DSEIS (16/0 hooks outside the NED) should be adopted because it would be effective at reducing mortalities.

Response: Because of the recently concluded NED experiment and the exceedance of the ITS in the 2001 BiOp, the Agency reinitiated consultation and began developing a proposed rule using the ITS as an initial guide in developing its alternatives. Management actions should first try to eliminate or reduce the likelihood of interactions between the fishery and sea turtles. For interactions that cannot be avoided, management actions should reduce the likelihood of sea turtles being injured or killed during, or as a result of, the interaction. These reductions must be made so that the fishery is not jeopardizing the continued existence of listed species. The mandatory possession and use of circle hooks and careful release gear, along with training and certification programs are expected to accomplish these objectives in the long-term, while the adaptive management strategies outlined in the RPA in the 2004 BiOp are expected to help ensure that these objectives are met in the short-term. As noted above, the final rule has been modified to allow the use of 16/0 or larger, non-offset circle hooks outside the NED.

Bycatch Issues

Comment 33: Many commenters recommended circle hooks, bait restrictions, release gear requirements, and other similar or equivalent management measures for recreational fisheries to reduce bycatch.

Response: The bycatch of fishery resources, marine mammals, sea turtles, sea birds and other living marine resources has become a central concern of the commercial and recreational fishing industries, resource managers, conservation organizations, scientists and the public, both nationally and globally. Accordingly, the Agency recently announced a National Bycatch Strategy to reduce bycatch through fishing gear improvements, standardized reporting, education and outreach. As part of that strategy, the HMS Management Division has identified the improvement of recreational fishery data and angler education as items to be considered in Amendment 2 to the HMS and Billfish FMPs. In addition, the Agency has established an angler outreach program to promote the use of circle hooks in the recreational fishery.

Comment 34: Several commenters stated that requiring an 18/0 circle hook with squid and/or mackerel could increase the bycatch of other non-target species, including billfish, bluefin tuna and large coastal sharks. There was also a concern that levels of bycatch in the PLL fishery, including seabirds and marine mammals, are too high regardless of hook and bait treatments, and that these interactions should be further considered before implementing final regulations.

Response: As described above, the Agency recently announced a National Bycatch Strategy to further reduce bycatch through fishing gear improvements, standardized reporting, education and outreach. Other initiatives underway include the U.S. Plan of Action for Reducing the Incidental Catch of Sea Birds in Longline Fisheries, which was jointly developed by this agency, the U.S. Fish and Wildlife Service, and the Department of State. The plan involves conducting an assessment of longline fisheries to determine if a seabird bycatch problem exists, and implementing measures to reduce impacts on seabirds to the maximum extent practicable. Because interactions with seabirds appear to be relatively low in Atlantic HMS longline fisheries, measures have not been implemented. This Agency will continue to monitor bycatch in the PLL fishery to determine if any of the measures contained in this final rule contribute to increased levels of bycatch of billfish, bluefin tuna, large coastal sharks, seabirds, or marine mammals.

Technical and Implementation Issues

Comment 35: Some commenters recommended redefining circle hooks by specifying the allowable gap between the hook point and the hook shank, providing a minimum length, specifying that the hook should be generally circular in shape, and not including a reference to the gauge of the wire (e.g., 16/0 or 18/0) used in the hook.

Response: The final rule has been clarified to specify the allowable gap between the hook point and the shank and a minimum length, and to specify that the required hooks should be generally circular or oval-shaped from point to shank. A gauge specification is being retained in the final regulations because the NED research experiment tested hooks of different gauges, and because fishing hooks are typically referred to by their gauge size. However, in recognition that there may be some variability, the final rule provides clarification of overall size dimensions, and the preamble of the final rule identifies circle hooks by manufacturer and model number that are known to meet the dimensions.

Comment 36: Numerous fishermen commented that they would not be able to obtain an adequate supply of the proposed circle hooks in a timely manner.

Response: The Agency considered delaying the effective date of the final regulations beyond 30 days, for vessels fishing outside the NED. However, due to the urgent need to reduce turtle interactions, an additional delay is not possible. An adequate supply of circle hooks for at least a few trips is expected to be available by the effective date of this rule. Hook manufacturers have recently increased production of circle hooks in response to the recent implementation of a similar rule in Hawaii.

Protected Resources Issues

Comment 37: Commenters stated that the June 14, 2001, BiOp and its associated incidental take statement (ITS) are not based upon the best available science. One commenter stated that the BiOp should be based upon the population status of southern loggerhead turtles, rather than the

northern population which the Agency is trying to protect. Also, the 2001 BiOp incorrectly states that 100 percent of sea turtle interactions in the NED are with the northern nesting population. Recent DNA testing shows that over 80 percent of NED loggerhead interactions were with turtles originating from the southern nesting population, which is increasing at 4 percent a year. In addition, loggerhead sea turtle population data should not be used to develop the leatherback sea turtle ITS. Some commenters stated there is no modeling of loggerhead and leatherback sea turtle populations, so the population estimates are uncertain.

Response: As reflected in comments 37-40, the Agency received public comments directed at the 2004 BiOp. The Agency is not required to provide for or respond to public comments while developing a BiOp. However, to the extent that these comments relate to the analyses required under the National Environmental Policy Act (NEPA), responses are provided below.

The June 1, 2004, BiOp and associated ITS supercede the previous opinion and analyze pertinent information related to this rulemaking. The information in the 2004 BiOp represents the latest, best available science, and has undergone numerous levels of review. The opinion analyzes potential impacts on the loggerhead species as a whole, with attention paid to the impacts on the individual subpopulations, each of which are important to the survival and recovery of the species and require protections in order to ensure the species' future. Based upon data from the NED research experiment, and the fact the fishery is widespread throughout the pelagic waters of the Atlantic and GOM, it is assumed that the overall interaction of loggerhead sea turtles with the pelagic longline fishery is in proportion with the overall stock sizes of each nesting aggregation. That is, the fishery is not believed to be affecting any stock disproportionately, which was a factor considered when the threat of any individual stock being extirpated was examined. In addition, the latest nesting trend data for the South Florida nesting assemblage indicate that there is no discernible trend in the population. The uncertainty of population estimates and trends are acknowledged and taken into account.

Comment 38: Several commenters stated that post-hooking mortality estimates of sea turtles were overestimated in the ITS, and should be revised based upon more recent data from a mortality workshop that the Agency held. Other commenters stated that the use of Spanish research studies to develop post-hooking mortality estimates in the BiOp is not appropriate. The current estimates of post-hooking mortality are based upon the use of "J"-hooks, which are more likely to cause gut-hooking than circle hooks. Circle hooks will better ensure that hooked and entangled sea turtles survive. These factors should be considered in the new BiOp.

Response: The 2004 BiOp uses refined post-interaction mortality estimates from the January 2004, Workshop on Marine Turtle Longline Post-Interaction Mortality. These estimates take into consideration hooking locations, which are largely a function of the hook type. The Spanish mortality studies were only one of many data sources considered by the participants of the workshop, and any potential limitations of those studies were understood and taken into account.

Comment 39: Commenters stated that sea turtle interactions are increasing because their populations are increasing. Therefore, the BiOp and proposed regulations should consider this as baseline information.

Response: The baseline information analyzed in this rulemaking and the 2004 BiOp includes the latest sea turtle population and trends data.

Comment 40: Commenters questioned how the PLL fleet could be found to be jeopardizing the continued existence of leatherback and loggerhead sea turtles when the fleet accounts for hundreds of interactions, while the shrimp fleet accounts for over 100,000 turtle interactions.

Response: Fisheries may impact life stages of sea turtles in different ways and have varying bycatch and bycatch mortality reduction measures available depending on the gear used. This rulemaking focuses on the impacts of the PLL fishery on protected sea turtles and expected reductions in interactions and mortality from the preferred alternatives. The Southeast shrimp trawl fishery underwent a separate consultation which resulted in a December 2, 2002, biological opinion. Although the shrimp fishery interacts with more sea turtles, the December 2002 biological opinion determined that revised regulations on Turtle Excluder Devices (68 Fed. Reg. 8456, February 21, 2003) would be expected to reduce related mortality significantly in that fishery. See the December 2002 biological opinion for specifics of the shrimp trawl consultation. The June 1, 2004 BiOp for this rulemaking found jeopardy for leatherbacks only, as a result of the expected levels of mortality. The RPA in the June 20034 BiOp is expected to reduce mortality to levels which will not jeopardize the continued existence of the species.

Other Comments

Comment 41: Commenters stated that the proposed regulations violate National Standard 4 of the M-S Act, because they discriminate between residents of different states, especially North Carolina, where there are few sea turtle interactions off the coast and residents catch smaller fish.

Response: The proposed and final management measures consist of conservation measures that are intended to protect threatened and endangered sea turtles. These measures are consistent with National Standard 4 because they apply bycatch reduction and mitigation requirements throughout the whole PLL fishery, are not direct allocations of fishing privileges, and do not discriminate between residents of different states. Circle hooks are necessary for U.S. PLL vessels for the entire Atlantic basin because turtle interactions can, and do, occur over this entire area, albeit at different rates. The PLL fleet is generally mobile, so vessels may opportunistically choose to fish in areas where any potential adverse impacts are lower. Fishery management actions often have inherently differential geographic impacts, and these are largely due to differences in species composition and abundance. In consideration of this, the Agency has modified the final rule to account for some geographical variation in the PLL fishery.

Comment 42: One commenter stated that the Agency has not adequately analyzed the cumulative effects of this action on PLL vessels, as required by NEPA.

Response: The DSEIS and FSEIS have adequately analyzed the cumulative effects of this action on PLL vessels. The analyses describe all major management actions that have occurred since 1985 and the potential effects of this action when added to other past, present or reasonably foreseeable future actions.

Comment 43: Commenters stated that there was no scoping process as required under NEPA and that the rulemaking was proceeding too quickly with little consideration being given to public concerns. One commenter requested consideration as an “applicant” in the development of the BiOp. Other commenters requested more public involvement in the ESA consultation, specifically, copies of the draft and final BiOp for the proposed rule

Response: Although scoping hearings can be beneficial, they are not required under NEPA. Because of the urgent need to implement sea turtle bycatch mitigation measures, scoping hearings were not held. However, the Agency has provided ample opportunity for public participation throughout the rulemaking. The Agency published a Notice of Intent of Proposed Rulemaking (NOI) in the Federal Register on November 28, 2003 (68 FR 66783), identifying significant issues related to the action and requesting public comment through December 29, 2003. The Agency also distributed a FAX notice on December 3, 2003, to solicit comment. Taking public comment into consideration, the Agency published a proposed rule in the Federal Register on February 11, 2004 (69 FR 6621), then held public hearings in North Dartmouth, MA (March 2, 2004), New Orleans, LA (March 4, 2004), and Manteo, NC (March 9, 2004). Over 100 people attended these public hearings. The comment period on the proposed rule closed on March 15, 2004, and the Agency received approximately 175 written and electronic comment letters. With regard to the ESA consultation, the Agency does not consider there to be an applicant for this action. Moreover, the Agency is not required to provide for public comment on a draft or final biological opinion. Copies of the final, 2004 BiOp are available upon request from the NOAA Fisheries Southeast Regional Office, Division of Protected Resources (9721 Executive Center Drive North, St. Petersburg, FL 33702. 727-570-5312). The BiOp may also be obtained online at: <http://sero.nmfs.noaa.gov/pr/rulings/hmsbo060104.pdf>.

Comment 44: One commenter stated that the impacts of the proposed regulations on “other important organizations,” including trade associations, have not been fully analyzed in the Community Profiles section of the DSEIS.

Response: Chapters 4, 6, 7, 8, and 9 of the DSEIS and the FSEIS identify affected entities and provided an assessment of the likely economic impacts associated with each of the alternatives. The analysis primarily focuses upon fishing vessels, as they would be most directly impacted by the action. The analysis was very complete and indicated a range of potential economic impacts on vessels, from negative to positive, depending upon a variety of factors including target species and hook and bait choices. In addition, potential impacts on dealers, processors, bait houses, and gear manufacturers who might be indirectly affected by the measures are identified.

By providing information on these direct and indirect impacts, with a focus on those most directly impacted by the action, other entities, including trade associations, should be able to reasonably assess the impacts in consideration of their unique situations.

Comment 45: Commenters noted that the Atlantic Tunas Conservation Act (ATCA) provides that the U.S. PLL fleet should have a reasonable opportunity to catch its full ICCAT quota of swordfish; however, the fleet is currently harvesting only 29 percent of its quota. The proposed regulations would further prevent full utilization of the quota.

Response: The final management measures are expected to provide the U.S. PLL fleet with a reasonable opportunity to catch its ICCAT quota allocation, consistent with the ATCA, Magnuson-Stevens Act, ESA, and other domestic law. The NED experiment demonstrated that target species catches can be increased, or at least remain constant, using circle hooks if an appropriate combination of hooks and bait is deployed. The DSEIS noted that the proposed measures are most likely to impact adversely mixed target trips, and that impacts on catches in warmer waters are not fully known. Public comment affirmed these potential impacts, and in response, the final rule provides more flexibility in hook and bait choices and hook sizes to minimize adverse impacts, to the extent practicable.

Comment 46: A commenter stated that the Secretary of Commerce does not have the jurisdictional authority to apply the Magnuson-Stevens Act to HMS fisheries outside the U.S. exclusive economic zone (EEZ), including the NED.

Response: The Secretary of Commerce does have the authority to regulate U.S.-permitted vessels fishing outside the U.S. EEZ.

References Cited in Appendix C1

- Bolten, A., H. Martins, E. Isidro, R Ferreira, M. Santos, E. Bettencourt, A Giga, A Cruz, B. Riewald, and K. Bjorndal. 2002. Preliminary results of experiments to evaluate effects of hook type on sea turtle bycatch in the swordfish longline fishery in the Azores. Unpublished Report. University of Florida, Gainesville, FL.
- Garrison, L. 2003a. Estimated bycatch of marine mammals and turtles in the U.S. Atlantic pelagic longline fleet during 2001 - 2002. National Oceanic and Atmospheric Administration Tech. Memo. NMFS-SEFSC-515. 52 pp.
- Garrison, L. 2003b. Summary of target species and protected resource catch rates by hook and bait type in the pelagic longline fishery in the Gulf of Mexico 1992 - 2002. Unpublished Report. National Oceanic and Atmospheric Administration, National Marine Fisheries Service, Southeast Fisheries Science Center, Miami, FL. Contribution # PRD-02/03-08. 12 pp.
- Javitech Limited. 2002. Report on sea turtle interactions in the 2001 pelagic longline fishery. Dartmouth, Nova Scotia, Canada.
- Lucy, J., and A. Studholme, eds. 2002. Catch and Release in Marine Recreational Fisheries. American Fisheries Society Symposium. 30.
- Porter, R. M., M. Wendt, M. D. Travis, I. Strand. 2001. Cost-earnings study of the Atlantic-based U.S. pelagic longline fleet. Pelagic Fisheries Research Program. SOEST 01-02; JIMAR contribution 01-337. 102 pp.

SCRS. 2002. Report of the Standing Committee on Research and Statistics, ICCAT Standing Committee on Research and Statistics, September 30 - October 4, 2002.

SCRS. 2003. Report of the Standing Committee on Research and Statistics, ICCAT Standing Committee on Research and Statistics, October 6 - October 10, 2003.

Watson, J.W., S. Epperly, and C. Bergman. 2004. Rationale for rulemaking option to require whole fish bait in the pelagic longline fisheries to mitigate sea turtle mortality. National Oceanic and Atmospheric Administration, National Marine Fisheries Service, Southeast Fisheries Science Center, Pascagoula, MS. Unpublished document.