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# SEFSC PELAGIC OBSERVER PROGRAM DATA SUMMARY FOR 2007 - 2011

BY

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## INTRODUCTION

In 1992, the National Marine Fisheries Service (NMFS) initiated scientific sampling of the U.S. large pelagic fisheries longline fleet, as mandated by the U.S. Swordfish Fisheries Management Plan and subsequently the Atlantic Highly Migratory Species Fishery Management Plan (1998). Scientific observers were placed aboard commercial vessels participating in the Atlantic large pelagic fishery by the Southeast Fisheries Science Center (SEFSC) and the Northeast Fisheries Science Center (NEFSC). In 1997, the SEFSC assumed sole responsibility for observer coverage of the pelagic longline fleet.

As described in previous documents (Keene et al. 2007, 2010), observer coverage by the Pelagic Observer Program (POP) since 1992 has been based on NMFS-employed observers, independent contracted personnel, and personnel supplied by observer provider companies. In the summer of 2006 the POP was authorized to retain all of it's observers through a contract observer provider, eliminating independent government contracts.

The SEFSC POP trains scientific observers to record detailed information concerning gear characteristics, location and time the gear is set and retrieved, environmental conditions, status and action of the marine life caught by the gear (alive or dead, kept or discarded), as well as morphometric measurements (length and weight) and sex identification of the animal. Observers also record incidental interactions with marine mammals, sea turtles, fishes, and sea birds. Collections of biological samples (anal fin rays, reproductive tissue, muscle, vertebral centra, skin patches, otoliths, etc.) from some species are used to support research studies pertaining to identification, biology and life history of fishes, turtles, and mammals. Tags are deployed and recovered when possible and data are returned to the proper principal investigator. Experiments are conducted on occasion by NMFS and other biologists via the POP. The data from experimental trips are isolated in the database and do not count towards mandated coverage, however such data are utilized to further scientific and statistical analyses.

The data collected by the POP are used by scientists in a variety of ways. Observed catch and effort data help confirm and augment the information provided through the mandatory submission of self reported Pelagic Logbook forms by vessel owners and operators. Observed catch and effort data are also important in evaluating the effectiveness of management measures, as well as providing information for evaluating the stock status of harvested marine species.

The purpose of this document is to provide a general overview of the POP and summarize the data collected in the western North Atlantic by the SEFSC during the 5 years between 2007 and 2011.

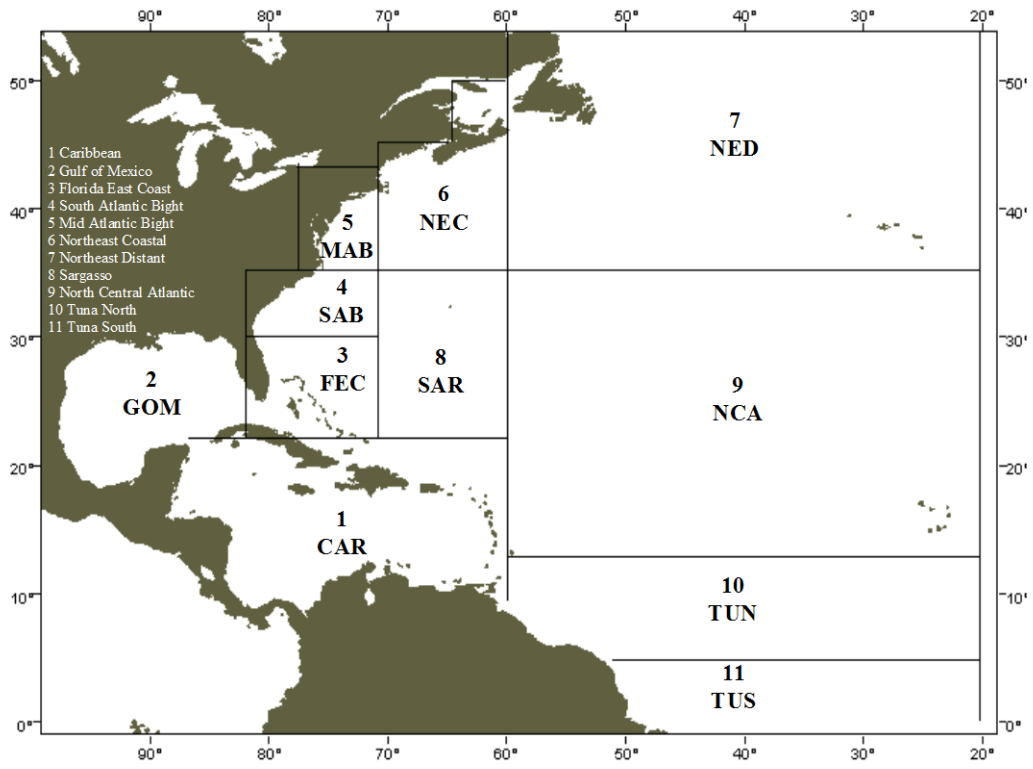


**Figure 1. The fishing area definitions used in classifying the U.S. pelagic longline effort.**

## OBSERVER PERSONNEL

Observers receive training in sampling techniques, data recording, conflict resolution, animal identification, CPR/First Aid and At-Sea Safety, as well as how to conduct themselves professionally in the field. They are also made aware that living conditions aboard ocean-going vessels can be variable (e.g. bunk accommodations, shower or lavatory facilities). While an observer is aboard a vessel, the operator and crew must allow the observer time to collect statistical and biological data. However, any delay in the normal routine of fishing operations or processing of caught fish should be minimal.

## VESSEL SELECTION

In order to obtain a representative, scientific sample of the fleet fishing effort, a list of randomly selected pelagic longline vessels with current permits is generated for each geographical area (Figure 1) and quarter for the current year, based upon reports of their effort (number of sets) from the Pelagic Logbook forms and landing records from the previous year.

The objective of the selections during 2007-2011 was to achieve a representative 8% coverage of the fishing effort in each fishing area and during each calendar quarter of the year. The chance of selecting an individual vessel depends on fishing effort that the permitted vessel reported by area and quarter in the previous year. Due to the requirement for 8% coverage in each quarter and area that the fleet fishes, an individual vessel could be selected for observation as many as four times in a year.

Observer coverage on a vessel becomes mandatory under U.S. fishery regulations [50 CFR 635.7] when vessel owners and operators, permitted for the fishery, are selected and notified in writing. A letter of selection (Appendix D) signed by the SEFSC Center Director is sent by certified mail to the selected permit holder address on file with the Highly Migratory Species (HMS) permit office.

## SELECTION LETTER

The SEFSC selection letter (Appendix D) states that the SEFSC must be notified by the vessel permit holder, in writing, of **each fishing trip** the vessel makes during the time period stated in the letter as regulated in 50 CFR 635.7 (Appendix E). The letter also specifies the minimum number of sets required (averaged from reporting in previous years) by the POP in order for that vessel to fulfill its obligation for observer coverage. Planning and coordination of observer coverage prior to each trip departure is very important. For convenience, each selection letter is mailed with a trip notification form that, when returned prior to a trip, provides the POP staff with written information concerning the vessel's name, captain, phone numbers and of contact person(s), communications and safety equipment available aboard the vessel. Information about the vessel's location, dates, and times of departure and return is included as well. The form can also be used to inform the POP staff when a vessel is active in another fishery, under repair, or no longer fishing. The written notification is necessary to document the owner's or operator's efforts to comply with mandatory coverage. The POP now utilizes electronic mail (e-mail) for correspondence between the program and industry. Messages and trip notification forms can be sent to popobserver@noaa.gov to expedite logistics with observer deployments and reporting. Telephone calls are helpful, after written notification, to determine other specific details prior to the deployment of the observer to the vessel. It is important to keep in mind that observer coverage by the SEFSC is based on a minimum number of sets per selected vessel (specified in the selection letter) and additional coverage may be required if the trip is shorter than expected.

## SAFETY EXAMINATION DECAL

The Observer Health and Safety Regulations [50 CFR 600, Appendix F] became effective in June 1998 and require vessels that are subject to mandatory observer coverage to display a current Commercial Fishing Vessel Safety Examination decal (Figure 2). Formal NMFS notices of the requirement have been distributed to permit holders. Dockside examinations are free and the decal is valid for two years (during the time of this memorandum 2007-2011). Vessels owners or operators who need to have their vessels examined in order to comply with the regulations should contact the local U.S. Coast Guard office or visit the website: http://www.fishsafe.info/locateexaminers.htm.


**Figure 2. Example of the decal displayed on a vessel after completing the United States Coast Guard Commercial Fishing Vessel Safety Examination**

## VESSEL NON-COMPLIANCE

The Atlantic Highly Migratory Species Fisheries Management Plan [50 CFR 635] specifies that once notified in writing, the permit holder/owner/operator must keep the POP informed of their fishing activities and trip departures during the period of selection. Vessel owners/operators must also understand an observer assigned to monitor a fishing trip can be a male or female due to federal regulations prohibiting discrimination in hiring and/or contracting practices. In general, the lack of bathroom facilities, privacy, or sparse living conditions aboard a vessel is not sufficient grounds to prohibit observer coverage by either a male or a female observer. Once arrangements have been made by the SEFSC office to assign an observer to a vessel, the vessel operator must wait until the observer has arrived. Advance notification of departure times and locations can prevent unnecessary delays. If the vessel departs without an observer once coverage has been arranged or if the operator rejects an observer present for boarding, this will be documented and the vessel name will be submitted for non-compliance to the NMFS Southeast Regional Office (SERO), which is responsible for issuing annual permits for participation in the fishery, and to the NMFS Office of Law Enforcement (OLE) responsible for enforcing federal fisheries regulations. Permit holders, owners, and/or operators of vessels can also be reported to SERO for: observer non-compliance for non-communication with the coordinator's office, lack of verbal or written notification of departures or fishing activities, hindrance of the observer in completing his/her data collection duties, and/or harassment of an observer during a trip. Lastly, a permit holder's failure to display a current Commercial Fishing Vessel Safety decal during the selection period will also be reported to OLE. It is the intent of this program to seek a good working relationship between the scientific personnel involved in the data collection and the daily routine of the vessel crew; the observer program personnel do not control actions taken by SERO and NMFS Enforcement office.

## DATA COLLECTION FORMS

In order to record data needed to describe the catch and effort of the longline fishery, the POP observer must complete, at the minimum, three data forms (Appendix 1). The first is called the "Longline Gear Log", which is used to record characteristics of the gear used in fishing operations, such as: the type of mainline used, length of drop line, number and length of gangions, make and model of hooks used, as well as the number of floats, high fliers, and radio beacons used. The second data form is the "Longline Haul Log", which is used to describe fishing effort. This form allows the observer to record the length, targeted species, location and time duration for each set and haul-back, as well as environmental information, the speed at which the vessel sets the gear, target species, and type of bait used. The last of the data forms is called the "Individual Animal Log". This data sheet allows the observer to record the species of animal caught, condition of the catch (alive, dead, damaged, or unknown) when brought to the vessel, and the final disposition of the catch (kept, thrown-back, finned, etc.). If an animal is brought onboard the vessel, the observer will verify the species, identify sex, and record length measurements. A final weight of a retained animal is recorded during unloading at the dock. This weight is matched to the length measurements on the data sheets using a specially numbered tag to identify the carcass of primary interest.

**DATA SUMMARY**
**2007-2011**

*Vessel Coverage*

From January 1, 2007 to December 31, 2011, 743 pelagic longline trips were observed in waters of the western North Atlantic Ocean (Table 1). Of the trips monitored, a total of 126 vessels were observed at least once during this time period. In total, observers spent 9,036 days-at-sea during which 5,757 sets and 5,813 hauls were observed (Figure 3 and Table 1). POP procedure is to count any haul that is interrupted intentionally to allow the gear to soak longer, or that is interrupted for weather or mechanical problems for longer than 6 hours, as a "split haul" (i.e. a single set that has two or more hauls associated with it).

Based on the historical observations made by the POP, scheduling fishing and fishing trips are not always predictable. Excluding the difficulties of communication with owners or operators concerning fishing trip departures, scheduling of an observed trip on any selected vessel can also be hindered by mechanical repairs, weather, crew or captain replacement, activity in another fishery, as well as availability of an observer. Given the transit time to and from the fishing grounds and the effort (in days) spent fishing; a POP observer spent an average of 1.6 days at sea for each set observed during the timeframe presented in this memorandum (Figure 3, Table 1), as well as historically (Keene et al. 2007, 2010).


**Figure 3. Total POP observer effort, 2007 - 2011**.

In the interest of simplicity, combined data from both the experimental and the regular fishery are presented in this summary. Experimental fisheries typically have enhanced observer coverage, thus increasing total observed effort. Years having experimental efforts include 2008, 2009, 2010, and 2011.

The average percent coverage was over 13 percent (13.39%) for years 2007-2011 combined (Figure 4). The variation in the percent coverage during this time reflects variable funding and fleet participation.

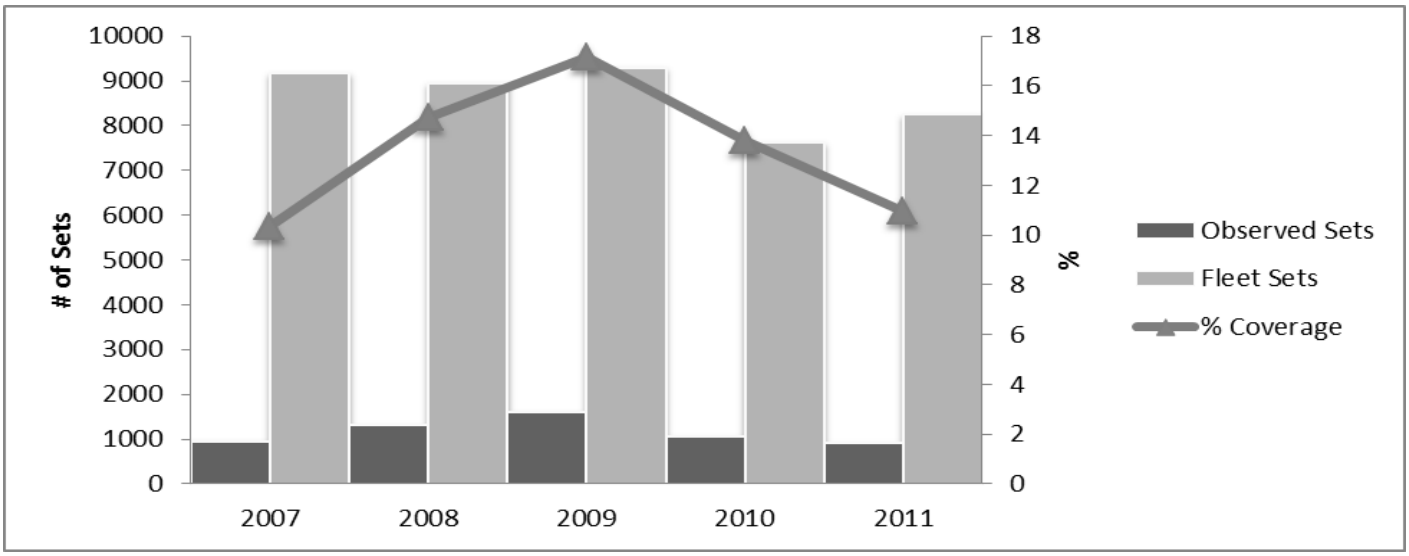


**Figure 4. Comparison of total observed sets recorded by the POP, the sets reported by the U.S. pelagic longline fleet through pelagic logbook forms, and percent coverage achieved by year, 2007-2011.**

*Gulf of Mexico Enhanced Observer Coverage during Atlantic bluefin tuna Spawning*

Starting 2007, the POP undertook the responsibility of increasing observer coverage in the Gulf of Mexico to monitor longline interactions with Atlantic bluefin tuna (*Thunnus thynnus*) during their peak period of abundance, January through June. Actual periods of increased coverage were dependent upon available funding but generally began in late March and lasted through early June. During the enhanced coverage in the years 2007, 2008, and 2009, 100% coverage of vessels with a Highly Migratory Species (HMS) commercial swordfish directed fishing permit, pelagic longlining in the GOM were targeted. Starting in 2010, this effort was reduced to a target of 50%. The 50% target tends to result in an actual coverage of 40% or greater for that spatial and temporal strata, giving adequate statistical precision needed to estimate bycatch of Atlantic bluefin tuna by pelagic longline in the Gulf of Mexico (Beerkircher, et al. 2009) as well as continuing to facilitate sample collection.

*Species Observed*

The presence of a scientific observer onboard a commercial longline vessel provides an opportunity for collecting valuable information for monitoring both the fishery and the stocks being harvested. The data forms provide scientists with basic information concerning gear configuration, baits used, number of hooks set, and the environmental parameters associated with a particular set. Equally important, the observers record data concerning the species of fish encountered, their size, sex and status (kept, discarded, etc).

Data collected during a fishing trip are entered into a computer usually within 7 days of the observer's return to port. Data are screened for accuracy during the debriefing meeting with the observer followed by data entry. Audit programs used by the POP help catch data entry errors. Because of the ongoing refinement of the quality assurance programs, the accuracy of the observer database is increasingly improved over time.

Summarizing the 2007-2011 catch data, observer personnel identified a total of 185,620 fish, marine mammals, sea turtles and birds (Figure 5; Tables 2 and 3).

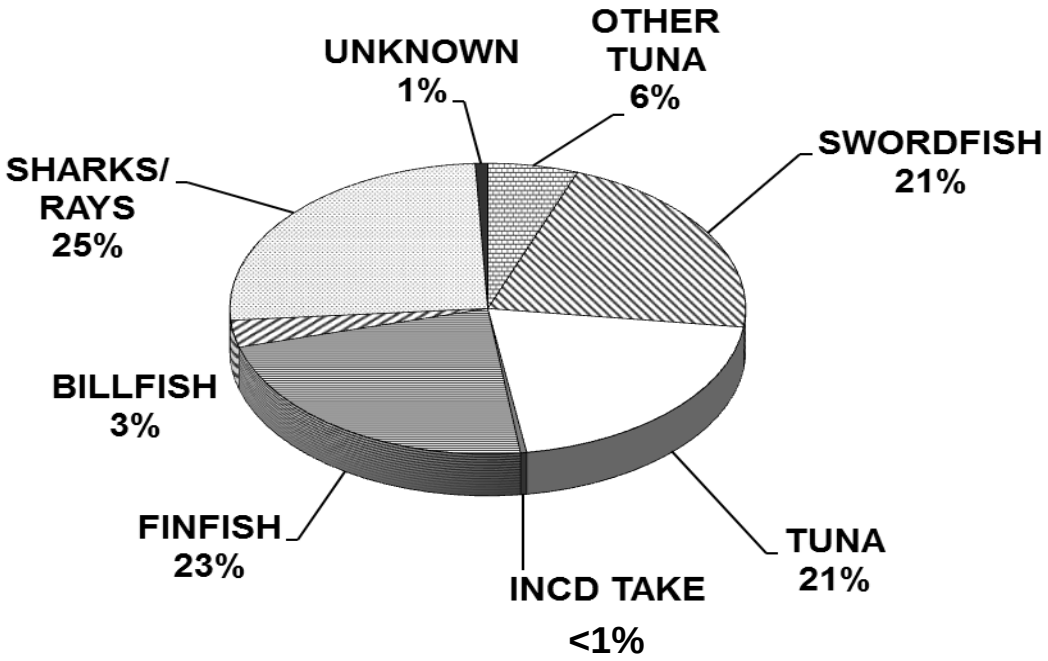


**Figure 5. Species composition of the 185,620 identified animals observed by general category groups by the POP, 2007-2011. It should be noted that due to elevated coverage in the Gulf of Mexico, 44% of these animals were observed in the Gulf of Mexico. The incidental take (marine mammals, turtles, and sea birds) represents less than 1% of the total catch documented in the POP database. The tuna category comprises yellowfin, bigeye and bluefin.**

This total includes 1,854 animals in the "UNKNOWN" category that could only be identified to a general fish category, (i.e. unknown tuna, unknown shark, etc) but the observer was able to determine the alive/dead status. In addition, the Incidental Take (INCD TAKE) (Figure 5; Table 3) includes 120 marine mammals (~6% released dead), 537 sea turtles (~1% released dead), and 23 seabirds (87% released dead).

Although a wide variety of fish were caught by the observed longline vessels, only about eight species were routinely valued by the fishery as a marketable product (>50% captured were kept). These primary species (swordfish, yellowfin tuna, bigeye tuna, mahi-mahi, wahoo, escolar, albacore and shortfin mako shark) comprise about 50% by number (N=86,140) of the total observed catch. Of the total identified fishes observed (Figure 6), swordfish made up 21% by number of the catch; while yellowfin, bigeye, and bluefin tunas, combined, made up 21% by number of the observed catch. Atlantic bluefin tuna is a highly marketable species in this fishery, but due to retention limitations few were kept (~16% of total observed). Interestingly, 15 species account for 91% of the observed gear interactions on pelagic longline vessels during the timeframe of this memorandum: swordfish, yellowfin tuna, blue shark, dolphinfish, lancetfish, bigeye tuna, pelagic stingray, escolar, albacore tuna, blackfin tuna, silky shark, shortfin mako, bluefin tuna, skipjack tuna, and wahoo.

Observation of the status (alive/dead) of fish caught is an important component needed for assessing the effectiveness of some fishery management tools, like minimum sizes. The observer records the status (alive, dead, damaged) of the fish as it is brought alongside the vessel (Tables 2 and 3) and whether it is kept or thrown back. From these data, mortality of discards can be estimated (Table 4). In general, these proportions are similar to the alive/dead proportions for various Atlantic pelagic species caught on longline reported in the literature (Farber and Lee 1991; Hoey 1992; Lee et al. 1995).

*Gear Characteristics*

Observer coverage took place in 9 of the 11 geographical areas of the fishery. As an overview of the observed longline gear deployed, the shortest average length of mainline set on an observed trip was 1 nautical mile (NM) while the longest average set during a trip was 46.62 NM, and the overall mean of all set lengths during this timeframe was 26.08 NM. Additionally, during the 5,813 hauls observed, a total of 4,323,559 hooks were recorded (Table 1).

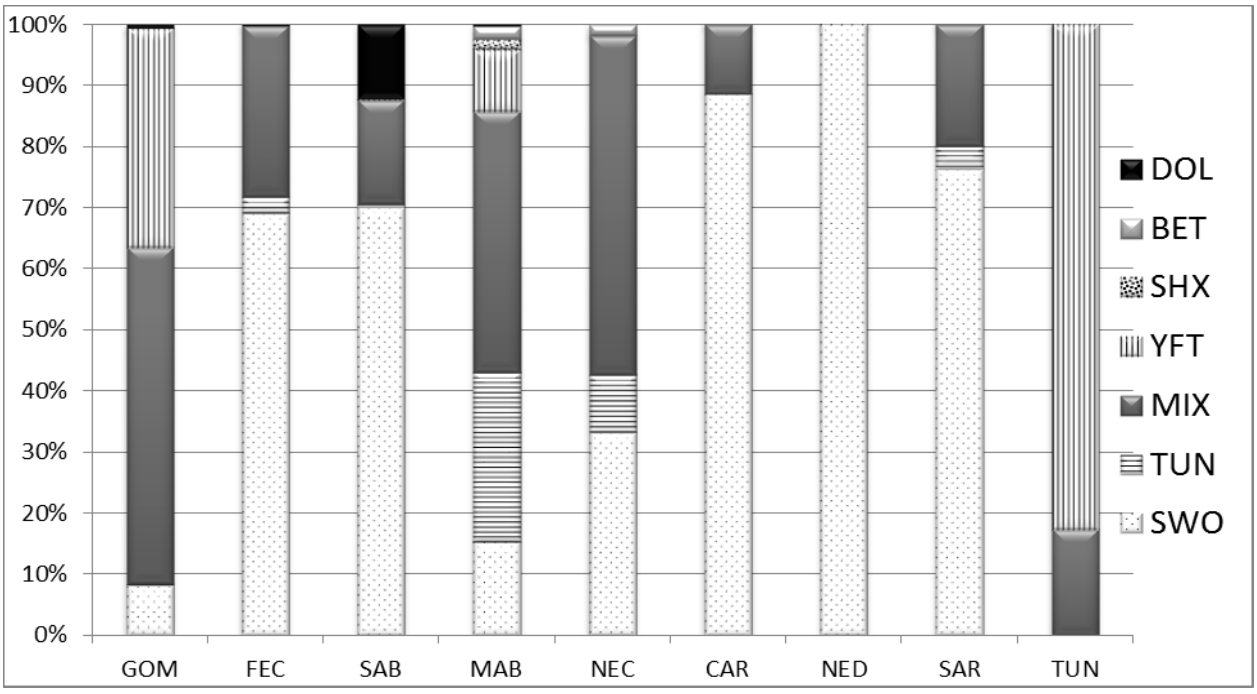


**Figure 6. Indicated target species for hauls observed, by area (see Fig. 1). SWO=swordfish, TUN =mixed tunas, MIX=any combination (usually a combination of swordfish and a tuna species), YFT=yellowfin tuna, SHX=sharks, BET=bigeye tuna, and DOL=mahi-mahi. TUS and NCA are not shown since there were no hauls in these areas during the 2007-2011 fishing years.**

Indicated target species for hauls was highly variable among different areas. The CAR, FEC, NED, and SAR areas had swordfish (SWO) as the primary target species for the hauls observed. A mixed target of swordfish and tuna species (MIX) was prevalent in areas such as GOM, MAB, and the NEC. Yellowfin tuna (YFT), was the primary target species of hauls observed in the TUN area (Figure 6).

Variation in gear construction influencing hook fishing depth (i.e. length of float line plus length of gangion) is quite variable among vessel operators. It should be understood that actual fishing depth of the baited hook is unknown due to line sag, ocean currents and environmental conditions. However, given an assumed fishing depth based on float line and gangion length, three general groupings can be found depending on the geographic areas where fishing takes place.

The average minimum and maximum depths of the baited hooks are varied throughout the areas, but show consistency for areas bordering each other (Table 5). The 1 fathom depths represent mahi (*Coryphaena hippurus*) directed sets, which are set much shallower. Swordfish is the dominate target species in this fishery, followed by tuna species or a combination of both swordfish and tuna, MIX (Figure 6).

Observers also recorded various kinds of bait (species) used during fishing activities (Table 5). Generally speaking, the technique of fishing "dead bait" (bait brought aboard the vessel frozen and then thawed prior to use) is the prevalent bait method used in all geographical areas. On any given set, most crews fish a single species of bait. The primary "dead bait" species recorded for observed sets were Atlantic mackerel (*Scomber scombrus*) and squid (*Illex* spp). Other frozen baits recorded on some of the trips observed, were from the Clupeidae (herring or shad) or Carangidae (scad) families.

As previously reported in Keene et al. (2010), squid and mackerel continue to be the preferred bait kind (>80% of hauls observed) associated with the "dead bait" technique observed in the longline fishery for all areas (Table 5), with squid being the most common bait in most of the geographical areas.

## RECENT POP RESEARCH EFFORTS

Numerous analyses of the POP data are conducted in support of determining the status of fishery resources. However, POP observers also aid in the collection of biological samples. Below are summarized a few POP research studies underway or recently completed making use of the specimen materials collected through the POP.

*Atlantic bluefin tuna Sampling*

In 2007 to 2011, POP observers collected samples from Atlantic bluefin tuna (*Thunnus thynnus*). Samples included gonads, white muscle, liver tissue, skin mucus, vertebrae, skin, spines, and otoliths from retained and dead discarded fish. Samples were sent to a plethora of scientists to carryout research on species identification, age and growth, reproduction, and genetic/molecular stock identification.

*Shark Sampling*

In 1999 the POP began collecting vertebral centra from sharks; samples (primarily from silky, blue, and shortfin mako sharks) were sent to the SEFSC Panama City laboratory during the time period of this memorandum. Information from these centra and other collection efforts will be used to develop or update age and growth models for shark population assessments.

*Mesopelagic Specimen Collection*

During the time period of this summary, mesopelagic specimens were collected for research scientists at the Nova Southeastern University in Ft. Lauderdale, FL. Specimens included primarily lancetfish (*Alepisaurus spp.),* escolar (*Lepidocybium flovobrunneum*), oilfish

(*Revettus pretiosus*), snake mackerel (*Trichiuridae spp.),* and others. These specimens were used to carryout research on: length/length relationships, length/weight relationships, and gut content stable isotope trophic ecology.

*Spearfish Identification*

POP observers gathered detailed information and photographs of istiophorids (billfish). Their efforts provided the data for research on roundscale spearfish (*Tetrapturus georgii)* morphology and distribution (Beerkircher et al., 2008), potential effects of misidentification of roundscale spearfish on stock assessment (Beerkircher et al., 2009) and using head morphology to distinguish between roundscale spearfish and white marlin (Beerkircher and Serafy, 2011).

*Tag Release and Recapture*

The Cooperative Tagging Center (CTC) is located at the SEFSC, Miami, FL. The purpose of the CTC is to provide tags to those wishing to participate in the tag release program, and to collect, archive, and analyze data collected from returned specimens. In order to study movements, as well as gain insight into growth rate, longevity, and mortality rates of highly migratory species, the CTC needs the assistance of individuals and organizations that are willing to tag on a voluntary basis. The Pelagic Observer Program (POP) is a contact to the CTC for the commercial large pelagic fishing community. Commercial pelagic fishermen are asked to contact the POP to provide a large number of tags (not to exceed 50 tags per request). For persons tagging for the first time, a form will be provided which will need to be completed and mailed to the SEFSC. Once the form has been received, a minimum of 25 tags will be provided the first time. If a tagger is already in the CTC database, up to 50 tags may be issued at one time. Keep in mind, however, that the SEFSC reserves the right to limit tag quantity provided.

The Apex Predator Program is located at the Narragansett Laboratory, Narragansett, Rhode Island. This program is similar to the CTC but the focus is on sharks. For more information on shark tagging, contact Lisa Natanson at 401-782-3320.

Many state governments have initiated tagging programs, and the resulting tags have been recovered on observed longline trips. These programs were initiated to track and gather data on fish that travel within state waters, such as the common dolphinfish (*Coryphaena hippurus)*. International fish tags are also recovered aboard observed trips. Various groups such as the International Commission for the Conservation of Atlantic Tunas **(**ICCAT) and the Inter-American Tropical Tuna Commission (IATTC) fund programs that tag highly migratory fishes for research.

As mentioned, tag recaptured fish are extremely important in providing information needed for studies of age, growth, migration and mortality rates of fish populations. With the advances in technology, satellite tags can now provide geolocation, historical migration, depth, and temperature with greater detail. Because the observer or the captain and crew do not have ready access to tag release data, all dead fish with a tag are considered extremely important and reported appropriately. Examples of the types of information obtained from recaptured fish follow:

1) A tag-recaptured swordfish was caught in March 2008 by a longline vessel while a POP observer was aboard. From the tag recapture number (#HM051919), it was determined that the swordfish had been at large for over 558 days (1.5 years) and was recaptured within 37 miles from where it was released. The swordfish had grown approximately 100cm during this time.

2) A longline vessel recaptured a silky shark (tag # R0064) in December 2007, after it had been at liberty for 1,324 days (3.6 years). The shark had been tagged from the NOAA vessel Delaware II and was recaptured after growing approximately 100cm (fork length).

3) A Billfish Foundation tag recapture from a swordfish (BF409367) took place in October 2009. The swordfish was at liberty for 1,150 days (3.2 years) and was caught very close to the tag deployment location in the Gulf of Mexico.

4) A Large Pelagics Research Center popup tag recapture (#95166) of a bigeye tuna occurred in August 2011 after the fish was at liberty for 562 days (1.5 years). The length of deployment represents one of the longest of all popup tag attachments on any pelagic species.

The above are a few of the interesting tag recaptures that took place with a POP observer on board the vessel. It is important for everyone to understand that the recapture of a tagged fish can be a treasure chest of information and lend much insight into the life history of a fish. In some cases, it can extend what we know about a fish's longevity. We appreciate all those that do participate, and we are willing to assist anyone who wants to get started.

## ACKNOWLEDGMENTS

The SEFSC Pelagic Observer Program is grateful to vessel owners, operators, and crews that have participated in the observer program. Without their overall cooperation, the collection of catch and effort data, as well as biological samples would have been difficult. The POP would like to recognize Lawrence Beerkircher, Jennifer Barker, Sascha Cushner, Matthew Maiello, Luis Mazuera, Jennifer Mravic, and Matthew Walia for their help in the collection and processing of the data for this summary. Special acknowledgment is given to observer personnel of the SEFSC and from IAP World Services Inc. (the contractor during the time of this

memorandum). Observers are an integral part in the science and management that occurs for our various fisheries worldwide and are greatly appreciated for such. The summary's cover photo is credited to POP observer Mark Seramur.

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Lee, D.W., C.J. Brown, and T.L. Jordan. 1995. SEFSC pelagic longline observer program data summary for 1992-1994. NOAA Technical Memorandum NMFS-SEFSC-373. 19p.

***For more information***

Information on the observer program or for scheduling an observer trip, please contact the Pelagic Observer Program:

Office Phone: 800 858-0624
E-mail: popobserver@noaa.gov
Website: http://www.sefsc.noaa.gov/fisheries/observers/pelagic.htm
Address: Pelagic Observer Program
NOAA SEFSC
75 Virginia Beach Drive
Miami, FL 33149

General information or questions about programs concerning HMS dealer reporting, HMS logbook submission, or the tagging program, persons should contact the following NMFS contact persons:

DEALER REPORTING: 305-361-4581
PELAGIC LOGBOOK REPORTING: 305-361-4581
GAMEFISH TAGGING PROGRAM (CTC): 800-473-3936
APEX predators program (shark tagging): 877-826-2612

*For more information (cont'd)*

Information on fishing permits or regulations should be directed to the proper contacts below:

**NOAA FISHERIES**
**ATLANTIC HIGHLY MIGRATORY SPECIES MANAGEMENT DIVISION**
*Chief: Margo Schulze-Haugen*
http://www.nmfs.noaa.gov/sfa/hms/
(301) 427-8503

| Topics | Office | Contact Information |
|---|---|---|
| Commercial swordfish<br>Sharks<br>Exempted fishing permits<br>Atlantic HMS news list<br>Pelagic and bottom longline<br>Protected species<br>Limited Access Permits | HMS<br>Headquarters Office | Phone: (301) 427-8503<br>Fax: (301) 713-1917<br>NMFS/SF1<br>1315 East-West Highway<br>Silver Spring, MD 20910 |
| Atlantic tunas<br>Bluefin tuna dealer reporting<br>Bluefin tuna catch document program<br>Charter/Headboat operations<br>International trade permit | HMS<br>Gloucester Office | Phone: (978) 281-9260<br>Fax: (978) 281-9340<br>NMFS/SF1<br>55 Great Republic Drive<br>Gloucester, MA 01930-2298 |
| Billfishes<br>Swordfish<br>Tournament registration<br>Billfish Certificate of Eligibility<br>Pelagic longline<br>Workshops<br>Limited Access Permits | HMS<br>St. Petersburg Office | Phone: (727) 824-5399<br>Fax: (727) 824-5398<br>NMFS HMS<br>263 13th Avenue South<br>St. Petersburg, FL 33701 |
| **Fishing and Dealer Permits** | | |
| Atlantic tunas longline permit<br>Shark and swordfish vessel and dealer permits | NMFS Southeast Regional Permits Office<br>http://go.usa.gov/3WNRT | Phone: (877) 376-4877 (toll free)<br>263 13th Ave. South<br>St. Petersburg, FL 33701 |
| Atlantic tunas (General category), HMS Charter/headboat, HMS Angling , and Swordfish General Commercial permits | Automated Permitting System<br>http://hmspermits.noaa.gov/ | Phone: (888) 872-8862<br>Dial "0" to speak with a person. |
| Atlantic tunas dealer permit<br>Incidental HMS squid trawl permit | NMFS Greater Atlantic Region Permits Office<br>http://www.nero.noaa.gov/aps/permits/ | Phone: (978) 281-9370<br>Fax: (978) 281-9366<br>55 Great Republic Drive<br>Gloucester, MA 01930 |

**Table 1. Number of vessels covered, trips, sets observed, days spent at sea, total hooks set, and percent of sets observed from the total sets required for 5% coverage (8% starting in 2002) of the fishing effort, 1992-2011.**

POP
OBSERVER
COVERAGE
1992-2011

| YEAR | VESSELS COVERED | TRIPS | SETS OBSERVED | DAYS AT SEA | TOTAL HOOKS SET | % of SETS REQUIRED[1] |
|---|---|---|---|---|---|---|
| 1992 | 42 | 45 | 329 | 601 | 197,919 | 51% |
| 1993 | 82 | 108 | 817 | 1,364 | 534,969 | >100% |
| 1994 | 75 | 92 | 650 | 1,081 | 419,105 | >100% |
| 1995 | 74 | 93 | 697 | 1,184 | 487,326 | >100% |
| 1996 | 47 | 51 | 361 | 681 | 223,387 | 45% |
| 1997 | 53 | 58 | 458 | 837 | 315,592 | 66% |
| 1998 | 49 | 54 | 287 | 541 | 180,962 | 53% |
| 1999 | 55 | 72 | 430 | 808 | 291,553 | 86% |
| 2000 | 62 | 72 | 475 | 816 | 330,373 | 92% |
| 2001 | 57 | 75 | 777 | 1,081 | 455,136 | >100% |
| 2002 | 46 | 81 | 855 | 1,634 | 707,187 | >100% |
| 2003 | 57 | 110 | 1,093 | 2,015 | 1,013,676 | 71% |
| 2004 | 64 | 99 | 706 | 1,019 | 535,567 | 81% |
| 2005 | 59 | 111 | 797 | 1,248 | 589,547 | >100% |
| 2006 | 59 | 77 | 569 | 942 | 431,456 | 93% |
| 2007 | 68 | 126 | 950 | 1,450 | 733,580 | >100% |
| 2008 | 70 | 153 | 1,213 | 1,916 | 935,034 | >100% |
| 2009 | 79 | 170 | 1,385 | 2,121 | 1,081,748 | >100% |
| 2010 | 81 | 116 | 888 | 1,352 | 680,541 | >100% |
| 2011 | 81 | 125 | 888 | 1,386 | 598,561 | >100% |
| OVERALL | 1,260[2] | 1,888 | 14,625 | 24,077 | 10,743,219 | N/A |
| YEARLY MEAN: | 63 | 94 | 731 | 1204 | 537,161 | >100% |

[1] % of Sets Targeted = (Sets Observed/Sets Targeted) x 100

[2] Overall Vessels Observed includes no duplications among years. Yearly totals of Vessels Observed include no duplications within that year.

**Table 2. Numbers of alive, dead, and damaged (shark bitten, etc) swordfish, billfish, tunas, and sharks when brought alongside the the boat as recorded by POP observers while deployed aboard U.S. commercial longline vessels, 2007-2011. Does not include animals whose status was unknown (<1% of all animals observed).**

| GROUP | COMMON NAME | ALIVE | DEAD | DAMAGED | TOTAL |
|---|---|---|---|---|---|
| SWORDFISH | SWORDFISH | 11,881 | 25,273 | 1,827 | 38,981 |
| TUNA | BIGEYE TUNA | 3,632 | 2,303 | 144 | 6,079 |
| | YELLOWFIN TUNA | 18,136 | 9,594 | 2,031 | 29,761 |
| | BLUEFIN TUNA | 909 | 1,066 | 58 | 2,033 |
| BILLFISH | ATLANTIC SAILFISH | 657 | 507 | 27 | 1,191 |
| | BLUE MARLIN | 1,014 | 412 | 39 | 1,465 |
| | SPEARFISH SPP. | 60 | 11 | 1 | 72 |
| | SPEARFISH LONGBILL | 17 | 25 | 0 | 42 |
| | SPEARFISH ROUNDSCALE | 88 | 208 | 2 | 298 |
| | WHITE MARLIN | 545 | 412 | 11 | 968 |
| SHARKS/RAYS | | | | | |
| Small Coastal | ATLANTIC SHARPNOSE | 17 | 96 | 6 | 119 |
| Large Coastal | BULL | 12 | 2 | 0 | 14 |
| | HAMMERHEAD SPP. | 201 | 75 | 6 | 282 |
| | HAMMERHEAD SMOOTH | 6 | 4 | 0 | 10 |
| | HAMMERHEAD SCALLOPED | 94 | 100 | 3 | 197 |
| | HAMMERHEAD GREAT | 9 | 8 | 0 | 17 |
| | NURSE | 2 | 0 | 0 | 2 |
| | SANDBAR | 235 | 69 | 2 | 306 |
| | SILKY | 1,464 | 1,165 | 9 | 2,638 |
| | SPINNER | 64 | 146 | 1 | 211 |
| | TIGER | 1,535 | 75 | 1 | 1,611 |
| Pelagic | BLUE | 18,981 | 4,182 | 30 | 23,193 |
| | THRESHER COMMON | 26 | 26 | 2 | 54 |
| | MAKO SPP. | 83 | 41 | 1 | 125 |
| | MAKO SHORTFIN | 1,859 | 673 | 22 | 2,554 |
| | PORBEAGLE | 104 | 45 | 2 | 151 |

| | | | | | |
|---|---|---|---|---|---|
| Prohibited | BASKING | 2 | 1 | 0 | 3 |
| | BIGNOSE | 2 | 1 | 0 | 3 |
| | DUSKY | 161 | 75 | 2 | 238 |
| | NIGHT | 461 | 861 | 38 | 1,360 |
| | MAKO LONGFIN | 81 | 70 | 0 | 151 |
| | THRESHER BIGEYE | 98 | 74 | 1 | 173 |
| | WHITETIP OCEANIC | 176 | 57 | 0 | 233 |
| Others | DOGFISH COLLARED | 5 | 1 | 0 | 6 |
| | DOGFISH SPINEY | 25 | 1 | 0 | 26 |
| | DOGFISH SMOOTH | 48 | 4 | 0 | 52 |
| | DOGFISH UNCLASSIFIED | 10 | 6 | 0 | 16 |
| | RAY PELAGIC (STINGRAY) | 5,933 | 56 | 4 | 5,993 |
| | SHARKS REQUIEM | 1,024 | 388 | 18 | 1,430 |
| | SKATES/RAYS | 48 | 0 | 1 | 49 |

**Table 3. Numbers of alive, dead, and damaged (shark bitten etc.) other tunas, finfish, marine mammals, marine turtles, seabirds and unknown species groups when brought alongside the boat as recorded by POP observers while deployed aboard U.S. commercial longline vessels, 2007-2011. Does not include animals whose status was unknown (<1% of all animals observed)**

| GROUP | COMMON NAME | ALIVE | DEAD | DAMAGED | TOTAL |
|---|---|---|---|---|---|
| TUNA OTHER | ALBACORE | 852 | 3,382 | 186 | 4,420 |
| | BLACKFIN TUNA | 1,538 | 1,884 | 111 | 3,533 |
| | BONITO | 40 | 47 | 4 | 91 |
| | LITTLE TUNY | 91 | 266 | 17 | 374 |
| | SKIPJACK TUNA | 174 | 1,700 | 28 | 1,902 |
| | TUNA UNCLASSIFIED | 70 | 43 | 258 | 371 |
| FINFISH | BARRACUDA | 715 | 58 | 6 | 779 |
| | BLUEFISH | 82 | 20 | 13 | 115 |
| | BLUELINE TILEFISH | 6 | 0 | 0 | 6 |
| | CIGARFISH SPP | 26 | 20 | 0 | 46 |
| | COBIA | 2 | 0 | 0 | 2 |
| | DOLPHIN SPP | 17,568 | 3,637 | 397 | 21,602 |
| | ESCOLAR | 3,711 | 1,790 | 145 | 5,646 |
| | JACK SPP | 11 | 4 | 0 | 15 |
| | LANCETFISH SPP | 635 | 9,608 | 252 | 10,495 |
| | MAKERAL SNAKE | 51 | 183 | 11 | 245 |
| | OILFISH | 450 | 271 | 17 | 738 |
| | OPAH | 9 | 7 | 0 | 16 |

| | | | | | |
|---|---|---|---|---|---|
| | POMFRET SPP | 501 | 310 | 7 | 818 |
| | PUFFER SPP | 125 | 13 | 1 | 139 |
| | RAINBOW RUNNER | 6 | 1 | 1 | 8 |
| | RED SNAPPER | 11 | 2 | 7 | 20 |
| | REMORA | 35 | 0 | 0 | 35 |
| | SUNFISH OCEAN | 135 | 1 | 0 | 136 |
| | SUNFISH SHARPTAIL | 150 | 7 | 0 | 157 |
| | SUNFISH SPP | 141 | 3 | 1 | 145 |
| | TRIPLETAIL | 2 | 0 | 0 | 2 |
| | WAHOO | 258 | 1,329 | 100 | 1,687 |
| MARINE MAMMAL | DOLPHIN | 4 | 1 | 0 | 5 |
| | DOLPHIN ALANTIC SPOTTED | 1 | 0 | 0 | 1 |
| | DOLPHIN BOTTLENOSE | 11 | 0 | 0 | 11 |
| | DOLPHIN COMMON | 0 | 1 | 0 | 1 |
| | DOLPHIN PANTROPIC SPOTTED | 8 | 0 | 0 | 8 |
| | DOLPHIN RISSOS | 23 | 1 | 0 | 24 |
| | MARINE MAMMAL | 8 | 1 | 0 | 9 |
| | PILOT WHALE | 45 | 2 | 0 | 47 |
| | PILOT WHALE LONGFIN | 4 | 0 | 0 | 4 |
| | PILOT WHALE SHORTFIN | 1 | 0 | 0 | 1 |
| | WHALE FALSE KILLER | 2 | 0 | 0 | 2 |
| | WHALE KILLER | 1 | 0 | 0 | 1 |
| | WHALE MINKE | 1 | 0 | 0 | 1 |
| | WHALE PYGMY SPERM | 1 | 1 | 0 | 2 |
| | WHALE, BEAKED | 2 | 0 | 0 | 2 |
| | WHALE, SPERM | 1 | 0 | 0 | 1 |
| MARINE TURTLE | LEATHERBACK | 266 | 4 | 0 | 270 |
| | LOGGERHEAD | 264 | 1 | 0 | 265 |
| | OLIVE RIDLEY | 2 | 0 | 0 | 2 |
| | TURTLE | 0 | 0 | 0 | 0 |
| SEA BIRD | GANNET NORTHERN | 2 | 2 | 0 | 4 |
| | GULL BLACK BACKED | 0 | 6 | 0 | 6 |
| | GULL HERRING | 0 | 5 | 0 | 5 |
| | NORTHERN FULMAR | 0 | 1 | 0 | 1 |
| | PELICAN, BROWN | 1 | 1 | 0 | 2 |
| | SEABIRD | 0 | 1 | 0 | 1 |
| | SHEARWATER GREATER | 0 | 4 | 0 | 4 |

**Table 4. Discards of alive and dead fish of 10 species recorded by POP observers while deployed aboard U.S. commercial longline vessels, 2007-2011.**

| COMMON NAME | DISCARDED ALIVE (A) | DISCARDED DEAD (D) | PROPORTION DEAD $\frac{D}{D+A}$ |
|---|---|---|---|
| SWORDFISH | 91 | 371 | 0.80 |
| BIGEYE TUNA | 3,632 | 2,303 | 0.39 |
| BLUEFIN TUNA | 909 | 1,066 | 0.54 |
| YELLOWFIN TUNA | 8,136 | 9,594 | 0.35 |
| MARLIN BLUE | 1014 | 412 | 0.29 |
| MARLIN WHITE | 545 | 412 | 0.43 |
| SAILFISH ATLANTIC | 657 | 507 | 0.44 |
| BLUE SHARK | 18,981 | 4,182 | 0.18 |
| MAKO LONGFIN | 81 | 70 | 0.46 |
| MAKO SHORTFIN | 1,859 | 673 | 0.27 |

**Table 5. Average hook depth (minimum and maximum in fathoms) and kind of baits observed on U.S. commercial longline vessels by geographical area (see Figure 1), 2007-2011 (non-experimental). Baits used were: Atlantic mackerel (*Scomber scombrus*), squid (*Illex sp.*), herring (*Clupeidae sp.*), artificial, Spanish sardine (*Sardinella aurita*), bigeye scad (*Selar crumenophthalmus*), and "other" (species not identified). All hooks used were circle hooks, and were either size 15/0, 16/0, or 18/0.**

| Areas Fished | Total Hauls | Average Hook Depth (fathoms) | | Bait Kind (% of area total hauls) | | | | | | | Hook Size (% of area total hauls) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | MIN | MAX | Mackerel | Herring | Squid | Artificial | Sardine | Scad | Other | 15/0 | 16/0 | 18/0 |
| CAR | 55 | 19 | 32 | 29% | 0% | 71% | 0% | 0% | 0% | 0% | 0% | 15% | 85% |
| FEC | 945 | 1 | 45 | 28% | 1% | 70% | 0% | 0% | 0% | 0% | 0% | 38% | 62% |
| GOM | 4,295 | 1 | 60 | 7% | 3% | 57% | 0% | 33% | 0% | 0% | 0% | 94% | 6% |
| MAB | 1,255 | 1 | 33 | 32% | 0% | 66% | 1% | 0% | 0% | 1% | 1% | 43% | 56% |
| NEC | 675 | 5 | 22 | 41% | 0% | 56% | 0% | 0% | 0% | 2% | 0% | 13% | 87% |
| NED | 218 | 5 | 13 | 74% | 0% | 26% | 0% | 0% | 0% | 0% | 0% | 0% | 100% |
| SAB | 1,070 | 1 | 28 | 51% | 0% | 45% | 0% | 3% | 0% | 1% | 0% | 32% | 68% |
| SAR | 241 | 16 | 32 | 39% | 2% | 59% | 0% | 0% | 0% | 0% | 0% | 17% | 83% |
| TUN | 160 | 20 | 27 | 0% | 0% | 26% | 0% | 16% | 58% | 0% | 0% | 100% | 0% |

Appendices:

(A) Longline gear characteristics log form

**PELAGIC OBSERVER PROGRAM** **LONGLINE GEAR LOG** **SE FISHERIES SCIENCE CENTER**

| OBS/TRIP NUMBER | VESSEL NUMBER | VESSEL NAME | DATE LANDED mm/dd/yyyy |
|---|---|---|---|
| STRING NUMBER | NUMBER OF HOOKS | **ANCHOR** USED? NO _____ YES _____ | WEIGHT _____ lbs |

**MAINLINE**

COLOR: Clear 01 _____, White 02 _____, Pink 03 _____, Black 04 _____, Green 05 _____, Blue 06 _____, Multi-color 07 _____, Red 08 _____, Other 09 _____

DIAMETER ___ . ___ mm

TEST _____ lbs

MATERIAL: Nylon 1 _____, Cotton 2 _____, Steel Wire 3 _____, Other 9 _____

# OF STRANDS _____

**FLOATS**

| TYPE | USED? NO=0 YES=1 | NUMBER | DISTANCE BETWEEN |
|---|---|---|---|
| Polyball | _____ | _____ | |
| Bullet/Daub | _____ | _____ | |
| Other | _____ | _____ | |
| MAX HOOKS BETWEEN | | _____ | |
| RADIO BEACONS | | _____ | |
| RADAR REFLECTORS | | _____ | |
| SECTIONS | | _____ | ___ . ___ nm |

**LIGHT STICKS**

USED? NO _____ YES _____

COLOR: White 02 _____, Pink 03 _____, Black 04 _____, Green 05 _____, Blue 06 _____, Multi-color 07 _____, Red 08 _____, Other 09 _____, Yellow 10 _____, Purple 11 _____

**GANGIONS**

COLOR: Clear 01 _____, White 02 _____, Pink 03 _____, Black 04 _____, Green 05 _____, Blue 06 _____, Multi-color 07 _____, Red 08 _____, Other 09 _____

DIAMETER ___ . ___ mm

TEST _____ lbs

MATERIAL: Nylon 1 _____, Cotton 2 _____, Steel Wire 3 _____, Other 9 _____

DISTANCE BETWEEN _____ ft

| | GANGION LENGTH | GANGION COUNT | **LEADERS** USED? NO=0, YES=1 | **SWIVELS** USED? NO=0, YES=1 | NUMBER SWIVELS/ GANGION |
|---|---|---|---|---|---|
| #1 | _____ ft | _____ | _____ | _____ | _____ |
| #2 | _____ ft | _____ | _____ | _____ | _____ |

LEADER LENGTH _____ in

LEADER TEST _____ lbs

LEADER MATERIAL: Nylon 1 _____, Cotton 2 _____, Steel Wire 3 _____, Other 9 _____

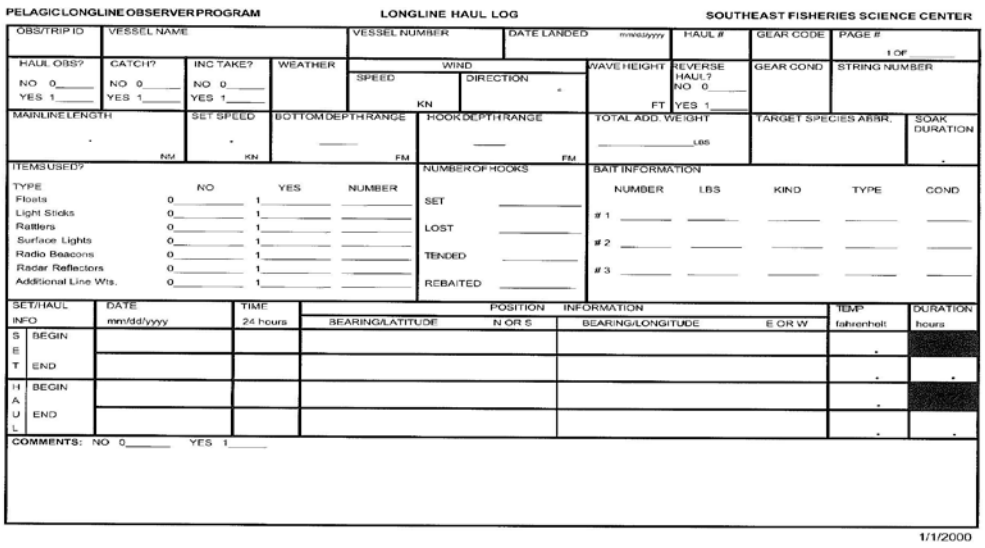
**DROPLINES**

| | LENGTH | DISTANCE BETWEEN |
|---|---|---|
| #1 | _____ ft | _____ ft |
| #2 | _____ ft | _____ ft |
| #3 | _____ ft | _____ ft |

**HOOKS**

| | BRAND | MODEL/PATTERN | SIZE | OFFSET |
|---|---|---|---|---|
| HOOK #1 | _____ | _____ | ____/____ | _____ ° |
| HOOK #2 | _____ | _____ | ____/____ | _____ ° |
| HOOK #3 | _____ | _____ | ____/____ | _____ ° |

(B) Longline haul log form



PELAGIC LONGLINE OBSERVER PROGRAM — LONGLINE HAUL LOG — SOUTHEAST FISHERIES SCIENCE CENTER

| OBS/TRIP ID | VESSEL NAME | VESSEL NUMBER | DATE LANDED mm/dd/yyyy | HAUL # | GEAR CODE | PAGE # 1 OF |
|---|---|---|---|---|---|---|
| | | | | | | |

| HAUL OBS? | CATCH? | INC TAKE? | WEATHER | WIND SPEED KN | WIND DIRECTION | WAVE HEIGHT FT | REVERSE HAUL? NO 0 YES 1 | GEAR COND | STRING NUMBER |
|---|---|---|---|---|---|---|---|---|---|
| NO 0 YES 1 | NO 0 YES 1 | NO 0 YES 1 | | | | | | | |

| MAINLINE LENGTH NM | SET SPEED KN | BOTTOM DEPTH RANGE FM | HOOK DEPTH RANGE FM | TOTAL ADD. WEIGHT LBS | TARGET SPECIES ABBR. | SOAK DURATION |
|---|---|---|---|---|---|---|
| | | | | | | |

ITEMS USED?

| TYPE | NO | YES | NUMBER |
|---|---|---|---|
| Floats | 0 | 1 | |
| Light Sticks | 0 | 1 | |
| Rattlers | 0 | 1 | |
| Surface Lights | 0 | 1 | |
| Radio Beacons | 0 | 1 | |
| Radar Reflectors | 0 | 1 | |
| Additional Line Wts. | 0 | 1 | |

NUMBER OF HOOKS: SET ____ LOST ____ TENDED ____ REBAITED ____

BAIT INFORMATION

| | NUMBER | LBS | KIND | TYPE | COND |
|---|---|---|---|---|---|
| # 1 | | | | | |
| # 2 | | | | | |
| # 3 | | | | | |

| SET/HAUL INFO | | DATE mm/dd/yyyy | TIME 24 hours | POSITION INFORMATION BEARING/LATITUDE | N OR S | BEARING/LONGITUDE | E OR W | TEMP fahrenheit | DURATION hours |
|---|---|---|---|---|---|---|---|---|---|
| SET | BEGIN | | | | | | | . | |
| | END | | | | | | | . | . |
| HAUL | BEGIN | | | | | | | . | |
| | END | | | | | | | . | . |

COMMENTS: NO 0 YES 1

1/1/2000

(C) Large pelagics individual animal log form.

*SOUTHEAST FISHERIES SCIENCE CENTER*
*INDIVIDUAL ANIMAL LOG*

01-01-20004

| Obs/Trip Identifier | Vessel Name | Vessel Number | Date of Haul mm/dd/yyyy / / | Haul Number | Page _____ of _____ |
|---|---|---|---|---|---|
| | | | | | |

| CARCASS TAG NUMBER OR SPECIMEN NUMBER | SPECIES Name (Abbr) | SPECIES Code | Photo Taken (R-n) | STATUS Unknown (0) Alive (1) Dead (2) Damage (3) | ACTION Unknown (0) Kept (1) Released dead (2) Released alive (3) Finned (4) Lost (5) Tended (6) | LENGTH MEASUREMENTS (cm) 1 | 2 | 3 | Code | Actual Dressed Weight (Lbs) | SEX U (0) M (1) F (2) | TAG NUMBER OR SAMPLE INFORMATION OR COMMENT(r) | TAG CODE TR (1) TT (2) RC (3) | Est. Round Weight (Lbs) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
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COMMENTS: NO_____ YES_____

(D) Pelagic Observer Program Species List

| Scientific Name | Common Name | POP Code | NMFS Code |
|---|---|---|---|
| *Istiophoridae* | BILLFISH | BIL | 0190 |
| *Makaira nigricans* | MARLIN BLUE | BUM | 2179 |
| *Testrapturus albidus* | MARLIN WHITE | WHM | 2177 |
| *Istiophorus albicans* | SAILFISH ATLANTIC | SAI | 3026 |
| *Tetrapturus spp.* | SPEARFISH | SPX | 4000 |
| *Tetrapturus pfluegeri* | SPEARFISH LONGBILL | SPF | 4010 |
| *Tetrapturus georgii* | SPEARFISH ROUNDSCALE | SPG | 4009 |
| *T. albidus/georgii (Unknown)* | WHITE MARLIN / R.S. SPEARFISH | WHX | 2180 |
| *Xiphias gladius* | SWORDFISH | SWO | 4320 |
| | | | |
| | SHARK | SHX | 3508 |
| *Isurus spp* | SHARK MAKO | XMA | 3580 |
| *Isurus oxyrinchus* | SHARK MAKO SHORTFIN | SMA | 3505 |
| *Isurus paucus* | SHARK MAKO LONGFIN | LMA | 3502 |
| *Lamna nasus* | SHARK PORBEAGLE | POR | 3501 |
| *Carcharhinus longimanus* | SHARK OCEANIC WHITETIP | OCS | 3498 |
| *Carcharihinidae spp* | SHARK REQUIEM | SRQ | 3571 |
| *Galieocercdo cuvier* | SHARK TIGER | TIG | 3515 |
| *Rhizopriondon terraenovae* | SHARK ATLANTIC SHARPNOSE | SAS | 3518 |
| *Carcharhinus acronotus* | SHARK BLACKNOSE | SBN | 3485 |
| *Charcharhinus ultima* | SHARK BIGNOSE | SBG | 3491 |
| *Carcharhinus limbatus* | SHARK BLACKTIP | SBK | 3495 |
| *Prionace glauca* | SHARK BLUE | BSH | 3504 |
| *Carcharhinus leucas* | SHARK BULL | SBU | 3497 |
| *Carcharhinus obscurus* | SHARK DUSKY | DUS | 3514 |
| *Carcharhinus isodon* | SHARK FINETOOTH | SFT | 3481 |
| *Carcharhinus plumbeus* | SHARK SANDBAR | SSB | 3513 |
| *Carcharhinus falciformis* | SHARK SILKY | FAL | 3493 |
| *Carcharhinus brevipinna* | SHARK SPINNER | SSP | 3496 |
| *Carcharhinus signatus* | SHARK NIGHT | SNI | 3494 |
| *Carcharhinus perezii* | SHARK REEF | SRF | 3490 |
| *Alopias spp.* | SHARK THRESHER | XTH | 3500 |
| *Asopias superciliosus* | SHARK THRESHER BIGEYE | BTH | 3510 |
| *Asopias vulpinus* | SHARK THRESHER COMMON | PTH | 3509 |
| *Pseudocarcharias kamoharai* | SHARK CROCODILE | SCR | 3578 |
| *Carcharias taurus* | SHARK SAND TIGER | SST | 3482 |
| *Sphyrna spp.* | SHARK HAMMERHEAD | XHH | 3516 |
| *Sphyrnamokarran* | SHARK HAMMERHEAD GREAT | GHH | 3524 |
| *Sphyrna lewini* | SHARK HAMMERHEAD SCALLOPED | SPL | 3523 |
| *Sphyrna zygaena* | SHARK HAMMERHEAD SMOOTH | SHH | 3522 |
| *Squalidae spp.* | SHARK DOGFISH | SDG | 3503 |
| *Isistius brasiliensis* | SHARK DOGFISH COLLARED | SCO | 3572 |
| *Mustelus canis* | SHARK DOGFISH SMOOTH | DGS | 3511 |
| *Squalus acanthias* | SHARK DOGFISH SPINEY | DGY | 3521 |
| *Somniosus microcephalus* | SHARK GREENLAND | SGR | 3532 |
| | | | |
| | SKATES/RAYS | SRX | 3650 |
| *Pteroplatytrogon violacia* | PELAGIC STINGRAY | PEL | 2859 |
| *Mobulidae* | MANTA RAY | MAN | 2864 |
| | | | |
| | TUNA | TUN | 4652 |
| *Thunnus thynnus* | TUNA BLUEFIN | BFT | 4652 |
| *Thunnus albacares* | TUNA YELLOWFIN | YFT | 4655 |
| *Thunnus atlanticus* | TUNA BLACKFIN | BLK | 4658 |
| *Thunnus obesus* | TUNA BIGEYE | BET | 4657 |
| *Katsuwonus pelamis* | TUNA SKIPJACK | SKJ | 4654 |
| *Thunnus alalunga* | TUNA ALBACORE | ALB | 4651 |
| *Euthynnus allettaratus* | LITTLE TUNNY | LTA | 4653 |
| *Sarda sarda* | BONITO | BON | 0330 |
| | | | |
| | SQUID | SQX | 8030 |
| | | | |
| | UNCODED ANIMAL | UNC | 9999 |
| | UNKNOWN | UNK | 0000 |

| Scientific Name | Common Name | POP Code | NMFS Code |
|---|---|---|---|
| | MARINE FINFISH | MFI | 5261 |
| *Acanthocybium solandri* | WAHOO | WAH | 4710 |
| *Scomberomorus cavalla* | MACKEREL KING | KGM | 1940 |
| *Scomber japonicus* | MACKEREL CHUB | CHM | 2150 |
| *Auxis thazard* | MACKEREL FRIGATE | FRM | 1320 |
| *Rachycentron canadum* | COBIA | CBA | 0570 |
| *Coryphaena spp* | DOLPHIN FISH | DOL | 1050 |
| *Lepidocybium flavobrunneum* | ESCOLAR (SMOOTH SKIN) | GEM | 2501 |
| *Revettus pretiosus* | OILFISH (ROUGH SKIN) | OIL | 2502 |
| *Seriola spp.* | AMBERJACK | AMJ | 0030 |
| *Caranx spp.* | JACK | JAC | 0034 |
| *Sphyraena spp.* | BARRACUDA | BAR | 0180 |
| *Elagatus bipinnlata* | RAINBOW RUNNER | RUN | 1814 |
| *Pomatomus salratrix* | BLUEFISH | BLU | 0230 |
| *Cubiceps spp.* | CIGARFISH | CUB | 0530 |
| *Trachipterus arcticus* | DEALFISH | DEA | 0985 |
| *Alepisaursus spp.* | LANCETFISH | LAX | 2035 |
| *Trichiuridae spp.* | MACKERAL SNAKE | TRX | 2504 |
| *Lampris guttatus* | OPAH | OPA | 2503 |
| *Brama spp.* | POMFRET | POA | 2710 |
| | PUFFER | PUX | 2760 |
| *Echeneidae spp.* | REMORA | REM | 2865 |
| *Mola spp.* | SUNFISH | MOX | 4260 |
| *Masturus lanceolatus* | SUNFISH SHARPTIAL | MST | 4264 |
| *Mola mola* | SUNFISH OCEAN | MOC | 4263 |
| *Megalops atlanticus* | TARPON | TAR | 4350 |
| *Lobotes surinamensis* | TRIPLETAIL | TPL | 4590 |
| | | | |
| | TURTLE | TTX | 8120 |
| *Chelonia mydas* | TURTLE GREEN | TTG | 8112 |
| *Eretmochelys imbricata* | TURTLE HAWKSBILL | THB | 8113 |
| *Caretta caretta* | TURTLE LOGGERHEAD | TTL | 8114 |
| *Lepidochelys kempii* | TURTLE KEMP'S RIDLEY | TKR | 8119 |
| *Dermochelys coriacea* | TURTLE LEATHERBACK | TLB | 8118 |
| | | | |
| | WHALE | WHA | 9006 |
| *Orcinus orca* | WHALE KILLER | MKW | 9020 |
| *Ziphiidea spp.* | WHALE BEAKED | WBK | 6953 |
| *Kogia breviceps* | WHALE SPERM PYGMY | PSW | 9013 |
| *Globicephala spp.* | WHALE PILOT | MPW | 9026 |
| *Globicephala melas* | WHALE PILOT LONGFIN | PWL | 9027 |
| *Globicephala macrorhynchus* | WHALE PILOT SHORTFIN | PWS | 9028 |
| *Hyperoodon ampullatus* | WHALE NORTHERN BOTTLENOSE | WNB | 9049 |
| | | | |
| *Mammalia* | MARINE MAMMAL UNIDENTIFIED | MAM | 9010 |
| *Tursiops truncates* | DOLPHIN BOTTLENOSE | MBD | 9036 |
| *Grampus griseus* | DOLPHIN RISSOS | MRD | 9037 |
| *Stenella attenuata* | DOLPHIN PANTROPICAL SPOTTED | MPD | 9039 |
| *Stenella frontalis* | DOLPHIN ATLANTIC SPOTTED | MAD | 9040 |
| *Stenella clymene* | DOLPHIN SPINNER SHORT BEAKED | MCL | 9041 |
| *Delphinus delphis* | DOLPHIN COMMON | MCO | 9042 |
| *Stenella coeruleoalba* | DOLPHIN STRIPED | MSD | 9043 |
| | | | |
| | | | |
| *Aves* | SEA BIRD | BRD | 6100 |
| *Morus bassanus* | GANNET NORTHERN | GAN | 6171 |
| *Larinae spp.* | GULL | GUX | 6200 |
| *Larus marinus* | GULL BLACK BACKED | GBB | 6205 |
| *Larus argentatus* | GULL HERRING | GHE | 6206 |
| *Leucophaeus atricilla* | GULL LAUGHING | GLA | 6208 |
| *Puffinus spp.* | SHEARWATER | SWX | 6400 |
| *Puffinus gravis* | SHEARWATER GREATER | SWG | 6402 |
| *Calonectris diomedea* | SHEARWATER COREY'S | SWC | 6407 |
| *Oceanites oceanicus* | STORM PETREL | SPW | 6434 |
| *Fregata magnificens* | FRIGATE BIRD | FRB | 6141 |

(E) SELECTION LETTER

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE

Southeast Fisheries Center
Miami Laboratory
75 Virginia Beach Drive
Miami, FL 33149

December 15, 2006

F/V **(VESSEL NAME)**

Dear Permit Holder:

In accordance with the federal Atlantic Highly Migratory Species regulations, 50 CFR 635.7, your vessel **(VESSEL CODE)** has been selected for observer coverage. The regulation requires that you contact the Southeast Fisheries Science Center's Miami Laboratory, in writing, at least five business days in advance of each trip your vessel makes within the period **January 1 through March 31, 2007.**
Failure to call the Observer Program in advance of each departure could result in enforcement action. Based on past logbook reports the Observer Program expects a minimum coverage of **(# SETS REQUIRED)** set(s) while the observer is assigned to your vessel. The observer will remain in the area to complete the required sets at the discretion of the Program Coordinators. You must report the following:

(1) Departure information (port, dock, date, and time); and

(2) Expected landing information (port, dock, and date).

Please provide this information to:

Observer Program Coordinator
75 Virginia Beach Drive
Miami, FL 33149

FAX (305) 361-4282
PHONE 1-800-858-0624

You may report this information by facsimile (FAX). For any notification received outside federal business hours (8:00 am - 4:30 PM Monday through Friday), the five-day notification period will not start until 8:00 am of the next federal working day.

Once a NMFS certified observer is placed on board your vessel, you no longer need to provide the above information unless you receive a subsequent notice of vessel selection for a period different than specified above.

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## (F) 50 CFR 635.7

**Fishery Conservation and Management**
**§ 635.7**

**§ 635.7 At-sea observer coverage.**

(a) Applicability. NMFS may select for at-sea observer coverage any vessel that has an Atlantic HMS, tunas, shark or swordfish permit issued under § 635.4 or § 635.32. Vessels permitted in the HMS Charter/Headboat and Angling categories will be requested to take ob- servers on a voluntary basis. When se- lected, vessels issued any other permit under § 635.4 or § 635.32 are required to take observers on a mandatory basis.

(b) Selection of vessels. NMFS will notify a vessel owner, in writing, when his or her vessel is selected for observer coverage. Vessels will be selected to provide information on catch, bycatch and other fishery data according to the need for representative samples.

(c) Notification of trips. The owner or operator of a vessel that is selected under paragraph (b) of this section must notify NMFS, at an address des- ignated by NMFS, before commencing any fishing trip that may result in the incidental catch or harvest of Atlantic HMS. Notification procedures and in- formation requirements such as ex- pected gear deployment, trip duration and fishing area will be specified in a selection letter sent by NMFS.

(d) Assignment of observers. Once noti- fied of a trip, NMFS will assign an ob- server for that trip based on current in- formation needs relative to the ex- pected catch and bycatch likely to be associated with the indicated gear de- ployment, trip duration and fishing area. If an observer is not assigned for a fishing trip, NMFS will issue a waiv- er for that trip to the owner or oper- ator of the selected vessel, so long as the waiver is consistent with other ap- plicable laws. If an observer is assigned for a trip, the operator of the selected vessel must arrange to embark the ob- server and shall not fish for or retain any Atlantic HMS unless the NMFS-as- signed observer is aboard.

(e) Requirements. The owner or oper- ator of a vessel on which a NMFS-ap- proved observer is embarked, regard- less of whether required to carry the observer, must comply with §§ 600.725 and 600.746 of this chapter and—

(1) Provide accommodations and food that are equivalent to those provided to the crew.

(2) Allow the observer access to and use of the vessel's communications equipment and personnel upon request for the transmission and receipt of messages related to the observer's du- ties.

(3) Allow the observer access to and use of the vessel's navigation equip- ment and personnel upon request to de- termine the vessel's position.

(4) Allow the observer free and unob- structed access to the vessel's bridge, working decks, holding bins, weight scales, holds, and any other space used to hold, process, weigh, or store fish.

(5) Allow the observer to inspect and copy the vessel's log, communications logs, and any records associated with the catch and distribution of fish for that trip.

(f) Vessel responsibilities. An owner or operator of a vessel required to carry one or more observer(s) must provide reasonable assistance to enable ob- server(s) to carry out their duties, including, but not limited to:

(1) Measuring decks, cod ends, and holding bins.

(2) Providing the observer(s) with a safe work area.

(3) Collecting bycatch when re- quested by the observer(s).

(4) Collecting and carrying baskets of fish when requested by the observer(s). (5) Allowing the observer(s) to collect

biological data and samples.

(6) Providing adequate space for storage of biological samples.

[64 FR 29135, May 28, 1999, as amended at 64 FR 37704, July 13, 1999; 66 FR 17372, Mar. 30, 2001; 68 FR 63741, Nov. 10, 2003; 74 FR 66586, Dec. 16, 2009

**Observers.** **§ 600.746**

(a) Applicability. This section applies to any fishing vessel required to carry an observer as part of a mandatory ob- server program or carrying an observer as part of a voluntary observer pro- gram under the Magnuson-Stevens Act, MMPA (16 U.S.C. 1361 et seq.), the ATCA (16 U.S.C. 971 et seq.), the South Pacific Tuna Act of 1988 (16 U.S.C. 973 et seq.), or any other U.S. law.

(b) Observer requirement. An observer is not required to board, or stay aboard, a vessel that is unsafe or inadequate as described in paragraph (c) of this section.

(c) Inadequate or unsafe vessels.

(1) A vessel is inadequate or unsafe for pur- poses of carrying an observer and al- lowing operation of normal observer functions if it does not comply with the applicable regulations regarding observer accommodations (see 50 CFR parts 229, 285, 300, 600, 622, 648, 660, 678, and 679) or if it has not passed a USCG safety examination or inspection. A vessel that has passed a USCG safety examination or inspection must dis- play one of the following:

(i) A current Commercial Fishing Vessel Safety Examination decal, issued within the last 2 years, that cer- tifies compliance with regulations found in 33 CFR, chapter I and 46 CFR, chapter I;

(ii) A certificate of compliance issued pursuant to 46 CFR 28.710; or

(iii) A valid certificate of inspection pursuant to 46 U.S.C. 3311.

(2) Upon request by an observer, a NMFS employee, or a designated ob- server provider, a vessel owner/oper- ator must provide correct information concerning any item relating to any safety or accommodation requirement prescribed by law or regulation. A vessel owner or operator must also allow an observer, a NMFS employee, or a designated observer provider to vis ually examine any such item.

(3) Pre-trip safety check. Prior to each observed trip, the observer is encour- aged to briefly walk through the ves- sel's major spaces to ensure that no ob- viously hazardous conditions exist. In addition, the observer is encouraged to spot check the following major items for compliance with applicable USCG regulations:

(i) Personal flotation devices/immersion suits;

(ii) Ring buoys;

(iii) Distress signals;

(iv) Fire extinguishing equipment;

(v) Emergency position indicating radio beacon (EPIRB), when required; and

(vi) Survival craft, when required.

(d) Corrective measures. If a vessel is inadequate or unsafe for purposes of carrying an observer and allowing op- eration of normal observer functions, NMFS may require the vessel owner or operator either to:

(1) Submit to and pass a USCG safety examination or inspection; or

(2) Correct the deficiency that is ren- dering the vessel inadequate or unsafe (e.g., if the vessel is missing one per- sonal flotation device, the owner or op- erator could be required to obtain an additional one), before the vessel is boarded by the observer.

(e) Timing. The requirements of this section apply both at the time of the observer's boarding, at all times the observer is aboard, and at the time the observer is disembarking from the ves- sel.

(f) Effect of inadequate or unsafe status. A vessel that would otherwise be required to carry an observer, but is in- adequate or unsafe for purposes of carrying an observer and for allowing operation of normal observer functions, is prohibited from fishing without observer coverage.

[63 FR 27217, May 18, 1998]

**(H): Historically Important Management Dates:** the United States has considered fisheries as an important economic resource. The following dates mark events important to the pelagic longline fishery:

1871: President Ulysses S. Grant signs legislation for the Office of Commissioner of Fish and Fisheries.
1903: U.S. Fish Commission becomes The Bureau of Fisheries
1966: ICAAT is established
1970: The Bureau of Fisheries becomes NOAA's National Marine Fisheries Service
1971: FDA prohibits sale of swordfish with mercury content greater than 0.5 parts per million
1969: National Environmental Policy Act (NEPA)
1972: Marine Mammal Protection Act (MMPA)
1973: Endangered Species Act (ESA)
1972: ICCAT's recommendation to prohibit landings of yellowfin tuna less than 7 pounds is passed, thus protecting juveniles.
1974: The first federally mandated (by law) observer program (tuna purse seine) is initiated by the NMFS Southwest Fisheries Science Center.
1976: The Magnuson-Stevens Fishery Conservation and Management Act is signed
1978: FDA raises maximum allowed mercury content in fish to 1.0 parts per million
1979: ICCAT's recommendation to prohibit landings of bigeye tuna less than 7 pounds is passed, thus protecting juveniles.
1985: The Atlantic Swordfish Fishery Management Plan (FMP) is implemented, mainly calling for reductions in harvest of smaller swordfish, continued research and monitoring of the North Atlantic swordfish population, and minimization of foreign impacts on the fishery.
1990: ICCAT passes its first recommendation on swordfish, calling for reductions in harvest of undersized North Atlantic swordfish; NOAA Fisheries Service follows with a ruling limiting harvest of undersized North Atlantic swordfish
1990: Magnuson-Stevens Act is amended to give the Secretary of Commerce authority to manage Atlantic tunas; secretarial authority is delegated to NOAA.
1992: NOAA establishes the Highly Migratory Species (HMS) division to manage Atlantic tunas, swordfish, sharks, and billfish.
1996: Sustainable Fisheries Act of 1996
1999: NOAA Fisheries Service publishes the final Fishery Management Plan (FMP) for managing Atlantic tunas, swordfish, and sharks.
1999: ICCAT establishes 10 year plan for rebuilding North Atlantic swordfish stocks.
1999/2000/2001/2005: NOAA Fisheries Service implements several large time-and-area closures for pelagic longline fishing, to reduce bycatch of juvenile swordfish and billfish (DeSoto Canyon: year-round, starting Nov 2000; Florida East Coast: year-round, starting March 2001; Charleston Bump: Feb-April; starting March 2001; Northeast Distant Waters Restricted Fishing Area: starting in 2004
2000: Live bait use is prohibited in the Gulf of Mexico.
2002 :Stock assessments determine that North Atlantic swordfish stock biomass is 94% of levels needed for maximum sustainable yield (BMSY)
2004: Mandatory use of circle hooks; J-hooks banned
2005: ICCAT repeals minimum size limit of yellowfin tuna, but the NOAA Fisheries Service retains its 27" minimum size limit for fish caught in the U.S.
2006: Magnuson Stevens Reauthorization Act/ Consolidated Atlantic HMS FMP
2007: U.S. seeks a temporary suspension of Eastern Atlantic and Mediterranean bluefin tuna fishing at ICCAT. ICCAT did not adopt the U.S. recommendation.
2009: North Atlantic swordfish stock is considered fully rebuilt
2010: The United Nation rejects the proposal to place the bluefin tuna on the Convention on International Trade in Endangered Species (CITES) list, which was supported by the U.S.