

# Northeast Distant Fishery Sea Turtle Bycatch Reduction Project

## Profile: The Atlantic Pelagic Longline Fleet

### FACT SHEET

Since the publication of Sebastian Junger's national bestselling novel, *The Perfect Storm*, and the subsequent blockbuster movie of the same name, "pelagic longlining" has become one of the most widely recognized forms of commercial fishing. This gear is employed to harvest the larger, free-swimming fish in the open ocean, including swordfish, tunas, mahi mahi and sharks. These are known as highly migratory species. As their name implies, they migrate throughout the world's oceans.

Like most of the world's recreational fisheries, longlining depends on catching fish on individual baited hooks. Unlike other hook-and-line fisheries, however, longlining employs a long main line from which individual hooks are suspended at intervals of 250 to 350 feet. The hooks are attached to the main line by monofilament branch-lines called gangions. Floats attached to branch-lines are spaced along the main line to keep it elevated horizontally in the water, and the gangions hang vertically from it. A variety of bait is used, with whole smaller fish, such as Atlantic mackerel and squid. Luminescent light sticks are often fastened to the gangions near the baited hooks, making them more attractive to the quarry and also attracting smaller species on which targeted species feed. The longlines used by the domestic fleet range from 20 to 40 miles in length. The U.S. pelagic longline fleet accounts for five to eight percent of the total number of pelagic longline hooks fished in the Atlantic.

The depth at which the hooks are set is controlled by the length of the lines attaching the main line to the floats, by the length of the gangions, and by the speed at which the longline gear is set (the slower the setting speed, the greater the "belly" in the line and the deeper the hooks).

After a variable "soak time," the gear is retrieved, and the catch is brought on board for cleaning and icing down in the hold. This "one at a time" processing and handling gives longline products a high quality distinction in the marketplace.

In 1999, this fishery came under a limited access program, capping the number of directed swordfish permits to 247 total vessels. In recent years, less than 100 of these vessels are actively fishing along the East and Gulf coasts. The vessels range in length from 40 to 100 feet and fish in waters up to hundreds of miles offshore. Depending on where the fish are and how well they are biting, a longline trip can last from several days to six weeks. Longline boats carry two to six crewmen.



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Pelagic longlining for highly migratory species began on the east coast of the U.S. and Atlantic Canada in the early 1960s. In the early days of the fishery, heavy multifilament lines and gangions with long shank sharks hooks were used. As the fishery developed, the gear evolved to keener and lighter monofilament gear with sportfishing style hooks, known as “American style” longline gear.

Pelagic longliners use an array of high tech devices to locate the water temperature “fronts” where the targeted fish congregate, attracted by bait concentrations. Longline vessel captains use satellite services that provide sea surface and subsurface temperatures, weather faxes, GPS, sonar, and radar to help determine the best places and methods to set their gear.

The following charts show the annual U.S. landings of the three primary species targeted by the domestic pelagic longline fleet: swordfish, yellowfin tuna, and bigeye tuna. The dip in swordfish landings reflects in part international quota reductions since 1990.

