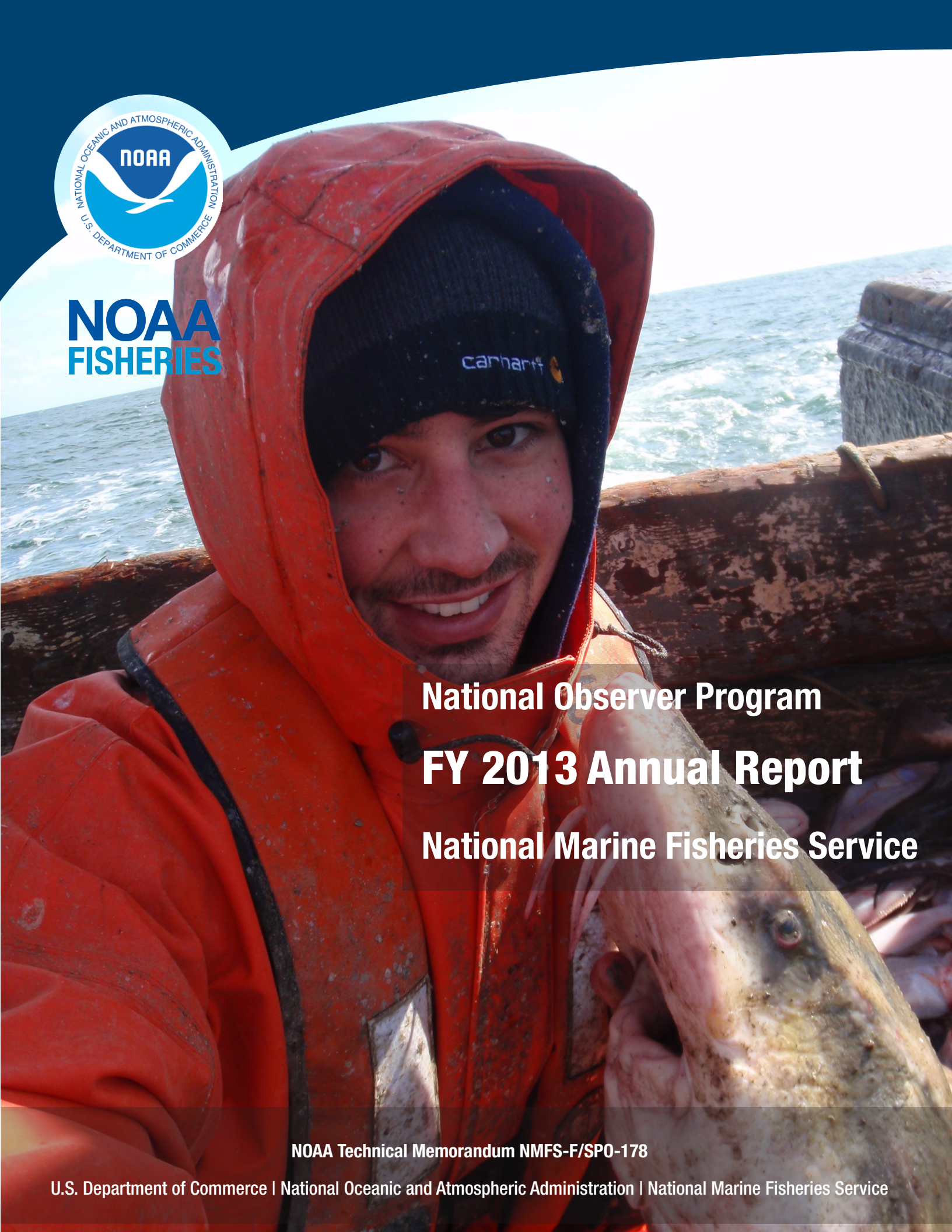

NOAA FISHERIES

National Observer Program

FY 2013 Annual Report

National Marine Fisheries Service

NOAA Technical Memorandum NMFS-F/SPO-178

U.S. Department of Commerce | National Oceanic and Atmospheric Administration | National Marine Fisheries Service

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December 2017

U.S. Department of Commerce
Wilbur L. Ross, Jr., Secretary

National Oceanic and Atmospheric Administration
RDML Tim Gallaudet, Ph.D., USN Ret., Acting NOAA Administrator

National Marine Fisheries Service
Chris Oliver, Assistant Administrator for Fisheries

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http://spo.nmfs.noaa.gov/tech-memos

https://www.st.nmfs.noaa.gov/observer-home/reports/nopannualreports/index

Cover photo: Sean Sullivan - West Coast Groundfish Observer Program (WCGOP), 2011.

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In Memoriam

Anthony T. "Taco" Santos, 42, passed away unexpectedly in Pago Pago, American Samoa, on March 1, 2014. Tony was from Wilmington, NC, and had been a NMFS observer for the Pacific Islands Region Observer Program since 2003. Tony deployed to the NMFS remote office in American Samoa in 2007 and remained there while amassing 1,985 sea days as a NMFS Observer. His passion for marine life and photography resulted in an exemplary collection of seabird photos that were instrumental in developing the NMFS PIROP Seabird ID guide. Tony was well known for his kindness and generosity. Tony is and will be missed by his fiancée, family, friends, and community of fellow observers.

Executive Summary

During FY 2013, the National Marine Fisheries Service conducted observer programs in six regions, with 917 observers and 77,610 sea days[1] observed in 48 fisheries nationwide. Specific accomplishments by region are presented below.

- The North Pacific Groundfish and Halibut Observer Program (Alaska Observer Program) observed 40,466 sea days across the groundfish and Pacific halibut fisheries in Alaska, with an additional 3,177 days at shore-side processing plants for a total of 43,643 sea days. The Alaska Observer Program was restructured in 2013 to improve the statistical reliability of the data to more equitably distribute the costs of the program, and to implement coverage in previously unobserved fisheries (e.g., the Pacific halibut commercial longline fishery). Observer coverage is no longer based on vessel length, but rather places all vessels and processors in the groundfish and halibut fisheries off the Alaskan coast into one of two observer coverage categories: (1) a full coverage category and (2) a partial coverage category.

- The West Coast Groundfish Observer Program observed 10,437 sea days in nine fisheries. A total of 8,987 sea days were observed in the West Coast trawl catch share fishery (shore-side and at-sea fleets), and 1,450 days were observed in the West Coast non-catch share fisheries. These fisheries include the limited entry sablefish fishery, as well as state-managed and open access fisheries such as California halibut trawl, nearshore rockfish, pink shrimp, and open access fixed gear fisheries.

- The Southwest Observer Program covered 391 days in the California large-mesh drift gillnet fishery, the Southern California set gillnet fishery, and the California-based deep-set pelagic longline fishery. Observers documented the incidental take of marine mammals, sea turtles, seabirds, and target and non-target fish species, and collected selected biological specimens.

- The Pacific Islands Fisheries Observer Program deployed 60 observers during 8,887 sea days in the Hawaii pelagic longline and American Samoa longline fisheries. The program implemented 100 percent observer coverage in the Hawaii shallow-set longline fishery using 1,641 sea days, and 20 percent coverage in the Hawaii deep-set longline fishery using 6,472 sea days. The program also observed 774 days in the American Samoa longline fishery. Observers collected data on incidental sea turtle takes and fishing effort, documented interactions of all protected species, and recorded species of fish kept and discarded. They also continued to process selected specimens for life history information.

- The Northeast Fisheries Observer Program (NEFOP) observed 11,311 sea days through three monitoring programs. The NEFOP observed a total of 17 fisheries, including the New England multispecies groundfish, Mid-Atlantic, herring Closed Area I, and the Atlantic sea scallop dredge fisheries. Several fishery management plans require mandatory observer coverage for specific fisheries. The NEFOP provides coverage to comply with requirements to meet the Standardized Bycatch Reduction Methodology and stock assessment needs. The NEFOP also monitors discard rates to ensure annual catch limits are not exceeded. In addition, the NEFOP collects data on gear performance and characteristics and protected species interactions, and monitors experimental fisheries.

- The Southeast Fisheries Observer Program observed 6,118 sea days in the pelagic longline, reef fish, shrimp trawl, and shark fisheries, including expanded coverage in the shrimp skimmer trawl fishery and enhanced coverage in the Gulf of Mexico for the bluefin tuna spawning season.

- The National Observer Program completed the U.S. National Bycatch Report First Edition Update 1; received approval of a renewal request of the Paperwork Reduction Act from the Office of Management and Budget for all observer data collection forms; co-convened the 7th International Fisheries Observer Monitoring Conference in Viña Del Mar, Chile (April 8–12, 2013); and produced a series of white papers on applicability of electronic technologies in resource monitoring.

[1] The number of sea days are calculated for the 2013 calendar year. All other data are calculated for the 2013 fiscal year.

1. Introduction

The National Oceanic and Atmospheric Administration's National Marine Fisheries Service (NMFS) deploys fishery observers to collect catch and bycatch data from U.S. commercial fishing and processing vessels. NMFS has been using observers to collect fisheries data since 1972. Observers have monitored fishing activities on all U.S. coasts, collecting data for a range of science, conservation, and management issues.

For more than four decades, fishery observers have collected high-quality data on board commercial fishing vessels in the U.S. exclusive economic zone (EEZ) and on the high seas. NMFS utilizes observers to collect data from U.S. commercial fishing and processing vessels, as well as from some shoreside processing plants and mother ships. Fisheries observers are professionally trained biological scientists who gather first-hand data on what's caught and thrown back. The high-quality data they collect is used to monitor fisheries, assess fish populations, set fishing quotas, and inform management decisions. Observers also support compliance with fishing and safety regulations. In 2013, there were fisheries observer programs in all NMFS fisheries management regions (Alaska, West Coast[2], Pacific Islands, Northeast[3], and Southeast). The number of observed fisheries varies depending on availability of funding, program priorities, and statutory or regulatory requirements.

Offices and science centers in each NMFS region administer observer programs in their areas (see Table 1). Each observer program is authorized by one or more of the following federal mandates: the Magnuson-Stevens Fisheries Conservation and Management Act (MSA), the Marine Mammal Protection Act (MMPA), and the Endangered Species Act (ESA). The National Observer Program (NOP) supports observer programs and increases their usefulness to the overall goals of NMFS through improvements in data collection, observer training, and integration of observer data with other research.

Under the MSA, fisheries management plans (FMPs) are developed for federal fisheries that require conservation and management. The MSA provides eight regional 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 Category I[4] and Category II[5] commercial fisheries that frequently or occasionally take[6] marine mammals (50 CFR 229.7(c)). NMFS uses observer data to

[2] In 2014 the Northwest and Southwest regions were combined into the West Coast Region.

[3] In 2014 the Northeast Region was renamed the Greater Atlantic Region.

[4] Category I fishery means a commercial fishery determined by the Assistant Administrator to have frequent incidental mortality and serious injury of marine mammals (16 U.S.C. 1387).

[5] Category II fishery means a commercial fishery determined by the Assistant Administrator to have occasional incidental mortality and serious injury of marine mammals (16 U.S.C. 1387).

[6] 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).

Table 1. Observer programs and locations for each region.

Observer Programs	Locations
Northeast	
Northeast Fisheries Observer Program	Falmouth, MA
At-Sea Monitoring Observer Program	Falmouth, MA
Industry Funded Scallop Observer Program	Falmouth, MA
Southeast	
Southeast Shrimp Trawl Observer Program	Galveston, TX
Atlantic Pelagic Longline Observer Program	Miami, FL
Gulf of Mexico Reef Fish Fishery Observer Program	Galveston, TX
Southeast Coastal Gillnet Observer Program	Panama City, FL
Shark Bottom Longline Observer Program	Panama City, FL
Pacific Islands	
Pacific Islands Fisheries Observer Program	Honolulu, HI
Alaska	
North Pacific Groundfish and Halibut Observer Program	Seattle, WA
Alaska Marine Mammal Observer Program*	Juneau, AK
Northwest	
West Coast Groundfish Observer Program	Seattle, WA
At-Sea Hake Observer Program	Seattle, WA
Southwest	
West Coast Regional Observer Program	Long Beach, CA

*Represents observer programs that operate only when funding is available.

quantify the impacts of fishing activities on marine mammal populations, record marine mammal sightings, and evaluate the success of bycatch reduction measures.

The ESA authorizes NMFS to place fisheries observers aboard commercial and recreational vessels in state and federal fisheries operating in the territorial seas or EEZ where sea turtle interactions may occur. Observer data help managers to determine whether existing measures to reduce sea turtle bycatch are working, or whether new or additional measures are needed to address sea turtle bycatch. NMFS annually identifies which fisheries are eligible for observer coverage under this requirement. The 2013 annual determination was published in the *Federal Register* on December 26, 2012 (77 FR 75999).

Observer coverage also may be recommended or required for federal fisheries as part of an ESA Section 7 biological opinion (BiOp). Section 7 prohibits federal agencies from carrying out programs (such as authorizing fishery operations) that jeopardize the continued existence of threatened and endangered species. Biological opinions may include terms and conditions that require observer coverage in fisheries where interactions with threatened or endangered species are known to occur.

Globally, international agreements (such as the Food and Agriculture Organization 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 reauthorized MSA[7] also strengthened the U.S. commitment to monitor

[7] http://www.nmfs.noaa.gov/sfa/magact/MSA_Amended_2007%20.pdf

and reduce 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 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 that are parties to the agreement." The provisions further 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."

1.1 Program Structure

Within the NMFS Office of Science and Technology (ST), the NOP provides national coordination of 14 observer programs in six regions, and of observer requirements in Atlantic Highly Migratory Species fisheries. In addition to national program administration, budgets, and planning, the NOP works with the regional observer programs to develop national policy, quality standards for observer data, and training standards for observer and marine safety instructors. The NOP has three permanent staff positions: program coordinator, bycatch expert, and safety expert.

The NOP also provides regional observer programs with a forum to increase collaboration and communication during National Observer Program Advisory Team (NOPAT) meetings that occur twice a year. Representatives from all regional observer programs and most NMFS offices participate on the NOPAT. The NMFS Science Board is composed of six NMFS science center directors, ST Director, Science Advisor for Stock Assessments, Senior Scientist for Ecological Research, Senior Research Economist, and chaired by the Chief Science Advisor. The Science Board reviews NOPAT recommendations, with final decisions made by the Chief Science Advisor, and the Assistant Administrator for Fisheries, when necessary.

Regional observer programs are responsible for their day-to-day operations, including administrative services, responses to data requests from a range of users, and working closely with third-party contracting companies that provide observers to address logistics and operational issues. Program scientists determine the appropriate sampling protocols and necessary observer coverage levels for each fishery. In general, regional programs work with observer provider companies to recruit, train, and deploy observers. Most costs are covered by NMFS, but in some cases the fishing industry contracts directly with private contracting companies to provide observer coverage. The full (100 percent) coverage fisheries managed by the Alaska Observer Program, for example, are funded primarily by the fishing industry, which pays observer salaries, travel costs, and insurance. The partial coverage fleet is paid by an ex-vessel fee determined by the North Pacific Fishery Management Council and implemented in federal regulations. 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, NMFS provides all new observers with rigorous training in species identification, sampling methods, and safety. Following a fishing trip, observers are debriefed, and the trip's data are quality checked by NMFS before being entered into a database system and made available to regional fisheries biologists.

1.2 Use of Observer Data in Fisheries Management

The information compiled by observer programs supports the management of fisheries and conservation of fish stocks, protected resources, and ecosystems throughout the United States. 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 (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 each managed fishery or stock, the MSA requires development of an Annual Catch Limit (ACL) that is set below the overfishing level to ensure that overfishing will not occur. Setting an ACL for a stock requires scientific data on catch and bycatch, which has resulted in increased observer days at sea across the country.

- Catch share programs rely on observer data to monitor catch, landings, and discards. In many cases these fisheries require enhanced observer coverage to document vessel-specific or sector-level quotas. Managers and fishermen rely on observer data to ensure that vessels or sectors do not exceed the authorized quota of target or discard species.

- 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. Biological samples collected by observers are also essential inputs into stock assessments (e.g., genetic data are used for species or stock identification purposes).

- For stocks that are overfished and in a rebuilding plan, such as Atlantic cod, preseason target catch numbers are provided to the management team. When the fishing season ends, 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 of marine mammals be monitored by observers, reported in the annual marine mammal stock assessment reports, and used to appropriately classify commercial fisheries according to their levels of incidental mortality and serious injury of marine mammals in the annual MMPA List of Fisheries (16 U.S.C. 1387).

- Observer data on marine mammal bycatch are used by Marine Mammal Take Reduction Teams when developing federally mandated Take Reduction Plans to assist in the recovery or prevent the depletion of certain strategic marine mammal stocks.[8]

- Observer data are used by industry in innovative bycatch avoidance programs, such as salmon bycatch monitoring in Alaska.

- Observer data are used by policymakers and Fishery Management Councils in numerous analyses to support their decision-making processes.

- Observer data support NMFS's series of National Bycatch Reports[9], which provide regular estimates of fish, marine mammal, sea turtle, and seabird bycatch for major U.S. fisheries.

[8] A strategic marine mammal stock is defined as a stock whose level of direct human-caused mortality exceeds the potential biological removal level; is declining and is likely to be listed as a threatened species under the Endangered Species Act of 1973; is listed as a threatened species or endangered species under the Endangered Species Act of 1973; or is designated as depleted under the Marine Mammal Protection Act (MMPA).

[9] http://www.st.nmfs.noaa.gov/observer-home/first-edition-update-1

- Under ESA Section 7 consultations, observer programs may be required or recommended to ensure anticipated take levels of threatened or endangered species (e.g., sea turtles, Atlantic sturgeon, etc.) are not exceeded in federal fisheries.

1.3 Funding History for Observer Programs

The NOP was formed in 1999 to improve coordination regionally and nationally among the observer programs. Prior to 1999, the majority of funding for regional observer programs was provided through indirect sources, such as congressional allocations supporting fisheries management and protected species conservation and recovery, or was provided by industry. Beginning in 1990, industry funds were also used to support the domestic observer program in Alaska; the amount of that industry funding has increased over time as mandatory coverage requirements have increased.

In 1999, the first congressional funds were directly appropriated to specific regional observer program budget or Program, Project, and Activity (PPA) lines, and the NOP was established to coordinate observer program activities. The number of fisheries observed has increased as available funding provided the means to develop observer programs for new or experimental fisheries while maintaining established monitoring programs (Figure 1).

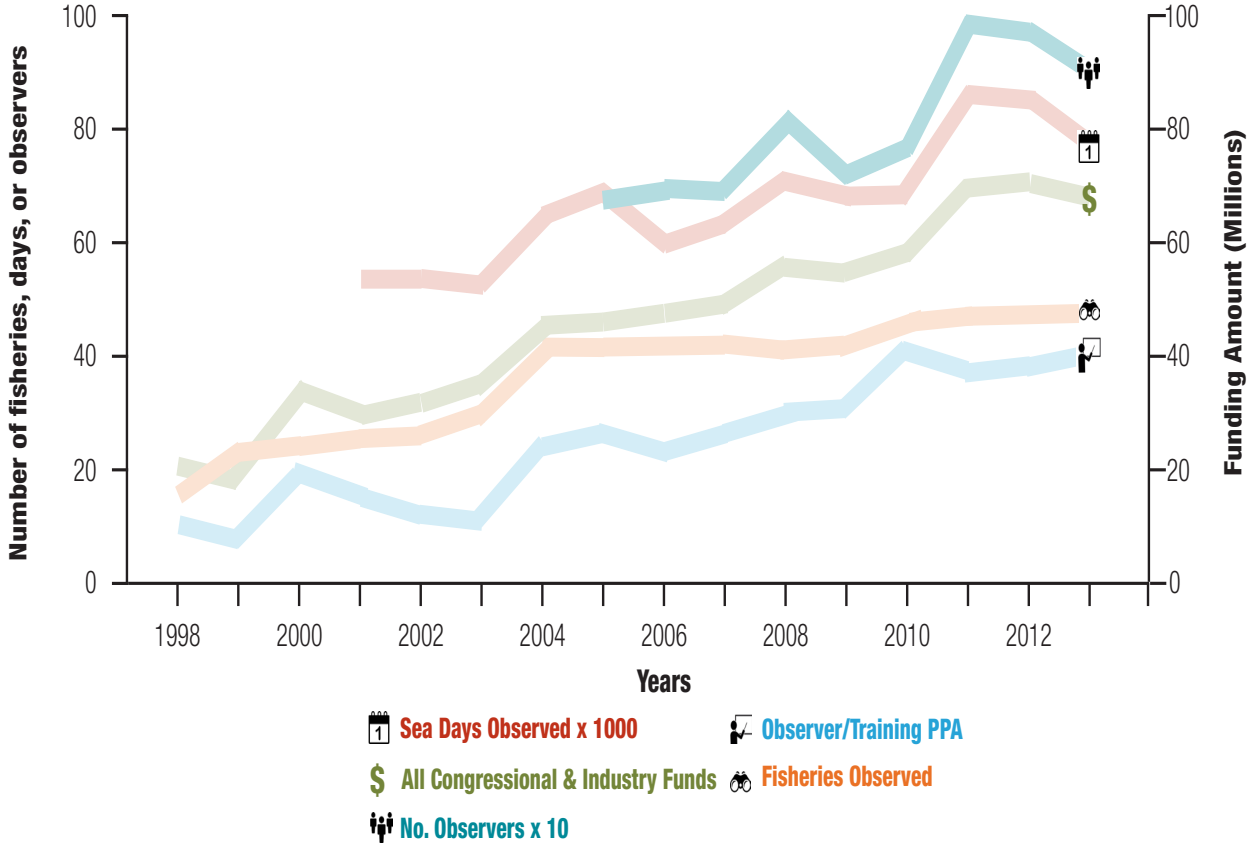

Figure 1. Overview of U.S. observer program funding (not adjusted for inflation) and number of observed fisheries from 1998 to 2013. Observer sea days were tracked since 2001. All congressional funds include the Observer/Training funds, National Catch Share funds, and/or other sources of federal funding.

2. FY 2013 Budget Summary

In FY 2013, congressional funding for observer coverage and program infrastructure totaled $53.4 million (Table 2), with industry contributions of $17.3 million bringing total funding to $70.7 million. This funding enabled regional observer programs to provide coverage for 79,217 days at sea in 47 fisheries. (The Appendix provides a breakdown of funding and observer coverage levels by program.) Industry funds were used to support observer coverage of fishing vessels in the West Coast groundfish trawl rationalization program, Atlantic sea scallop, and Alaska groundfish and halibut fisheries.

The majority of funding for observer programs comes from congressional appropriations. The congressional funding, including $39.9 million from observer budget lines, totaled $53.4 million. In addition to direct budget lines, observer programs may receive funding from federal appropriations supporting programs under the MSA, MMPA, and ESA.

Regional and NOP activities are funded through a number of dedicated congressional budget lines (listed below). Prior to 2012, the Reducing Bycatch budget line was split between ST for observer activities and the Office of Sustainable Fisheries for bycatch technology research. Beginning in FY 2012, Congress directed NMFS to make $2,500,000 of the Reducing Bycatch line available for competitive grants to non-federal researchers working with U.S. fishermen on the development of improved fishing practices and innovative gear technologies. This decreased available Reducing Bycatch funds for observer programs from approximately $1.8 million to $458,221 in FY 2013, resulting in fewer observer sea days.

Table 2. Federal appropriations supporting observer programs, FY 2013 Spend Plan.

Observer Funding Source	Total
Reducing Bycatch PPA*	$458,221
Observers/Training PPA	
National Observer Program*	$12,448,615
West Coast Observers	$4,698,772
North Pacific Marine Resource Observers	$5,410,886
Hawaii Longline Observer Program	$3,868,468
New England Groundfish Court-Ordered Observers	$8,164,997
East Coast Observers	$335,697
Atlantic Coast Observers	$3,286,459
South Atlantic/Gulf of Mexico Shrimp Observers	$1,727,153
Total Observer Budget Line Item Funding	$40,399,268
Total Other Congressional Funding**	$13,021,574
TOTAL CONGRESSIONAL FUNDING (all sources)*	**$53,420,842**

*A portion is allocated to the NOP and each regional program.
**Includes the following PPAs: National Catch Share Program ($10,436,000), Marine Mammal ($1,388,491), Fisheries Research and Management ($1,077,083), and Fish Information Networks ($120,000).
***Industry funding for FY 2013 totaled $17,277,099, with total combined industry and congressional funding coming to $70,697,941.

3. FY 2013 National Observer Program Activities

3.1 National Highlights

In addition to coordinating activities among the six regional observer programs, the NOP accomplished the following milestones:

- Held two NOPAT meetings to discuss observer program issues and ensure national consistency across regional programs.
- Held a meeting of the National Bycatch Report Steering Committee.
- Made a presentation on the National Bycatch Report[10] at the 143rd Annual Meeting of the American Fisheries Society.
- Published the *FY 2012 NOP Annual Report* as NOAA Technical Memorandum NMFS-F/SPO-127.[11]
- Completed the first update to the National Bycatch Report.[12]
- Held the 7th International Fisheries Observer and Monitoring Conference.[13]
- Funded $759,000 for electronic monitoring (EM)/electronic reporting (ER) projects through an Internal Funding Allocation(s) process.
- Co-produced a series of white papers on EM/ER.[14]

These items and other activities are described in greater detail in the sections that follow.

NMFS Science Program Review

Managing the nation's fisheries and protected species requires sound science. As part of a 5-year planning and review cycle, a systematic peer review of all six fishery science centers and ST was initiated in 2012 to (1) evaluate the quality, relevance, and performance of current science and research, and (2) aid in planning future science and research. In 2013, experts from within and outside the agency conducted rigorous reviews of the fishery, survey, and biological data that are collected in support of stock assessments. The review examined NOAA ship-based surveys, cooperative research surveys, logbook and observer data, and data management and quality control. The reports are available on the NMFS website.[15]

National Observer Program Advisory Team (NOPAT)

The NOPAT met twice in 2013 to discuss observer program activities, priorities, and funding. The NOPAT has representatives from each regional observer program and headquarters offices, including ST, SF, General Counsel for Fisheries, General Counsel for Enforcement, Office of Protected Resources, Office of Law Enforcement (OLE), and the U.S. Coast Guard (USCG). The NOPAT identifies and addresses issues of national concern, establishes priorities for observer programs, resolves funding issues, and shares information and success stories aimed at improving observer data collection and program implementation nationwide.

Discussion topics included the FY 2013 observer program budget, observer and vessel safety, program priorities, the EM strategic planning process, standards for observer medical/physical condition, and other topics.

Safety Advisory Committee

The NOPAT has a Safety Advisory Committee (SAC), which comprises safety representatives from each regional observer program, OLE, and

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10 https://afs.confex.com/afs/2013/webprogram/Paper12173.html

11 http://www.st.nmfs.noaa.gov/Assets/Observer-Program/pdf/FY_2012_NOP_Annual_Report_FINAL.pdf

12 http://www.st.nmfs.noaa.gov/observer-home/first-edition-update-1

13 http://www.ifomc.com/7thifomcproceedings.pdf

14 http://www.nmfs.noaa.gov/sfa/reg_svcs/Councils/ccc_2013/K_NMFS_EM_WhitePapers.pdf

15 http://www.st.nmfs.noaa.gov/science-program-review/

Figure 2. Video monitoring equipment shows crew activity from several different cameras on board a trawler in the Northeast electronic monitoring pilot study.

the USCG. It provides recommendations to the NOPAT on safety and health issues. The SAC convenes by phone prior to the NOPAT meeting, and more frequently as needed. It meets in person at least once every 2 years, coincident with a NOPAT meeting.

National Bycatch Report Update

Monitoring and reducing bycatch is a cornerstone of sustainable fisheries management. The *First Edition of the National Bycatch Report* (NBR) was published in September 2011. The NBR documented bycatch estimates using observer data and self-reported logbook data for all fisheries for which this information was available in 2005. An update to the report was finalized at the end of 2013 and posted to the NOP website in January 2014.[16] The update provides estimates mostly based on 2010 data.

To accomplish the update, ST (including the NOP) developed a NMFS intranet database to enter and centralize bycatch estimates for fish, sea turtle, marine mammal, seabird, and invertebrate species. The NBR Steering Committee met by phone in January 2013 and in Silver Spring, Maryland in March 2013.

Electronic Monitoring and Reporting

NMFS has moved toward greater adoption of electronic technologies in fishery-dependent data collection programs. These technologies include the collection of digital imagery (Figure 2), and gear deployment and location information from EM and ER devices such as e-logbooks. Determining the appropriate circumstances when EM/ER technologies can be adopted as the most cost-effective means for collecting data for science, fishery management, monitoring, and enforcement became a priority beginning in FY 2013.

NMFS pursued a strategic effort to advance the use of electronic technologies in partnership with the regional councils at the Council Coordination

[16] http://www.st.nmfs.noaa.gov/observer-home/finaldraftnbr

[17] http://www.nmfs.noaa.gov/op/snippets/em_er_discussion_draft_august_2013.pdf

Committee meeting February 21, 2013, in Washington, D.C., as well as in collaboration with the fishing industry. In August 2013, NMFS released its policy on electronic technologies and fishery-dependent data collection, and maintains a draft *Electronic Monitoring and Reporting: Guidance & Best Practices*[17] document online. One of the policy directives is that fishery-dependent data collection programs will be periodically reviewed by NMFS regions to ensure effective, efficient monitoring programs that meet industry and government needs; increase coordination between regions; and promote sharing of research, development, and operational outcomes. Toward that end, a systematic peer review of data collection and quality was conducted at NMFS regional science centers and ST in 2013. In addition, the NOPAT appointed an Electronic Monitoring Committee, which drafted a white paper that summarized more than 30 EM projects conducted by NMFS between 2002 and 2011. It detailed cost estimates comparing human and EM tools from selected case studies with different goals and objectives. The document identified and described the effectiveness and limitations of video monitoring as a tool for meeting the agency's resource management objectives, and complemented ongoing efforts by NMFS to effectively utilize EM technology.

Although planning is important, implementing EM/ER into fishery data-collection programs requires knowledgeable people engaged in the field. In FY 2013, the NOP hired a consultant to reach out to the councils, commissions, regions, science centers, and other stakeholders to resolve obstacles to implementing EM/ER solutions in NMFS observer programs. In addition, NOP staff spent time with captains and NMFS science center staff reviewing current challenges and successes with ongoing EM/ER projects in the field.

Funding is needed to ensure EM and ER development and implementation. The budget enacted in FY 2013 included an increase, of which a portion of the funds was designated for EM or ER projects. An Internal Funding Allocation(s) process was initiated to encourage and support development and implementation of these technologies in U.S. fisheries, particularly in fisheries with catch share programs, with proposal selection slated for FY 2014.

7th International Fisheries Observer and Monitoring Conference (IFOMC)

The NOP and Steering Committee successfully planned and hosted the 7th International Fisheries Observer and Monitoring Conference (IFOMC), April 8–12, 2013 in Viña del Mar, Chilé. Ten U.S. delegates were selected from a potential list of 20 NMFS scientists to attend the conference. The conference attracted more than 225 participants from 27 countries, and was chaired and hosted by the Instituto de Fomento Pesquero, IFOP (Fisheries Development Institute of Chile) with sponsorship from NMFS and other organizations. The event focused on ways to improve fishery monitoring programs worldwide by sharing practices and developing new methods of data collection and analysis. The conference also provided a forum for observers, scientists, managers, enforcement personnel, non-governmental organizations, and other stakeholders who share an interest in and/or responsibility for observing and monitoring fisheries. The NOP provided funding for 10 observers to attend and make presentations.[18]

Administrative Actions

On December 1, 2011, the Association for Professional Observers and Public Employees for Environmental Responsibility (PEER) requested an Office of Inspector General (OIG) investigation of the Southeast Observer Programs' management practices and handling of observer reports regarding vessel non-compliance with fisheries regulations and other applicable law, and compliance with regulations for observer safety and vessel accommodations. In response to this request, the OIG directed NMFS to conduct an inquiry into the issues raised in the complaint and submit a formal response detailing the results (OIG Complaint Action Referral No. PPC-CI-12-0221-H). The NMFS administrative inquiry that followed included a number of action items that closed the

[18] http://www.ifomc.com/7thifomcproceedings.pdf

OIG complaint. However, the administrative inquiry determined that all policies, procedures, and controls, including processes for reporting marine resource violations, and must be consistent across all observer programs. Also, procedures must be documented and included in observer orientation and refresher training. The administrative inquiry directed the NOP to review all regional observer programs for policy, procedure, and control consistencies as applicable and report back to the Director, Office of Science and Technology with recommendations. The full report, *National Review of Observer Program Policies and Procedures with Recommendations with Respect to the 2013 Administrative Inquiry Action Items,* is posted on the NMFS website.[19] It includes a list of nine action items and responses from each program on those actions.

Freedom of Information Act Request Submitted by PEER

PEER submitted a Freedom of Information Act (FOIA) request (FOIA 2013-001010) in an article concerning a hearing on NMFS efforts to analyze the feasibility of using video cameras to monitor commercial fishing as a mechanism to reduce observer costs. The request was for the following items: 1) All studies or analyses comparing the costs of electronic monitoring versus human fisheries observers conducted or obtained by NMFS; 2) All studies or analyses comparing the effectiveness or quality of electronic monitoring versus human fisheries observers conducted or obtained by NMFS; 3) Any directives that NMFS has issued concerning use of electronic monitoring rather than or in conjunction with human observers; 4) Any material describing how and by whom the electronic monitoring data would be reviewed by human monitors to interpret what was captured on camera; 5) Records indicating how electronic monitoring data will be aggregated, summarized, and made publicly accessible; 6) Documents reflecting the safeguards that will be required to police against manipulating or disabling cameras; and 7) All communications between representatives of the fishing industry and NMFS concerning electronic monitoring. This request covers the period from January 1, 2010, to the date of the request, June 7, 2013. There were 350 documents associated with this request, which were made available on the FOIA online system.[20] This case was closed on April 7, 2014, with a final disposition of partial grant/partial denial with 404 records released in part or in full.

Observer Safety Concerns

In 2013, the NOPAT Safety Committee compiled a list of exemptions (sometimes referred to as waivers) for observer coverage. These exemptions are still being reviewed to ensure their proper application. The committee also recommended revisions to the National Observer Safety Training Standards requirements for observer refresher training. In addition to specifying which topics will constitute refresher training for observers, the committee is also reviewing the timeframe for requiring certified observer safety trainers to conduct or participate in training in order to maintain their certification. After the standards are cleared by the NOPAT and then NMFS Leadership, they will be added to the Office of Policy's Policy Directive System (PDS).

3.2 International Activities

Liberia Observer Training

U.S. trainers conducted an intensive 3-week observer training course from February 25 to March 14, 2013, in Monrovia, Liberia. The training took place in partnership with the Liberia Bureau of National Fisheries and the World Bank's West Africa Regional Fisheries Project (WARFP), building on previous training conducted in both 2011 and 2012. The training covered the anticipated tuna observer program for purse seine and tuna longline vessels as well as nearshore demersal trawl fisheries. The observer trainees consisted of newly selected observers, current observers, and fisheries inspectors for a total class size of 27. Course topics

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[19] http://www.st.nmfs.noaa.gov/Assets/Observer-Program/pdf/Report_on_Obs_Prgm_Policies_Procedures_28Mar14_Final_rev2.pdf

[20] http://www.noaa.gov/foia-freedom-of-information-act

included fish management and other regulations governing observers in Liberia, as well as how to sample in pelagic longline fisheries, purse seine fisheries, and trawl fisheries. Additional topics included species identification (fish, marine mammals, and sea turtles), and safety at sea, including communication and vessel electronics. Tests were administered during the course and 21 of the 27 students passed to become qualified observers.

Sierra Leone Legal Training

As part of the West Africa capacity-building project, NMFS provided a 4-day legal training in Freetown, Sierra Leone, from July 22 to July 25, 2013. The training covered a wide range of topics germane to fisheries enforcement and prosecution in Sierra Leone. The training team consisted of two attorneys from the NOAA Office of General Counsel and International Affairs division, an enforcement agent from the NOAA Office of Law Enforcement, and an international observer consultant. NOAA also invited an attorney from the WARFP–Liberia program to encourage collaboration with adjacent countries. NOAA partnered with WARFP and the Sierra Leone Ministry of Marine Fish and Marine Resources (MFMR) to increase the understanding of the necessary infrastructure for fishery enforcement.

A total of 25 Sierra Leone government officials attended the training from five different agencies, including the Sierra Leone Armed Forces–Maritime Wing, MFMR, Ministry of Justice, and Sierra Leone police. The wide-ranging backgrounds and experience sof participants contributed to shared information, experiences, and lessons learned on topics relevant to fisheries enforcement and prosecution in Sierra Leone. Deputy Minister of MFMR Charles Rogers and Director of Fisheries Alpha Bangura provided opening remarks and participated in various sessions of the training.

International Activities undertaken by regional observer programs are described in the following section.

4. Regional Observer Program Activities

Six regional observer programs are administered by NMFS. The funding received by each program is used to administer existing programs, 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, management needs, and program goals. For some fisheries, certain mandated coverage or FMP goals must be met. The following sections summarize the FY 2013 achievements of NMFS regional observer programs. See the Appendix for detailed information.

4.1 Alaska

North Pacific Groundfish and Halibut Observer Program

The North Pacific Groundfish and Halibut Observer Program, headquartered at the Alaska Fisheries Science Center in Seattle, Washington, observed 40,466 sea days across the groundfish and Pacific halibut fisheries in Alaska, with an additional 3,177 days at shore-side processing plants, for a total of 43,643 sea days. The Alaska Observer Program was restructured in 2013 to improve the statistical reliability of the data, to more equitably distribute the costs of the program, and to implement coverage in previously unobserved fisheries, such as the Pacific halibut fishery. Observer coverage is no longer based on vessel length, but rather places all vessels and processors in the groundfish and halibut fisheries off Alaska into one of two observer coverage categories: (1) a full coverage category, and (2) a partial coverage category.

Restructured Program Implemented

NMFS made important changes to the observer program. It changed how observers are deployed, how observer coverage is funded, and identified the vessels and processors that must have some or all of their operations observed. These changes increase the statistical reliability of data collected by the program, address cost inequality among fishery participants, and expand observer coverage to previously unobserved fisheries.

The Alaska Observer Program places vessels into different coverage categories, allocates observer coverage based on the data requirements used in management, deploys observers onto vessels or assigns coverage by trips using randomization, tracks observer logistics and observer provider performance, and operates within a constrained budget. Fleet operations that are to be fully observed pay for observers on their own through the open market, while operations that are observed only when selected by NMFS must work with the NMFS-contracted observer provider, and do not directly pay for observer coverage. The initial year of funding for observers in this "partial coverage category" was provided by NMFS, with future years to be paid for through proceeds from landing fees collected in years prior. The fee is capped at 2 percent by the MSA, and was limited to 1.25 percent by the North Pacific Fishery Management Council (NPFMC). Future funds available to deploy observers in this program and resulting coverage levels on the fleet will be a function of quotas, prices, fishing effort, and any congressional or agency contributions. The NPFMC will review the fee annually after the second year of the program.

Observer coverage is allocated within the partial coverage category through an Annual Deployment Plan (ADP), whereas decisions to move portions of the fleet between partial and full coverage categories are done through NPFMC action. The ADP is a NMFS process informed by an internal scientific group. NMFS provides this plan to the NPFMC in October (preliminary) and December (final) for input and comment, but not for approval. An annual report is provided to the NPFMC by NMFS in June of each year that summarizes the prior year's deployment versus deployment targets. In this way future ADPs are informed by learning from past performance of (and subsequent adjustments to) the observer program.

NMFS awarded the observer provider contract for the partial coverage fleet to AIS, Inc. The contract was awarded without protest for 1 year, with 1 option year. The contract was intentionally short to facilitate changes to the contract structure if

needed, given the early performance of the program and the observer provider. Specific congressional funding for the Observer Training Center in Anchorage ended in 2013, thereby increasing observer program costs and NMFS staff workload in Seattle.

The NPFMC continues to offer full support to the restructured program, but there has been sustained industry and political resistance to reduce or replace human observation of the new participants in the program. One industry group filed a lawsuit in FY 2013 against the implementation of the restructured observer program, and another group has intervened on its behalf. There is a strong interest for EM to replace observers in the small vessel fleet, particularly those in the halibut Individual Fishing Quota Program. A full-time scientist was hired to advance EM development and implementation in the North Pacific, and a draft strategic plan for EM/ER in the North Pacific was presented to the NPFMC in June 2013.[21] Saltwater, Inc. was contracted to help the observer program to develop and deploy EM systems into this fleet for a project scheduled to begin in April 2013. A total of 512 requests for volunteer cards were sent to the fleet. Of those, 30 positive responses were received. Of those 30, only 8 actually carried EM equipment for testing in 2013. NMFS is hoping for increased participation from the partial coverage fleet in 2014. In contrast, the Alaska Region has successfully implemented its third production use of video in Alaska in a compliance context within the full coverage sector of the fleet. In this instance, EM is used in conjunction with flow scales to allow a cooperative catch share structure for Catcher Processors that target Pacific cod in the Bering Sea.

Outreach was an important component of activities, given the launch of the restructured program. Outreach events were held in Seattle, Aleutians East Borough, Petersburg, Anchorage, Homer, Kodiak, Newport (OR), Chignik (via telecom), Ketchikan, Sitka, and Juneau. In addition, informational reports have been given at each council meeting. Outreach efforts were a collaborative effort between science center, region, and enforcement staff.

Overall, the program is responding as designed, and NMFS is transitioning from federal funds to industry fees for sea days. The Alaska Region is developing the fee infrastructure within NMFS and the Department of Treasury.

Electronic Monitoring Pilot Study

The final rule[22] implementing the restructured observer program includes an option for vessels to carry EM equipment to collect required fisheries data. The final rule did not require EM, because NMFS had not yet developed performance standards or technical specifications for it. However, as part of the restructured observer program, NMFS is developing EM technologies to collect catch, discard, and fishing effort data aboard commercial vessels. The objective of the study is to develop a camera-based EM tool that could reliably monitor fishing activities for an entire trip—particularly those in the sablefish and halibut fisheries conducted on vessels between 40 feet and 57.5 feet in overall length. The observer program solicited voluntary participation from more than 500 vessels based out of Sitka, Petersburg, Homer, and Kodiak. Eight vessels (approximately 1.5 percent of the fleet) participated in the project.

Alaska Marine Mammal Observer Program (AMMOP)

The AMMOP, which is headquartered at the Alaska Regional Office in Juneau, Alaska, received $535,000 to deploy 13 observers in the Southeast Alaska gillnet fishery. The MMPA requires that certain commercial fisheries are monitored to obtain statistically reliable estimates of incidental injury to and mortality of marine mammals. The AMMOP monitors incidental take of marine mammals in Alaska state fisheries. Of the 14 MMPA Category II fisheries managed by the State of Alaska, 8 have been observed by the AMMOP since its establishment in 1990. Those fisheries include the Prince William Sound drift and set gillnet fisheries (1990–91), Alaska Peninsula drift gillnet fishery (1990), Cook Inlet drift and set gillnet fisheries (1999–2000), Kodiak set gillnet fishery (2002 and 2005), and Yakutat set gillnet fishery (2007–2009). Data collected during these rotation-

[21] http://www.afsc.noaa.gov/Publications/AFSC-TM/NOAA-TM-AFSC-276.pdf

[22] https://www.gpo.gov/fdsys/pkg/FR-2012-11-21/pdf/2012-28255.pdf

al observation periods are used in marine mammal stock assessments to estimate annual mortality and serious injury, and to classify fisheries according to levels of mortality in the annual MMPA List of Fisheries.

In 2013, the AMMOP observed 449 days at sea in the Southeast Alaska drift gillnet fishery. Because of the large geographic range of the fishery, the first 2 years of observer coverage focused on Alaska Department of Fish and Game Management Districts 6 and 8. These two districts were observed at 6.6 percent coverage. The remaining three management areas (Districts 1, 11, and 15) will be observed in future years as funding becomes available. Development of a new sampling design has increased the efficiency of data collection and reduced cost. Data collected from this fishery is important relative to concerns over incidental takes of humpback whales and harbor porpoise.

Due to the small size of gillnet vessels, observers collected data from alternative platforms; i.e., independent work boats operated by trained captains alongside fishing vessels. Data included information about fishing operations and gear, catch and bycatch (including marine mammals, fish, invertebrates, and seabirds), and environmental conditions. Examples of gear information included net length, twine material, mesh size, and marine mammal deterrent devices (e.g., pingers or acoustic harassment devices). Fishing data included fishing effort, net location, set and soak times, picking or hauling time, and catch (the numbers of animals caught by species and condition). Observers recorded the species, number, and behavior of marine mammals in the immediate fishing area and noted all entanglements. Observers collected data before and after hauls as well as while gear was being hauled or picked.

4.2 West Coast

West Coast reporting is split into two subregions: Northwest and Southwest.

4.2.1 Northwest

The activities of the Northwest Observer Program can be divided into two segments of the fisheries: catch share and non-catch share. Combined funding for these programs in FY 2013 ($8,592,143) was down significantly from FY 2012 ($10,565,489). Industry funding of at-sea costs totaled approximately $1.4 million. These programs observed 10,437 days, a decrease from 11,011 days in 2012. Coverage rates and total species catch for all sectors and years can be found online.[23]

West Coast Trawl Catch Share Program

The West Coast Groundfish Trawl Catch Share Program was implemented on January 11, 2011. Under the trawl rationalization program, the TAC is divided into shares that are allocated to permit owners. Because individual, cooperative, and/or sector quotas can be transferred and all species must be accounted for, catch share programs require 100 percent at-sea observer coverage. Catch share observers are deployed on vessels participating in the Shore-Based Individual Fishing Quota (IFQ) program (including hake and non-hake groundfish trawl and non-trawl vessels), all mother ships participating in the at-sea hake fishery, all mothership catcher-vessels participating in the at-sea hake fishery, and all catcher–processors participating in the at-sea hake fishery.

In FY 2013, federal funds paid approximately 65 percent of the vessel costs for observer coverage in the West Coast Groundfish Trawl Catch Share Fishery. This was a decrease from FY 2012 where federal funds paid about 80 percent of those costs. Approximately 8,170 observer sea days were invoiced, leading to total federal reimbursements of about $1.7 million to the fleet.[24]

West Coast Non-Trawl Catch Share Fisheries

In FY 2013, federal funds paid 100 percent of the cost of observer coverage in the non-catch share fisheries. Non-catch share observers were deployed

[23] http://www.nwfsc.noaa.gov/research/divisions/fram/observation/data_products/index.cfm

[24] These figures do not include the federal reimbursement costs of the compliance monitors in the processing plants, who verify that the fish tickets for trawl catch share offloads are completed accurately. Almost all of the catch monitors are observers who follow the fish off the boat into the plant.

in fisheries/sectors that include: Limited Entry Sablefish Endorsed Fixed Gear, Limited Entry Non-Sablefish Endorsed Fixed Gear, Open Access Nearshore Fixed Gear (Oregon and California), Open Access Fixed Gear (Washington, Oregon, and California), Open Access California Halibut Trawl (California), and Open Access Pink Shrimp Trawl (Washington, Oregon, and California).

Observer coverage in the Non-Catch Share sector has decreased due to reduced budgets in 2013. In FY 2012, a total of $4,511,602 was allocated to observing these fisheries; in FY 2013, that amount was reduced to $3,546,170. Although the program was able to maintain 13 year-round observers, funds were available to hire only 7 of the typical 26 seasonal observers that work the busiest 7 months of the year. The program was able to maintain some coverage in all sectors, and though these sectors account for less of the total catch and bycatch for the groundfish fishery, they do have interactions with protected species.

Biological Opinion for West Coast Groundfish

In March 2012, an ESA Section 7 biological opinion (BiOp) was issued on the West Coast Groundfish FMP. This BiOp impacts five protected species: green sturgeon, eulachon, humpback whales, Stellar sea lions, and leatherback sea turtles.[25] The BiOp included new requirements for observer data and specimen collection, sampling, reporting, and elements of observer training. The Northwest Observer Program has created collaborative bycatch reporting teams with staff from the Northwest Fisheries Science Center (NWFSC), Southwest Fisheries Science Center (SWFSC), and West Coast Regional (WCR) to produce bycatch reports for the protected species as outlined in the BiOp. The Northwest Observer Program also continues to produce necessary fleet-wide bycatch estimates, a Pacific halibut report, and the annual groundfish mortality reports.

Electronic Monitoring Feasibility Project

Working with the Pacific States Marine Fisheries Commission (PSMFC), NMFS funded a project aimed at demonstrating the feasibility of using EM as an alternative to observers for compliance monitoring on selected commercial fishing vessels. Recognizing the importance of identifying and implementing ways to reduce costs associated with the program in a timely manner, an EM plan has been developed to demonstrate the feasibility of using cameras for catch compliance monitoring on different components of the trawl fleet. The EM plan also examines how an integrated EM program (cameras plus electronic logbooks) could support catch accounting requirements in the future. In FY 2013, the Northwest Observer Program continued to collaborate with PSMFC to conduct EM/ER testing in the West Coast groundfish fleets. Testing in the bottom trawl, mid-water trawl, and fixed gear fleets in the catch share sector will continue in 2014 to help determine the role of EM/ER in compliance monitoring on the west coast.

Electronic Improvements to Infrastructure

The electronic infrastructure was improved significantly, allowing for timelier processing of data and organizing of observer information and activities. A new database, ObsLog, was created to track observer deployments, contracts, training and debriefing requirements and completions, safety checklists, incidents, and debriefing requests. Observer provider companies and observer staff can use the application to report safety incidents, and the OLE and USCG will have access to the system to view incident reports, view vessel safety checklists, and access observer statements of fact, as appropriate. This database will create a secure record and streamline reporting to OLE, reducing the inefficiency of manually handled and tracked reports.

The observer program has significantly improved its observer database that contains catch and biological data. The program also improved processing functions to automate calculations from raw observer data for reporting quota debits for discards to the Vessel Account System (VAS) used by fishermen to track catch share quota. These improvements have reduced data errors tremendously. For example, the percentage of trips where discard quota pounds reported to VAS changed due to data errors decreased from 98.7 percent in 2011 to 26.7 percent in 2013. Further, the debrief-

[25] http://www.pcouncil.org/wp-content/uploads/F3b_ATT3_BO_MAR2012BB.pdf

ing process has also improved data delivery by increasing the percentage of trips where discard information was finalized in the VAS from 36 percent in 2011 to 77 percent in 2013.

4.2.2 Southwest

The Southwest Region received the majority of its observer program funds in FY 2013 ($899,357) through the NOP budget line. The Southwest Observer Program observed a total of 391 sea days with 5 observers in the California large-mesh drift gillnet, the Southern California set gillnet, and the California deep-set pelagic longline fisheries. These values are largely consistent with FY 2012 levels. The Southwest Fisheries Science Center uses observer data to estimate incidental take of marine mammals to prepare annual stock assessment reports and to document the incidental take of sea turtles, seabirds, and target and non-target fish species. A summary of observer program reports is posted online.[26]

California Large-Mesh Drift Gillnet Fishery

In May 2013, the Southwest Region Protected Resources Division issued a BiOp on the drift gillnet fishery. The BiOp requires NMFS to reevaluate observer coverage levels in the fishery by May 2014 and initiate implementation of any changes to observer coverage by August 2014. To assist with preparation of the BiOp, staff from the SWFSC and Southwest Regional Office (SWRO) analyzed observer and logbook data to determine whether a data bias existed due to an observer effect on observed vessels. NMFS found no significant difference in swordfish catch per unit effort (CPUE) between observed and unobserved trips, indicating that observed vessels do not change the way they fish when an observer is on board.

On September 4, 2013, NMFS issued emergency regulations covering the drift gillnet fishery through January 31, 2014. The regulations require 100 percent observer coverage of all fishing in waters deeper than 1,100 fathoms, video monitoring systems for all vessels, and a fishery closure if a sperm whale is observed killed or seriously injured.

4.3 Pacific Islands

The Pacific Islands Regional Observer Program (PIROP) received $5,817,975 in funding to support observer coverage in 3 fisheries with required coverage levels in FY 2013. Regulations require 20 percent observer coverage in the Hawaii pelagic longline deep-set tuna fishery and 100 percent coverage in the Hawaii pelagic longline shallow-set swordfish fishery. In addition, the American Samoa pelagic longline fishery is observed at 20 percent. Observer coverage was also provided in the American Samoa pelagic longline fishery for 774 sea days. In FY 2013, the program had 60 observers deployed for a total of 8,887 sea days across all 3 fisheries, compared to 50 observers deployed for 9,790 days in FY 2012. The decline in sea days occurred mainly in the swordfish fishery due to a decrease in fishing effort (coverage rates in 2012 and 2013 remained at 100 percent). Reports are available online.[27]

The PIROP has been able to meet its required responsibilities despite a challenging fiscal situation. Observers in this program stay at sea for extended periods of time and travel long distances, making deployments expensive, and staffing levels have not yet returned to normal following three retirements.

False Killer Whale Take Reduction

On November 29, 2012, NMFS issued a final False Killer Whale Take Reduction Plan (TRP) consisting of regulatory and non-regulatory measures to reduce mortalities and serious injuries of false killer whales in Hawaii-based longline fisheries.[28] These regulations are intended to reduce the likelihood of false killer whales being incidentally hooked or entangled, and killed or seriously injured, during Hawaii-based longline fishing operations. Regulatory measures that went into effect on December 31, 2012, include gear requirements, longline prohibited areas (e.g., a Main

[26] http://www.westcoast.fisheries.noaa.gov/fisheries/wc_observer_programs/sw_observer_program_info/data_summ_report_sw_observer_fish.html.

[27] http://www.fpir.noaa.gov/OBS/obs_qrtrly_annual_rprts.html

[28] https://www.federalregister.gov/articles/2012/11/29/2012-28750/taking-of-marine-mammals-incidental-to-commercial-fishing-operations-false-killer-whale-take

Hawaiian Islands Longline Fishing Prohibited area), training and certification in marine mammal handling and release, captains' supervision of marine mammal handling and release, and posting of NMFS-approved placards on longline vessels. The PIROP has been working with partners in the Office of Protected Resources and Office of Sustainable Fisheries to clarify roles and responsibilities of observers when there is an interaction with a protected species such as a false killer whale. Following these discussions, the program has reviewed and reinforced protocols for observers while at sea when an interaction occurs.

Observer Support of Research Projects

Observers are working with staff from the Pacific Islands Fisheries Science Center on two projects pertinent to monitoring and bycatch of U.S. fisheries. The first of these projects follows the needs of the TRP and is focused on evaluating where false killer whales are caught within a fishing set, and why. There is a strong link between false killer whale depredation on fishing bait and incidental take, and any long-term solution for bycatch reduction also likely will need to reduce depredation. Acoustic observations of false killer whales and vessel noise began in 2011 with funding from NMFS. The project is aimed at tracking individual false killer whales as they move through longline gear.

The second project aims to determine the post-release survival of large Pacific blue marlin and striped marlin released from pelagic longline gear. Observers help with collecting tissue plugs and blood, which are being used to develop biochemical correlates of morbidity and mortality. If successful, the method could prove to be portable and applicable to the rapid analyses of post-release survivorship in many pelagic species.

Electronic Improvements to Infrastructure

The PIROP was undergoing an office automation initiative in 2013. Broadly speaking, this initiative will replace paper with electronic forms and upgrade the database infrastructure and integration. After completion, the program will achieve improved tracking of observer logistics, fleet correspondence, observer training status, enforcement documents, and observer data quality and data disposition. The initiative has three phases: Phases I(a) and I(b) were completed as of 2013. Work began on Phase II(a) in January 2014, with completion expected by late 2014.

International Activities and Capacity Building

In response to a request by a researcher at the Spanish National Association of Fish and Seafood Canning Manufactures-Technical Centre for the Preservation of Fish, Seafood and Aquaculture Products (ANFACO-CECOPESCA)[29], the program provided five samples to perform a molecular test to confirm the identification of snake mackerel specimens caught in the Atlantic.

The program manager participated in the 2013 Regional Observer Coordinators Workshop in Roratonga, Cook Islands. The annual workshop ensures consistent practices among participants, avoiding pitfalls and sharing strengths. The program provided input on topics for the new Western and Central Pacific Fisheries Commission Regional Observer Programs. Some of the issues included higher observer wages, improved payment mechanism(s), clear observer credentials (ID badges), and minimum safety standards for vessel safety checks. Following work completed in 2012, a syllabus was developed for training staff that will be used to train and debrief observers in the Korean Purse-Seine Observer Program.

Coral Triangle Initiative

The Coral Triangle Initiative on Coral Reefs, Fisheries, and Food Security is a multilateral partnership of six countries working together to sustain extraordinary marine and coastal resources. In 2013, PIROP worked with the U.S. Navy's Pacific Partnership to facilitate an observer program planning and debriefing workshop in the Solomon Islands to support capacity building efforts in the region.[30] The program sent a contracted staff member to Honiara to lead the workshop with Solomon Islands and Papua New Guinea personnel.

[29] http://www.anfaco.es

[30] http://www.nmfs.noaa.gov/ia/international_development/asia_pacific/honiara_workshop_2013.pdf

To assist with the development of an Indonesian fisheries observer program, the program manager and two other staff traveled to the region to provide a "training the trainers" workshop so that Indonesia could begin training observers and meet with appropriate Ministry personnel regarding administration of an observer program.

4.4 Northeast

The Northeast Fisheries Observer Program (NEFOP) received $17,884,338 in federal funding, plus $2,015,000 for the Atlantic sea scallop industry-funded observer program. A total of 11,311 sea days were observed through three monitoring programs. A total of 17 fisheries were observed, including the New England multispecies groundfish, Mid-Atlantic fisheries, herring Closed Area I, and the Atlantic sea scallop dredge fishery. FMPs adopted by the New England Fishery Management Council and the Mid-Atlantic Fishery Management Council include mandatory observer coverage requirements for several fisheries. The NEFOP provides coverage to comply with requirements to meet the Standardized Bycatch Reduction Methodology[31], fulfill stock assessments needs, and monitor discard rates to ensure ACLs are not exceeded. The NEFOP collects data on gear performance and characteristics, and protected species interactions. It also monitors experimental fisheries. Reports from the NEFOP are posted online.[32]

Northeast Multispecies Groundfish Monitoring

The Northeast entered its fourth year of sector management in the Northeast Multispecies Groundfish Fishery. The target observer coverage rate in the sector-managed fishery was 22 percent, achieved through a combination of at-sea monitoring (14 percent) and NEFOP observer coverage (8 percent). The industry was scheduled to begin paying for monitoring costs in the sector-managed fishery beginning in 2012; however, economic information indicated that fishermen were not yet able to assume at-sea monitoring costs. As a result, NMFS continued to fund the cost of at-sea monitoring for New England groundfish fisheries through April 30, 2014—the end of the 2013 fishing year. The industry is scheduled to begin paying for monitoring costs in the sector-managed fishery some time in the future, with NOAA contributing the infrastructure costs to provide the training and certification of observers and to process the data. Additionally, methods to help offset and share the at-sea portion of the costs are being examined and developed through an industry-funded observer program omnibus amendment.

Bluefin Tuna Purse Seine Fishery

The U.S. bluefin tuna purse seine fishery in New England has been inactive for several years, but as of FY 2013 there was one active vessel (of five permitted vessels) operating out of Fairhaven, MA. Since the fleet was last active, the International Commission for the Conservation of Atlantic Tunas has adopted a binding recommendation (General Issue Recommendation 2010-10) for a minimum of 5 percent observer coverage of fishing effort in the tuna purse seine fishery. Observers are required to record and report total target catch and bycatch (including sharks, sea turtles, marine mammals, and seabirds), size composition, disposition status (i.e., retained, discarded dead, released alive), and the collection of biological samples for life history studies (e.g., gonads, otoliths, spines, scales). In addition, observers record and report area of catch by latitude and longitude, fishing effort information (e.g., number of sets, etc.), and date of each fishing operation (including, as appropriate, the start and stop times of the fishing activity). NEFOP is temporarily providing observer coverage in this fishery.

Electronic Monitoring System Study

The NEFOP continued with its fourth and final year (Phase III) of an EM system test of the applicability of video technology to collect catch and fishing effort data aboard commercial fishing vessels. The goal of the study was to evaluate the utility of EM as a means to monitor catch on a real-time basis in the Northeast multispecies groundfish sector fleet. Participating vessels were located in a variety of ports in New England to account for

[31] http://www.nefsc.noaa.gov/fsb/SBRM/

[32] http://www.nefsc.noaa.gov/femad/fsb/

differences in fishing activity in multiple geographic ranges, and to effectively assess the applicability of EM in sector-based management.

The first phase of the program focused on building a foundation of data (detection, counting, species identification) specific to the needs of the Northeast Multispecies Groundfish Fishery. Results demonstrated there are limitations to consistent species identification, and more work is needed regarding weight estimation. The second phase focused on a series of dedicated experiments to improve methods for obtaining fish weight with a known accuracy and precision, and to develop methods to increase species identification through catch handling. Results demonstrated there are efficiencies in weight estimation using length/weight correlations and improvement in species identification among select species, e.g., certain flounders and hakes.

FY 2013 efforts (Phase III)[33] focused on simulating two EM monitoring models with potential for effective use in Northeast fisheries. The two models include full retention of catch with EM monitoring for discard compliance (compliance approach), and EM validation of industry-reported data (audit approach). Ultimately, the EM monitoring model dictates the level of complexity and therefore the operational considerations associated with EM. The specific monitoring approach influences factors including effective identification of quota species, weight estimations, reporting requirements, cost monitoring, analysis and review time, and catch handling intricacies. The extent to which these factors impact data varies considerably according to the model. Products of this final phase will help to document and explain how these factors influence EM, drive costs, and affect the overall, comprehensive monitoring program.

Standardized Bycatch Reporting Methodology (SBRM)

In 2008, Oceana filed a lawsuit against NMFS challenging the SBRM methodology used to track bycatch in Northeast fisheries. The district court rejected the statutory claims made by the plaintiff; however, the plaintiff appealed to the U.S. District Court of the District of Columbia. The court found that the agency had not established a lawful SBRM because the agency still had discretion to allocate observers at a level less than the minimum needed to achieve 30 percent coefficient of variation if faced with external constraints such as budget shortfalls. The U.S. District Court ordered the SBRM Amendment to be vacated, and remanded the case to NMFS for further proceedings consistent with the opinion of the Court of Appeals. The Northeast Regional Office began a regulatory amendment of the SBRM requirements through the New England Council and Mid-Atlantic Council with the SBRM Omnibus Amendment. In February 2014, the U.S. District Court for D.C. issued a decision that upholds a framework adjustment that set at-sea observer coverage rates for the Northeast Multispecies Groundfish Fishery.

Deep-Sea Coral and Sponge Identification Training

The NEFOP observer training curriculum now includes deep-sea coral and sponge species identification. A pilot project funded in 2012 by the NMFS Deep-Sea Coral Research and Technology Program developed lesson plans, training aides, and field guides to include deep-sea coral and sponge identification. These materials are distributed to all NEFOP observers and at-sea monitors. Deep-sea coral identification has been incorporated into the curriculum for all certification training. The project team investigated new sampling/recording methodology for corals (e.g., photographic) and reviewed the current recording of coral/sponge presence. Additionally, the NEFOP Species Verification Program, a training and data quality program, will be used to offer an excellent tracking method for correct deep-sea coral and sponge identification. The project team is particularly interested in helping the redfish fishery document any coral bycatch, because redfish have been observed to co-occur with deep-sea corals in the Gulf of Maine.

[33] http://www.nefsc.noaa.gov/fsb/ems/new-england-em-project-phase3-final-aug15-2014.pdf

4.5 Southeast

In FY 2013, the Southeast regional observer programs were allocated $9,170,910 in federal funding. A total of 6,090 sea days were observed under several observer programs: 1,981 sea days in the South Atlantic and Gulf of Mexico shrimp otter trawl observer program (including expanded coverage in the skimmer trawl fishery); 2,187 sea days in the Atlantic, Gulf of Mexico, and Caribbean pelagic longline fisheries (including enhanced coverage during the bluefin tuna spawning season and experimental trips in the Mid-Atlantic Bight area); 1,457 sea days in the Gulf of Mexico reef fish observer program; and 335 days and 130 days in the shark gillnet and shark bottom longline observer program, respectively. (See the Appendix for more information.) This is an increase of 457 sea days compared to FY 2012.

Southeast Shrimp Trawl Observer Program

The Shrimp Observer Program completed a second year of coverage that included 178 sea days in the shrimp skimmer trawl fishery in the northern Gulf of Mexico. Observers were placed on randomly selected state licensed vessels to monitor any interactions with sea turtles. The number of sea turtle captures decreased from 24 observed in 2012 to 8 observed in 2013. Although sea turtle interactions were lower in 2013 than during the initial year of coverage, fluctuations were expected due to variations in weather, water temperature, and animal abundance, as well as other unknown factors. A summary report of the second year of coverage was published in January 2014.[34] Additionally, through voluntary coverage, observers continued to collect data to evaluate turtle excluder devices aboard skimmer trawl vessels in Louisiana and North Carolina. In FY 2013, a new BiOp was released for the shrimp trawl fishery that required increased observer coverage to monitor for ESA-listed smalltooth sawfish interactions. In response, the Galveston and Panama City Programs are initiating an EM project to document any take of sawfish in the shrimp trawl fishery. This project was funded by the Cooperative Research Program.

Atlantic Pelagic Longline Observer Program

The Atlantic Pelagic Longline Observer Program (POP) targets 8 percent observer coverage of the commercial pelagic longline fleet in 12 statistical areas throughout the Western Atlantic Ocean (Canada, along the U.S coast, the Gulf of Mexico, and throughout the Caribbean to Trinidad). Utilizing a corps of 12 to 20 observers, the POP deployed observers on 188 trips in 2013, accounting for 1,487 observed sets over 2,134 sea days. During 2013, 5 experimental trips (54 sets, 53 sea days) were observed to gauge the effectiveness of weak hooks used in the Mid-Atlantic Bight.

Enhanced Bluefin Tuna Observer Coverage

The POP used available funding to achieve approximately 50 percent observer coverage in the Gulf of Mexico enhanced coverage campaign during the bluefin tuna spawning season from March through June 2013. Observers spent 892 sea days to observe 608 sets during this time. The coverage was expected to produce a coefficient of variation of approximately 20 percent for bluefin tuna discard estimates (see NOAA Technical Memorandum NMFS-SEFSC-588). The enhanced coverage will allow NMFS to continue collecting data regarding spatial and temporal patterns of bluefin tuna bycatch, biological samples from landed fish or dead discards, and satellite tagging of yellowfin tuna catch and bluefin tuna bycatch. Reports are posted online.[35]

Gulf of Mexico Reef Fish Fishery Observer Program

The Gulf of Mexico Reef Fish Fishery Observer Program monitored catch shares in the Gulf of Mexico Reef Fish Individual Transferable Quota fishery. With a focus on sea turtle interactions, the expanded observer coverage of the bottom longline and bandit reel reef fish fishery will also provide better estimates of discards for other species as well as better accounting of quotas for targeted species. Expanded biological sampling for species of interest will provide data for stock assessments—observers are often the only source for reproductive

[34] Pulver, J. R., E. Scott-Denton, and J. A. Williams. Observer coverage of the 2013 Gulf of Mexico skimmer trawl fishery. NOAA Tech. Memo. NMFS-SEFSC-654, 25 p.

[35] http://www.sefsc.noaa.gov/pop.jsp

samples of reef fish. Additional observer coverage in these fisheries is being funded by the Gulf and South Atlantic Fisheries Foundation through the Marine Fisheries Initiative (MARFIN).

Southeast Coastal Gillnet Observer Program

The Southeast Coastal Gillnet Observer Program provides observer coverage of the Southeast coastal gillnet fishery from North Carolina to Florida and through the Gulf of Mexico. In addition to standard coverage, the observer program expanded observer coverage for small gillnet vessels operating in state waters of Alabama, Mississippi, and Louisiana. Observers are primarily deployed to estimate the impact of this fishery on marine mammals and sea turtles, but they also gather valuable information on the state fishery and fishery bycatch. In addition, this program has migrated its database from local data storage to Oracle-based, centrally located servers, which will facilitate at-sea reporting of observer data and its use in management. Reports are available online.[36]

Shark Bottom Longline Observer Program

The Shark Bottom Longline Observer Program continued to focus on monitoring catch and bycatch. Within this program, ER improvements are being explored—funding was awarded to develop an at-sea ER method using tablet computers. Field testing of these tablets was completed in 2013 using pairwise observer coverage (i.e., one observer filled out standard paper forms and one observer utilized the tablet). Future modifications based on field testing will require streamlining the application for more efficient data entry. This program is migrating its database from local data storage to Oracle-based, centrally located servers, which will facilitate at-sea reporting of observer data and its use in management. Reports are available online.[37]

[36] http://www.sefsc.noaa.gov/labs/panama/ob/gillnet.htm

[37] https://www.sefsc.noaa.gov/labs/panama/ob/bottomlineobserver.htm

5. Other Developments Related to Observer Programs

5.1 The National Safety Training Standards Procedural Directive

The NOPAT Safety Committee reviewed and revised the National Safety Training Standards Procedural Directive and submitted it for approval to the NOPAT. The changes include: 1) completion of CPR/First Aid Training before initial deployment, when required; 2) scheduling of safety trainers' refresher training every 3 years rather than every 2 years; 3) training for safety trainers across programs and regions; 4) setting specific minimum topics that qualify as observer refresher training; and 5) completion of observer refresher safety training within a 3-year period.

Regional observer safety trainers developed core curriculum topics in coordination with the NOP to enhance risk awareness and safety skills of observers deployed on commercial fishing vessels required to carry an observer. In addition to identifying core curriculum topics, the Safety Committee established standards regarding minimum qualifications for NMFS observer safety trainers and revised requirements for ongoing professional development and maintenance, frequency of refresher safety training for active observer safety trainers, checklists that trainers should follow when teaching skills that may pose a safety risk to students and trainers, and minimum safety equipment that observers must have before deployment on a fishing vessel. The revised policy directive is undergoing internal review.

5.2 Office of Law Enforcement

Regional Activities

During 2013, OLE and observer program relations improved nationwide. Communications and increased observer training resulted in an improved understanding of observer compliance roles, and in improved compliance information from observers and observer program staff.

The safety and welfare of observers remain the top domestic priorities of the OLE. Observer safety was negatively impacted in 2013 by crew member drug use, mistreatment of observers, and negligent vessel operations. OLE has collaborated with industry groups, observer programs, observers, NOAA's Office of General Council, state law enforcement partners, and the USCG to decrease these threats to observers.

In the Pacific Island Division, plans were made to move OLE and Observer Program offices into adjacent office spaces to increase opportunities for liaison and collaboration between the programs.

In the Southeast Division, OLE liaison agents and the observer programs collaborated to improve observer compliance role training and to draft

internal procedures for reporting potential violations. Procedures included observer program review of incidents, documentation of incidents, and referral of violations to OLE. Observer training topics included information about OLE, summary of applicable regulations, observer compliance role, and potential victim crimes against observers.

In the Alaska Division, observers were deployed for the first time on halibut IFQ vessels and on 40- to 60-foot catcher vessels. Every field agent and officer received training on the restructured program and engaged with industry and the observer program during implementation. OLE agents and officers provided outreach and compliance assistance, and responded in real time to incidents involving observer coverage, safety, treatment, access, and assistance.

Summary Settlement

Summary Settlement penalties are issued at the discretion of NOAA OLE according to National and Regional Summary Settlement Penalty Schedules established by the NOAA Office of General Counsel. A summary settlement penalty is assessed by an OLE agent or officer in lieu of civil proceedings, which could result in harsher penalties. The summary settlement allows a violator the opportunity to choose to settle an alleged violation and pay a reduced penalty within a specified time period following receipt of the Summary Settlement Notice. Payment of the Summary Settlement offer satisfies the total civil penalty assessment and indicates the violator does not contest the violation(s). Payment may also constitute an agreement to forfeit and abandon to the United States any fish and gear that were seized during the enforcement action. If the alleged violator chooses not to accept the Summary Settlement offer, the case is forwarded to the NOAA Office of General Counsel for prosecution. Current Summary Settlement Penalty Schedules can be found online.[38]

Beginning July 1, 2013, OLE's revised national and regional Summary Settlement Schedules (SSS) went into effect. Regional schedules include many new penalties for observer-related violations. The National SSS includes the following penalties:

- Interference with observer ability to perform duties: $1,000
- Failure to demonstrate proof of passing USCG safety examination: $500
- Failure to maintain safe conditions for protection of observers: $1,000
- Failure to provide adequate accommodations: $1,000

5.3 Office of Science and Technology

In FY 2013, the Office of Science and Technology, through the NOP, supported several regional projects recommended by the National Seabird Program totaling $112,000. These included seabird identification training to all AFSC fishery observers ($30,000). During 2013 these observers provided over 43,000 sea days to the commercial groundfish fisheries in federal waters off Alaska, and for the first time, made observations in the Pacific halibut IFQ longline fishery. The AFSC also received $25,000 for necropsy analysis of all seabirds recovered by observers deployed to Alaska and Hawaii fisheries through their respective observer programs. In 2013, approximately 200 birds were necropsied including albatross species, fulmars, and shearwaters. The objective of this effort was to understand demographics of seabirds incidentally caught in U.S.-based commercial fisheries, and to maximize scientific sampling from these collections. Demographic data for albatrosses are considered a high-priority item under the Fish and Wildlife Service Conservation Action Plan for Laysan and Black-Footed Albatross. Additionally, the Northeast Fishery Science Center received $40,000 for ongoing seabird bycatch modeling designed to allow analysts to monitor incidental takes of seabirds and other protected species. The funds were also designated for observer coverage using a mapping tool with a graphical user interface to visualize observed seabird bycatch events in near real time to identify areas that may require more in-depth analysis. The Southeast Fishery Science Center received $17,000 for seabird identification training for its POP observers. The training included birds of both the western North Atlantic Ocean and the Gulf of Mexico.

[38] http://www.gc.noaa.gov/enforce-office3.html

6. Looking Ahead: Goals and Priorities for NMFS Observer Programs in 2014

Observer program priorities in FY 2013 included monitoring fisheries in each region to meet statutory and regulatory requirements under the MSA, MMPA, and ESA for observer coverage in U.S. commercial fisheries, while also addressing critical science and management needs for catch estimates, discard estimates, and stock assessments. A second priority was to expand observer coverage into fisheries with bycatch concerns, as identified in the National Bycatch Report, the ESA Annual Determination, the MMPA List of Fisheries, and in fisheries with little or no observer coverage. Given the likelihood of further reductions in funding in FY 2014, NMFS' highest priority will be addressing existing mandatory requirements.

The President's FY 2014 budget included an increase of $2.7 million for observer programs, directed at providing observer coverage in existing and emerging catch share fisheries. Catch share programs will continue to require significant effort on the part of observer programs, particularly in the Northwest, Northeast, and Alaska. Observer programs will continue to seek appropriate ways to lower costs for observers and at-sea monitors, including alternatives such as EM.

In May 2013, NMFS issued a Policy on Electronic Technologies and Fishery-Dependent Data Collection, supported by a series of white papers, to evaluate and encourage the use of the latest monitoring and reporting technologies. The intent is to stimulate conversations among regional offices, science centers, fishery management councils, interstate fishery commissions, and fishing communities to identify, evaluate, and implement ER/EM technologies in their regional fisheries. Details on the use and potential courses of action for their implementation can be reviewed in the *Fisheries Monitoring Roadmap: A guide to evaluate, design and implement an effective fishery monitoring program that incorporates electronic monitoring and electronic reporting tools, 2013.*[39]

Advancements in ER and EM have the potential to provide better data, enable better decision-making, and facilitate better fishing. NMFS is constantly striving to keep its science on the cutting edge. The agency launched an initiative to evaluate emerging technologies for use in fishery-dependent data collections with the goal of implementing and providing more timely, accurate, and cost-effective information. Regional implementation plans for electronic technologies are anticipated in late 2014.

Finally, NOAA, along with other federal agencies, will most likely be facing declining budgets in FY 2014 and beyond. The challenge for observer programs is how to balance increasing monitoring demands with decreasing federal funds. The search for options to reduce the cost of observer coverage has taken on new urgency, and alternatives such as EM and cost-sharing with industry are key areas actively under development. Although some observer programs have relied on industry funding for many years, several other observer programs only recently have begun to transition to industry funding. This funding change has proven challenging in fisheries where profit margins are slim or non-existent. Finding the right balance of cost-effectiveness, cost-sharing with industry, and using all necessary and available tools to meet monitoring and observing requirements will be a high priority for the future.

Support of our international activities is expected to continue in FY 2014. With support from the U.S. Agency for International Development-Indonesia, the U.S. will continue to provide technical assistance and capacity building support in the areas of marine resource management and observer program development. PIROP scheduled an observer trainer and debriefing workshop at the NOAA Pacific Islands Fisheries Science Center for April 7–11, 2014.

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[39] https://www.edf.org/sites/default/files/FisheryMonitoringRoadmap_FINAL.pdf

Appendix

NMFS Fisheries Observer Programs Funded in FY 2013 by Region

Alaska

Fisheries Observed	Fleet Size	Authority to Place Observers	Season of Operation	Funding Source	Program Duration	Target % Coverage	Actual % Coverage	Target Sea Days	Actual Sea Days*	Number of Observers
North Pacific Groundfish and Halibut Observer Program, Alaska Fisheries Science Center, 7600 Sand Point Way NE, Seattle, WA 98115-0070										
Program Manager: Martin Loefflad, 206-526-4195, martin.loefflad@noaa.gov, website: http://www.afsc.noaa.gov/FMA/default.htm										
Bering Sea, Aleutian Islands (BSAI) Groundfish Trawl Cooperatives (AFA, A80), BSAI Voluntary Longline Pacific Cod Cooperative, Gulf of Alaska (GOA) Groundfish Trawl Rockfish Program (RP), and Catcher Processors	1,446 vessels (168 in 100% coverage); 71 shore-side plants	MSFCMA (50 CFR 679.50)	Various	Observers/Training: North Pacific Marine Resource Observers/North Pacific Observer Program	1973–present (Observer program); 1998–present (AFA); 2007–present (A80, CDQ); 2013–present (RP)	100%	100%	Defined by regulation	36,928	407
				National Observer Program						
				Industry Funding						
				Other Congressional						
				Reducing Bycatch						
BSAI and GOA Groundfish Trawl, Longline and Pot Fisheries; U.S. Pacific Halibut Fishery			Year-round	National Observer Program	2013–present	15% catcher vessels > 57.5 ft (TS)**; 11% catcher vessels 40–57.5 ft (VS)***	14% TS; 10% VS	Defined by available funds and contracts with observer providers in Annual Deployment Plan	3,538	60
				Reducing Bycatch						
				Observers/Training: North Pacific Marine Resource Observers/North Pacific Observer Program						
				Other Congressional						
				National Catch Share Program						
Southeast Alaska Drift Gillnet Fishery	451 permits	MMPA (50 CFR 229)	May–Oct	Marine Mammal Protection	2012–present	7.5%	6.6%	Adjusted for fishing effort	449	13
*Actual sea days does not include 3,177 shore-side plant coverage days (some of which co-occur with sea days), bringing the total coverage days to 43,643. **TS: Trip selection—for all trawl vessels in partial coverage, vessels were selected for observer coverage on a trip-by-trip basis. ***VS: Vessel selection—for all hook and line and pot vessels in partial coverage, vessels selected for observer coverage carried an observer for all trips during a 2-month period.										
TOTAL ALASKA REGION OBSERVER PROGRAM FUNDING (CONGRESSIONAL): $8,143,481										
TOTAL ALASKA REGION OBSERVER PROGRAM FUNDING (INDUSTRY): $13,642,543										
TOTAL ALASKA REGION OBSERVER PROGRAM FUNDING (ALL SOURCES): $21,786,024										

Greater Atlantic

Fisheries Observed	Fleet Size	Authority to Place Observers	Season of Operation	Funding Source	Program Duration	Target % Coverage	Actual % Coverage	Target Sea Days	Actual Sea Days	Number of Observers
Northeast Fisheries Observer Program, Northeast Fisheries Science Center, 166 Water Street, Woods Hole, MA 02543-1097										
Program Manager: Amy Martins, 508-495-2266, amy.martins@noaa.gov, website: http://www.nefsc.noaa.gov/femad/fsb/										
New England Multispecies Groundfish (SBRM; groundfish, longfin squid, and herring management)	1,052 trawl vessels, 474 gillnet vessels and 46 longline	MSFCMA (50 CFR 648); MMPA (50 CFR 229)	Year-round	Northeast Groundfish Observers (NEFOP)	1990–present	30% coefficient of variation on bycatch species; 8% common pool; 22% for groundfish sectors (8% NEFOP + 14% ASM); 20% herring	Coverage targets are close	Targets are set by SBRM (April through March), based on CV and adjusted for funding availability and/or resource set-aside	2,750	125
				National Observer Program–-At-Sea Monitoring (ASM)	2010–present				3,000	
				National Catch Share Program (ASM/Electronic Monitoring)						
Mid-Atlantic Fisheries	719 permits	MMPA (50 CFR 229); MSFCMA (50 CFR 648)	Year-round	Atlantic Coast Observers	2001–present	30% coefficient of variation on bycatch species (SBRM)	< 8%	SBRM Targets	1,100	Included above
Mid-Atlantic Coastal Fisheries	> 670 vessels	MMPA (50 CFR 229)	Year-round	Marine Mammal Observers	1994–present	30% coefficient of variation on critical marine mammal stocks	< 8%	Funding limited	150	Included above
Herring Closed Area I coverage	125 vessels	MSFCMA (50 CFR 648)	Year-round	Reducing Bycatch	2010–present	100% if fishing in the Groundfish Closed Area I	100%	-	275	Included above
Atlantic Sea Scallop Fishery (Dredge and Trawl; General Category and Access Area Permits; Open and Access Areas)	511 vessels	MSFCMA (50 CFR 648)	Year-round	Industry Funding	1999–present	5–20% by permit type/area fished, determined by SBRM and amount of set-aside	Coverage targets are close	2,402	2,600	47
				National Observer Program						
TOTAL NORTHEAST REGION OBSERVER PROGRAM FUNDING (CONGRESSIONAL): $18,126,973										
TOTAL NORTHEAST REGION OBSERVER PROGRAM FUNDING (INDUSTRY): $2,015,000										
TOTAL NORTHEAST REGION OBSERVER PROGRAM FUNDING (ALL SOURCES): $20,141,973										

Northwest

Fisheries Observed	Fleet Size	Authority to Place Observers	Season of Operation	Funding Source	Program Duration	Target % Coverage	Actual % Coverage	Target Sea Days	Actual Sea Days	Number of Observers
West Coast Groundfish Observer Program, Northwest Fisheries Science Center, 2725 Montlake Blvd East, Seattle, WA 98112-2097										
Program Manager: Jon McVeigh, 206-302-2423, jon.mcveigh@noaa.gov, website: http://www.nwfsc.noaa.gov/research/divisions/fram/observer/										
West Coast Trawl Catch Shares (shore-side and at-sea fleets)	144	MSFCMA (50 CFR 660)	Shore-side: year-round; at-sea: May–Dec	National Catch Share Program*	Jan 2011–present (Note: includes historical fisheries LE Trawl 2001–2010 and At-Sea Hake 1975–2010)	100%	100%	Defined by regulation (100% coverage, shore-side 1 observer; at-sea 2 observers)	Shore-side: 7,566 At-Sea: 1,424	122
				Obs/Trn-West Coast Observers (NWR)						
				Reducing Bycatch						
				National Observer Program						
				Industry Funding						
West Coast Groundfish Non-Catch Share Fisheries (Limited Entry (LE) Fixed Gear, Open Access (OA) fisheries including state-managed fisheries)	LE: 190 longline, 33 trap permits, OA: approx. 1,000	MSFCMA (50 CFR 660)	Year-round	National Observer Program	2001–present	LE: 10–20% OA: < 1–10%	LE: 15–25% OA: 1–8%	LE: 800 OA: 700	1,450	20
				Observers/Training: West Coast Observers						
Bycatch Reporting for West Coast Groundfish Fishery Biological Opinion	N/A	N/A	N/A	Other Congressional	N/A	N/A	N/A	N/A	N/A	N/A
* Approximately 65% of these funds were used to reimburse industry for observer and catch monitor coverage.										
TOTAL NORTHWEST REGION OBSERVER PROGRAM FUNDING (CONGRESSIONAL): $10,534,230										
TOTAL NORTHWEST REGION OBSERVER PROGRAM FUNDING (INDUSTRY): $1,619,556										
TOTAL NORTHWEST REGION OBSERVER PROGRAM FUNDING (ALL SOURCES): $12,153,786										

Pacific Islands

Fisheries Observed	Fleet Size	Authority to Place Observers	Season of Operation	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://www.fpir.noaa.gov/OBS/obs_index.html										
Hawaii Pelagic Longline Fishery	164 vessels with permits (112 active)	MSFCMA (50 CFR 665); MMPA (50 CFR 229)	Year-round	Observers/Training: Hawaii Longline Observers	1994–present	20% tuna	20%	6,110	6,472	60
						100% swordfish	100%	2,970	1,641	
American Samoa Pelagic Longline Fishery	30	MSFCMA (50 CFR 665) in Jan. 2005	Year-round	National Observer Program	2005–present	20%	20%	1,204	774	
Program Support for the Western and Central Pacific Fisheries Commission	NA	NA	Year-round	Reducing Bycatch	2008	NA	NA	NA	NA	NA
Support for PIRO Observer Data Dissemination/Access Activities	NA	NA	Year-round	National Observer Program	2007–present	NA	NA	NA	NA	NA
TOTAL PACIFIC ISLANDS REGION OBSERVER PROGRAM FUNDING (CONGRESSIONAL): $6,060,610										
TOTAL PACIFIC ISLANDS REGION OBSERVER PROGRAM FUNDING (INDUSTRY): $0										
TOTAL PACIFIC ISLANDS REGION OBSERVER PROGRAM FUNDING (ALL SOURCES): $6,060,610										

Southeast and Caribbean (page 1 of 2)

Fisheries Observed	Fleet Size	Authority to Place Observers	Season of Operation	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://www.galvestonlab.sefsc.noaa.gov/research/fishery_management/index.html#observer_program										
Southeastern Atlantic and Gulf of Mexico Shrimp Otter Trawl Fisheries (including rock shrimp) Skimmer Trawl	Approx. 1,467 (GOM) and 534 (SA) USCG federally permitted vessels, unknown number of state vessels, ~106 rock shrimp vessels	Voluntary through July 2007; Mandatory - July 2007 MSFCMA (50 CFR 622)	Year-round	Observers/Training: South Atlantic and Gulf Shrimp Observers	1992–present	2%	2%	1,500 plus experimental	1,981	44
				Observers/Training: Atlantic Coast Observers						
Atlantic Pelagic Longline Observer Program, Southeast Fisheries Science Center, 75 Virginia Beach Dr, Miami, FL 33149-1003										
Program Manager: Kenneth Keene, 305-361-4275, kenneth.keene@noaa.gov, website: http://www.sefsc.noaa.gov/										
Atlantic, Gulf of Mexico, Caribbean Pelagic Longline Fishery	70–80 active vessels	MSFCMA (50 CFR 635); MMPA (50 CFR 229); ATCA	Year-round	Observers/Training: Atlantic Coast Observers	1992–present	8% by vessel sets	~10%	1,096 sets	2,187	15
				Observers/Training: East Coast Observers						
				Other Congressional						

Southeast and Caribbean (page 2 of 2)

Fisheries Observed	Fleet Size	Authority to Place Observers	Season of Operation	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: https://www.sefsc.noaa.gov/labs/panama/										
Southeast Shark and Coastal Teleost Gillnet Fishery	Directed Shark Permits: 216 Indirect Shark Permits: 262	MMPA (50 CFR 229); MSFCMA (50 CFR 635)	Year-round	Observers/ Training: Atlantic Coast Observers	1998–present	100% shark strike, 38% shark drift, 5% shark and teleost sink net	100% shark strike, 38% shark drift, 5% shark and teleost sink net	100% shark strike, 38% shark drift, 5% shark and teleost sink net	335	6
Atlantic and Gulf of Mexico Directed Large Coastal Shark Bottom Longline Fishery	Directed Shark Permits: 216 Indirect Shark Permits: 262 Reeffish Longline Exemption Permits: 65	MSFCMA (50 CFR 635)	Year-round-Open until quota is filled	National Observer Program	1994–present	100% sandbar shark research fishery; 4–6% non-sandbar shark fishery	100% sandbar shark research fishery; 4–6% non-sandbar shark fishery	100% sandbar shark research fishery; 4–6% non-sandbar shark fishery; 8–10% reeffish longline	Shark research fishery: 118; non-research fishery: 12; (total 130)	6
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, website: http://www.galvestonlab.sefsc.noaa.gov/										
Gulf of Mexico Reef Fish Fishery - All gear types	Approx. 831 permitted USCG documented vessels	Mandatory	Year-round	Reducing Bycatch / National Observer Program	2006–present	2%	2%	455	501	44 (included in shrimp fishery)
Gulf of Mexico Reef Fish Fishery - Vertical Line Emphasis	Approx. 831 permitted USCG documented vessels	Mandatory	Year-round	National Catch Share Program	August 2011–present	16%	16%	999	956	44 (included in shrimp fishery)
Gulf of Mexico Purse Seine (Menhaden) 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, website: http://www.galvestonlab.sefsc.noaa.gov/										
Gulf of Mexico Menhaden Fishery	Approx. 41 permitted USCG documented vessels	MMPA (50 CFR 229)	April–November	Marine Mammals	2011	0.00%	0.00%	0	0	0
TOTAL SOUTHEAST REGION OBSERVER PROGRAM FUNDING (CONGRESSIONAL): $9,413,546										
TOTAL SOUTHEAST REGION OBSERVER PROGRAM FUNDING (INDUSTRY): $0										
TOTAL SOUTHEAST REGION OBSERVER PROGRAM FUNDING (ALL SOURCES): $9,413,546										

Southwest

Fisheries Observed	Fleet Size	Authority to Place Observers	Season of Operation	Funding Source	Program Duration	Target % Coverage	Actual % Coverage	Target Sea Days	Actual Sea Days	Number of Observers
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: https://swfsc.noaa.gov/										
California Large-Mesh Drift Gillnet Fishery	20 vessels	MMPA (50 CFR 229); MSFCMA (50 CFR 660)	Aug–Jan	National Observer Program	1990–present	20%	19%	180	136	5
California Deep-Set Pelagic Longline Fishery	1 vessel	MSFCMA (50 CFR 660)	Nov–May	Reducing Bycatch National Observer Program	2001–present	100%	75%	120	92	
Southern California Set Gillnet Fishery	40 vessels	MMPA (50 CFR 229); ESA (50 CFR 222)	Jan–Dec	National Observer Program	1990–1994, 2007, 2010–2012	10%	3%	150	54	
SWC Data Management and Bycatch Estimates	NA	NA	Year-round	National Observer Program	NA	NA	NA	NA	NA	NA
TOTAL SOUTHWEST REGION OBSERVER PROGRAM FUNDING (CONGRESSIONAL): $1,142,002										
TOTAL SOUTHWEST REGION OBSERVER PROGRAM FUNDING (INDUSTRY): $0										
TOTAL SOUTHWEST REGION OBSERVER PROGRAM FUNDING (ALL SOURCES): $1,142,002										

Office of Science & Technology

Fisheries Observed	Fleet Size	Authority to Place Observers	Season of Operation	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: Chris Rilling, 301-713-2363, chris.rilling@noaa.gov, website: http://www.st.nmfs.noaa.gov/observer-home/										
Science & Technology	NA	NA	NA	Reducing Bycatch	1999–Present	NA	NA	NA	NA	NA
Science & Technology	NA	NA	NA	Atlantic Coast Observers	1999–Present	NA	NA	NA	NA	NA
Science & Technology	NA	NA	NA	National Observer Program	1999–Present	NA	NA	NA	NA	NA
HQ Observers	NA	NA	NA	HQ Observers	1999–Present	NA	NA	NA	NA	NA
TOTAL OBSERVER PROGRAM FUNDING*: $40,399,268										
TOTAL OTHER CONGRESSIONAL FUNDING: $13,021,574										
TOTAL CONGRESSIONAL FUNDING: $53,420,842**										
TOTAL INDUSTRY FUNDING: $17,277,099										
TOTAL OBSERVER FUNDING - ALL FUNDING SOURCES: $70,697,941										
ESTIMATED NUMBER OF SEA DAYS TARGETED - Does not include programs that target permits, sets, or trips instead of sea days								**72,500**		
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									**77,610**	
TOTAL NUMBER OF OBSERVERS - Does not include deployments for electronic monitoring										**917**
*Includes Observer/Training PPA										
**Sum of Observer/Training PPA, Reducing Bycatch (sub-PPA), and other congressional funding (PPAs: National Catch Share Program, Marine Mammal, Fisheries Research and Management,and Fish Information Networks)										