

NMFS National Observer Program



**FY 2007 Annual Report
August 2008**



**U.S. Department of Commerce
National Oceanic and Atmospheric Administration**

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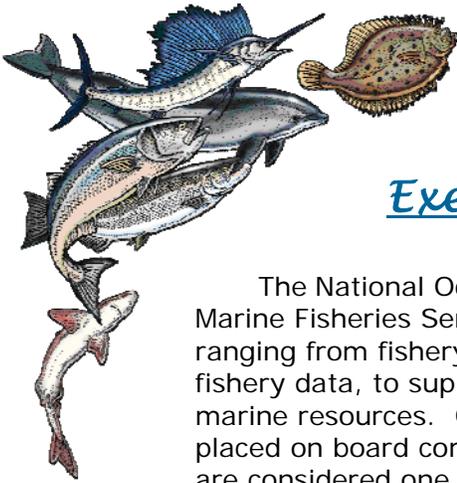
NMFS Office of Science and Technology
National Observer Program
1315 East-West Highway
Silver Spring, MD 20910

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Cover photos, clockwise from top left: gear coming aboard (Northeast Fisheries Observer Program); observer measuring a shark (Pacific Island Regional Office); Atlantic herring (Photographer Amy Van Atten, NOAA).

Layout, Design, and Content: Samantha Brooke, National Observer Program



Executive Summary

The National Oceanic and Atmospheric Administration's (NOAA) National Marine Fisheries Service (NMFS) utilizes data from a variety of sources, ranging from fishery-independent surveys to commercial and recreational fishery data, to support its science-based stewardship of the nation's living marine resources. Of these sources, data collected by fisheries observers placed on board commercial fishing vessels through NMFS observer programs are considered one of the best sources of fishery-dependent data used in fisheries conservation and management.

In FY 2007¹ NMFS observer programs continued to provide high quality biological information on the nation's fisheries. These data are utilized by NMFS scientists and fisheries managers carrying out conservation and management activities such as stock assessments, quota monitoring, and development of bycatch reduction measures. The importance of these scientific data sets was highlighted by 2007's reauthorization of the Magnuson-Stevens Conservation and Management Act (MSA). In particular, the reauthorized Act mandated the use of annual catch limits and accountability measures to end overfishing, emphasized the use of scientific information in fisheries management, and established a program to develop bycatch reduction devices to minimize bycatch, seabird interactions, bycatch mortality, and post-release mortality in Federally managed fisheries. NMFS observer programs were also highlighted in the NMFS Strategic Plan for Fisheries Research (<http://www.st.nmfs.noaa.gov>) and the NMFS State of Deep Coral Ecosystems report (<http://www.nmfs.noaa.gov/habitat/dce.html>).

Work on the NMFS National Bycatch Report (NBR), also continued throughout FY 2007. The NBR, a collaborative project coordinated by the National Observer Program, is scheduled for completion in 2008. Bycatch² has become a central concern of fishing industries, resource managers, scientists, and the public, both nationally and globally. The NBR will provide a benchmark for evaluation of the Agency's performance relative to bycatch monitoring and reduction.

The NMFS deploys more than 700 observers annually to collect biological and economic data for more than 40 fisheries nationwide. To carry out this work, observer programs utilize funding from the Federal government and the commercial fishing industry. In FY 2007, Federal commercial fisheries observer programs received funding totaling \$47 million for observer coverage and program infrastructure. This report contains a summary of funding and activities for NMFS observer programs in FY 2007.

¹ The Federal fiscal year runs from 1 October to 30 September each year.

² Bycatch is defined as the discarded catch of living marine resources and the unobserved mortality due to encounters with fishing gear that occurs during the course of fisheries operations (Evaluating Bycatch: A National Approach to Standardized Bycatch Monitoring, 2004).



1. Introduction

Since 1972, observers have collected high quality data on commercial fishing activities in the U.S. Exclusive Economic Zone (EEZ) and on the high seas. The NMFS utilizes fishery observers to collect data from U.S. commercial fishing and processing vessels, as well as from some shore-side processing plants. Today, there are fisheries observer programs in all six NMFS fisheries management regions (Fig. 1).

Regional Offices and Science Centers in each NMFS Region (Northeast, Southeast, Northwest, Southwest, Alaska, and Pacific Islands) are responsible for administering observer programs in their area. Each observer program is authorized by one or more of the following Federal mandates: the MSA, the Marine Mammal Protection Act (MMPA), and the Endangered Species Act (ESA).

Under the MSA, Fisheries Management Plans (FMPs) are required for each Federal fishery that requires conservation and management. The MSA provides Fishery Management Councils and the Secretary of Commerce with the authority to require that "one or more observers be carried on board a vessel of the United States engaged in fishing for species that are subject to the plan, for the purpose of collecting data necessary for the conservation and management of the fishery" (16 U.S.C. §1853 (b)(8)).

The MMPA also authorizes the placement of observers on board vessels engaged in commercial fishing operations which frequently take³ marine mammals (16 U.S.C. §1383(e)). The NMFS uses observer data to quantify the impacts of fishing activities on marine mammal populations and to identify bycatch reduction measures.

In FY 2007, the NMFS Office of Protected Resources finalized a rule under the ESA that provides NMFS with the authority to place fisheries observers aboard vessels in state and Federal fisheries operating in the territorial seas or EEZ where sea turtle interactions may occur. Observers will help determine whether existing measures to reduce sea turtle bycatch are working or whether new or additional measures are needed. With this information, NMFS will be better positioned to address sea turtle bycatch problems. Additionally, section 7 of the ESA prohibits Federal agencies from carrying out programs (such as authorizing fishery operations) that jeopardize the continued existence of threatened and endangered species. Observer programs may be recommended for Federal fisheries as part of a section 7 biological opinion.

On a global scale, international agreements (such as the FAO Code of Conduct for Responsible Fisheries) identify the agency's stewardship role in leading collaborative efforts to conserve and protect marine resources. International provisions in the MSA also strengthened the U.S. commitment to monitoring and reducing bycatch. These provisions require the Secretary of State to "include statistically reliable monitoring carried out by the United States through observers or dedicated platforms provided by foreign nations, that are parties to the agreement, of all target and non target fish species, marine mammals, sea turtles, and seabirds entangled or killed by large-scale driftnets used by fishing vessels of foreign nations

³ "Take" of a marine mammal is defined as: "to harass, hunt, capture, or kill, or attempt to harass, hunt, capture, or kill any marine mammal" (16 U.S.C. 1362).



that are parties to the agreement;" and specify that "the taking of non-target fish species, marine mammals, sea turtles, seabirds, and endangered species or other species protected by international agreements to which the U.S. is a party is minimized and does not pose a threat to existing fisheries or the long-term health of living marine resources".

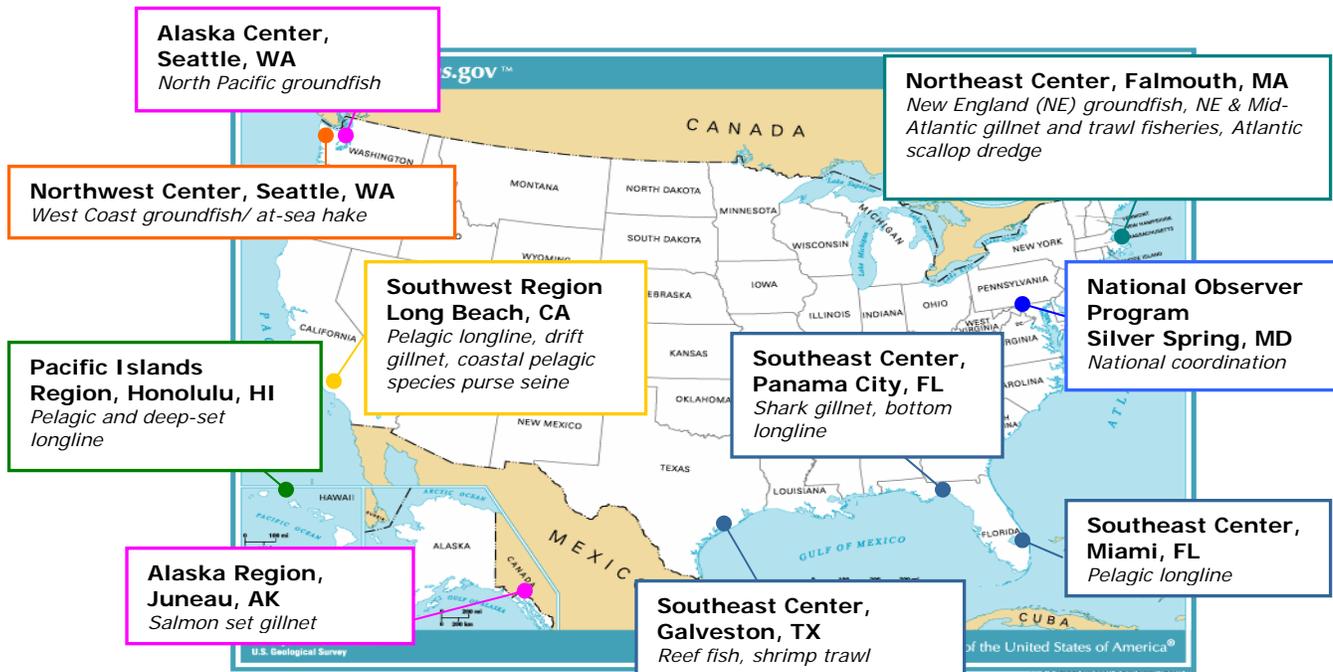


Figure 1. U.S. commercial fishery observer programs (2007) are located in each of six NMFS Regions (Northeast, Southeast, Alaska, Northwest, Southwest, and Pacific Islands), in either a NMFS Regional Office ("Region") or Science Center ("Center").

Visit the National Observer Program at:

www.st.nmfs.gov/st4/nop/index.html

for an interactive map of U.S. fisheries observer programs.

1.1 Program Structure

The NMFS' Office of Science and Technology coordinates observer programs at the national level through the National Observer Program (NOP). In addition to handling national program administration, budgeting, and planning, the NOP works with the regional observer programs to develop national policy and observer data quality standards. The NOP also provides regional observer programs with a forum to increase communication. Representatives from all regional programs and most NMFS offices participate in the National Observer Program Advisory Team (NOPAT), which serves as an advisory board to the NOP. The NMFS Science Board (composed of the six NMFS Science Center directors and the director of the Office of Science and Technology, who serves as the Board's chair) reviews NOPAT recommendations, with final decisions made by the Director of the Office of Science and Technology, Chief Science Advisor, and Assistant Administrator for Fisheries, when necessary.



Regional programs are responsible for the day-to-day operation of fishery observer programs. Program scientists determine the appropriate sampling protocols and necessary observer coverage levels for each fishery. In general, regional programs work with private contracting companies to recruit and deploy observers. In some cases, the fishing industry contracts directly with a private contracting company to provide observer coverage. The North Pacific Groundfish Observer Program, for example, is funded annually in part by fishing industry members (industry pays for observer's salaries, travel costs, and insurance). The NMFS Alaska Fisheries Science Center administers this program and receives the data for near real-time management of the groundfish fishery. These data are also made available by the program to industry members. Regardless of an observer program's funding structure, all new observers are provided with training by NMFS in species identification, sampling methods, and safety. Following a fishing trip, observers are debriefed, and the trip's data are quality checked before being entered into a database system and made available to regional fisheries biologists.

1.2 Use of Observer Data in Fisheries Management

Fisheries observers are trained biological technicians who collect data to support a wide range of conservation and management activities. The information compiled by observer programs supports the management and conservation of fisheries, protected resources, and ecosystems throughout the U.S. Observer data are also increasingly relied upon to monitor compliance with fisheries regulations. Information collected by fisheries observers is used for a wide range of assessment and monitoring purposes, including the following examples.

- In some fisheries, the amount of a specific fish species that can be caught is specified by a "total allowable catch" (or TAC) level. Observer data are used to project total catches for these species and to monitor the level of fishing activity so that the TAC is not exceeded.
- For many fisheries, estimates of fishing mortality and/or protected species interaction rates based on observer data are used for monitoring fishery performance and developing stock assessments.
- For rebuilding species, such as New England groundfish, preseason target catch numbers are provided to the management team. When the fishing season end, observer data are evaluated to determine total mortality and correspondingly adjust the next season's targets.
- The MMPA requires that levels of fishery-related serious injury and mortalities be monitored and reported in the annual stock assessment reports and used in assigning commercial fisheries to appropriate categories in the annual MMPA List of Fisheries (16 U.S.C. 1387).
- Observer data on marine mammal bycatch are used by NMFS Take Reduction Teams when developing Federally-mandated Take Reduction Plans (TRPs) to assist in the recovery or prevent the depletion of certain strategic marine mammal stocks.



1.3 Funding History for Observer Programs

Although NMFS has utilized fishery observers to collect data since 1972, the Office of Science and Technology's NOP was not established until 1999. Prior to 1998, the majority of funding for regional observer programs was provided through indirect sources, such as Congressional allocations supporting fisheries management and protected resource legislation. Beginning in the late 1990s, industry funds were also used to support observer programs; the amount of industry funding has remained relatively stable.

In 1999, the first Congressional funds were directly appropriated for observer program budget lines, and the NOP was established to coordinate U.S. observer program activities. In general, funding for observer programs has increased over time. The number of fisheries observed has increased as programs obtain the means to develop observer programs for new or experimental fisheries while maintaining established monitoring programs (Fig. 2).

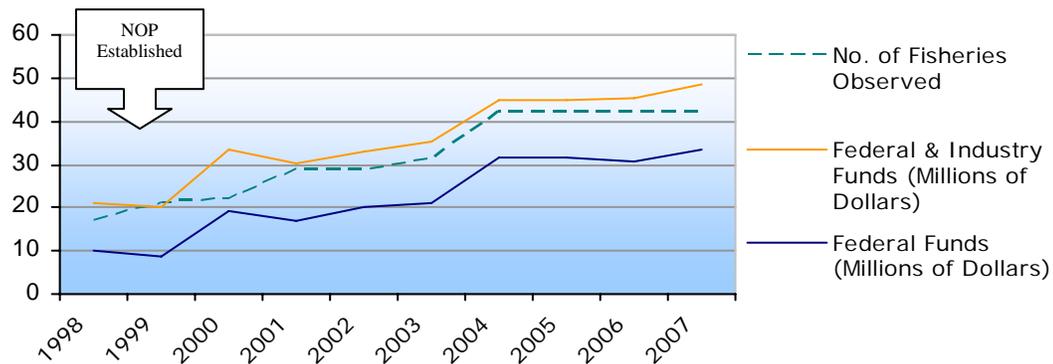


Figure 2. Overview of U.S. observer program funding and observed fisheries from 1998-2007 (not adjusted for inflation).



2. *FY 2007 Budget Summary*

In FY 2007, total funding from all sources for Federal fisheries observer programs was approximately \$48,611,000 for observer coverage and program infrastructure. This funding enabled regional observer programs to provide coverage for more than 64,000 days at sea in 42 fisheries (Appendix A provides a detailed breakdown of funding and coverage levels by program). The industry-provided portion of total funding in FY 2007 was \$14,990,000. Industry funds were used to support observer coverage of fishing vessels in the Northwest shore-based hake, Northwest at-sea hake, Atlantic sea scallop, and Alaska groundfish fisheries.

The majority of funding for observer programs comes from Congressional appropriations. In FY 2007, Congressional funding for observer programs totaled \$33,631,000. All regions have at least one dedicated budget line supporting observer program activities except the Southwest, which has never had a dedicated budget line for observer programs. Although Alaska does have a Congressional line item, this is strictly for the program that covers Federal fisheries (the North Pacific Groundfish Observer Program). There is no Congressional line item for the Alaska Marine Mammal Observer Program, which observes state fisheries. Funding is also available from two National budget lines, which are equally allocated to regional programs. In addition to direct budget lines, observer programs may receive funding from Federal appropriations supporting programs under the American Fisheries Act (AFA), ESA, MMPA, and the MSA.

It is important to note that an observer program may be funded by more than one budget line, and a single budget line may support observer program activities in more than one region. Many observer programs are funded through a combination of funding sources in order to maintain sufficient observer coverage and infrastructure.

3. *FY 2007 National Observer Program Activities*

The NOP is supported by a permanent allocation from the Reducing Bycatch budget line to provide staff support and program infrastructure. Funding for specific activities of the NOP was also provided through the MMPA, Sustainable Fisheries, and Atlantic Coast Observers Congressional budget lines (Appendix A provides details). The following section highlights some of the NOP's activities in FY 2007.

3.1 *National Highlights*

Bycatch Symposium

In September 2007, the NOP co organized an international symposium at the annual meeting of the American Fisheries Society. The symposium, entitled "Developing Tools for Ecosystem-Based Fishery Management: Incentive Programs, Bycatch Quantification, and Gear Technology", included a poster by NOP staff on the NBR. The symposium also featured presentations on topics of interest to the NOP, including video monitoring and bycatch estimation.





Observer Health and Safety Regulations

The safety of fisheries observers is a primary concern for NMFS. In 2007, NMFS published a final rule to enhance the safety of observers while at sea. The rule clarifies prohibited actions regarding observers, reinforces that observers may not be deployed nor stay aboard an unsafe vessel, clarifies when a fishing vessel is inadequate for observer deployment and how an owner or operator can resolve discrepancies, clarifies when the safety decal requirement applies, and provides for an alternate NMFS safety equipment examination of certain small fishing vessels. The rule will aid NMFS in maintaining and enhancing the safety and effectiveness of fisheries observers in carrying out their duties.

National Safety Regulations are posted on the NOP website:
<http://www.st.nmfs.noaa.gov/st4/nop/index.html>

Minimum Eligibility Standards

On 23 July, 2007, the Assistant Administrator for Fisheries signed into national policy the "National Minimum Eligibility Standards for Marine Fisheries Observers." These standards are intended to serve as national minimum requirements for new and existing programs. The policy includes the minimum eligibility standards for:

- Education/experience
- Training
- Conflict of interest
- Physical/medical condition
- Communication skills
- Citizenship or ability to work legally in the United States.

In addition, a safety training acknowledgment of risk form is included to document that observer candidates are informed of the risks of participation in observer training. The adoption of the national minimum eligibility standards will aid in the selection of academically and physically qualified candidates who can perform their duties professionally and objectively and set a foundation for developing standards for quality observers for all NMFS regional observer programs.

For more information on the National Minimum Eligibility Standards policy:
<http://www.st.nmfs.gov/st4/nop/index.html>

Safety Training Manual

Minimum safety training standards were established by NMFS regional observer trainers, in coordination with the NOP, NOPAT, and the Alaska Marine Safety Education Association. These standards outline core curriculum topics and requirements for ongoing professional development and maintenance for observer safety trainers and are part of NOAA's Policy Directives.



NMFS photo by:
Dennis Hansford





New ESA Sea Turtle Monitoring Rule

In 2007, NMFS issued a rule under the ESA to require fishing vessels in designated fisheries to take observers on board for collection of sea turtle bycatch data. With this information, NMFS will be better positioned to address the sea turtle bycatch problem. Observers will help determine whether existing measures to reduce sea turtle bycatch are working or whether new or additional measures are needed. The rule will apply to designated fishing vessels operating in both state and Federal waters, and to designated U.S. fishing vessels on the high seas. Each year NMFS will publish in the Federal Register a draft and final determination of fisheries that may be monitored for sea turtle interactions. The determination will be based on the best available information regarding sea turtle-fishery interactions, sea turtle distribution, or fishing gear characteristics. The NOP and regional observer program are assisting the NMFS Office of Protected Resources with the implementation of this new regulation.

The full text of the final rule is posted at:

www.nmfs.noaa.gov/pr/species/turtles/regulations.htm

3.2 International Work

International Fisheries Observer Conference

In May 2007, over 280 fisheries observers, observer program managers, biologists, and data end-users from over 45 nations met in Victoria, Canada, for the fifth International Fisheries Observer Conference. The conference is designed to bring together individuals involved with fisheries observer programs across the globe to share ideas and discuss key issues. The conference steering committee organized ten panel sessions, three workgroup sessions, a poster session, a mini-trade show, and a special room focusing on safety gear and techniques. The NOPAT sponsored the attendance of ten U.S. observers, each of whom presented a poster at the conference. The U.S. will host the next conference, scheduled for July 2009 in Portland, Maine.

Final Convention on the Conservation of Antarctic Marine Living Resources Rule (AMLR)

This final rule (50 CFR part 300), outlines the requirements for U.S. vessels harvesting Antarctic living marine resources in the Convention area. These are the first domestic observer requirements NMFS has implemented for an international convention/regional fisheries management organization. In addition to requiring vessel monitoring systems (VMS) for all U.S. vessels harvesting AMLR and the use of seal excluder devices for U.S. vessels harvesting krill with trawl gear in the Convention area, this final rule expands the list of requirements and prohibitions regarding scientific observers and clarifies the duties and responsibilities of observers on the vessels and of the vessel hosting the observers.

Examples include:

- Compliance with Observer Health & Safety Regulations
- Prohibition of conflict of interest
- Mandatory sampling stations



- Vessels may not pay observers directly, and must utilize an NMFS approved observer provider

Although there are currently no U.S. vessels fishing these waters, these regulations will be in place should U.S. vessels participate in Antarctic fisheries again in the future.

International Commission for the Conservation of Atlantic Tunas (ICCAT) Transshipment Observer Program

In 2007, ICCAT developed a new observer program to monitor the transshipment of Atlantic tuna. The ICCAT, headquartered in Madrid, Spain, is responsible for providing internationally coordinated research on and developing regulatory recommendations for the conservation of tunas and tuna-like species in the Atlantic Ocean and adjacent seas. Staff from the NOP aided the ICCAT secretariat in drafting a request for observer provider proposals consistent with the U.S. observer programs best practices, assisted in designing the program, and reviewed the contract and memorandum of understanding agreement between contractor and the transshipment vessel.

The ICCAT observer program for transshipment vessels began operations in May 2007. The program is funded by the participating nationalities that transship product, which are the People's Republic of China, Korea, Philippines and Taiwan. Consistent with recent discussions and international developments, ICCAT is currently coordinating with the other four existing tuna Regional Fisheries Management Organizations with a view to expanding this new observer program to all tuna transshipment operations throughout the world.

3.3. Joint Regional and National Highlight: the National Bycatch Report

The National Bycatch Report will quantify regional and national bycatch levels (using primarily 2005 data) for fish, marine mammals, sea turtles, and seabirds in all Federally-managed fisheries, including measures of uncertainty. These estimates will provide a basis for determining future monitoring and data collection goals. The initial version of the report will compile current estimates of bycatch for Federal commercial marine fisheries. Regional teams used observer data, along with self-reported and some fishery independent data, to develop bycatch estimates for inclusion in the report.

In 2007, a tier classification system was developed to assist in monitoring improvements to the quality of bycatch data and estimates over time. Key stocks and fisheries were also identified, and will be used to establish a benchmark for evaluating the Agency's performance relative to bycatch monitoring and bycatch data quality. Regional teams began work on drafting fisheries bycatch estimation improvement plans for fisheries of focus.

In August 2007, the NOP convened a workshop of observer program managers, stock assessment scientists, and protected resources biologists to review preliminary results. Following the workshop, NOP and regional staff began work on developing the draft report. A final version of the report is projected for 2008.



4. Regional Observer Program Activities

Observer programs are administered by NMFS Regional Offices and Science Centers around the country. The funding received by each program is used to administer existing programs as well as to develop observer programs for new or experimental fisheries and to perform outreach to industry members and the public. Research priorities and observer coverage levels are determined by the regional programs. Coverage levels are influenced by available funding, the number of active participants in the fishery, fishing conditions, and program goals. For some fisheries, certain mandated coverage or FMP goals must be met. The following section summarizes FY 2007 achievements of NMFS regional observer programs.

4.1 Alaska

Alaska fisheries are covered by two primary observer programs: the Alaska Marine Mammal Observer Program (AMMOP), which provides observers for salmon set gillnet fisheries, and the North Pacific Groundfish Observer Program (NPGOP), which covers Bering Sea/Aleutian Islands and Gulf of Alaska groundfish trawl, longline, and pot fisheries.

The primary achievement of the NPGOP in 2007 was the collection of over 35,000 observer coverage days across the groundfish fisheries in Alaska. This represents a considerable effort on the part of NMFS, industry, observer providers, and the observers. The data provided by the observers enabled the tracking of over 1,500 separate management quotas for Alaska groundfish. The program provides real-time catch estimation for North Pacific groundfish fisheries and is supported primarily through industry funding. The NPGOP, which observes fisheries under the Groundfish of the Gulf of Alaska and Groundfish of the Bering Sea and Aleutian Islands Management Area FMP's, received approximately \$17,007,000 in funding for FY 2007, including \$13,000,000 in industry funds (Appendix A gives details).

Of the fourteen MMPA Category II⁴ fisheries in Alaska, seven have been observed by the AMMOP since its establishment in 1990, including the Prince William Sound drift and set gillnet fisheries (1990-91), the Alaska Peninsula drift gillnet fishery (1990), the Cook Inlet drift and set gillnet fisheries (1999-2000), and the Kodiak set gillnet fishery (2002 and 2005). Data collected during these rotational observation periods are used in marine mammal stock assessments to estimate annual serious injury and mortality and to categorize fisheries in the annual MMPA List of Fisheries. In FY 2007, the AMMOP met and exceeded its target sample of 300 permitted fishing vessels in the Yakutat gillnet fishery. A total of \$675,333 supported these observations over two years: \$300,000 in FY 2006 and \$375,333 in FY 2007.

FY 2007 Program Highlights: NPGOP

Groundfish Observer Program Regulations Amended

In June 2007, NMFS published a final rule to amend regulations implementing the NPGOP. This action was necessary to avoid expiration of the NPGOP on 31

⁴ An MMPA Category II fishery has occasional incidental mortality and serious injury of marine mammals.



December, 2007, and ensure uninterrupted observer coverage in North Pacific groundfish fisheries. The amended regulations allow the program to continue in its current form while the North Pacific Fishery Management Council considers long term restructuring alternatives.

Rockfish Pilot Program Reduces Bycatch⁵

The Central Gulf of Alaska (GOA) Rockfish Pilot Program (Pilot) was implemented in 2007 under Amendment 68 to the Groundfish of the Gulf of Alaska FMP. Under this program, the rockfish quota was divided among the participants based on their individual catch history, and fishing cooperatives were initiated. The program was initially authorized by Congress as a 2-year program, but was extended to 5 years in the reauthorized MSA. The first fishing season under the program took place in spring 2007. Initial results indicate increased retention rates, reduced bycatch of non target species, and positive economic benefits to the Kodiak Island community.

For successful implementation of the program, NMFS was required to monitor quotas and prohibited species caps in real time on a cooperative-level scale. The NMFS was able to address the increased monitoring required under this program through the NPGOP, providing 100 percent coverage for all fishing vessels and 200 percent coverage for at-sea processors. The expanded coverage cost is borne primarily by industry. NMFS and the industry are testing the use of video in this fishery to see if that tool can be used to partially replace observers and mitigate their cost. This work is being done by industry, in cooperation with NMFS, through an experimental fishing permit.

The Pilot program is another example from the North Pacific area of real-time monitoring of quotas and cap management through the use of observer information. It also has demonstrated the utility of experimental fishing permits as a tool for evaluating new approaches to monitoring.



NMFS photo by Rob Swanson

Pacific Ocean perch being delivered to a Kodiak processing plant.

Personal Locator Beacons Save Lives⁶

Given the high potential of danger at sea, safety is a key focus of observer program operations and training. Although commercial fishing vessels carrying observers have a variety of required safety equipment on board, such as the vessel radio and Emergency Position-Indicating Radio Beacon (EPIRB), in an emergency requiring abandoning ship, that equipment may be inaccessible or otherwise left behind. In 2007, the NPGOP purchased personal locator beacons for all of the approximately 400 groundfish observers with funding provided by the NOP.

A Personal Locator Beacon (PLB) is a small portable device which, when activated, emits a signal giving the unit's location and indicating the person possessing the device is in imminent danger and needs rescue. When activated, the signal from the PLB is transmitted by satellite to the NOAA Search and Rescue Satellite Aided

⁵ Adapted from the article "Personal Locator Beacons Added to FMA Safety Program in 2007" by Allison Barnes (AFSC Quarterly Research Reports: October, November, December 2007).

⁶ Adapted from the article "The FMA Divisions Role in the Central Gulf of Alaska Rockfish Pilot Program" by Allison Barnes (AFSC Quarterly Research Reports: April, May, June 2007).



Tracking (SARSAT) Mission Control Center. Signals transmitted from sea are relayed to the U.S. Coast Guard for response action. The signal is detected by satellites, usually within 5 minutes of first transmission. The use of PLB's provides a new degree of safety for this program, where observers are often deployed for up to 90 days.

MMFS Alaska Fisheries
Science Center photo



Brian Mason, observer program staff member, dons an immersion suit to demonstrate the use of a Personal Locator Beacon for water rescue.

FY 2007 Program Highlights: AMMOP

In 2007 the AMMOP completed the first year of a planned 2 year study of the Yakutat set-gillnet fishery. The Yakutat set-gillnet fishery for salmon is classified as a Category II fishery under the MMPA due to potential interactions with gray whales, harbor seals, and endangered humpback whales. Observers monitored fishing activities from independent skiffs, as the fishing vessels used by the Yakutat fishermen are too small to carry an observer. Marine mammals, seabirds, salmon, and other fish species are identified and recorded. Over 300 permits were sampled by 13 observers, allowing the program to meet its 5 percent coverage goal for the fishing season. In 2008, the program will continue observations of the Yakutat fishery. Information collected through AMMOP observations will allow for accurate estimation of fishing effort and interactions with marine mammal species, as required under the MMPA.

4.2 Northwest

In FY 2007, the Northwest Regional observer programs received \$6,087,000 in funding, including approximately \$590,000 in industry funding to support monitoring the at-sea and shore-based hake fisheries (Appendix A gives details). A total of 5,814 sea days was observed in Northwest Regional fisheries. This includes a total of 1,817 days of electronic monitoring in the shore-based hake midwater trawl fishery. Other fisheries observed in FY 2007 included the West Coast limited entry groundfish fisheries (trawl and fixed gear) and state-managed and open-access fisheries. Yearly observer data reports and summary analyses for many of these fisheries are available on the Northwest Fisheries Science Center's webpage: www.nwfsc.noaa.gov.

FY 2007 Program Highlights

Bycatch Minimization Formally Established in West Coast Groundfish Fisheries

Finalized in December 2006, Amendment 18 to the Pacific Coast Groundfish FMP formalizes the standardized bycatch reporting methodology and bycatch minimization requirements for groundfish fisheries off the U.S. Pacific Coast. Under



this rule, all fishing vessels, which includes catcher/processors, at-sea processors, and those vessels that directly or incidentally take and retain groundfish in waters off Washington, Oregon, and/or California, are required to accommodate an observer and/or electronic-monitoring system if directed by NMFS. In the past, some vessels that incidentally caught groundfish could not be required to carry observers. The amendment also requires the use of observer data in the biennial and in-season fishery management processes. Other regulations in the amendment include a requirement to account for the co-occurrence ratios of overfished species with healthy stocks, and to authorize closed areas to protect and rebuild overfished stocks and control fishing effort.

Data Releases and Reports

The West Coast Groundfish Observer Program released multiple bycatch rate reports during FY 2007 that were essential to management. Fleet specific reports highlighted bycatch rates of various species that are used in management to estimate the catch of various groundfish fleets such as limited entry bottom trawl, sablefish fixed gear, and nearshore rockfish. In addition, a 'total mortality' report, released in December 2006, combined observer data with other available sources such as landings receipts and logbooks to estimate the total removals of multiple groundfish stocks during the 2005 fishing year. The bycatch rate reports use observer data solely to release the rate of discard in two observed fisheries: the limited entry zero tier fishery and the nearshore rockfish fishery. Both sets of reports are incorporated into the Council process by the fishery managers. Information from the reports is used to set catch and bycatch limits, as well as closed areas, and is available at the Northwest Fisheries Science Center website: www.nwfsc.noaa.gov.

Electronic Monitoring on Shore-based Hake Fleet



Pacific hake (whiting).

NMFS Northwest Fisheries
Science Center photo

Electronic monitoring (EM) has been deployed in the shore-based hake fleet to monitor for maximized retention of catch. For the 2007 season, the funding structure was redesigned to better reflect the possible future regulations implemented in this fishery. In past seasons, NMFS funded this project completely, but in 2007 the industry paid for the leasing, installation, maintenance, and removal of the systems. The NMFS funded the processing, review, and analysis of the retrieved data.

The EM project continues to focus on monitoring for discards, with the goal of preventing selective discarding and reducing total volume of any discard for the fishery.

Increased Collaboration with the At-Sea Hake Fleet

Since bycatch caps on overfished and rebuilding rockfish species were put in place in the hake fishery, the At-Sea Hake Observer Program (A-SHOP) staff has organized preseason meetings with each participating vessel's officers, factory foreman, sorting crew, and assigned observers. Due to the continuation of these meetings and collaboration, observer sample sizes used to estimate total bycatch of rockfish species in this fleet have remained large, averaging 50 percent of all catch in this



fleet. In addition, extra aid by the crew has allowed for increased observer biological sampling of numerous species.

4.3 Southwest

The Southwest Region receives the majority of funding for its observer programs through the National Observer Program and Reducing Bycatch budget lines. In FY 2007 the Southwest Region observer program received \$716,000 for its observer programs; including \$150,000 in MMPA funds (Appendix A provides details). Funding was used to provide observer coverage for several large fisheries along the Pacific Coast, including one MMPA Category I fishery⁷. In FY 2007, the Southwest Region provided observer coverage for the California/Oregon pelagic drift gillnet fishery (MMPA Category I), California pelagic longline fishery (MMPA Category II), and the California coastal pelagic purse seine fishery (MMPA Category II). A total of 650 days at sea were observed in those fisheries.

FY 2007 Program Highlights

California Pelagic Longline Observer Program

The west coast pelagic longline fishery had 100 percent observer coverage during FY 2007. This provided a total accounting of protected species and fish caught in the fishery. A total of 100 days at sea were observed.

California/Oregon Pelagic Drift Gillnet Observer Program

Observers recorded 350 days at sea, meeting the 20 percent coverage goal for this fishery. The Southwest Fisheries Science Center uses data collected through this observer program, along with estimates of annual drift gillnet effort from the California Department of Fish and Game, to estimate the annual incidental mortality and serious injury of marine mammals and sea turtles taken in this fishery.

California Coastal Pelagic Species Purse Seine Observer Program

Observers are placed on all vessels participating in the California coastal pelagic species purse seine fishery to document the incidental take of marine mammals and seabirds in the fishery and to document the catch of target and non-target fish and invertebrate species. The Southwest Fisheries Science Center uses data collected through this observer program, along with estimates of annual purse seine effort from the California Department of Fish and Game, to estimate the annual incidental mortality and serious injury of marine mammals and seabirds taken in coastal pelagic purse seine fishery. In FY 2007, observers recorded 200 days at sea, meeting the sea-day coverage goal for this fishery.

Bycatch of the southern sea otter has been observed in the California coastal pelagic purse seine fishery. Because the southern sea otter is listed as threatened under the ESA, in 2007 NMFS initiated a Section 7 consultation with the U.S. Fish and Wildlife

⁷ A MMPA Category I fishery is a commercial fishery that has frequent incidental mortality and serious injury of marine mammals.



Service (USFWS). The USFWS was asked to examine the possible effects on the southern sea otter of implementing changes to regional allocation structure of Pacific sardine fisheries as proposed under Amendment 11 to the Coastal Pelagic Species FMP. The resulting Biological Opinion concluded that Amendment 11 was not likely to jeopardize the continued existence of the southern sea otter. The Pacific Fisheries Management Council incorporated a number of requirements and conservation measures stemming from the Biological Opinion in Amendment 11 to provide further conservation efforts for southern sea otters. Reporting requirements and conservation measures require all coastal pelagic species purse seine fishermen and vessel operators to employ avoidance measures when sea otters are present in the fishing area and to report any interactions that may occur between their vessel and/or fishing gear and otters. The Southwest Fisheries Science Center uses data collected through its observer program, along with estimates of annual purse seine effort from the California Department of Fish and Game, to estimate the annual incidental mortality and serious injury of marine mammals taken in the coastal purse seine fishery.



NOAA photograph
Commander John Boriniak
NOAA Corps (ret.)

4.4 Pacific Islands

The \$5,529,000 in funding received in FY 2007 for the Pacific Islands fishery observer programs supported coverage for three fisheries: the Hawaii pelagic longline tuna fishery (deep-set), the Hawaii pelagic longline swordfish fishery (shallow-set) and the American Samoa pelagic longline fishery. A total of 9,195 days were observed. A portion of the funding was also used to upgrade the Pacific Islands observer data system and to integrate this system with the longline data system (Appendix A provides details).

All of the Pacific Islands observer programs focus on monitoring interactions between commercial fisheries and sea turtles (e.g. loggerhead, leatherback, and green sea turtles), sea bird, and marine mammal species. Data and specimens collected by observers are provided to the Pacific Islands Fisheries Science Center after careful review by observer program staff. These data are used by Center biologists for stock assessment evaluation and to calculate official bycatch estimates for marine mammals and sea turtles which are provided in quarterly reports. In FY 2007, Pacific Islands observer programs covered 100 percent of all vessels fishing in the swordfish fishery, as required by regulation. In addition, the program was able to provide 7 percent coverage in the American Samoa longline fishery.

Reports from the Pacific Islands Region Observer Program are available online at: http://www.fpir.noaa.gov/OBS/obs_qrtrly_annual_rprts.html

FY 2007 Highlights

Final Rule Requires Faster Action to Protect Sea Turtles

A 2004 Biological Opinion concluded that the Hawaii-based longline fisheries jeopardized the continued existence of three species of sea turtles. Calendar year incidental take limits were developed to limit the bycatch of loggerhead and leatherback sea turtles. The annual limits on physical interactions are set at 16 for



leatherback sea turtles and 17 for loggerhead sea turtles. These strict annual limits apply to all vessels registered under Hawaii longline limited-access permits while engaged in shallow-set longline fishing. Full (100 percent) observer coverage is required in this fishery, and interactions with turtles are monitored using observer program data.

In 2007, the Western Pacific Fisheries Management Council implemented a final rule that allows for immediate closure of the Hawaii-based shallow-set longline fishery when either of the annual limits is reached. Under previous regulations, permit holders were given at least 7 days advance notice before the annual fishery closure. The delay was necessary to provide NMFS with adequate time to notify fishermen, and to allow fishermen to comply. Today, observers are equipped with satellite phones and the 7 day delay is no longer necessary. This process was tested successfully during the 2006 fishing season, and the turtle bycatch cap was not exceeded.

TurtleWatch System

TurtleWatch is a mapping system that provides up-to-date information about sea surface temperatures in the Pacific Ocean north of the Hawaiian Islands. The TurtleWatch system was created as an experimental product by the PIFSC Ecosystem and Oceanography Division to help reduce inadvertent interactions between Hawaii-based longline fishing vessels and loggerhead turtles. Information on swordfish catch per unit of effort (CPUE) and rate of sea turtle interactions were obtained from the Hawaii longline observer program. Using sea surface temperature and ocean current conditions, locations of waters preferred by the turtles are predicted. Early results of Turtlewatch indicate that it may be possible to focus fishing effort on areas where the potential for sea turtle bycatch is low.

4.5 *Northeast*

In FY 2007, the Northeast Fisheries Observer Program (NEFOP) received a total of approximately \$11,685,000 in program funding, including \$1,400,000 in industry funding for the Atlantic sea scallop industry-funded program. Over 10,514 sea days were observed through six monitoring programs: New England groundfish trawl and sink gillnet fisheries; Mid Atlantic coastal gillnet fisheries; New England and Mid-Atlantic small mesh trawl fisheries; Mid Atlantic *Illex* squid trawl; New England and Mid-Atlantic large mesh trawl fisheries; and the Atlantic sea scallop dredge fishery (Appendix A provides details). The New England Fishery Management Council's Multispecies FMP includes mandatory observer coverage requirements for several fisheries: the NEFOP provides this coverage in addition to collecting data on gear performance and characteristics and monitoring experimental fisheries.

FY 2007 Program Highlights

Increased Monitoring of Summer Flounder Discards

Funding from the National Observer Program budget line provided 380 additional sea days for fisheries impacting summer flounder in the Mid Atlantic. Northeast Region NMFS staff within the Population Biology Branch will use these data to increase the precision of discards estimates in these fisheries.



Final Rule - Atlantic Sea Scallop Amendment 13

Amendment 13 to the Atlantic Sea Scallop FMP (Scallop FMP) was implemented in 2007. This amendment was developed by the New England Fishery Management Council to permanently reactivate the industry-funded observer program in the Scallop FMP through a scallop total allowable catch (TAC) and days-at-sea (DAS) set-aside program that helps vessel owners defray the cost of carrying observers.

Observer coverage in the scallop fishery is necessary to monitor the bycatch of finfish, including yellowtail flounder, skates, monkfish, cod, and other species. Monitoring of yellowtail flounder bycatch under the Northeast Multispecies FMP is of particular concern because of catch limits on yellow tail flounder (an overfished species). Observers also monitor the fishery for interactions with endangered and threatened sea turtles.

A number of additional observer program measures were also approved under this rule, including requirements for becoming an approved observer service provider, observer certification and decertification criteria, and notification requirements for vessel owners and/or operators. The amendment also requires scallop vessel owners, operators, or vessel managers to procure certified fishery observers for specified scallop fishing trips from an approved observer service provider.



Atlantic sea scallop

NEFSC website photo:
www.nefsc.noaa.gov/sos/s/psyn/iv/scallop/

Changes to the Northeast Multispecies & Monkfish FMPs

A final rule implementing Framework Adjustment 42 to the Northeast Multispecies FMP and Framework Adjustment 3 to the Monkfish FMP became effect 22 November, 2007. Framework Adjustment 42, developed by the New England Fishery Management Council, was a biennial adjustment to the Northeast Multispecies FMP. The Adjustment set forth a rebuilding program for Georges Bank yellow tail flounder and modified northeast multispecies fishery management measures to reduce fishing mortality rates on six other groundfish stocks. These changes were necessary to maintain compliance with the FMP rebuilding program. Framework Adjustment 3 to the Monkfish FMP was implemented to reduce the unintended impact of the multispecies fishery that occurred during the pilot phase (an increase in monkfish catch by participating vessels). A relatively high rate of observer coverage (approximately 36 percent) was necessary to evaluate the success of these measures.

Reducing Haddock Discards

Although fishermen are required to use a haddock separator trawl when fishing in the U.S./Canada area to minimize bycatch of undersize haddock, 2005 observer data indicated increased discarding of undersized Georges Bank haddock in the U.S./Canada area multispecies fishery. The very large 2003 haddock year class, coupled with a slower than expected growth rate, has created high levels of haddock discards. To prevent excessive discarding of haddock, the minimum size limit for Georges Bank and Gulf of Maine haddock was reduced from 19 inches to 18 inches for commercial fisheries. Under an initial emergency action, NMFS monitored the haddock fishery closely to determine whether the reduction in haddock size resulted



in changes in fishing behavior or substantive increases in fishing effort. Monitoring results showed a decline in the discard rate and no increase in fishing effort.

A temporary closure of the U.S./Canada Area limited access fishery also helped minimize the impacts of discards of undersized haddock to the Georges Bank stock. Observer program data indicate that haddock recruited to legal size by late summer 2007. These data are critical to monitoring the catch and bycatch of overfished groundfish in the Northeast Multispecies fishery. Collecting this information allows TAC and bycatch limits to be enforced.

Preventing Overfishing

In FY 2007, NMFS temporarily closed the Eastern U.S./Canada Area (Fig. 6) to limited access northeast multispecies fishers in order to prevent the TAC of Georges Bank cod from being exceeded. This decision was based on information collected by the observer program, as well as regional Vessel Monitoring Systems (VMS) other data sources. The Eastern U.S./Canada area was reopened at a later date during fishing season to provide access to the shared U.S./Canada stocks of cod, haddock, and yellowtail flounder, once NMFS determined that this could be done without exceeding the Georges Bank cod TAC for the 2007 fishing year.

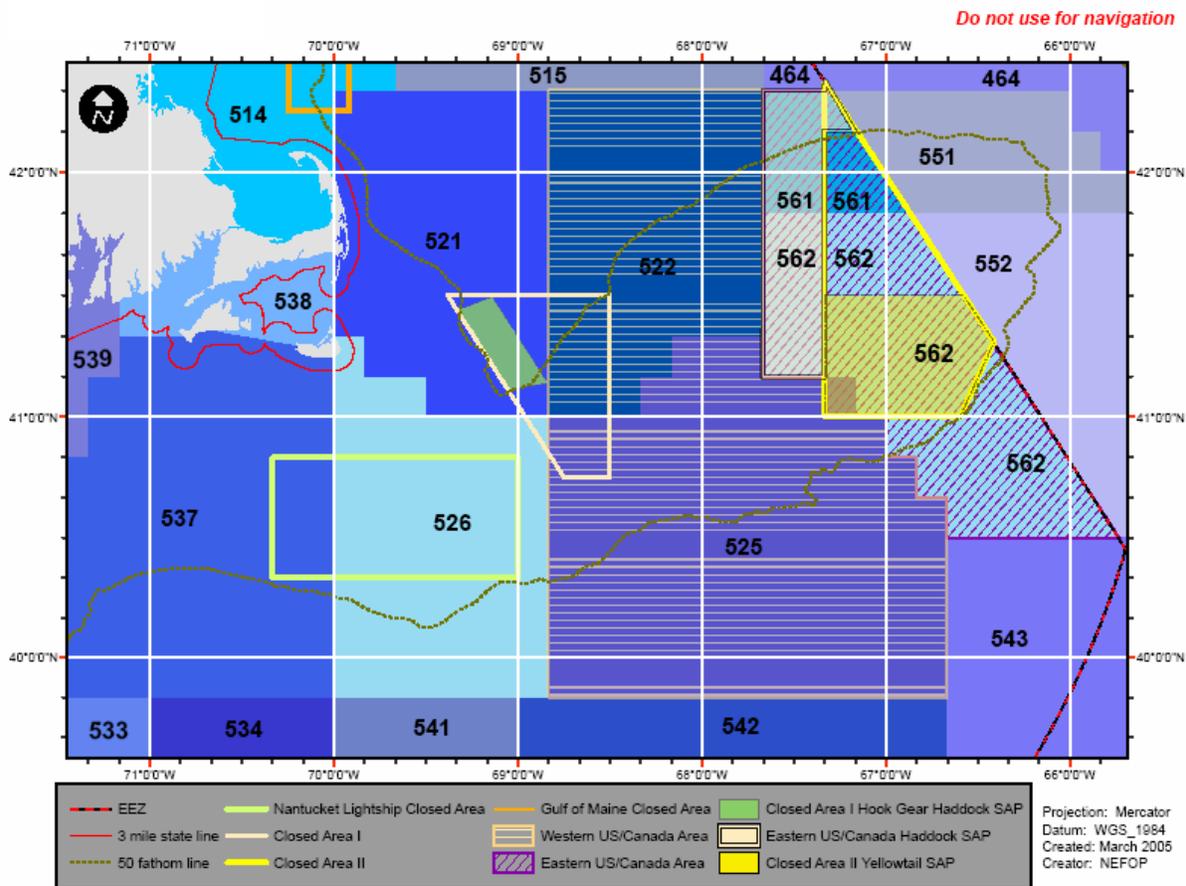


Figure 6. Fishing areas of Georges Bank courtesy of the New England Fisheries Observer Program.



4.6 Southeast

In FY 2007 Southeast Regional observer programs were allocated \$5,755,400. A total of 3,090 sea days were observed by the South Atlantic and Gulf of Mexico shrimp otter trawl; Atlantic, Gulf of Mexico, and Caribbean pelagic longline; and the Gulf of Mexico reef fish observer programs. In addition, a total of 460 sets was observed by the Southeast Shark Gillnet Atlantic and Gulf of Mexico directed large coastal shark bottom longline observer programs (Appendix A provides details).

FY 2007 Program Highlights

Shrimp Observer Program

During FY 2007 data was obtained during 966 sea days of observations aboard 23 shrimp-trawl vessels. Observer coverage was less than 1 percent. During the reporting period, data on bycatch levels of selected finfish species were provided to stock assessment scientists at the Southeast Fisheries Science Center for inclusion in the Southeast Data Assessment and Review (SEDAR) process. Data on temporal and spatial catch of shrimp and bycatch species (including protected species) were provided to regulatory agencies and academic research personnel. In addition, the effectiveness of various bycatch reduction device (BRD) designs in reducing finfish bycatch and shrimp retention during commercial shrimping operations was assessed based on data collected by this program.

Reef Fish Observer Program

In FY 2007 data from 3,332 sets were collected during 644 sea days of observations aboard 88 vessels. Observer coverage was approximately 1 percent. Fishery-specific data were provided to Southeast Fisheries Science Center stock assessment scientists, and protected species bycatch levels were estimated. Moreover, data from this program are being used by Southeast Regional Offices to assess discards/landings by vessels that possess individual fishing quota (IFQ) endorsements.

Gulf Red Snapper Management Measures

Recent regulations were implemented under Amendment 27/14 to the Shrimp Fishery of the Gulf of Mexico FMP and the Reef Fish Resources of the Gulf of Mexico FMP, respectively, to reduce overfishing of Gulf red snapper. Under these interim measures, commercial and recreational quotas for red snapper are reduced, as are the commercial minimum size limit and recreational bycatch limit. Among other measures, the regulations establish a target level of reduction of shrimp trawl bycatch mortality of red snapper. The intended effect is to reduce overfishing of red snapper in the Gulf of Mexico. Two observer programs in the Southeast Region, the Southeast shrimp trawl observer program and the Southeast reef-fish observer program, will be essential to data collection and monitoring under this rule.

The proposed regulations also will improve the quality of technological devices (BRD's) used by the U.S. South Atlantic and Gulf shrimp fishery to reduce bycatch. The proposed amendment would require current BRD regulations in the Southeast Atlantic to apply to Gulf of shrimp fisheries as well. This will also allow for the certification of new BRD's. The intended effect of this rule is to improve bycatch



reduction in the shrimp fisheries and better meet the requirements of National Standard 9⁸.

Consolidated Atlantic Highly Migratory Species FMP

NMFS Pelagic longline
observer program photo



Albacore tuna.

The Consolidated Atlantic Highly Migratory Species (HMS) FMP, finalized in November 2006 consolidates and replaces previous FMP's for Atlantic Billfish and Atlantic Tunas, Swordfish, and Sharks. The Consolidated Atlantic HMS FMP establishes a number of conservation and management actions for HMS fisheries, including mandatory workshops for commercial fishermen and shark dealers, complementary time/area closures in the Gulf of Mexico, programs to rebuild overfished northern albacore tuna and finetooth sharks, and recreational management regulations

for Atlantic billfish, among other measures. The final rule became effective 1 November, 2006.

The new measures rely extensively on observer program data. For example, closed areas identified under the Consolidated Atlantic HMS FMP were initially selected by plotting and examining the HMS logbook and POP data to identify areas and times where bycatch was concentrated. In addition, more research on any variability in bluefin tuna bycatch associated with sea surface temperature will be conducted, and it will utilize data and logbook and/or observer data to evaluate the temporal and spatial consistency of the association of bluefin tuna with these temperature regimes.

The NMFS has also expanded the directed shark gillnet fishery observer program to include observer coverage on vessels using alternative types of gillnet gear (sinknet) or targeting non HMS species. This will aid in determining the extent of finetooth shark landings in these fisheries. Additionally, the observer program added finetooth sharks to the select species list for bycatch subsampling in the Gulf of Mexico shrimp trawl fishery to monitor bycatch of finetooth sharks in this fishery. These activities will form the basis for implementing appropriate management measures to ensure that overfishing of finetooth sharks is prevented.

Shark Directed Bottom Longline Fishery Observations

The shark directed bottom longline fishery observer program provides protected species (i.e. sea turtle, sea bird, marine mammal, and smalltooth sawfish) bycatch rates in the shark bottom longline fishery in order to meet the mandates of a Biological Opinion issued under the Consolidated HMS FMP. In 2007, observers monitored 264 shark directed bottom longline sets. Additional information on sets targeting a combination of sharks and groupers, and sharks and tilefish (individually and within the same set) was also gathered. Observers were deployed throughout the South Atlantic and Gulf of Mexico fishing regions. Although the target coverage level was 4-6 percent of the total fishing effort, recent calculations indicate the actual level of coverage was closer to 8 percent of total fishing effort. These data are critical to the monitoring of takes and mortality estimates for protected sea turtles,

⁸ National Standard 9 states that conservation and management measures shall, to the extent practicable, (A) minimize bycatch and (B) to the extent bycatch cannot be avoided, minimize the mortality of such bycatch.



sea birds, marine mammals, and smalltooth sawfish, and are also used in conducting assessments of sharks, goliath grouper, and mutton snapper stock assessments.

New Closed Areas Established

A final rule implementing additional handling, release, and disentanglement requirements for sea turtles and other nontarget species caught in the commercial shark bottom longline fishery was implemented in March, 2007. The rule also established six areas closed to HMS-permitted vessels carrying bottom longline gear onboard. The closures will aid in protection of Essential Fish Habitat and minimize impacts on mutton snapper, red hind, and other reef-dwelling species. The information evaluated for this rule included information from the Atlantic pelagic and the shark bottom longline observer programs.

Expanded Observer Program Coverage to Study Bluefin Tuna Bycatch

Bluefin tuna are valuable and highly exploited in commercial fisheries. The Gulf of Mexico is considered the primary spawning grounds for the western stock of Atlantic bluefin tuna, and most spawning is believed to occur between April and June. An eastern stock of Atlantic bluefin tuna spawns in the Mediterranean Sea. Scientific evidence suggests mixing between the two stocks, but the degree to which mixing occurs is unknown. Beginning in FY 2006, NMFS implemented emergency observer coverage (March-June) of Atlantic swordfish and tuna fisheries in order to collect biological data on Atlantic bluefin tuna bycatch. In 2007, the Pelagic Observer Program (POP) again provided 100 percent coverage (March-June) for vessels participating in this fishery. The data collected by observers will help scientists better understand bluefin tuna stock structure, biology, and behavior, and will assist in the rebuilding of this valuable resource. The increase in observer coverage also supplements scientific research on the bycatch of protected and prohibited species in the pelagic longline fishery, and shows the effectiveness of circle hooks in reducing bycatch.



5. Looking Ahead- NMFS Observer Program FY 2008 Goals

NOAA National Marine Sanctuaries Program photo



In FY 2008, NMFS observer programs will continue to provide the high-quality biological information on fish, marine mammals, sea turtles, and seabird populations, which will be relied upon by NMFS to manage the nation's living marine resources. National and regional collaboration on high-level projects, such as the NBR, implementation of the new ESA observer program, and interpreting and incorporating MSA changes, such as revised provisions on the confidentiality of observer data, will remain high priorities.

On the international front, the NOP and regional programs will continue their work to support developing observer programs, such as those in tropical Pacific and African regions, and to share new technologies and concepts at home and abroad. With the selection of the United States to host 2009's International Fisheries Observer and Monitoring Conference (IOFMC)⁹, it is clear that 2008 will be a busy year.

More information on NMFS observer programs can be found on the National Observer Program website: www.st.nmfs.gov/st4/nop/index.html.

Literature cited:

NMFS (National Marine Fisheries Service). 2004. Evaluating bycatch: a national approach to standardized bycatch monitoring programs. U.S. Dep. Commer., NOAA Tech Memo. NMFS-F/SPO-66, 108 p. On-line version, <http://spo.nmfs.noaa.gov/tm>

⁹ Visit the IOFMC 2009's website at: <http://iofmc.com/> to learn more.



APPENDIX A: NMFS Fisheries Observer Programs Funded in FY 2007.

Regional and National observer program activities are funded through a number of dedicated Congressional budget lines (Table A1). The Reducing Bycatch line is split between the Office of Science and Technology for observer activities and the Office of Sustainable Fisheries for bycatch technology research. The Office of Science and Technology portion of the Reducing Bycatch line, along with the National Observer Program line, are equally allocated to the regional programs and used for observer coverage, program infrastructure, and NBR development. The National Observer program retains some funds from these lines to support national program activities. Other Federal funds may be used to support observer program activities, including monies appropriated by Congress to support the MMPA, MSA, etc.

Table A1. Congressional budget lines supporting observer programs, FY 2007.

	Budget Line Item	Line Total
Allocated to regional programs	National Observer Program	\$2,970,000
	Reducing Bycatch	\$1,508,000
	West Coast Observers	\$4,948,000
	North Pacific Marine Resource Observers	\$2,272,000
	North Pacific Observer Program	\$1,512,000
	Hawaii Longline Observer Program	\$3,966,000
	Northeast Groundfish Observers	\$7,427,000
	East Coast Observers	\$345,000
	Atlantic Coast Observers	\$3,323,000
	South Atlantic/ Gulf of Mexico Shrimp Observers	\$1,797,000
	Other Federal Funds	\$3,563,000
		Total Congressional Funding (all sources)



Table A2. Detailed National and Regional observer program funding (FY2007).

Fisheries Observed	Fleet Size	Authority to Place Observers	Season of Operation	Funding Amount	Funding Source	Program Duration	Target % Coverage	Actual % Coverage	Target Sea Days	Actual Sea Days	Number of Observers
PACIFIC OCEAN											
North Pacific Groundfish Observer Program, Alaska Fisheries Science Center, 7600 Sand Point Way NE, Seattle, WA 98115-0070											
Program Manager: Dr. William Karp, 206-526-4194, bill.karp@noaa.gov, website: http://www.afsc.noaa.gov/refm/observers/											
Bering Sea, Aleutian Islands and Gulf of Alaska Groundfish Trawl, Longline and Pot Fisheries ^a	303 vessels / 24 shore plants	MSA (50 CFR 679.50)	year-round	\$1,512,000	Obs/Trn-N.Pac.Marine Res. Obs./ N. Pac. Obs. Program ^b	1973 - present	100% vessels > 125 ft., 30% vessels 60-124 ft., and 30% or 100% shore plants	100% vessels > 125 ft., 30% vessels 60-124 ft., and 30% or 100% shore plants	Defined by regulation (approx. 37,000)	35,324	384
				\$2,272,000	Alaska Composite ^c						
				\$11,904	National Standard 8/Fish Statistics						
				\$15,201	Fisheries Management Program						
				\$187,667	Reducing Bycatch						
				\$8,096	Reducing Bycatch ^d						
				\$13,000,000	Industry funds						

^a Data to assess the current actual coverage in the 30 percent fleet is not available and compliance with the requirement has been an enforcement function. The North Pacific Groundfish Observer Program uses observer days rather than observer sea days because the coverage regulations require observers to be stationed at shoreside plants as well as on vessels.

^b Portion of budget line used to support management activities.

^c Portion of budget line used to support management activities.

^d Approximately 8K in Reducing Bycatch funding provided by NMFS but not through the National Observer Program.

Table A2 Continued.

Fisheries Observed	Fleet Size	Authority to Place Observers	Season of Operation	Funding Amount	Funding Source	Program Duration	Target % Coverage	Actual % Coverage	Target Sea Days	Actual Sea Days	Number of Observers
Alaska Marine Mammal Observer Program, Alaska Regional Office, P. O. Box 21668, Juneau, AK 99802-1668											
Program Manager: Bridget Mansfield, 907-586-7642, bridget.mansfield@noaa.gov, website: http://www.fakr.noaa.gov/protectedresources/observers/mmop.htm											
AK Yakutat Salmon Set Gillnet Fishery	100 set net permits	MMPA Cat. II (50 CFR 229)	June - Sept	\$375,333	Obs/Trn-National Observer Program	1999 - present	5%	5%	300 permits	304 permits	13
TOTAL ALASKA REGION OBSERVER PROGRAM FUNDING (CONGRESSIONAL): \$4,382,000											
TOTAL ALASKA REGION OBSERVER PROGRAM FUNDING (INDUSTRY): \$13,000,000											
TOTAL ALASKA REGION OBSERVER PROGRAM FUNDING (ALL FUNDING SOURCES): \$17,383,000											
West Coast Groundfish Observer Program, Northwest Fisheries Science Center, 2725 Montlake Blvd East, Seattle, WA 98112-2097											
Program Manager: Jonathan Cusick, 360-332-2793, jonathan.cusick@noaa.gov, website: http://www.nwfsc.noaa.gov/research/divisions/fram/observer/											
West Coast Groundfish Limited Entry Fleets (trawl and fixed gear)	179 trawl, 190 longline, 30 trap permits	MSA(50 CFR 660)	year-round	\$4,823,000	Obs/Trn-West Coast Observers	2001 - present	10-20%	17-30%	1,900	1,936	43
				\$151,334	Obs/Trn-National Observer Program						
				\$75,666	Reducing Bycatch						
State Managed and Open Access Fisheries (includes California halibut trawl, nearshore rockfish, pink shrimp, prawn and open access fixed gear fisheries)	approx. 1,000 vessels	MSA (50 CFR 660)	year-round	Included in groundfish		2001 - present	<1 - 10%	<1 - 10%	500	947	included in groundfish
Shore-Based Hake Mid-Water Trawl Fishery	36 vessels	MSA (50 CFR 660)	Apr - Aug	\$125,000	Obs/Trn-West Coast Observers	2004 - 2007	100% vessels covered with pilot electronic monitoring	100%	1,800	1,817	electronic monitoring, no observers used
				\$200,000	Industry						
				\$98,000	Reducing Bycatch						

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Table A2 Continued.

Fisheries Observed	Fleet Size	Authority to Place Observers	Season of Operation	Funding Amount	Funding Source	Program Duration	Target % Coverage	Actual % Coverage	Target Sea Days	Actual Sea Days	Number of Observers
At-Sea Hake Mid-Water Trawl Fishery	15 vessels	MSA (50 CFR 660)	May - Dec	\$224,000	Obs/Trn-National Observer Program	1975 - present	100% (two observers on every vessel)	100%	800	1,114	~40
				\$390,000	Industry						
TOTAL NORTHWEST REGION OBSERVER PROGRAM FUNDING (CONGRESSIONAL): \$5,497,000											
TOTAL NORTHWEST REGION OBSERVER PROGRAM FUNDING (INDUSTRY): \$590,000											
TOTAL NORTHWEST REGION OBSERVER PROGRAM FUNDING (ALL FUNDING SOURCES): \$6,087,000											
Southwest Region Observer Program, Southwest Regional Office, 501 West Ocean Blvd, Long Beach, CA 90802-4213											
Program Manager: Lyle Enriquez, 562-980-4025, lyle.enriquez@noaa.gov, website: http://swr.ucsd.edu/hcd/fishobs.htm											
California/Oregon Pelagic Drift Gillnet Fishery	60 vessels	MMPA Cat. I (50 CFR 229)	May - June	\$156,000	MMPA	1990 - present	20%	20%	350	350	10
				\$84,667	Reducing Bycatch						
				\$177,333	Obs/Trn-National Observer Program						
California Pelagic Longline Fishery	5 vessels	MMPA Cat. II (50 CFR 229)	Sep - June	\$100,000	Reducing Bycatch	2001 - present	100%	100%	100	100	3
California Coastal Pelagic Species Purse Seine Fishery	70 vessels	MMPA Cat. II (50 CFR 229)	Jan - Dec	\$198,000	Obs/Trn-National Observer Program	2004 - present	200 sea days	2-3%	200	200	6
TOTAL SOUTHWEST REGION OBSERVER PROGRAM FUNDING (CONGRESSIONAL): \$716,000											
TOTAL SOUTHWEST REGION OBSERVER PROGRAM FUNDING (INDUSTRY): N/A											
TOTAL SOUTHWEST REGION OBSERVER PROGRAM FUNDING (ALL FUNDING SOURCES): \$716,000											

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Table A2 Continued.

Fisheries Observed	Fleet Size	Authority to Place Observers	Season of Operation	Funding Amount	Funding Source	Program Duration	Target % Coverage	Actual % Coverage	Target Sea Days	Actual Sea Days	Number of Observers
Hawaii Fisheries Observer Program, Pacific Islands Regional Office, 1601 Kapiolani Blvd, Honolulu, HI 96814-4700											
Program Manager: John Kelly, 808-973-2935, john.d.kelly@noaa.gov, website: http://swr.nmfs.noaa.gov/pir/index.htm											
Hawaii Pelagic Longline Fishery	164 vessels with permits (112 active)	MSA (50 CFR 660)	year-round	\$3,966,000	Obs/Trn-Hawaii Longline Observers	1994 - present	20% Tuna	20%	Fleet dep.	5,836	60
				\$1,000,000	Hawaii Sea Turtles		100% swordfish	100% swordfish	Fleet dep.	2,837	35
American Samoan Pelagic Longline fishery	30 vessels	MSA (50 CFR 660) in Jan. 2005	year-round	\$33,666	Reducing Bycatch	2005-present	7%	7%	1047	522	11
				\$245,334	Obs/Trn-National Observer Program						
Developing and adapting Longline Observer Data System (LODS) to enable the integration of LODS and Longline Logbook Data System (LLDS)	NA	NA	year-round	\$126,000	Reducing Bycatch	NA	NA	NA	NA	NA	NA
Upgrades to LOD's System	NA	NA	year-round	\$130,000	Obs/Trn-National Observer Program	NA	NA	NA	NA	NA	NA
				\$28,000	Reducing Bycatch						
TOTAL PACIFIC ISLANDS REGION OBSERVER PROGRAM FUNDING (CONGRESSIONAL): \$5,529,000											
TOTAL PACIFIC ISLANDS REGION OBSERVER PROGRAM FUNDING (INDUSTRY): NA											
TOTAL PACIFIC ISLANDS REGION OBSERVER PROGRAM FUNDING (ALL FUNDING SOURCES): \$5,529,000											

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Table A2 Continued.

Fisheries Observed	Fleet Size	Authority to Place Observers	Season of Operation	Funding Amount	Funding Source	Program Duration	Target % Coverage	Actual % Coverage	Target Sea Days	Actual Sea Days	Number of Observers
ATLANTIC OCEAN, GULF OF MEXICO, CARIBBEAN											
Northeast Fisheries Observer Program, Northeast Fisheries Science Center, 166 Water Street, Woods Hole, MA 02543-1097											
Program Manager: Amy Van Atten, 508-495-2262, amy.van.atten@noaa.gov, website: http://www.nefsc.noaa.gov/femad/fsb/											
New England Groundfish Trawl and Sink Gillnet Fisheries (also shrimp trawl, bottom longline/tub, herring mid-water pair trawl, whiting trawl)	approx. 1,200 trawl vessels and 250 gillnet vessels	MSFCMA (50 CFR 648); MMPA Cat. I (50 CFR 229)	year-round	\$7,427,000	Obs/Trn-New England Groundfish	1990 - present	5%	5%	6,458	6,350	65
Mid-Atlantic Coastal Gillnet Fishery (includes monkfish, dogfish, and several state fisheries)	>665 vessels	MMPA Cat. II (50 CFR 229)	year-round	\$809,352	MMPA	1994 - present	<1	<1	703	450	included in groundfish
NE and Mid Atlantic Small Mesh Trawl Fisheries (squid, mackerel, butterfish)	719 permits	MMPA Cat. I (50 CFR 229.7); MSFCMA (50 CFR 648)	year-round	\$1,491,604	Obs/Trn-Atlantic Coast Observers	2001 - present	<1	<1	1172	1100	included in groundfish
Mid Atlantic Illex Squid Trawl Fishery	vessels unknown	MSFCMA (50 CFR 648); MMPA Cat. I (50 CFR 229)	year-round	included in small mesh trawl fisheries	--	2004 - present	<1	<1	100	79	included in groundfish
Atlantic Sea Scallop Dredge Fishery	250 vessels with permits, 185 active	MSFCMA (50 CFR 648)	year-round	1,400,000	Industry funding	1999 - present	8-10%	8-10%	TBD	2,155	included in groundfish
				\$187,667	Reducing Bycatch						
				\$52,666	Obs/Trn-National Observer Program						
NE and Mid Atlantic Large Mesh Trawl Fisheries (summer flounder, bluefish, monkfish, dogfish)	620 vessels (2,138 permits)	MSFCMA (50 CFR 648)	year-round	\$322,667	Obs/Trn-National Observer Program	1998 - present	2%	2%	380	380	included in groundfish

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Table A2 Continued.

TOTAL NORTHEAST REGION OBSERVER PROGRAM FUNDING (CONGRESSIONAL): \$10,285,000											
TOTAL NORTHEAST REGION OBSERVER PROGRAM FUNDING (INDUSTRY): \$1,400,000											
TOTAL NORTHEAST REGION OBSERVER PROGRAM FUNDING (ALL FUNDING SOURCES): \$11,685,000											
Fisheries Observed	Fleet Size	Authority to Place Observers	Season of Operation	Funding Amount	Funding Source	Program Duration	Target % Coverage	Actual % Coverage	Target Sea Days	Actual Sea Days	Number of Observers
Southeast Fisheries Observer Programs - Programs are managed in separate laboratories as indicated below.											
Southeast Shrimp Trawl Observer Program, Southeast Fisheries Science Center, Galveston Laboratory, 4700 Avenue U, Galveston, TX 77551-5997											
Program Manager: Elizabeth Scott-Denton, 409-766-3571, elizabeth.scott-denton@noaa.gov, website: http://galveston.ssp.nmfs.gov/galv/research/management.htm#observer_program											
Southeast and Gulf of Mexico Shrimp Otter Trawl Fisheries (including rock shrimp)	approx. 1,870 (GOM) and 640 (SA) USCG Federally-permitted vessels, unknown number of state vessels, ~257 rock shrimp vessels	Voluntary through July 2007; Mandatory since July 2007 MSA(50 CFR 635)	year-round	\$235,000	Obs/Trn-National Observer Program	1992 - present	1%	<1%	1,200	996	16
				\$1,797,000	Obs/Trn-South Atlantic and Gulf Shrimp Observers						
				\$210,000	Obs/Trn-Atlantic Coast Observers						
Atlantic Pelagic Longline Observer Program, Southeast Fisheries Science Center, 75 Virginia Beach Dr, Miami, FL 33149-1003											
Program Manager: Lawrence Beerkircher, 305-361-4247, lawrence.r.beerkircher@noaa.gov, website: http://www.sefsc.noaa.gov/											
Atlantic, Gulf of Mexico, Caribbean Pelagic Longline Fishery	70-80 active vessels	MSA (50 CFR 635); MMPA Cat. I (50 CFR 229); ATCA	year-round	\$1,253,095	Obs/Trn-Atlantic Coast Observers	1992 - present	8% by vessel sets	11%	900	1450	10
				\$345,000	Obs/Trn - East Coast Observers						
				\$915,000	Enhanced Bluefin Tuna						

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Table A2 Continued.

Fisheries Observed	Fleet Size	Authority to Place Observers	Season of Operation	Funding Amount	Funding Source	Program Duration	Target % Coverage	Actual % Coverage	Target Sea Days	Actual Sea Days	Number of Observers
Southeast Shark Driftnet Observer Program & Shark Bottom Longline Observer Program, Southeast Fisheries Science Center, Panama City Laboratory, 3500 Delwood Beach Rd, Panama City, FL 32408											
Program Manager: Dr. John Carlson, 850-234-6541, john.carlson@noaa.gov, website: www.wefscpanamalab.noaa.gov/shark/observersBLL.htm											
Southeast Shark and Coastal Teleost Gillnet Fishery	4-23 vessels with directed shark permits	MMPA Cat. II (50 CFR 229); MSA (50 CFR 635)	year-round	\$324,305	Obs/Trn-Atlantic Coast Observers	1998 - present	38% shark drift gillnet; 100% shark strike gillnet;	39% of drift sets, 100% strike sets, 20% sink-shark sets.	~200 sets	196 sets	2 to 4
Atlantic and Gulf of Mexico Directed Large Coastal Shark Bottom Longline Fishery	251 directed shark permits (as of Oct. 2002)	MSA (50 CFR 635)	3 seasons - Jan-Apr; May-Aug; Sep-Nov	\$150,000	F/ST - Expand Stock Assessment	1994 - present	4-6%	8%	233 sets	264 sets	4 to 6
				\$140,300	Obs/Trn-National Observer Program						
				\$198,000	Fisheries Research and Management Program - SF Funding						
Gulf of Mexico Reef Fish Fishery Observer Program, Southeast Fisheries Science Center, Galveston Laboratory, 4700 Avenue U, Galveston, TX 77551											
Program Manager: Elizabeth Scott-Denton, 409-766-3507, elizabeth.scott-denton@noaa.gov											
Gulf of Mexico Reef Fish Fishery	Approx. 1,000 permitted USCG documented vessels	MSA (50 CFR 622)	year-round	\$187,667	Reducing Bycatch	2006 - present	<1%	1%	300 + transfer from FY06	644	16
				\$33	Obs/Trn-National Observer Program						
TOTALSOUTHEAST REGION OBSERVER PROGRAM FUNDING (CONGRESSIONAL): \$5,755,400											
TOTAL SOUTHEAST REGION OBSERVER PROGRAM FUNDING (INDUSTRY): NA											
TOTAL SOUTHEAST REGION OBSERVER PROGRAM FUNDING (ALL FUNDING SOURCES): \$5,755,400											

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Table A2 Continued.

Fisheries Observed	Fleet Size	Authority to Place Observers	Season of Operation	Funding Amount	Funding Source	Program Duration	Target % Coverage	Actual % Coverage	Target Sea Days	Actual Sea Days	Number of Observers
National Observer Program, Office of Science and Technology, 1315 East West Highway, Silver Spring, MD 20910											
Manager: Dr. Lisa Desfosse, 301-713-2363, lisa.desfosse@noaa.gov, website: http://www.st.nmfs.gov/st1/nop											
National Bycatch Report NOTE: funds distributed to NOP and regional programs	N/A	N/A	year-round	\$322,862	Obs/Trn-National Observer Program	2005 - present	N/A	N/A	N/A	N/A	N/A
				\$399,138	Reducing Bycatch						
National Observer Program Support Activities	N/A	N/A	year-round	\$50,278	Obs/Trn-Atlantic Coast Observers	1999 - present	N/A	N/A	N/A	N/A	N/A
				\$150,000	MMPA						
				\$150,000	Fisheries Research and Management Program - SF Funding						
				\$81,577	Obs/Trn-National Observer Program						
Regional Safety Cross-Training	NA	NA	NA	\$3,000	Obs/Trn-National Observer Program	2007	NA	N/A	N/A	NA	NA
TOTAL NATIONAL OBSERVER PROGRAM FUNDING: \$1,156,855											
NMFS Reserve	NA	NA	NA	\$300,000	Obs/Trn-National Observer Program	2007	NA	NA	NA	NA	NA
TOTAL NMFS RESERVE: \$300,000											
TOTAL OBSERVER PROGRAM CONGRESSIONAL FUNDING				\$33,621,042							
TOTAL INDUSTRY FUNDING				\$14,990,000							
TOTAL OBSERVER FUNDING - ALL FUNDING SOURCES				\$48,611,042	Totals may not sum due to rounding						
ESTIMATED NUMBER OF SEA DAYS TARGETED - Does not include programs that target permits, sets, or trips instead of sea days									54,110		
ACTUAL NUMBER OF SEA DAYS OBSERVED - Includes days deployed for electronic monitoring. Does not include programs that target permits, sets, or trips instead of sea days										64,587	
TOTAL NUMBER OF OBSERVERS - Does not include deployments for electronic monitoring											722

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