

*Comment 15:* Fishermen are concerned that data are lacking on the causal relationship between strandings and shrimp fishing. For example, in May of 2000, 22 turtles stranded along the South Carolina coast while the shrimp fishery was operating. Yet in May 2001, 21 turtles stranded along that coast in the absence of shrimp fishing. They stated that recreational fishers and boaters, habitat loss, and pollution are all sources of strandings.

*Response:* NMFS agrees there are many causes that contribute to strandings. Causes include, but are not limited to, diseases, boat strikes, ingestion of marine debris, dredging, power plant entrainment, and incidental capture in fisheries. The cause of death can only be determined in a limited number of cases such as when gear is associated with the carcass. However, there are other sources of data that provide substantial evidence to indicate that shrimp trawling is the main contributing factor to sea turtle mortality (Magnuson *et al.*, 1990; Caillouet *et al.*, 1991, 1996; Crowder *et al.*, 1995; TEWG, 2000). In 1989, a Committee on Sea Turtle Conservation was formed under the auspices of the National Research Council (NRC). The charge to NRC was to review the scientific and technical information pertaining to the conservation of sea turtles and the causes and significance of turtle mortality. The NRC found that, "Of all known factors, by far the most important source of death was the incidental capture of turtles (especially loggerheads and Kemp's ridleys) in shrimp trawling." The NRC report is based on numerous data sources including shrimping effort correlations with stranding levels, independent trawl surveys, and tags returned from turtles that were incidentally captured in shrimp trawl nets. In addition to the NRC report, NMFS' observers have documented incidental capture of sea turtles in shrimp trawl nets throughout the southeastern Atlantic Ocean and Gulf of Mexico. The NMFS Shrimp Trawl Observer Program observed 2,833 sea days between January 2000 and May 2002. During this time NMFS observers documented the incidental capture of 49 sea turtles. These turtles were captured in various locations (4 were captured in the offshore waters of Texas, 5 in the offshore waters of Alabama, 1 in the nearshore waters (state waters) of Alabama, 5 in the nearshore waters of South Carolina, 1 in the offshore waters of Louisiana, 2 in the nearshore waters of Louisiana, 2 in the nearshore waters of Mississippi, 4 in the offshore waters of eastern Florida, 14 in the nearshore

waters of western Florida, and 10 in the offshore waters of western Florida).

The November 2000 TEWG report cites studies that show that the use of TEDs has significantly reduced strandings over the period 1980–1997 by an estimated 40 percent in South Carolina and 58 percent in Georgia, relative to strandings estimates without TEDs. The TEWG also indicates that a significant TED effect on strandings is detectable through the time series analysis of biweekly data, in spite of the increasing trend in annual strandings. Recent work in Georgia that takes shrimp landings into account show strandings per unit of shrimp catch were reduced 37 percent with the use of TEDs.

*Comment 16:* Some environmental groups and state agencies commented that data collected from key nesting beaches in the Atlantic Ocean indicate that the leatherback turtle nesting population may be declining. Globally, leatherbacks are experiencing a severe decline. They also state that the northern nesting population of loggerhead turtles has declined and the portion of the northern nesting population that nests in South Carolina has decreased by as much as 47 percent in the past 20 years. Therefore, they allege that large TEDs are essential to ensure the recovery of these species. Large TEDs allow large juvenile and sexually mature loggerheads and green turtles, as well as leatherback turtles to escape and decrease escape times for all turtles thereby making TEDs more effective.

*Response:* NMFS is requiring larger openings of TEDs as described in the Summary of the Final Rule and the Provisions and Justification of the Final Rule section of this notice.

*Comment 17:* Fishermen believe that current data do not justify the use of these larger TEDs in all areas and times. The year-round use of the leatherback TED is unnecessary. Additional research is necessary to ensure that burdens are not placed on the industry without a corresponding benefit to turtles.

*Response:* Data from multiple sources, including at-sea observer programs, aerial sightings, public reports, incidental captures and strandings documented through the Sea Turtle Stranding and Salvage Network (STSSN), support the use of a TED capable of releasing leatherback turtles in all offshore waters and a TED capable of releasing large loggerhead turtles throughout the southeastern Atlantic Ocean and Gulf of Mexico. Loggerheads are documented in all inshore and offshore areas, whereas leatherbacks are predominantly found in offshore waters

but infrequently enter inshore waters. Additionally, both loggerheads and leatherbacks occur in shrimping areas during all seasons when shrimp trawling activity is expected to occur (see NMFS response to Comment 13).

*Comment 18:* The Gulf and South Atlantic Fisheries Foundation states that there must be appropriate resources to conduct a comprehensive industry review of turtle information and perform analysis of the massive data sets. This would include stock assessment evaluations and economic analysis.

*Response:* A significant amount of available data were reviewed by the NRC when they made their 1990 findings (see comment 15). The latest stock assessment on the leatherback and loggerhead turtles conducted by NMFS (National Marine Fisheries Service Southeast Fisheries Science Center, 2001) was extensively reviewed by an independent peer review process UM Independent System for Peer Reviews - whose findings supported the quality of the stock assessment and can be obtained upon request (see ADDRESSES).

*Comment 19:* Environmental organizations believe that the effects on sea turtle populations as a result of inadequate TEDs far outweigh the impacts that may occur on nesting beaches; whereas, fishermen believe that nesting beach and nest protection should be stressed before new regulations on fishermen take place.

*Response:* NMFS shares responsibility with the U.S. Fish and Wildlife Service (USFWS) for sea turtle recovery actions under the ESA. NMFS is responsible for addressing threats in the marine environment while the USFWS oversees recovery actions on the nesting beaches. As outlined in all of the Atlantic sea turtle joint ESA Recovery Plans, both threats on the nesting beaches and in the marine environment must be addressed in order to recover these listed species. Programs to protect nests and hatchlings have been ongoing for many years. A primary example is the joint Mexico/U.S. protection program for Kemp's ridleys at Rancho Nuevo that began in the late 1970s. Nesting beaches throughout the southeastern U.S. are protected by the states, Department of Interior, Department of Defense, and the public. NMFS must continue to reduce incidental capture in shrimp trawl fisheries when data support that modifications to existing TED requirements are necessary.

*Comment 20:* Environmental organizations feel it is illegal for NMFS to imperil threatened and endangered species by delaying the implementation of this final rule to alleviate short-term