



National Observer Program
FY 2006 Annual Report
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Administration

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Cover photos, from left: Observer Andres Overturf with a slender mola (Pacific Islands Regional Office); Observer Joe Arceneaux (Pacific Islands Regional Office); Catch being brought onboard (Alaska Fisheries Science Center); Collecting salmon otolith samples (Northwest Fisheries Science Center).

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



Executive Summary

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

In FY2006¹, NMFS observer programs continued to provide high quality biological information on the nation's fisheries, data that are relied upon by the agency to manage the nation's marine resources. Observer data are used in stock assessments, quota monitoring, and development of protected species bycatch reduction measures. These data will become increasingly important under the 2006 Magnuson-Stevens Conservation and Management Reauthorization Act (MSRA), which emphasizes the use of scientific data in the fisheries management process.

The FY 2006 also marked the initiation of work on the National Bycatch Report (NBR), a collaborative project coordinated by the National Observer Program, scheduled for completion in 2008. Bycatch² has become a central concern of fishing industries, resource managers, scientists and the public, both nationally and globally. In 1998, NMFS developed a National Bycatch Strategy³ to "implement conservation and management measures for living marine resources that will minimize, to the extent practicable, bycatch and the mortality of bycatch that cannot be avoided." Identification of key stocks and fisheries of concern through the NBR will provide a benchmark for evaluating the Agency's performance relative to bycatch monitoring and reduction.

The NMFS deploys more than 700 observers annually to collect biological and economic data in more than 40 fisheries nationwide. To carry out this work, observer programs utilize funding from a variety of sources. This report contains a summary of funding and activities for NMFS observer programs in FY 2006. In FY 2006, federal commercial fisheries observer programs received federal and industry funding totaling \$45,311,950 for observer coverage and program infrastructure.

¹ The federal fiscal year runs from October 1st to September 30th each year.

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

³ NMFS. 1998. Managing the Nation's Bycatch. Available online at: www.nmfs.noaa.gov/by_catch/bycatch_strategy.htm



1. Introduction

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

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

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

The MMPA also authorizes the placement of observers on board vessels engaged in commercial fishing operations which frequently take⁴ marine mammals (16 U.S.C. §1383(e)). NMFS uses observer data to quantify the impacts of fishing activities on marine mammal populations and to identify bycatch reduction measures.

Under section 7 of the ESA, federal agencies cannot carry out programs (such as authorizing fishery operations) that jeopardize the continued existence of threatened and endangered species. In FY 2007, the Office of Protected Resources finalized a rule under the ESA that provides NMFS with the authority to place fisheries observers aboard vessels in state and federal fisheries operating in the territorial seas or Exclusive Economic Zone where sea turtle interactions may occur. Observers will help determine whether existing measures to reduce sea turtle bycatch are working, or whether new or additional measures are needed. With this information, the Agency will be better positioned to address sea turtle bycatch problems.

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

⁴ "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).

species protected by international agreements to which the United States is a party is minimized and does not pose a threat to existing fisheries or the long-term health of living marine resources”.

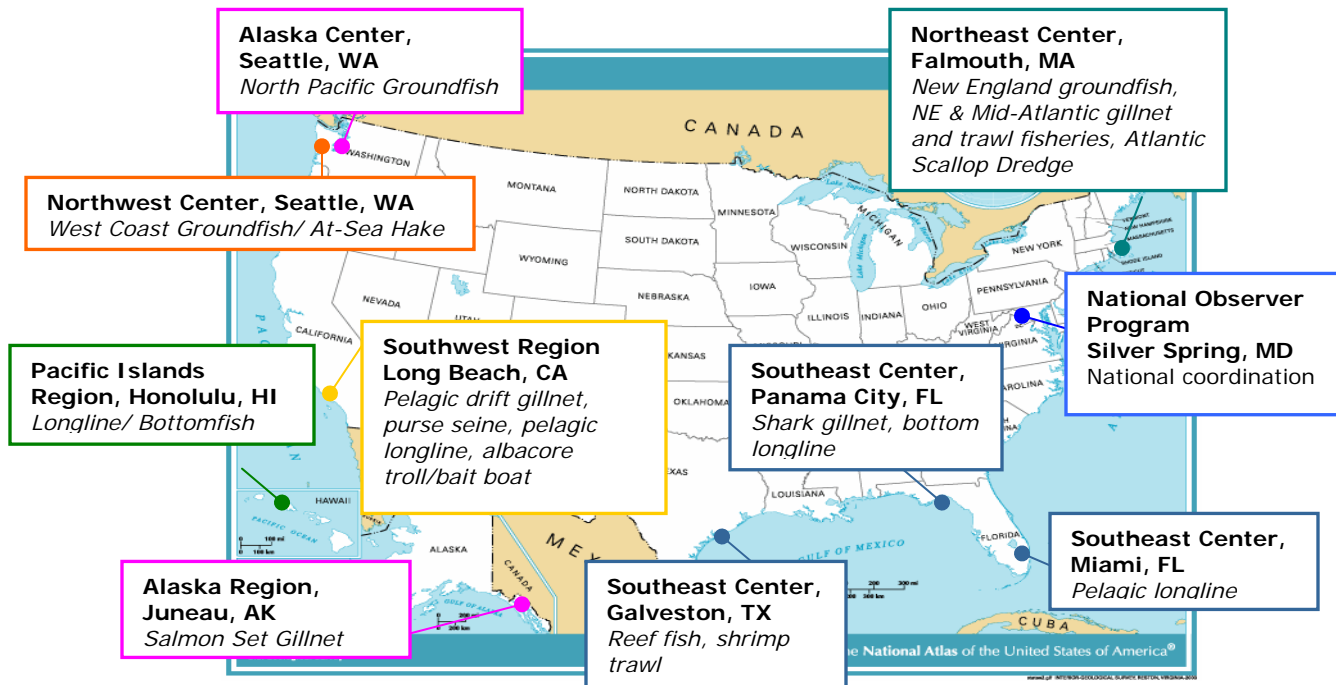


Figure 1. Map of U.S. commercial fishery observer program offices located at NMFS Regional Offices (“Region”) and Science Centers (“Center”).

Visit the National Observer Program at:

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

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

1.1 Program Structure

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

Regional programs are responsible for the day-to-day operation of fishery observer programs. Program scientists determine the appropriate sampling protocols and necessary observer coverage levels for each fishery. In general,



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

1.2 Use of Observer Data in Fisheries Management

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

- In some fisheries, the amount of a specific fish species that can be caught is specified by a "total allowable catch" (or TAC) level. Observer data are used to project total catches for these species and to monitor the level of fishing activity.
- For many fisheries, estimates of fishing mortality and/or protected species interaction rates based on observer data are used for monitoring fishery performance and developing stock assessments.
- For rebuilding species, such as New England groundfish, preseason target catch numbers are provided to the management team. After the fishing season has passed, observer data are evaluated to determine total mortality and correspondingly adjust the next season's targets.
- The MMPA requires that levels of fishery-related serious injury and mortalities be monitored and reported in the annual Stock Assessment reports and used in assigning commercial fisheries to appropriate categories in the annual List of Fisheries.
- Observer data on marine mammal bycatch are used by NMFS Take Reduction Teams when developing federally mandated Take Reduction Plans (TRPs) to assist in the recovery or prevent the depletion of certain strategic marine mammal stocks.

1.3 Funding History for Observer Programs

Although NMFS has utilized fishery observers to collect data since 1972, the Office of Science and Technology's NOP was not established until 1999. Prior to 1998, the majority of funding for regional observer programs was provided through indirect sources, such as Congressional allocations supporting fisheries management

and protected resource legislation. Beginning in the late 1990s, industry funds were also used to support observer programs (specifically in the Alaska groundfish, the Northwest at-sea hake and the Northeast scallop fisheries); the amount of industry funding has remained relatively stable.

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

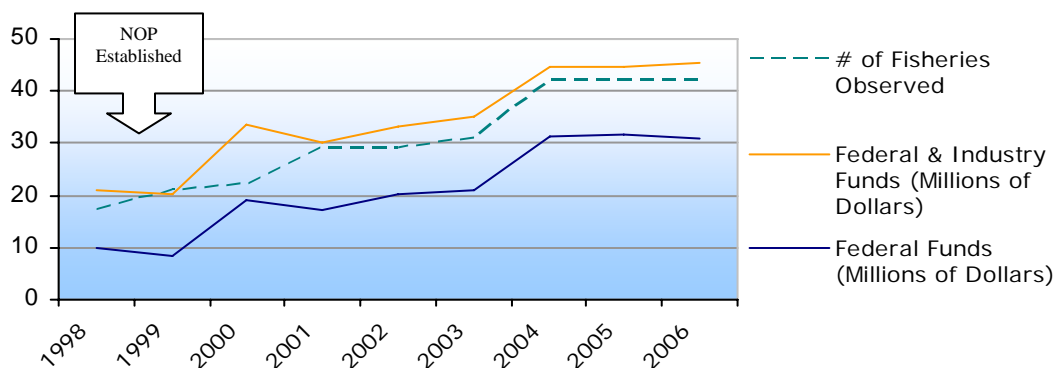


Figure 2. Overview of U.S. observer program funding and observed fisheries from 1998-present (not adjusted for inflation).



2. FY 2006 Budget Summary

In FY 2006, funding for federal commercial fisheries observer programs was \$45,311,950 for observer coverage and program infrastructure (Figure 3), including \$1,293,000 for NOP activities (\$437,000 for national coordination work, and \$856,000 for regional National Bycatch Report (NBR) activities).

This funding enabled regional observer programs to provide coverage for

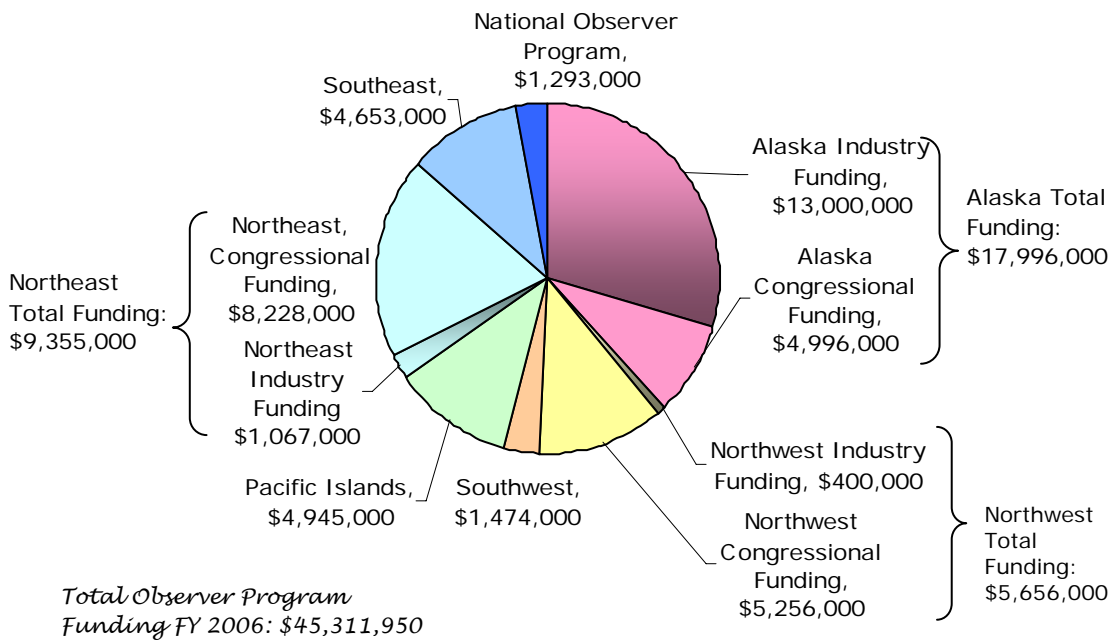


Figure 3. Total regional and national funding for fisheries observer programs in FY 2006. Totals include Congressional appropriations and other federal funds, national competitive funds, and industry funds for all observer programs in each region.

more than 59,000 days at sea in 42 fisheries⁵ (refer to Appendix I for a detailed breakdown of funding and coverage levels by program). The industry-provided portion of total funding in FY 2006 was \$14,467,000. Industry funds were used to support observer coverage of fishing vessels in the Northwest at-sea hake, Alaska groundfish, and Northeast scallop fisheries.

The majority of funding for observer programs comes from Congressional appropriations. In FY 2006, Congressional funding for observer programs totaled \$30,845,000. Observer programs receive federal funds in several different ways. The primary sources of funding for most regional observer programs are dedicated Congressional budget lines (Figure 4). All regions have at least one dedicated budget line supporting observer program activities except the Southwest, which has never had a dedicated budget line for observer programs. Although Alaska does have a Congressional line item, this is strictly for the program that covers Federal fisheries (the North Pacific Groundfish Observer Program- NPGOP). There is no Congressional line item for the Alaska Marine Mammal Observer Program, which observes state fisheries.

⁵ Includes 1,921 electronically monitored sea days.

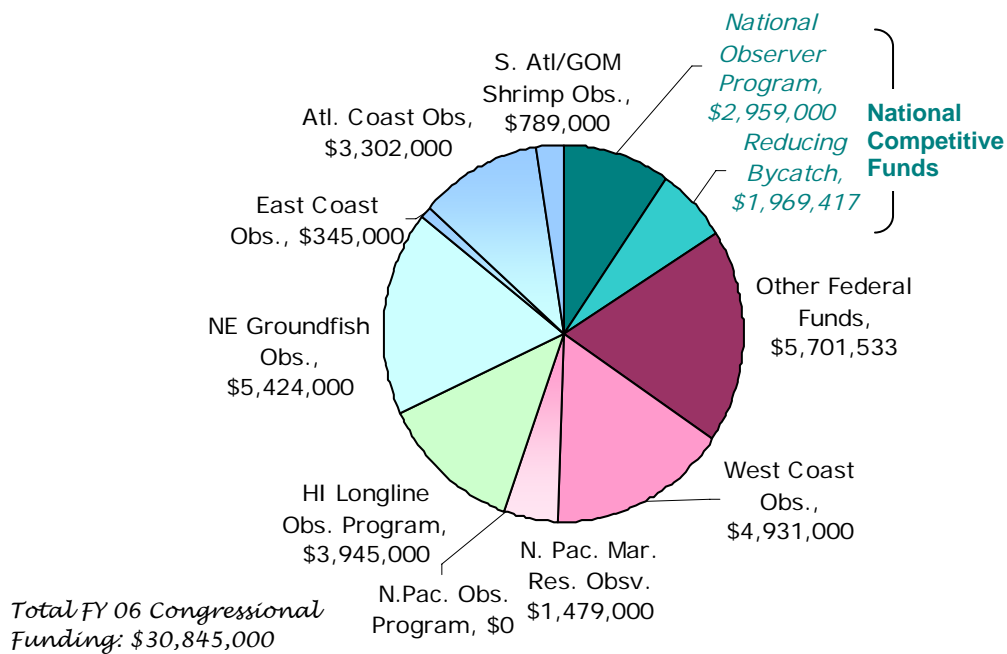


Figure 4. Congressional budget lines supporting observer programs, FY 2006. Other Federal funds include monies appropriated by Congress to the Office of Sustainable Fisheries and Office of Protected Resources to support activities under MMPA, MSRA, etc.

It is important to note that an observer program may be funded by more than one budget line, and a single budget line may support observer program activities in more than one region. Many observer programs are funded through a combination of federal funding sources in order to maintain sufficient observer coverage and infrastructure. In addition to direct budget lines, observer programs may receive funding from federal appropriations supporting programs under the American Fisheries Act (AFA), ESA, MMPA, and the MSRA. These “other Federal funds” contributed a total of \$5,701,533 to observer programs in FY 2006.

The NMFS Office of Science and Technology receives Congressional funding that provides a third source of support for national and regional observer program activities through the National Observer Program and Reducing Bycatch budget lines. The Reducing Bycatch line is split between the Office of Science and Technology for observer activities and the Office of Sustainable Fisheries for bycatch technology research. The NOP’s portion of the Reducing Bycatch line and the National Observer Program line comprised the National Competitive Funds for FY 2006. These competitive funds were allocated through the NOPAT competitive funding process. National and regional programs submitted proposals to the NOPAT, which then provided a technical evaluation of all proposals. Final funding decisions were made by the Director of the Office of Science and Technology and the NMFS Chief Science Advisor, with additional input from the NMFS Science Board. In FY 2006, NOPAT funds were also allocated to each of the six NMFS Science Centers and the NMFS Office of Science and Technology to support development of a National Bycatch Report. Funds allocated through this process in FY 2006 totaled \$4,928,000 and supported activities at the national level and in all six regions (Figure 5).



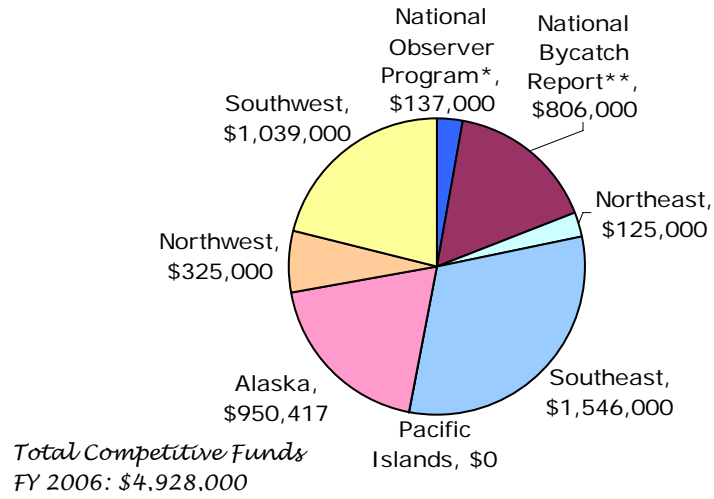


Figure 5. FY 2006 National Observer Program funding: allocation of national competitive funds and funding for the National Bycatch Report to regional and national observer programs.

*Includes funding for a project conducted jointly with the Southeast Fisheries Science Center (~\$40,000).

**Funding was provided for each region and the NOP to support NBR activities.

3. *FY 2006 National Observer Program Activities*

The NOP is supported by a permanent allocation of \$97,000 from the Reducing Bycatch budget line to provide staff support and program infrastructure. The NOP also participates in the competitive funding process, submitting proposals for activities that support priority national projects on a wide range of topics. Funding for specific activities of the NOP was also provided through the following Congressional budget lines: \$150,000 MMPA; \$150,000 Sustainable Fisheries. The following section highlights some of the NOP's activities in FY 2006.

3.1 *Office of the Inspector General Recommendations:*

In 2004, the Office of the Inspector General's (OIG) Office of Inspections and Program Evaluations formally evaluated NMFS observer programs and developed ten recommendations to improve data quality, performance monitoring, and outreach activities for national and regional observer programs⁶. In FY 2005, the NOP completed final responses to four recommendations. In FY 2006, the NOP and the NOPAT conducted work on the remaining six recommendations (submitting final responses for three). Final responses for the remaining three recommendations will be completed in FY 2007.

OIG Recommendations Completed in FY 2005

- ✓ Establish a monitoring and reporting process to help ensure that North Pacific Groundfish observer providers are in compliance with the new certification requirements and meet the standards defined in the NPGOP regulations;
- ✓ Develop model performance work statements for observer provider service contracts;
- ✓ Provide adequate training in the use and monitoring of performance-based service contracting for observer provider contracts; and
- ✓ Explore offering resource neutral (to the extent possible) incentives to increase industry cooperation with the observer program.

OIG Recommendations Completed in FY 2006:

- ✓ Establish NOP priorities and performance measures, develop a mechanism to monitor and report regional program performance to NMFS headquarters, and ensure that observer program managers are held accountable for performance related to both national and specific regional program priorities;
- ✓ Develop an outreach strategy that includes; (a) guidance that regional program managers can use to establish and reach their outreach goals; (b) suggestions for creating and distributing easy-to-read information (in both English and foreign

⁶Office of the Inspector General. 2004. NMFS Observer Programs Should Improve Data Quality, Performance Monitoring, and Outreach Efforts. U.S. Department of Commerce, Office of Program Inspection and Evaluations. NOAA-IPE-15721.64p. Available online at: www.oig.doc.gov/oig/publications.htm.



languages, where needed); and, (c) a central resource library for outreach materials so that regional programs can share ideas and materials and avoid duplication of efforts; and

- ✓ Increase program outreach efforts to the fishing industry, such as holding regional forums, deploying staff, or utilizing the National Sea Grant Program extension program or other organizations, to educate the industry and improve industry cooperation with the observer programs.

Work conducted in FY 2006 for the final three OIG Recommendations (final reports to the OIG on these items will be completed in FY 2007):

- ✓ *Develop and implement statistically valid, unbiased vessel selection procedures for observer programs with contractual relationships with observer providers and continually monitor the implementation to ensure that the vessel selection process is properly implemented.*

NMFS conducted a national workshop in May 2006 to evaluate bias in 24 fisheries observer programs representing all NMFS regions. The workshop focused on evaluating procedures employed in observer programs to select vessels for observation and other factors that could cause bias in estimates of catch and bycatch. The workshop recommended improvements to program designs and procedures that could reduce such bias. National recommendations were developed that will be applied to all regional observer programs, as well as specific recommendations for improving bias in each program.

The Vessel Selection Bias Workshop Report is available online at: www.st.nmfs.gov/st4/nop/workshops.html

- ✓ *Explore options to improve the recruitment and retention of qualified, experienced observers.*

The NOPAT initiated a review of the report developed by the Association of Professional Observers to determine the magnitude of any problems with recruitment and retention of observers. Specific recommendations were developed to continue activities for improving retention of observers. It was determined that recruitment of observers is not currently a problem. However, recruitment will be monitored and improvements made if required.

- ✓ *Work with the North Pacific Fishery Management Council to establish requirements for an observer program that includes a vessel selection process that produces random sampling of the fishery.*

The Alaska Fisheries Science Center and Alaska Regional Office continued to work with the North Pacific Fishery Management Council to develop alternatives for restructuring of the NPGOP. The North Pacific Fishery Management Council extended the current industry-fee structured program until legal authority was provided through re-authorization of the 2006 MSRA. Outstanding labor issues are being addressed by the Department of Labor.

3.2 Additional FY 2006 Highlights from the NOP

3.2.1 International Work

In FY 2006, NOP staff was involved with a variety of international observer-related projects, including drafting and revising new observer regulations for the Commission for Conservation of Antarctic Marine Living Resources (CCAMLR) and the Southern Ocean. Additionally, NOP staff gave separate presentations of U.S. domestic observer programs to visiting scientists from Taiwan and the Republic of Korea and assisted in coordinating and scheduling a meeting between Chilean scientists and Northwest and Alaskan Fisheries Science Centers observer program staff. NOP staff also reviewed and provided significant comments to the Office of International Affairs for the formation, management, structure, and statement of work for the new transshipment regional observer program managed by the International Commission for the Conservation of Atlantic Tuna (ICCAT).



Antarctic iceberg - CCAMLR Antarctica survey cruise in 2003.
Photo credit: Teresa Turk, National Observer Program

3.2.2 Outreach

In FY 2006, the NOP developed a Communications Plan to coordinate and support observer program outreach efforts at the national and regional level. The plan is expected to be approved and implemented in FY 2007. The first NOP Annual Report was also developed in FY 2006. Annual reports are posted on the NOP internet site at: www.st.nmfs.gov/st4/nop/index.html.



4. *Joint Regional and National Highlight: The National Bycatch Report*

In FY 2005, NMFS began work on the NBR. This report will contain bycatch estimates for fish, marine mammals, sea turtles, and seabirds for all federally managed fisheries where data and estimation methods are available to support these analyses. The report also will include measures of uncertainty, as well as action plans for improving the quality of bycatch data in fisheries of focus. The NBR is a collaborative, nation-wide effort coordinated by the NOP, which involves NMFS fisheries biologists and managers from all regions of the U.S.

In FY 2006, major activities of the NBR included appointment of a Steering Committee, composed of observer program and bycatch experts from each NMFS Region and from headquarters offices, to provide planning and guidance for the report's development. Regional teams composed of fish, marine mammal, sea turtle, and seabird experts from Regional Offices and Science Centers were also formed to compile and analyze data for the report. In July 2006 the NOP coordinated a Bycatch Estimation Methodology Assessment Workshop, where Steering Committee and Regional Team members evaluated regional data sources and estimation methods. Products of the workshop included a series of recommendations for proceeding with the report and a draft scoring system to rank the quality of bycatch data sources and estimation methods.

At the national level, the NOP worked to coordinate activities of the NBR with other NMFS projects, such as the Fisheries Information Systems (FIS). The NOP also contracted with Merlin, Inc. to hire a data architect responsible for developing a database system to centrally house all regional bycatch estimates and to generate portions of the report.



5. Regional Observer Program Activities

Observer programs are administered by NMFS Regional Offices and Science Centers around the country. The funding received by each program is used to administer existing programs as well as to develop observer programs for new or experimental fisheries, and perform outreach to industry members and the public. Research priorities and observer coverage levels are determined by the regional programs. Coverage levels are influenced by available funding, the number of active participants in the fishery, fishing conditions, and program goals. For some fisheries, certain mandated coverage or FMP goals must be met. The following section summarizes FY 2006 achievements of NMFS regional observer programs.

5.1 Alaska

Alaskan fisheries are covered by two primary observer programs: the Alaskan Marine Mammal Observer Program (AMMOP), which provides observers for salmon set gillnet fisheries, and the North Pacific Groundfish Observer Program (NPGOP), which covers Bering Sea/Aleutian Islands and Gulf of Alaska groundfish trawl, longline, and pot fisheries. Total funding for the NPGOP in FY 2006 was approximately \$17,695,000; including approximately \$13,000,000 of industry funds (see Appendix A for details). A total of 36,424 sea days was observed by the NPGOP, including 100 percent observer coverage for vessels larger than 125 feet.

AMMOP, which collects data on incidental take of marine mammals and seabirds, targeted 300 permitted fishing vessels in FY 2006 in the Yakutat gillnet fishery. Competitive funding was awarded to the AMMOP (\$300,000) to support coverage of this fishery. However, initiation of observer coverage was delayed until 2007 due to funding issues; the \$300,000 was placed on a contract until the total amount needed to cover this fishery was available. Of the fourteen MMPA Cat. II fisheries in Alaska, six have been observed by the AMMOP since its establishment in 1990, including the Prince William Sound drift and set gillnet fisheries (1990-1991), the Alaska Peninsula drift gillnet fishery (1990), the Cook Inlet drift and set gillnet fisheries (1999-2000), and the Kodiak set gillnet fishery (2002 and 2005). Data collected during these rotational observation periods are used in marine mammal stock assessments to estimate annual serious injury and mortality and to categorize fisheries in the annual MMPA List of Fisheries.

FY 2006 Program Highlights: NPGOP

Temporary Harvesting of Rockfish Species

In FY 2006, the NPGOP began working with the Alaska Regional Office to develop a Central Gulf of Alaska (GOA) Rockfish Pilot Program (Amendment 68 to the FMP for the Groundfish of the Gulf of Alaska)- a temporary program to establish a limited access program for harvest of several rockfish species. The five year program was mandated by Congress as a short-term solution to stabilize the fishing community of Kodiak, Alaska, while the North Pacific Council develops a comprehensive, long-term rationalization⁷ program. By establishing exclusive harvesting privileges through

⁷ Rationalizing a fishery involves developing for a system for allocating harvest privileges among fishery participants.

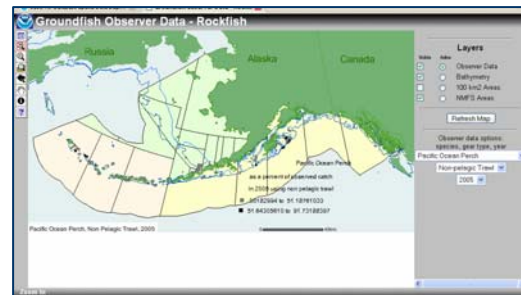


limited access, the pilot program will eliminate the current “race to fish” that exists for the harvesting and processing sectors, and will create an incentive for the industry to focus on higher value products requiring greater time investment. The program will present numerous monitoring challenges as it relies on observer monitoring of catch and bycatch across several different fishery sectors.

Web Application for Viewing Observer Spatial Data

The NPGOP and staff at the NMFS Alaska Fisheries Science Center developed an exciting new web-based application to allow the public access to aggregated observer data. The application was developed in close coordination with industry and the environmental community, and is designed to provide users with a tool to better understand where fish and invertebrates are caught in the Bering Sea/Aleutian Islands and Gulf of Alaska groundfish fisheries. The information for this database comes from observer data maintained by the Fisheries Monitoring and Analysis Division of the Alaska Fisheries Science Center. The application is available on the Alaska Fisheries Science Center website (www.afsc.noaa.gov/FMA/spatial_data.htm).

Screen capture of the Alaska Fisheries Science Center observer data spatial mapping system, showing 2005 pelagic ocean perch as percent of observed catch in the non-pelagic trawl fishery.



FY 2006 Program Highlights: *AMMOP*

Coverage of the Yakutat Set Gillnet Fishery

In FY 2006, AMMOP collected information on the Yakutat set gillnet fishery to evaluate the logistics of placing observers in this fishery to monitor marine mammal incidental takes. The study examined the number and location of fishing operations, operational characteristics of the fishery, and changes in fishery activities across the fishing season. Implementation of observations in the Yakutat set gillnet fishery is scheduled to occur during the 2007-2008 fishing seasons.

Kodiak Set Gillnet Fishery- Data Analysis

During FY 2006, the AMMOP also began analysis of data collected during 2005 observations of the Kodiak set gillnet fishery. A final report of the 2002/2005 data collection program was submitted in 2007. Additional analysis was conducted to determine the impact of different levels of coverage on the use of the program’s observer data in management.



(Above left) Salmon and kelp caught in a set gillnet. (Above right) Picking a set gillnet at Broken Point, Kodiak Island. Photo credit (both photos): Amy Van Atten and AMMOP.

5.2 Northwest

In FY 2006 the Northwest Regional observer program received \$5,256,000 in funding, including approximately \$400,000 in industry funding to support monitoring the at-sea hake fishery (see Appendix A for details). A total of 5,559 sea days was observed in Northwest Region fisheries, including 1,911 days of EM in the shore-based hake fishery. The Northwest's observer programs continued to deploy observers and advanced technology to collect total catch, discard and bycatch data in West Coast commercial groundfish and hake fisheries. Working closely with industry, the At-Sea Hake Observer Program (A-SHOP) increased sample sizes collected by observers in the at-sea hake fishery. The Northwest groundfish observer program also increased its coverage of small vessel live-fish nearshore fleets, while maintaining data collection in the limited entry bottom trawl and fixed gear fleets.

Yearly observer program data reports and summary analyses for trawl, fixed gear, and near-shore fisheries are made available on the Northwest Fisheries Science Center's webpage: www.nwfsc.noaa.gov.

FY 2006 Program Highlights

Electronic Monitoring of the Shore-Based Hake Fishery

In FY 2006 the Northwest Region continued electronic monitoring (EM) experiments in the shore-based hake fishery. The fishery functions under an experimental fishing permit as a "maximized retention" fishery and has been monitored since 2004 to determine whether EM systems can be utilized to verify maximized retention of catch. In FY 2006, testing focused on the EM system's capability as an audit tool to independently verify vessel logbook entries of discard. Overall, this project provided a great deal of data on the capabilities of EM in different applications. It has also been a useful tool in providing feedback to the fleet about discard rates and estimates of discards in the shore-based hake fishery.



Formalizing a Bycatch Minimization Policy and Requirements for Pacific Coast Groundfish Fisheries

In FY 2006, Amendment 18 to the Pacific Coast Groundfish FMP was submitted to the Federal Register for review and comment. Amendment 18 will incorporate bycatch minimization policies and requirements into the FMP. Implementation of Amendment 18 will require continued coverage by the West Coast Groundfish Observer Program (WCGOP) in limited entry, as well as open access fisheries, that take and retain federally managed groundfish species, regardless of whether the fishery targets groundfish. By monitoring these fisheries, the WCGOP will be able to provide the data needed by federal and state fishery managers and stock assessment scientists to manage west coast groundfish stocks.

2004 Total Fish Mortality Report Released

In May 2006, a report of the total 2004 mortality in West Coast groundfish fisheries was released. A major component of the information used to create the report was provided by both the WCGOP and A-SHOP. The WCGOP data informed the total mortality estimates for the commercial groundfish fleets, and A-SHOP data provided input to estimates for the at-sea hake fleet. This report provides a useful look backwards for management to verify total mortality of many groundfish stocks. The report is available from the Northwest Fisheries Science Center's website (www.nwfsc.noaa.gov).

Real-time Monitoring for Rockfish Bycatch (At-Sea Hake Fishery)

In October 2005, NMFS announced changes to management measures in the commercial and recreational Pacific Coast groundfish fisheries. Using data collected by the A-SHOP and other sources, the Pacific Coast Groundfish FMP was modified to allow fisheries increased access to groundfish stocks while protecting overfished and depleted stocks. Following an analysis of widow rockfish bycatch data collected by A-SHOP observers, the Pacific Council elected to increase the bycatch limit for the Pacific whiting fishery using a portion of the widow rockfish quota not yet set aside or projected to be taken by other sectors. Real-time monitoring of bycatch by the A-SHOP will be an important part of this program. The new management measures will help prevent a race to harvest as much whiting as possible before the widow rockfish bycatch limit is reached.

Pre-season Meetings with At-sea Hake Fleet

The A-SHOP staff has organized pre-season meetings between NWFSC staff and each participating vessel's officers, factory foreman, sorting crew and assigned observers to address measures limiting bycatch caps on overfished rockfish species (*Sebastes sp.*) in the Pacific hake fishery. Program staff, observers and industry members feel these meetings have gone a long way in clarifying the expectations of both the crew and the observers. As bycatch of certain rockfish species (determined from observer data) limit the fleet's ability to access the full hake quota, a larger observer sample size is important. These meetings have been very successful in highlighting the importance of slowed processing and adding crew help to increase the observer sample size. Working together has increased observer sample size on these vessels.



(Above Left) An observer weighs fish aboard a West Coast groundfish trawler (Photo credit, Northwest Groundfish Observer Program, NMFS Northwest Fisheries Science Center). (Above Right) Pacific hake (*Merluccius productus*) biological samples being collected by an observer aboard an at-sea hake processor (Photo credit, Northwest At-sea Hake Observer Program, NMFS Northwest Fisheries Science Center).

5.3 Southwest

The Southwest Region receives all funding for its observer programs through NOPAT's national competitive funding process. In FY 2006 Southwest observer programs were awarded \$1,474,000 in competitive funds. These funds were used to provide observer coverage for several large fisheries along the Pacific Coast, including two MMPA Category I fisheries⁸. In addition to initiating observer programs for two additional fisheries, the California set gillnet fishery (MMPA Cat. I) and the West Coast recreational charter fishery for highly migratory species (HMS), the Southwest Region continued to provide observer coverage for the California/Oregon pelagic drift gillnet fishery (MMPA Cat. I), California pelagic longline fishery (MMPA Cat. II⁹), California coastal pelagic purse seine fishery (MMPA Cat. II), and the Pacific albacore troll fishery (see Appendix A for details). FY 2006 coverage for all observed fisheries in this region totaled 732 observed days at sea.

FY 2006 Program Highlights

Monitoring of the West Coast Highly Migratory Species Recreational Charter Vessel Fishery

Although extensive data collection programs exist for commercial HMS fisheries, catch data for HMS recreational fisheries are lacking. In the past, the state logbook system and NMFS's fishery independent surveys have been criticized for over estimating catches. Additionally, no studies exist on the bycatch of skipjack tuna and blue shark in recreational fisheries, the only species reported as bycatch from this fishery. These data are especially important to provide a basis for evaluating

⁸ A MMPA Category I fishery is a commercial fishery that has frequent incidental mortality and serious injury of marine mammals.

⁹ A MMPA Category II fishery is a commercial fishery that causes occasional incidental mortality and serious injury of marine mammals.



the effects and effectiveness of the “catch and release” program proposed under the West Coast HMS FMP.

In FY 2006, the Southwest Region initiated a pilot observer program for the West Coast HMS Recreational Charter Vessel Fishery, achieving a two percent coverage level (38 observed sea days). The program focused on monitoring the incidental taking of seabirds and recording catch and bycatch data. Seabird bycatch data will be used by the Southwest Region and the U.S. Fish and Wildlife Service to estimate the annual incidental mortality and serious injury of any seabirds taken in this fishery. Catch and bycatch data on the fishery will be used to meet MSRA bycatch reporting requirements for the West Coast HMS FMP.

100 Percent Coverage of the California Pelagic Longline Fishery

The California pelagic longline fishery targeting tuna operates off the U.S. West Coast, with a peak fishing season from January 1st to May 31st of each year. Logbook and NMFS west coast swordfish pelagic longline observer data have demonstrated interactions with sea turtles, seabirds, and marine mammals. The West Coast HMS FMP recommends high levels of observer coverage, possibly up to 100 percent, to obtain reliable and statistically valid data on bycatch of protected species (marine mammals, sea turtles and seabirds). Collecting information on bycatch of the endangered short-tailed albatross and other sea birds is also identified as a priority in the interagency “National Plan of Action for Reducing the Incidental Catch of Seabirds in Longline Fisheries”. In FY 2006, the Southwest Region received funding to support the 100 percent coverage goal, and observers were deployed on all trips occurring off the West Coast, observing over 100 days at sea.

5.4 Pacific Islands

The \$4,945,000 in funding received in FY 2006 by the Pacific Islands Region observer program supported coverage for three fisheries: the Hawaii pelagic longline tuna fishery, the Hawaii pelagic longline swordfish fishery, and the American Samoa pelagic longline tuna fishery (see Appendix A for details). All of the Region’s observer programs focus on monitoring interactions between commercial fisheries and protected species and are authorized under the MSRA. Data collected by observers are utilized by researchers at the Pacific Islands Fisheries Science Center to calculate official bycatch estimates for sea turtles, seabirds, and marine mammals (released in quarterly reports), produce technical reports. Observers also collect biological samples, which are analyzed by Center researchers. In FY 2006, the Pacific Islands Region Observer Program observed over 8,000 days at sea and achieved 100 percent coverage for pelagic longline trips targeting swordfish, as required under the Pelagic Fisheries of the Western Pacific FMP (Pelagic FMP).





(Above Right) Observer Ed Chicardi with two bigeye tuna. (Above Left) Observer Leah Wold applies a satellite tag to the last loggerhead sea turtle caught in the FY 2006 Hawaii longline fishery.
Photo Credit: Pacific Islands Regional Office

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

FY 2006 Highlights

American Samoa Observer Program Begins First Year of Observations

FY 2006 was the first year of observer coverage for the American Samoa pelagic longline fishery. The American Samoa Observer Program was established under Amendment 11 to the Pelagic FMP in May 2006. In April 2006, the first two observers were deployed out of Pago Pago, American Samoa, providing the program with the opportunity to learn more about fisheries in this remote area. Baseline data collected have highlighted the diverse marine resources of American Samoa. Results demonstrate a need for more protected species related data to develop regionally specific management measures.

New Longline Fishing Methods Reduce Seabird Bycatch

Laysan (*Phoebastria immutabilis*) and black-footed (*Phoebastria nigripes*) albatrosses are taken as bycatch in the Hawaii pelagic longline tuna and swordfish fisheries. "Side-setting" of longline gear (setting gear off of the side of the boat, rather than the stern) was demonstrated by directed research, observer data, and other sources to be more effective at reducing seabird bycatch than several other seabird avoidance methods. Regulatory Amendment 5 to the Pelagic FMP included side-setting as one of the seabird avoidance techniques that fishermen may adopt to meet FMP requirements. Using observer data, biologists will analyze the long-term efficacy of side-setting as a bycatch reduction measure.



Black footed albatross.
Photo credit: Dr. Dwayne Meadows
(NOAA/NMFS/OPR)



Since side-setting is a low-cost means to reduce seabird bycatch, data confirming its efficacy will be important for longline fisheries in the U.S. and abroad.

5.5 Northeast

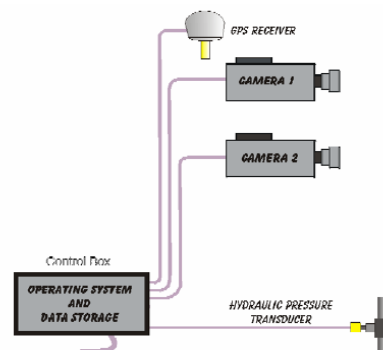
In FY 2006, the Northeast Fisheries Observer Program (NEFOP) received a total of \$9,355,000 in program funding; \$8,228,000 in congressional funding and \$1,067,000 in industry funding to support coverage of the Atlantic sea scallop dredge fishery. Over 5,300 sea days were observed through six monitoring programs: New England Groundfish Trawl and Sink Gillnet Fisheries; Mid-Atlantic Coastal Gillnet Fisheries; New England and Mid-Atlantic Small Mesh Trawl Fisheries; Mid-Atlantic *Illex* squid trawl; New England and Mid-Atlantic Large Mesh Trawl Fisheries; and the Atlantic Sea Scallop Dredge Fishery (see Appendix A for details). Ten days of observer coverage were obtained through pilot electronic monitoring projects. Several Northeast Region FMPs include mandatory observer coverage requirements; the NEFOP provides this coverage in addition to collecting data on gear performance and characteristics and monitoring experimental fisheries.

FY 2006 Program Highlights

Advances in Data Collection and Processing

In FY 2006, the NEFOP reached their goal of decreasing data processing turn-around time for incoming vessel trips to 90 days. In addition, the program distributed personal digital assistants (PDAs) to observers. The PDAs enhanced the timeliness of reporting and reduced the rate of errors for certain data fields, including selected bycatch species.

The region also explored the use of electronic (video) monitoring (EM) to record catch and discards through a contract with Archipelago Marine Resources, Inc. and the voluntary cooperation of regional fishermen. The New England study collected over 70 hours of video footage from bottom longline vessels in 2006; a pilot project to deploy video monitoring on gillnet vessels was also completed (see www.ccchfa.org/pages/2/27/ for the full report).



EM System components.
Graphic from Archipelago Marine, Inc.

Implementation of Haddock Bycatch Reduction Measures in the Atlantic Herring Fishery

Regulations established under the Northeast Multispecies FMP prohibit vessels fishing for Atlantic herring from possessing or landing any groundfish. In FY 2005 emergency measures were enacted to prevent the closure of the Atlantic herring fishery due to increased occurrence of juvenile haddock bycatch. Following the emergency rule, the New England Fishery Management Council (NEFMC) worked with NMFS and other stakeholders to develop permanent measures. In August 2006 the NEFMC implemented the new regulations, which established an exempted herring

fishery authorized to possess incidentally caught haddock up to an annually specified limit. The regulations also authorized possession of up to 100 pounds of other regulated multispecies (such as cod, witch flounder, plaice, yellowtail flounder, pollock, winter flounder, windowpane flounder, redfish, and white hake). Vessels fishing under this exemption must carry an observer if requested to do so. The effectiveness of the regulation will rely on observer monitoring of groundfish bycatch in the fishery, and the use of observer data to implement the haddock bycatch cap.

Emergency Rule to Implement Regulations for the New England Scallop Fishery

Observer coverage of the Atlantic sea scallop fishery is necessary to monitor the bycatch of several important fish species, including skates, monkfish, and cod. Observers also monitor bycatch of yellowtail flounder in the Scallop Access Areas within the year-round closed areas under the Northeast Multispecies FMP. This monitoring program is particularly important to the fishery: once the total allowable catch (TAC) of yellowtail flounder is reached, fishing activity is limited.

Through a FY 2006 emergency rule, NMFS proposed re-activating the industry-funded observer program under the Atlantic Sea Scallop FMP to support monitoring of the fishery. Benefits (either additional scallop catch allowances when fishing in the Scallop Access Areas or additional fishing Days-at-Sea (DAS) when fishing in open areas) are included in the FMP to help defray the costs of observers by fishing vessels. Vessels fishing for scallops are required to carry observers, whether or not scallop TAC or DAS set-asides are available.

Without the program established through this emergency rule, observer coverage would be constrained to levels below those recommended in the Atlantic Sea Scallop FMP for precise estimates of yellowtail flounder bycatch. In addition, lower levels of coverage would limit monitoring of interactions between the scallop fishery and sea turtles. The emergency rule went into effect June 16, 2006, and was re-authorized in December for an additional 6 months. Amendment 13 to the Atlantic Sea Scallop FMP was published in the Federal Register on June 13, 2007, replacing the emergency rule, and enabling the use of industry funding indefinitely.

Monitoring Scallop Dredge Interactions with Sea Turtles- Update



Bycatch of sea turtles by fishing gear is one of the main sources of turtle injury and mortality worldwide. Fisheries observers are essential for monitoring fisheries interactions with sea turtles, rehabilitating captured sea turtles, and collecting data on the effectiveness of sea turtle bycatch reduction devices.

In August 2006 NMFS issued a final rule requiring sea turtle conservation measures for all Atlantic sea scallop dredge vessels in times and areas where sea turtle interactions are most likely to occur. These conservation measures include closures and the required use of a bycatch reduction device. The modification requires a "mat" made from chains that are spaced to prevent turtles from becoming caught in the gear, while still preserving the scallop catch. Sea scallop dredges may injure or kill sea turtles that go under the heavy dredge frame, and NMFS is working with the scallop industry to support testing of other dredge designs that move turtles in the dredge path up and over the gear. Observer monitoring of the sea scallop fishery



will be essential for determining the effectiveness of these measures, and of any new dredge designs, in reducing bycatch of sea turtles.

5.6 Southeast

In FY 2006 Southeast Regional observer programs were allocated \$4,653,000. A total of 2,723 sea days was observed by six programs: the Southeast and Gulf of Mexico Shrimp Otter Trawl; Atlantic, Gulf of Mexico, and Caribbean Pelagic Longline Fishery; Southeast Shark Gillnet; Atlantic and Gulf of Mexico Directed Large Coastal Shark Bottom Longline Fishery; the Gulf of Mexico Reef Fish Fishery; and the North Carolina Small Boat Gillnet Fishery (see Appendix A for details). In FY 2006 the Southeast Region also received competitive funding to support a mandatory observer program for the reef fish fishery and continue an alternate platform¹⁰ observer program in the North Carolina gillnet fishery.

FY 2006 Program Highlights

Changes in Observer Coverage for Southern U.S. Shrimp Fisheries



While Southeast Atlantic and Gulf of Mexico shrimp stocks are not overfished, many commercial and recreational finfish species caught as bycatch during the trawling operations are being overfished, including the highly-prized red snapper. Although the Gulf of Mexico and Southeast Atlantic shrimp trawl fisheries have been observed since 1992, participation in the observer program has been voluntary. Amendment 13 to the Gulf of Mexico Shrimp FMP (finalized in October 2006), and Amendment 6 to the South Atlantic Shrimp Fishery FMP (finalized in December 2005), established a mandatory observer program for Southeast shrimp fisheries. Onboard fishery observers represent the best mechanism to collect catch and bycatch data for these fisheries; the proposed amendments improve the observer program's ability to collect this important information.

Reef Fish Observer Program Completes First Year of Data Collection

The commercial reef fish fishery is another important Gulf of Mexico fishery; several hundred participating vessels target valuable red snapper and other reef fish species. Amendment 22 to the Reef Fish FMP, which was passed in July 2005, provided NMFS with the authority to implement an observer program for the commercial and for-hire sectors of this fishery. In FY 2006 observers were placed throughout the fishing seasons on commercial reef fish vessels operating primarily in the western Gulf of Mexico. During its first year of operation, the observer program focused on general finfish bycatch characterization, estimation of managed finfish discard and release mortality levels (including estimates for red snapper and red grouper), and estimation of protected species bycatch levels (such as sea turtle species). The data collected through this observer program has improved the quality of bycatch information available to fisheries managers.

¹⁰ When safety or logistical concerns preclude placing an observer aboard a fishing vessel, alternate platforms (such as observers aboard a secondary vessel equipped with binoculars) may be utilized to collect fishery data.

Monitoring Mid-Atlantic Gillnet Interactions with Bottlenose Dolphins

Bycatch of bottlenose dolphins is known to occur in several Mid-Atlantic fisheries. In 2006, a final Bottlenose Dolphin Take Reduction Plan (BDTRP) was established under the MMPA. The plan includes recommendations to increase observer coverage, especially in North Carolina. Mid-Atlantic coastal gillnet fisheries have been periodically observed by both the Northeast and Southeast regional observer programs in the past, including coverage of the North Carolina and Virginia gillnet fisheries. Accurate bycatch estimates are crucial to manage the species under the BDTRP. In FY 2006 Southeast Region observer programs covered an additional 117 sea days to monitor bottlenose dolphin serious injury and mortality in the Mid-Atlantic coastal gillnet fishery. This information will be used to develop bycatch estimates for marine mammal species and to evaluate the success of the BDTRP.

Temporary Expansion of Observer Coverage Due to Right Whale Entanglement



Northern right whale and calf.
Photo credit: Florida Fish and Wildlife
Conservation Commission/NOAA

In 2005 a pilot observer program was implemented to monitor vessels with active directed shark permits fishing with sink gillnet gear. The program initially focused on determining the fishery's impact on finetooth shark landings and on shark populations in general. However, in FY 2006 a Northern right whale (a critically endangered species) became entangled in sink gillnet gear in the area covered by this fishery. In response to this event, Southeast observer program coverage was expanded in the area where the entangled whale was sighted. The information collected by the observer program was used by the Atlantic

Large Whale Take Reduction Team to determine the potential effect of coastal gillnet fisheries on right whales. Following the entanglement, NMFS published a temporary rule to close the Southeast Restricted Area to all gillnet gear. A permanent rule to modify the regulations in this area from November to March (when right whales are present in high numbers) is under development.

Reducing Longline Interactions with Protected Species

In FY 2006 the Pelagic Observer Program (POP) implemented 100 percent observer coverage for a special Cooperative Research Program (CRP) experimental design project. This project tested the impact of hook offset and baiting technique effects on bycatch reduction. Observers monitored a total of 247 sets, and spent 395 days at sea during the project. Results of this research may lead to fishing methods that reduce the bycatch of sea turtles, seabirds, marine mammals, and endangered smalltooth sawfish in the shark bottom longline fishery.

Sampling Gulf Seafood Following Hurricane Katrina

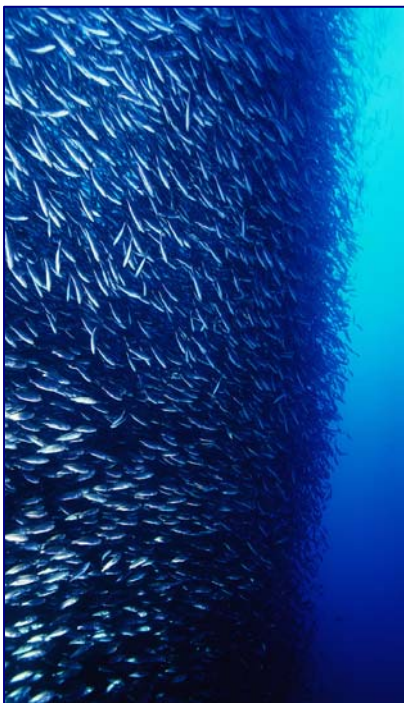
Following Hurricane Katrina, NMFS monitored Gulf seafood for potential bio-accumulation of chemicals that were introduced into the Gulf of Mexico when floodwaters were pumped from the streets of New Orleans. From September to December 2006, Southeast Region shrimp fishery observers collected seafood in the



offshore areas of the Gulf affected by Hurricane Katrina. Samples collected by the shrimp fishery observers were tested at the Northwest Fisheries Science Center (NWFSC). The results consistently demonstrated that Gulf seafood was healthy and safe to enjoy.



6. *Looking Ahead- NMFS Observer Program FY 2007 Goals*



In FY 2007 NMFS observer programs will continue to provide high quality biological information on fish, marine mammals, sea turtles, and seabird populations, which will be relied upon by the Agency to manage the nation's living marine resources. National and regional collaboration on high-level projects, such as the National Bycatch Report, will be a focus of FY 2007. Another program focus for FY 2007 will be interpreting and incorporating MSRA changes, such as revised provisions on the confidentiality of observer data.

The next year will also bring the opportunity to share the work of U.S. observer programs both nationally, through the implementation of the NOP Communications Strategy, and with an international audience, during the International Fisheries Observer Conference (IFOC)¹¹.

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

¹¹ Visit the IFOC 2007's website at: www.fisheriesobserverconference.com/info.asp to learn more.



APPENDIX A: NOAA Fisheries Observer Programs Funded in FY 2006

Fisheries Observed	Fleet Size	Authority to Place Observers	Season of Operation	Funding Amount	Funding Source	Program Duration	Target % Coverage	Actual % Coverage	Target Sea Days	Actual Sea Days	Number of Observers
PACIFIC OCEAN											
North Pacific Groundfish Observer Program, Alaska Fisheries Science Center, 7600 Sand Point Way, NE, Seattle, WA 98115-0070											
Program Manager: Dr. William Karp, 206-526-4194, bill.karp@noaa.gov, website: http://www.afsc.noaa.gov/refm/observers/											
Bering Sea, Aleutian Islands and Gulf of Alaska Groundfish Trawl, Longline and Pot Fisheries	303 vessels / 24 shore plants	MSFCMA (50 CFR 679.50)	year-round	\$1,479,000	Obs/Trn-North Pacific Marine Resource Observers/ N. Pacific Obs Prgm	1973 - present	100% vessels > 125 ft.	100% vessels > 125 ft.	37,000	36,424	398
				\$297,978	Fisheries Management Program		30% vessels 60-124 ft.	30% vessels 60-124 ft.			
				\$2,268,555	Alaska Composite		30% or 100% shore plants	30% or 100% shore plants			
				\$650,417	Reducing Bycatch						
				\$13,000,000	Industry funds						
Data to assess the current actual coverage in the 30% fleet are not available and compliance with their requirement has been an enforcement function. The North Pacific Groundfish Observer Program uses observer days rather than observer sea days, because the coverage regulations require observers to be stationed at shoreside plants as well as on vessels.											
Alaska Marine Mammal Observer Program, Alaska Regional Office, P. O. Box 21668, Juneau, AK 99802-1668											
Program Manager: Bridget Mansfield, 907-586-7642, bridget.mansfield@noaa.gov, website: http://www.fakr.noaa.gov/protectedresources/observers/mmop.htm											
AK Yakutat Salmon Set Gillnet Fishery	100 set net permits	MMPA Cat. II (50 CFR 229)	June - Sept	\$300,000	Reducing Bycatch	1999 - present	5%	sampling delayed		sampling delayed	

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Fisheries Observed	Fleet Size	Authority to Place Observers	Season of Operation	Funding Amount	Funding Source	Program Duration	Target % Coverage	Actual % Coverage	Target Sea Days	Actual Sea Days	Number of Observers
West Coast Groundfish Observer Program, Northwest Fisheries Science Center, 2725 Montlake Blvd East, Seattle, WA 98112-2097											
Program Manager: Jonathan Cusick, 360-332-2793. jonathan.cusick@noaa.gov, website: http://www.nwfsc.noaa.gov/research/divisions/fram/observer/											
West Coast Groundfish Limited Entry Fleets (trawl and fixed gear)	179 trawl, 190 longline, 30 trap permits	MSFCMA (50 CFR 660)	year-round	\$4,931,000	Obs/Trn-West Coast Observers	2001 - present	10-20%	10-20%	3,000	1,952	43
Exempted Fishing Permits (EFP)	Early CA opener for hake (1 vessel)	MSFCMA	Mar - Apr	logistical and data support included in above		2006	100%	100%	5	5	logistical and data support included in groundfish
State Managed and Open Access Fisheries (includes California halibut trawl, nearshore rockfish, pink shrimp, prawn and open access fixed gear fisheries)	approx. 1,000	MSFCMA (50 CFR 660)	year-round	Included in above		2001 - present	<1 - 10%	<1 - 10%	500	491	included in groundfish
Shore-Based Hake Mid-Water Trawl Fishery	35 vessels	MSFCMA (50 CFR 660)	Jun - Aug	\$250,000	Reducing Bycatch	2004 - present	100% vessels covered with pilot electronic monitoring	100% vessels covered with pilot electronic monitoring	2000	1,911	electronic monitoring, no observers used
At-Sea Hake Mid-Water Trawl Fishery	6 motherships, 9 catcher processors	MSFCMA (50 CFR 660)	May - Oct	\$75,000	Reducing Bycatch	1975 - present	100%	100%	450	1,200	34
				\$400,000	Industry						

Fisheries Observed	Fleet Size	Authority to Place Observers	Season of Operation	Funding Amount	Funding Source	Program Duration	Target % Coverage	Actual % Coverage	Target Sea Days	Actual Sea Days	Number of Observers
Southwest Region Observer Program, Southwest Regional Office, 501 West Ocean Blvd, Long Beach, CA 90802-4213											
Program Manager: Lyle Enriquez, 562-980-4025, lyle.enriquez@noaa.gov, website: http://swr.ucsd.edu/hcd/fishobs.htm											
California/Oregon Pelagic Drift Gillnet Fishery	60 vessels	MMPA Cat. I (50 CFR 229)	May - Jun	\$410,000	MMPA	1990 - present	20%	20%	350	357	11
				\$25,000	Economics						
California Pelagic Longline Fishery	5 vessels	MMPA Cat. II (50 CFR 229)	Sep - Jun	\$203,000	Obs/Trn-National Observer Program	2001 - present	100%	100%	300	110	2
Pacific Albacore Troll Fishery	800 vessels	MSFCMA (50 CFR 660)	May - Nov	\$170,000	Obs/Trn-National Observer Program	2004 - present	1%	<1%	300	19	2
California Coastal Pelagic Species Purse Seine Fishery	70 vessel	MMPA Cat. II (50 CFR 229)	Jan - Dec	\$194,000	Obs/Trn-National Observer Program	2004 - present	10%	10%	200	202	4
Southern California Tuna Purse Seine Fishery	5 vessels	MSFCMA (50 CFR 660)	Jun - Jul	\$40,000	Obs/Trn-National Observer Program	2004 - present	33%	0%	15	0	0
Southern California Set Gillnet Fishery	50 vessels	MMPA Cat. I (50 CFR 229)	Jan - Dec	\$364,000	Obs/Trn-National Observer Program	new in 2006	10%	<1%	200	6	1
West Coast Highly Migratory Species Recreational Charter Vessels	20 vessels	MSFCMA (50 CFR 660)	May - Nov	\$68,000	Obs/Trn-National Observer Program	new in 2006	5%	2%	100	38	3

Fisheries Observed	Fleet Size	Authority to Place Observers	Season of Operation	Funding Amount	Funding Source	Program Duration	Target % Coverage	Actual % Coverage	Target Sea Days	Actual Sea Days	Number of Observers
Hawaii Fisheries Observer Program, Pacific Islands, Regional Office, 1601 Kapiolani Blvd, Honolulu, HI 96814-4700											
Program Manager: John Kelly, 808-973-2935, john.d.kelly@noaa.gov, website: http://swr.nmfs.noaa.gov/pir/index.htm											
Hawaii Pelagic Longline Fishery	164 vessels with permits (112 active)	MSFCMA (50 CFR 660)	year-round	\$3,945,000	Obs/Trn-Hawaii Longline Observers	1994 - present	20% tunas	21% tunas	220 trips targeted	5,781	73
				\$1,000,000	Hawaii Sea Turtle		100% swordfish	100% swordfish	160 trips targeted	1,729	49
American Samoan Pelagic Longline fishery	30	MSFCMA (50 CFR 660) in Jan. 2005	year-round	see above		2005-present	7%	9.3%	15 trips	204	2
Hawaii Bottomfish Fishery	9	MSFCMA (50 CFR 660)	year-round	see above		2003-2006	20%	4%	2 trips	44	1
ATLANTIC OCEAN, GULF OF MEXICO, CARIBBEAN											
Northeast Fisheries Observer Program, Northeast Fisheries Science Center, 166 Water Street, Woods Hole, MA 02543-1097											
Program Manager: David Potter, 508-495-2262, david.potter@noaa.gov, website: http://www.nefsc.noaa.gov/femad/fsb/											
New England Groundfish Trawl and Sink Gillnet Fisheries (also shrimp trawl, bottom longline/tub, herring mid-water pair trawl, whiting trawl)	approx. 1,200 trawl vessels and 250 gillnet vessels	MSFCMA (50 CFR 648); MMPA Cat. I (50 CFR 229)	year-round	\$5,424,000	Obs/Trn-New England Groundfish	1990 - present	5%	2%	8,783	4,123	76
				\$750,000	MMPA						
Mid-Atlantic Coastal Gillnet Fishery (includes monkfish, dogfish, and several state fisheries)	>665 vessels	MMPA Cat. II (50 CFR 229)	year-round	\$450,000	MMPA	1994 - present	4%	4%	400	591	included in groundfish

Fisheries Observed	Fleet Size	Authority to Place Observers	Season of Operation	Funding Amount	Funding Source	Program Duration	Target % Coverage	Actual % Coverage	Target Sea Days	Actual Sea Days	Number of Observers
NE and Mid-Atlantic Small Mesh Trawl Fisheries (squid, mackerel, butterfish)	719 permits	MMPA Cat. I (50 CFR 229.7); MSFCMA (50 CFR 648)	year-round	\$315,000	Obs/Trn-Atlantic Coast Observers	2001 - present	<1%	<1%	317	247	included in groundfish
Atlantic Sea Scallop Dredge Fishery	250 vessels with permits, 185 active	MSFCMA (50 CFR 648)	year-round	\$624,000	Obs/Trn-Atlantic Coast Observers	1999 - present	5%	2%	709	453	included in groundfish
				\$1,067,000	Industry						
NE and Mid-Atlantic Large Mesh Trawl Fisheries (summer flounder, bluefish, monkfish, dogfish)	620 vessels (2,138 permits)	MSFCMA (50 CFR 648)	year-round	\$540,000	Obs/Trn-Atlantic Coast Observers	1998 - present	<1%	<1%	473	172	included in groundfish
Mid-Atlantic Illex Squid Trawl Fishery	vessels unknown	MSFCMA (50 CFR 648); MMPA Cat. I (50 CFR 229)	year-round	included in small mesh trawl fisheries		2004 - present	<1%	<1%	22	136	included in groundfish
Electronic Monitoring Other Special Projects	N/A	N/A	year-round	\$125,000	Obs/Trn-National Observer Program	2006	N/A	N/A	N/A	10	video sea testing

Fisheries Observed	Fleet Size	Authority to Place Observers	Season of Operation	Funding Amount	Funding Source	Program Duration	Target % Coverage	Actual % Coverage	Target Sea Days	Actual Sea Days	Number of Observers
Southeast Fisheries Observer Programs - Programs are managed in separate laboratories as indicated below.											
Southeast Shrimp Trawl Observer Program, Southeast Fisheries Science Center, Galveston Laboratory, 4700 Avenue U, Galveston, TX 77551-5997											
Program Manager: Liz Scott-Denton, 409-766-3571, elizabeth.scott-denton@noaa.gov, website: http://galveston.ssp.nmfs.gov/galv/research/management.htm#observer_program											
Southeast and Gulf of Mexico Shrimp Otter Trawl Fisheries (including rock shrimp)	approx. 3,000 USCG documented vessels, unknown number of state vessels, 411 rock shrimp vessels	voluntary	year-round	\$500,000	Obs/Trn-National Observer Program	1992 - present	<1%	>1%	1,000	1,003	7
				\$789,000	Obs/Trn-South Atlantic and Gulf Shrimp Observers						
				\$211,000	Obs/Trn-Atlantic Coast Observers						
Atlantic Pelagic Longline Observer Program, Southeast Fisheries Science Center, 75 Virginia Beach Dr, Miami, FL 33149-1003											
Program Manager: Lawrence Beerkircher, 305-361-4247, lawrence.r.beerkircher, website: http://www.sefsc.noaa.gov/											
Atlantic, Gulf of Mexico, Caribbean Pelagic Longline Fishery	70-80 active vessels	MSFCMA (50 CFR 635); MMPA Cat. I (50 CFR 229); ATCA	year-round	\$1,238,000	Obs/Trn-Atlantic Coast Observers	1992 - present	5-8%	5-8%	908	929	10
				\$345,000	Obs/Trn - East Coast Obs						
				\$267,000	Obs/Trn-National Observer Program						

Fisheries Observed	Fleet Size	Authority to Place Observers	Season of Operation	Funding Amount	Funding Source	Program Duration	Target % Coverage	Actual % Coverage	Target Sea Days	Actual Sea Days	Number of Observers
Southeast Shark Driftnet Observer Program & Shark Bottom Longline Observer Program, Southeast Fisheries Science Center, Panama City Laboratory, 3500 Delwood Beach Rd, Panama City, FL 32408											
Program Manager: John Carlson, 850-234-6541, john.carlson@noaa.gov, website: www.wefscpanamalab.noaa.gov/shark/observersBLL.htm											
Southeast Shark Gillnet Fishery	4-23 vessels with directed shark permits	MMPA Cat. II (50 CFR 229); MSFCMA (50 CFR 635)	year-round	\$324,000	Obs/Trn-Atlantic Coast Observers	1998 - present	100% Nov-Mar; 38% Apr-Nov	100% Nov-Mar; 38% Apr-Nov	224	345	4
Atlantic and Gulf of Mexico Directed Large Coastal Shark Bottom Longline Fishery	251 directed shark permits (as of Oct. 2002)	MSFCMA (50 CFR 635)	3 seasons - Jan-Apr; May-Aug; Sep-Nov	\$277,000	Obs/Trn-National Observer Program	1994 - present	3.90%	5-6%	240	148	6
				\$200,000	Sustainable Fisheries						
Gulf of Mexico Reef Fish Fishery Observer Program, Southeast Fisheries Science Center, Galveston Laboratory, 4700 Avenue U, Galveston, TX 77551											
Program Manager: Elizabeth Scott-Denton, 409-766-3507, elizabeth.scott-denton@noaa.gov											
Gulf of Mexico Reef Fish Fishery	Approx. 1,000 permitted USCG documented vessels	mandatory	year-round	\$400,000	Obs/Trn-National Observer Program	2006 - present	<5%	<5%	300	272	8
Alternative Platform Sampling of North Carolina Small Boat Gillnet Fishery, Southeast Fisheries Science Center, Beaufort Laboratory, 101 Pivers Island Road, Beaufort, NC 28516											
Program Manager: Dr. Aleta Hohn, 252-728-8797, aleta.hohn@noaa.gov, website: http://www.nmfs.noaa.gov/pr/interactions/trt/teams.htm											
Alternative Platform Sampling of North Carolina Small Boat Gillnet Fishery	Unknown	MMPA Cat. I (50 CFR 229); ESA	year-round	\$102,000	Obs/Trn-National Observer Program	Mar 2006 - present	3-5%	TBD	100 trips	26	2

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

Manager: Dr. Lisa Desfosse, 301-713-2363, lisa.desfosse@noaa.gov, website: <http://www.st.nmfs.gov/st1/nop>

National Bycatch Report	N/A	N/A	year-round	\$249,000	Obs/Trn-National Observer Program	2005 - present (funds distributed to ST and regional programs)	N/A	N/A	N/A	N/A	N/A
				\$557,000	Reducing Bycatch						
				\$50,000	Obs/Trn-Atlantic Coast Observers						
Shark At-Sea Data Entry Project	N/A	N/A	year-round	\$40,000	Reducing Bycatch	2006	N/A	N/A	N/A	N/A	N/A
National Observer Program Support Activities	N/A	N/A	year-round	\$150,000	MMPA	1999 - present	N/A	N/A	N/A	N/A	N/A
				\$150,000	Sustainable Fisheries						
				\$97,000	Reducing Bycatch						

TOTAL OBSERVER PROGRAM CONGRESSIONAL FUNDING	\$ 23,174,000	
TOTAL OTHER FUNDING	\$7,670,950	
TOTAL INDUSTRY FUNDING	\$ 14,467,000	
TOTAL OBSERVER FUNDING - ALL FUNDING SOURCES	\$ 45,311,950	Totals may not sum due to rounding

ESTIMATED NUMBER OF SEA DAYS TARGETED - Does not include programs that target trips instead of sea days	57,774
ACTUAL NUMBER OF SEA DAYS OBSERVED - Includes days deployed for electronic monitoring	59,105

TOTAL NUMBER OF OBSERVERS - Does not include deployments for electronic monitoring	738
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