

**ISSUES AND OPTIONS ON THE STRATEGY FOR SEA TURTLE
CONSERVATION AND RECOVERY IN RELATION TO U.S. ATLANTIC
OCEAN AND GULF OF MEXICO FISHERIES**

SCOPING DOCUMENT

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PURPOSE OF THE SCOPING DOCUMENT

The National Oceanic Atmospheric Administration's National Marine Fisheries Service (NMFS) intends to promulgate regulations to reduce the takes of endangered and threatened sea turtles in trawl fisheries on the Atlantic Coast and the Gulf of Mexico. In order to prepare a draft environmental impact statement as well as to gather information on these planned regulations, NMFS is undertaking a scoping process. The scoping process will be the first stage in a multi-step process required by the National Environmental Policy Act (NEPA) to ensure that Federal agencies evaluate the environmental impacts of major Federal actions. During the scoping process, the public is provided with an opportunity to assist NMFS in determining the scope of issues that require analysis. The analysis of issues and the environmental impacts of the proposed actions will be presented in a Draft Environmental Impact Statement (EIS), which will be made available for public comment. This scoping document is prepared as an aid to the public on the scoping process that NMFS is about to undertake.

In the early part of this decade, NMFS recognized the need to prevent or minimize address sea turtle bycatch in a more comprehensive manner. NMFS thus developed the Strategy for Sea Turtle Conservation and Recovery in Relation to the Atlantic Ocean and Gulf of Mexico Fisheries (Strategy). This Strategy is intended to address sea turtle bycatch by gear type instead of by fishery. Further, since the Strategy will be promulgated under the Endangered Species Act (ESA), 16 USC 1531 *et seq.*, NMFS will be able to better address sea turtle takes in state and Federal fisheries.

After several years of data collection and analysis, NMFS determined that the first gear type to address sea turtle bycatch would be trawl gear, given information indicating that estimated average annual bycatch for the Mid-Atlantic bottom otter trawl was 616 loggerheads per year (Murray 2008), along with an additional 134 loggerheads caught annually in scallop trawl gear (Murray 2007 and NMFS 2008). In February 15, 2007, NMFS published an Advanced Notice of Public Rulemaking (ANPR) to amend the regulations for the use of turtle excluder devices (TEDs) in several fisheries (72 FR 7382). Those fisheries included the flynet, whelk, calico scallop, Atlantic sea scallop and summer flounder. The ANPR also noted that NMFS was considering replacing the summer flounder fishery sea turtle protection area, boundary, described at 50 CFR 223.206(d)(2)(iii), with a general sea turtle protection area boundary.

NMFS received 165 comments during the comment period for the ANPR, the majority of which were nearly identical. Many of the comments indicated support for the TEDs requirements in trawl fisheries and as well as closure of "key sea turtle habitat areas." Other comments received suggested that a deflector for trawl fisheries might be an approach to be considered.

This scoping document will provide the public with information for their consideration and comment related to measures to reduce the take of endangered and threatened sea turtles in trawl fisheries. NMFS will use comments received during this scoping period in designing the options for rulemaking to reduce the take of sea turtles in commercial trawl fisheries. NMFS will hold public scoping meetings starting May 2009 until June 2009 and will accept comments through July 10, 2009.

NMFS believes that public involvement is critical during the development and drafting of any regulatory action. Through public input, NMFS will be better able to explore a reasonable range of management alternatives and their potential impacts. NMFS, therefore, is seeking comments from participants in commercial and recreational fisheries, regional fishery management councils, states, representatives from the conservation and scientific communities, and the general public. NMFS anticipates that additional issues and options will be identified by the public during the series of scoping meetings. These additional issues and options will also be considered when drafting the proposed rule and draft EIS.

It is important to note that the options presented in this document are identified for the purposes of stimulating discussion and input from the public, and some may not be analyzed in the NEPA EIS process. Also, the options presented in this document are not necessarily endorsed by NMFS at this time. Rather, these represent a range of management measures, not necessarily mutually exclusive of each other, that NMFS could further consider as the rulemaking process advances. Some of the options have been discussed in the past, and may be more detailed than others. NMFS will consider these options, as well as other options provided by the public through the scoping process when developing management alternatives for Atlantic and Gulf of Mexico trawl fisheries in order to meet the goals of the ESA and to prevent or minimize sea turtle bycatch.

STATUS of SEA TURTLES

Since the 1970s, the six species of sea turtles found in U.S. waters have been listed under the U.S. Endangered Species Act (ESA). Three species are listed as endangered – Leatherbacks (*Dermochelys coricea*), Kemp’s ridley (*Lepidochelys kempii*), and Hawksbill (*Eretmochelys imbricata*.) Three species are listed as threatened – Olive ridley (*Lepidochelys olivacea*), Loggerhead (*Caretta caretta*), and Green (*Chelonia mydas*). Florida and Mexico’s Pacific Coast breeding colonies of green turtles are listed as endangered as well. Likewise, the Pacific coast of Mexico’s olive ridley breeding colonies are listed as endangered. More information on these species can be found at <http://www.nmfs.noaa.gov/pr/species/turtles/#species>.

The National Marine Fisheries Service and the U.S. Fish and Wildlife Service have joint jurisdiction under the ESA to protect and recover sea turtles. The Services are required under the ESA to “seek to conserve endangered species and threatened species and shall utilize their authorities in furtherance of the purposes of this Act.” Therefore, the Services seek to address the threats to the recovery of sea turtle populations. The principal threats to sea turtles are poaching, habitat destruction (in-water and beach), bycatch, pollution, and vessel strikes.

NMFS is responsible for in-water conservation of sea turtles. The principal anthropogenic in-water threat to sea turtles is bycatch in fisheries. To help reduce the sea turtle bycatch in fisheries, NMFS has promulgated several regulations pursuant to the ESA and the Magnuson-Stevens Fishery Conservation and Management Act (MSA), 16 USC 1801 *et seq.* For example, beginning in the late 1980s and into the early 1990s, NMFS required shrimp fishermen in the Gulf of Mexico and south of the North Carolina border to use turtle excluder devices (TEDs). 50 CFR 223.206(d)(2)(i). More recently, NMFS extended that requirement into the flounder fishery south of the North Carolina border, 50 CFR 223.206(d)(2)(iii). NMFS has also placed restrictions on the use of gillnets in Pamlico Sound, North Carolina. 50 CFR. 223.206(d)(7). In the Chesapeake Bay, NMFS requires modified pound net leaders in order to reduce sea turtle bycatch. 50 CFR. 223.206(d)(10). Lastly in the Atlantic, pelagic longline vessels are required to use circle hooks with certain bait combinations, have onboard sea turtle release equipment, and comply with specified sea turtle handling and release protocols, 50 CFR 635.21, and sea scallop dredge vessels are required to use chain mats across the opening of dredges to prevent the capture of sea turtles. 50 CFR 223.206(d)(11).

In the Pacific, NMFS has prohibited fishing with draft gillnets in CA/OR in the shark/swordfish fishery during El Nino events. 50 CFR 223.206(d)(6). In addition, in the Hawaii swordfish fishery, circle hooks with whole finfish bait and 100% observer coverage is required, there is a hard cap on the number of turtle takes and annual fleet-wide effort is limited. 50 CFR 665.32-33.

In 2007, NMFS published a rule under the ESA to require fishing vessels that are identified through an annual determination process to take observers at NMFS’

request, 50 CFR 222 Subpart D. Through this process, NMFS will be able to better understand sea turtle bycatch in state and Federal fisheries in order to implement measures to prevent or minimize that bycatch.

While NMFS' actions to reduce sea turtle bycatch in fisheries have aided in the efforts to achieve species' recovery, current indications are that work towards recovery is still needed. In 2007, the USFWS and NMFS released the five-year reviews for all six species of sea turtles as required by the ESA. All of the five-year reviews recommended no changes in the current listings. With the exception of the Kemp's ridley, all of the reviews also recommended that full status reviews be undertaken in accordance with the Distinct Population Segment policy. Currently, there is such a review being conducted for loggerhead sea turtles.

In 2007, NMFS was also petitioned to designate critical habitat for leatherbacks off the west coast of the United States. The petitioners were particularly concerned about the area in which the CA/OR drift gillnet fishery for swordfish/thresher shark operates. On December 28, 2007, NMFS determined that the petition may be warranted and has been working to designate critical habitat (72 FR 73745) and is currently working on the 12-month finding.

NMFS received two additional petitions in 2007 to designate the North Pacific loggerhead and the Northwest Atlantic loggerhead sea turtles as "Distinct Population Segments" and list them as endangered. NMFS 90-day petition finding determined that these petitions may be warranted in November 16, 2007 (72 FR 64585) and March 5, 2008, respectively. A joint NMFS/USFWS Biological Review Team (BRT) is currently assessing the global status of loggerheads. The BRT report will provide the foundation upon which NMFS and USFWS will determine whether to designate Distinct Population Segment(s) for loggerheads and, if so, what their ESA listing status should be.

Finally in January 2009, NMFS and USFWS released the revised Recovery Plan for the Northwest Atlantic Population of the Loggerhead Sea Turtle. This plan contains a detailed analysis of threats, prioritized recovery actions based on these threats and detailed recovery criteria. The recovery plan can be found at http://www.nmfs.noaa.gov/pr/pdfs/recovery/turtle_loggerhead_atlantic.pdf.

STRATEGY FOR SEA TURTLE CONSERVATION AND RECOVERY IN RELATION TO ATLANTIC OCEAN AND GULF OF MEXICO FISHERIES

In 2001, NMFS developed the Strategy for Sea Turtle Conservation and Recovery in Relation to Atlantic Ocean and Gulf of Mexico Fisheries (Strategy) to address sea turtle bycatch on a gear basis as opposed to specific fisheries. This Strategy was developed in part because NMFS addresses fishery interactions through the ESA

Section 7 process on federal fisheries, but that approach does not allow the integration of state-managed fisheries and fisheries not currently managed under a Fishery Management Plan. On July 31, 2001, NMFS published a Notice of Intent (NOI) to prepare an Environmental Impact Statement to assess the potential impacts on the human environment of sea turtle interactions with fishing activities in the Atlantic and Gulf of Mexico (66 FR 39474). The expectation was that through the scoping meetings that NMFS would be able to gather input from states, Councils, industry, academia, non-governmental organizations, and other interested parties in order to address sea turtle bycatch by gear type throughout the Atlantic and the Gulf of Mexico. In May, 2004, NMFS published a notice of availability (NOA) in part to respond to the 10 comments received in 2001 NOI on the Strategy (69 FR 30627, May 28, 2004). The majority of the commenters expressed support for the Strategy. There were four principal comments. First, some commenters felt that the Strategy should not be restricted to just the Atlantic. NMFS responded that the majority of priority fisheries in the Pacific, such as longline and drift gillnets, were already being managed by Magnuson-Stevens Fishery Conservation and Management Act regulations. Others felt that the Strategy should include non-fishery impacts. NMFS responded that fisheries has been identified as one of the most significant impacts to sea turtles and therefore the Strategy would remain focused on fisheries impacts. The third major comment centered on priority actions such as implementing larger turtle excluder devices (TEDs) in trawl fisheries, restricting leaders in the Chesapeake Bay pound net fishery, prohibiting large mesh gillnets and placing observers on Mid-Atlantic gillnet fisheries. NMFS responded that they had addressed the majority of these comments in rulemaking already. And finally, the last comment noted that the NOI lacked specific information on the actions being proposed. In the same NOA, NMFS presented a draft information framework and draft criteria for evaluating gear types under the Strategy, so that the public could continue to provide input to the Strategy process. The NOA provided a list of gear in the Atlantic Ocean and the Gulf of Mexico Fisheries on which the public could comment. NMFS also then presented a Fisheries Characterization, Bycatch and Regulations Information Framework for public comment.

NMFS then began a process to characterize all the state and Federal fisheries in the Gulf of Mexico and the Atlantic Ocean to better understand the nature of those fisheries and the interactions with sea turtles. On November 8, 2006, NMFS announced in the Federal Register the availability for review of the Atlantic and Gulf of Mexico trawl fishery characterizations (71 FR 65473).

During this time period, NMFS also began to develop a Geographic Information System (GIS) database of all information on sea turtle distribution and fishing effort. This data was collected from NOAA Science Centers, other Federal agencies, and private research groups. As a result of the fishery characterization and data collection process, NMFS identified the priority gears for the Strategy as trawl, gillnets, traps and pots and hook and line (including longline). NMFS will leave open the possibility to take conservation measures on other gear types as new information becomes available.

In 2006, NMFS Northeast Fisheries Science Center issued a report that estimated the estimated average annual bycatch of loggerhead turtles in the Mid-Atlantic bottom otter trawl fisheries (Cape Hatteras, NC to Long Island Sound, NY) to be 616 animals for the years 1996-2004 (Murray 2006.) This estimate did not include the Mid-Atlantic scallop trawl fishery, for which a separate sea turtle bycatch estimate was done for 2004-2005. The estimated average annual bycatch of loggerhead sea turtles in the Mid-Atlantic scallop trawl fishery in the years 2004-2005 was 134 animals (NMFS 2008 and Murray 2007).

Interaction in trawl fisheries are of a particular concern, since sea turtles forcibly submerged in any type of restrictive gear eventually suffer fatal consequences from prolonged anoxia and/or seawater infiltration of the lung (Lutcavage and Lutz 1997). A study examining the relationship between tow time and sea turtle mortality in the shrimp trawl fishery showed that mortality was strongly dependent on trawling duration, with the proportion of dead or comatose sea turtles rising from 0% for the first 50 minutes of capture to 70% after 90 minutes of capture (Henwood and Stuntz 1987). However, metabolic changes that can impair a sea turtle's ability to function can occur within minutes of a forced submergence. While most voluntary dives appear to be aerobic, showing little if any increases in blood lactate and only minor changes in acid-base status, the effects are very different in forcibly submerged sea turtles, where oxygen stores are rapidly consumed, anaerobic glycolysis is activated, and acid-base balance is disturbed, sometimes to lethal levels (Lutcavage and Lutz 1997). Forced submergence of Kemp's ridley sea turtles in shrimp trawls resulted in an acid-base imbalance after just a few minutes (times that were within the normal dive times for the species) (Stabenau *et al.* 1991). Conversely, recovery times for acid-base levels to return to normal may be prolonged. Henwood and Stuntz (1987) found that it took as long as 20 hours for the acid-base levels of loggerhead sea turtles to return to normal after capture in shrimp trawls for less than 30 minutes. This effect is expected to be exacerbated for sea turtles that are recaptured before metabolic levels have returned to normal.

Following the recommendations of the 1990 National Research Council (NRC) report to reexamine the association between tow times and sea turtle deaths, the data set used by Henwood and Stuntz (1987) was updated and re-analyzed (Epperly *et al.* 2002; Sasso and Epperly 2006). Seasonal differences in the likelihood of mortality for sea turtles caught in trawl gear were apparent. For example, the observed mortality exceeded 1% after 10 minutes of towing in the winter (defined in Sasso and Epperly (2006) as the months of December-February), while the observed mortality did not exceed 1% until after 50 minutes in the summer (defined as March-November; Sasso and Epperly 2006). In general, Sasso and Epperly (2006) concluded that tows of short duration (<10 minutes) in either season have little effect on the likelihood of mortality for sea turtles caught in the trawl gear and would likely achieve a negligible mortality rate (defined by the NRC as <1%). Intermediate tow times (10-200 minutes in summer and 10-150 minutes in winter) result in a rapid escalation of mortality, and eventually reach a plateau of high mortality, but will not equal 100%, as a sea turtle caught within the last hour of a long tow will likely survive (Epperly *et al.* 2002; Sasso and Epperly 2006). However, in both seasons, a

rapid escalation in the mortality rate did not occur until after 50 minutes (Sasso and Epperly 2006) as had been found by Henwood and Stuntz (1987). Although the data used in the reanalysis were specific to bottom otter trawl gear in the U.S. south Atlantic and Gulf of Mexico shrimp fisheries, the authors considered the findings to be applicable to the impacts of forced submergence in general (Sasso and Epperly 2006).

Given this information on sea turtles and interactions with trawl fisheries, and because of the development and use of turtle excluder devices (TEDs) in other trawl fisheries, in the United States and elsewhere, NMFS determined that trawl fisheries would be the first gear type addressed under the Strategy. To aid NMFS in determining which trawl fisheries to address first, NMFS looked to bycatch estimates in trawl fisheries. In the Murray 2008 estimate, the average annual estimate of loggerhead sea turtle bycatch was broken down by target species group. This revealed that approximately 47 percent of the estimated bycatch occurred in the summer flounder/scup/black sea bass fishery, 15 percent in the Atlantic mackerel/squid/butterfish, 10 percent in the Atlantic croaker, 10 percent in Northeast multispecies (large and small mesh), 6 percent in the northeast skate complex, 5 percent in the horseshoe crab fishery, and less than 1 percent for bluefish, monkfish, spiny dogfish and weakfish respectively.

As a result of the number of different types of trawl fisheries, the amount of sea turtle bycatch in various trawl fisheries, and the availability of bycatch mitigation technology, NMFS has preliminarily determined that trawl fisheries in the Atlantic and the Gulf of Mexico would best be addressed in three phases. By addressing trawl fisheries in phases, NMFS would be able to implement bycatch mitigation strategies as technology becomes available. The preliminary phases that NMFS is considering are as follows:

- Trawl Phase One – summer flounder, Atlantic sea scallop, whelk, calico scallop and the flynet fisheries for croaker and weakfish. (A description of Trawl Phase one fisheries can be found below.)
- Trawl Phase Two – sheepshead/black drum/king whiting, porgy, skimmer, Spanish sardine/scad/ladyfish/butterfish, and multispecies (large and small mesh).
- Trawl Phase Three – skate, horseshoe crab, monkfish, bluefish, spiny dogfish, herring trawl fisheries, and any other trawl fisheries not previously identified or considered.

On May 8, 2009, NMFS published an NOI to prepare an EIS and conduct public scoping meetings (74 FR 21627). The current scoping process will focus on issues to be addressed in the EIS for Phase One trawl fisheries. The public will also have the opportunity to comment on the delineation of these phases and whether other trawl fisheries should be included or excluded. For example, another option (described in the presentation of alternatives below) would be to require regulations to protect sea

turtles in all trawl fisheries. The public will also be able to comment on the range of alternatives for addressing sea turtle bycatch in the phase one trawl fisheries. These alternatives may include the spatial and temporal extent of the regulation, requirements to use TEDs, and closed areas amongst other alternatives. In the Alternatives section of this document, the range of alternatives that NMFS has preliminarily identified is presented.

In a phased approach as described above, NMFS will need to determine how to define the particular fisheries to be regulated. For example, if NMFS were to require a TED to be used in the summer flounder fishery in a particular area, the vessels that would be subject to this regulation would need to be defined. One option could be all vessels using trawl gear that have any summer flounder on board. Another option would be to have all vessels using trawl gear that have more than a certain amount of summer flounder on board (e.g., 10lbs, 50lbs, 100lbs). NMFS will work to identify appropriate landing levels or permit status to help define these fisheries. Input from the public is welcome regarding ways to define these fisheries.

The public scoping period for the EIS will begin May 8, 2009 and continue until July 10, 2009. There will be five public meetings. Information on the meetings can be found in Annex I.

FISHERIES DESCRIPTION

Summer Flounder Fishery

Since 1992, all vessels using bottom trawls to fish for summer flounder in specific times and areas off Virginia and North Carolina have been required to use NMFS-approved TEDs in their nets 50 CFR 223.206(d)(2)(iii)). Currently, the escape opening requirements for the flounder TED are ≥ 35 inches (≥ 89 cm) in width and ≥ 12 inches (≥ 31 cm) in height 50 CFR 223.207(b)(1). Although this final rule requiring the larger opening in the shrimp trawl fishery did not require vessels in the summer flounder trawl fishery to use the larger escape opening sizes, the preamble to the rule stated NMFS was evaluating the need for such restrictions in this fishery (68 FR 8456, February 21, 2003). The smaller opening currently used in this fishery is likely insufficient to allow the escapement of leatherback sea turtles and larger loggerhead and green sea turtles. The larger opening TEDs have passed the NMFS testing criteria for turtle escapement, and NMFS has conducted testing of the larger opening in the mid-Atlantic summer flounder trawl fishery since 2003.

As part of this first phase of rulemaking, NMFS is considering modifying TED regulations in the summer flounder trawl fishery to require a larger escape opening. The larger escape opening would have a 142-inch (361cm) circumference with a corresponding 71-inch (180cm) straight-line stretched measurement. This is expected to decrease escape times for all turtles and allow for the release of leatherbacks and all larger loggerhead and green sea turtles. The larger opening would be consistent with sea turtle regulations currently in place in the shrimp trawl fishery.

Additionally, the northern component of the summer flounder trawl fishery, which currently does not fall under the TED requirement, would also be considered for a requirement to use TEDs, as further described below.

Whelk and Calico Scallop Trawl Fisheries

The whelk fishery occurs primarily in the state waters of Georgia and South Carolina. In addition to Georgia and South Carolina, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Virginia, Maryland, and North Carolina have reported landings of channeled, lightning or knobbed whelk by trawl gear. The fishery arose as an alternative fishery when the shrimp fishery was closed. Trawling for knobbed, channeled and lightning whelk occurs from mid-February through mid-April.

Due to documented sea turtle interactions in whelk fisheries, NMFS evaluated potential TED designs for the fishery in 2000-2001. The whelk TED was developed in cooperation with the Georgia Department of Natural Resources (GDNR) and the University of Georgia Marine Extension Service was designed to provide near shore whelk fishermen with a TED that would allow the target species to pass through the TED frame and be retained as catch. The whelk TED passed the NMFS turtle testing protocol in 2001. The whelk TED design is similar to the top-opening flounder TED used along the southeastern Atlantic coast during the winter months, and features enlarged openings at the bottom of the frame. Currently, GDNR requires the use of this TED in the whelk trawl fishery in Georgia state waters. As part of the Strategy, NMFS is considering requiring the use of TEDs in the whelk trawl fishery throughout the range of the fishery.

The calico scallop fishery originally developed in North Carolina in the early 1960s, but the focus of the fishery shifted to areas off Florida during the early 1970s. Calico scallop trawls are typically small (e.g., headrope length < 40 feet) and usually towed for short periods of time (e.g., 15 minutes). The scallop beds off Florida stretch from Jacksonville to Ft. Pierce in 60 to 240 feet (18 to 73 m) of water. Due to large fluctuations of calico scallop abundance and patchy distribution, landings within the fishery have been extremely sporadic. No vessels are thought to currently be operating in the fishery as a result of calico scallop depletion, habitat degradation, and lack of processing facilities. NMFS has determined that a hard TED, similar in design to the whelk TED, could be installed in calico scallop trawls. NMFS is considering an option to require the use of TEDs in the calico scallop trawl fishery in the event that the fishery re-emerges.

Mid-Atlantic Scallop Trawl Fishery

The U.S. Atlantic sea scallop fishery is conducted in the Gulf of Maine, on Georges Bank, and in the mid-Atlantic offshore region southward to North Carolina. The commercial fishery for Atlantic sea scallops occurs year round and is primarily conducted using dredges and otter trawls. Approximately 10 percent of landings in the sea scallop fishery are from vessels using trawl gear, primarily in the

mid-Atlantic. Fishing by these vessels often occurs during the summer when other species (e.g., summer flounder) are not available (NMFS 2003). Trawl fishermen participating in the sea scallop fishery primarily use either Atlantic sea scallop trawls or flounder trawls. Sea turtle bycatch has been documented in the Atlantic sea scallop trawl fishery.

In 2005 and 2006, NMFS tested the feasibility of TED use in the sea scallop trawl fishery. The sea scallop TED tested is a whelk TED that has been modified to prevent chafing of the gear. This TED design passed the NMFS testing criteria for sea turtle escapement. Initial results suggest that TED use in the sea scallop trawl fishery is feasible. As part of the first phase of rulemaking, NMFS is considering an option to require the use of TEDs in the Mid-Atlantic sea scallop trawl fishery.

Flynet Fishery

Flynets are high profile trawls fished just off the bottom and range from 80 to 120 feet (24.4 to 36.6 m) in width, with wing mesh sizes of 8 to 64 inches (41 to 163 cm). The flynet fishery is a multi-species fishery that operates along the east coast of the United States. Sea turtle bycatch has been documented in this fishery. One component of the fishery operates inside of 180 feet (55 m) from North Carolina to New Jersey, and targets Atlantic croaker, weakfish, and other finfish species. Another component of the flynet fishery operates outside of 180 feet (55 m) from the Hudson Canyon off New York south to Hatteras Canyon off North Carolina. Target species for the deeper-water component of the fishery include bluefish, Atlantic mackerel, squid, black sea bass, and scup. The more inshore flynet fishery targeting croaker and weakfish is being considered for Phase One. TEDs for the flynet fishery have been in development since 1999. Two semi-rigid TED designs for use within the flynet fishery have passed the NMFS turtle testing protocol when rigged with a top-opening escape panel. NMFS is considering an option to require the use of TEDs in the flynet fishery.

Replacement of the Summer Flounder Fishery Sea Turtle Protection Area Boundary with a General Sea Turtle Protection Area Boundary

The existing Summer Flounder Fishery Sea Turtle Protection Area rule requires that any summer flounder trawler operating within the boundary must use TEDs (50 CFR 223.206(d)(2)(iii)). Currently, this protection area is bounded on the north by a line extending off Cape Charles, Virginia, on the south by a line extending from the South Carolina-North Carolina border, and on the east by the Exclusive Economic Zone boundary. Vessels are exempted from the summer flounder TED requirement north of Oregon Inlet, North Carolina, from January 15 through March 15, annually.

From 1994-2004, observers documented turtle bycatch in summer flounder and other mid-Atlantic bottom otter trawl fisheries in areas and times when TEDs are not required in the summer flounder trawl fishery (Murray 2006). Based on the analysis,

the likelihood of interacting with a turtle depends on the time and area in which fishing occurs rather than the fish species being targeted. While incidental captures of sea turtles occurred throughout the year, Murray (2006) concluded that most interactions were confined to certain bathymetric and thermal regimes. Because of documented bycatch of sea turtles north of the current line, NMFS is considering expanding the geographic scope of the TED requirements in the summer flounder fishery as part of the first phase of rulemaking. Any new geographic scope for the TED requirements for the summer flounder fishery may also be the geographic scope for the other trawl fisheries being considered for regulations to protect sea turtles.

ALTERNATIVES FOR TRAWL PHASE ONE OF THE ATLANTIC/GULF STRATEGY

In this section NMFS presents a menu of options under the four components that will make-up the entire alternative. NMFS will select an option from the spatial, temporal, fisheries and fisheries operating sections to create a complete alternative. NMFS will make this selection based on the scoping discussions, as well as analysis as to what is the most realistic combination of options to create an alternative.

No Action Alternative (Status Quo): Under the no action alternative, trawl fisheries in the Atlantic Ocean would continue to fish in the same manner. The current TED requirements would remain in place and no additional measures would be required in these fisheries to reduce sea turtle interactions.

Spatial Alternatives

Spatial Alternative 1: Under this alternative, the regulation would apply to proposed Area 1, which is bound on the north by a line extending south along 70.00° W from the south facing shoreline of Cape Cod, MA to 41.15° N/70.00° W, then extending east along 41.15° N to the outer boundary of the Exclusive Economic Zone (EEZ). This area is bounded on the east by the outer boundary of the EEZ and on the west by the mean high water line (Figure 1a).

Spatial Alternative 2: Under this alternative the regulation would apply to Proposed Area 2 which is bounded on the north by a straight line extending from the intersection of the south facing shoreline of Cape Cod, MA with 70.00° W to the intersection of the outer boundary of the Exclusive Economic Zone (EEZ) with 68.00° W. Proposed Area 2 is bounded on the east by the outer boundary of the EEZ and on the west by the mean high water line (Figure 1b).

Spatial Alternative 3: Under this alternative the regulation would apply to the entire Exclusive Economic Zone (EEZ) of the East Coast of the United States south from the Canadian border to the intersection of 81.00 ° W longitude. This spatial alternative would affect the northernmost latitude described in Table 1 and Table 2 of the temporal alternatives, shown below. Instead of being 41.75° N, it would be the northernmost latitude of the U.S. EEZ along the East Coast.

Temporal Alternatives

Temporal Alternative 1: Under this alternative, the regulation would be required south of specific latitudes at varying times each year, as summarized in Table 1.

Table 1: Vessels entering waters south of the following latitudes must comply with the designated regulation during the following times:

Latitude	Time Frame
38° N	January 1 through January 31
36° N	February 1 through March 15
38° N	March 16 through April 15
40° N	April 16 through May 15
41.75° N	May 16 through November 30
40° N	December 1 through December 31

Temporal Alternative 2: Under this alternative the regulation would be required south of specific latitudes at varying times each year, as summarized in Table 2.

Table 2: Vessels entering waters south of the following latitudes must comply with the designated regulation during the following times:

Latitude	Time frame
37° N	January 1 through April 15
39° N	April 16 through May 15
41.75° N	May 16 through October 31
39° N	November 1 through November 30
37° N	December 1 through December 31

Temporal Alternative 3: Under this alternative, the regulation would apply throughout the year with no exceptions.

Fisheries Alternatives

Fisheries Alternative 1: Under this alternative, the regulation would apply to all trawl fisheries targeting summer flounder, whelk, Atlantic sea scallop, and calico scallop and flynet fisheries targeting croaker and weakfish.

Fisheries Alternative 2: Under this alternative, the regulation would apply to all trawl fisheries. All trawl fisheries refer to the following fisheries – Summer flounder, Atlantic sea scallop, whelk, calico scallop, flynet fisheries for croaker and weakfish, sheepshead/black drum/king whiting, porgy, skimmer, Spanish sardine/scad/ladyfish/butterfish, and multispecies (large and small mesh), skate, horseshoe crab, monkfish, bluefish, spiny dogfish, herring trawl fisheries, and other trawl fisheries not previously identified or considered.

Fisheries Alternative 3: Under this alternative, the regulation would apply to those trawl fisheries with the highest bycatch, e.g., 5% or greater of total trawl bycatch, as reported in Murray 2008 (see Table 3) and other documents (e.g., scallop trawl estimates in Murray 2007 and NMFS 2008).

Table 3. Average annual estimates of loggerhead turtles for requested fish group, 2000-2004 (Murray 2008)

Main Species Group	Average Annual Estimate of Loggerhead Bycatch from 2000-2004	% of Total Assigned
Atlantic croaker	41	10%
Atlantic mackerel/Squid/Butterfish	62	15%
Bluefish	3	<1%
Horseshoe crab	19	5%
Monkfish	2	<1%
Northeast multispecies (large and small mesh combined)	43	10%
Northeast skate complex	24	6%
Sea scallop (in otter trawl gear only)	20	5%
Spiny dogfish	1	<1%
Summer flounder/Scup/Black sea bass	192	47%
Weakfish	4	<1%
Total takes from trips assigned to identifiable species groups	411	100%
Total unassigned	77	

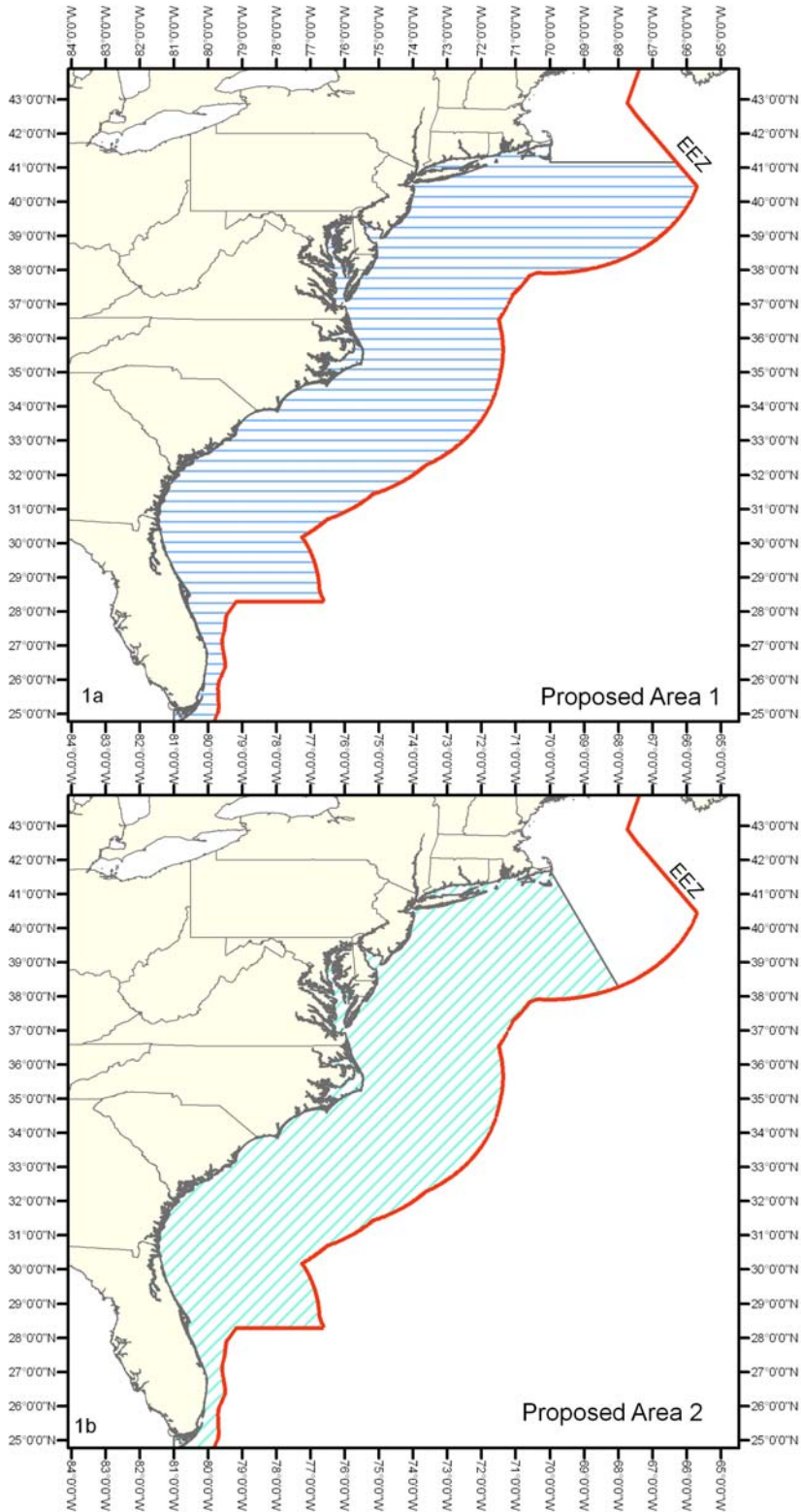
Fisheries Operating Alternatives

Fisheries Restriction Alternative 1: Under this alternative, TEDs would be required in all trawl fisheries to reduce the incidental capture of sea turtles.

Fisheries Restriction Alternative 2: Under this alternative, trawl fisheries selected in the Atlantic Ocean would be prohibited from operating.

Fisheries Restriction Alternative 3: Under this alternative, TEDs and/or other regulatory requirements, (e.g., tow times), would be required.

FIGURE 1



Annex I -- Schedule of Public Scoping Meetings

The dates, times, and locations of the meetings are scheduled as follows:

1. *Silver Spring, Maryland* -- May 15, 2009, 10am-12pm NOAA Science Center, 1301 East West Highway, Silver Spring, MD 20910.
2. *New York, New York* -- June 9, 2009, 7-9pm Mid-Atlantic Fishery Management Council meeting, Radisson Martinique on Broadway, 49 West 32nd Street, New York, NY 10001.
3. *Brunswick, Georgia* – June 15, 2009, 7-9pm, Georgia Department of Natural Resources Coastal Division Headquarters, 1 Conservation Way, Brunswick, Georgia 31520.
4. *Manteo, North Carolina* – June 20, 2009, 2-4pm at the Roanoke Festival Park, Small Auditorium, One Festival Park, Manteo, NC 27954.
5. *Portland, Maine* -- June 23, 2009, 7-9pm, New England Fishery Management Council meeting, Holiday Inn by the Bay, 88 Spring Street, Portland, ME, 04101.

ANNEX II -- ADDITIONAL INFORMATION ON SEA TURTLE STATUS

For more information on the status of threatened and endangered sea turtles please visit the following links.

Green -- http://www.nmfs.noaa.gov/pr/pdfs/species/greenturtle_5yearreview.pdf

Hawksbill -- http://www.nmfs.noaa.gov/pr/pdfs/species/hawksbill_5yearreview.pdf

Kemp's Ridley -- http://www.nmfs.noaa.gov/pr/pdfs/species/kempstridley_5yearreview.pdf

Leatherbacks -- http://www.nmfs.noaa.gov/pr/pdfs/species/leatherback_5yearreview.pdf

Loggerhead -- http://www.nmfs.noaa.gov/pr/pdfs/species/loggerhead_5yearreview.pdf

Olive Ridley -- http://www.nmfs.noaa.gov/pr/pdfs/species/oliveridley_5yearreview.pdf

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