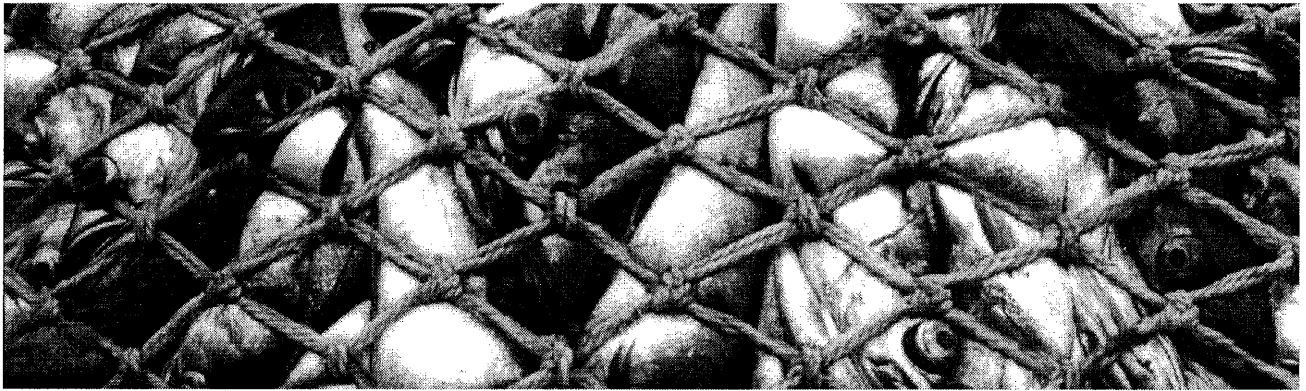


**Part II:
Observer Program Descriptions**





UNITED STATES OBSERVER PROGRAM SUMMARIES

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NORTH PACIFIC & BERING SEA GROUNDFISH, TRAWL & FIXED GEAR FISHERY

Bill Karp, Task Leader, Alaska Fisheries Science Center, 7600 Sand Point Way NE, Seattle, WA 98115

Observer Program Mandate and Authority

Mission of the program: Collect data on catch and bycatch quantity, composition, and biological characteristics, document fishery interactions with marine mammals and seabirds, monitor compliance with federal fisheries regulations.

Fishery management: Federal

Authority to place observers: Magnuson-Stevens Fishery Conservation and Management Act (amendments to the Gulf of Alaska Groundfish and Bering Sea/Aleutian Islands Groundfish Fishery Management Plans), Marine Mammal Protection Act.

Volunteer or mandatory: Mandatory.

Funding sources: Direct observer costs - industry funded; NMFS operational costs - govt. funded.

Program duration: 1973 to present. Originally monitored foreign and joint venture fishing, 100% domestic since 1991.

Annual program costs: (\$U.S.) Costs to industry \$8-10 million; Agency costs \$2 million.

Fishery Description (1997)

Target species: All major groundfish species harvested in U.S. Federal waters of the Gulf of Alaska and Bering Sea/Aleutian Islands.

Other commercially landed species: None.

Bycatch: Bycatch of halibut, salmon, king and Tanner crab, marine mammals (several species), and seabirds (several species) occurs and is designated as prohibited or protected species bycatch. Bycatch of groundfish also occurs in the groundfish fisheries.

Fleet size: 350 vessels and 20 shore plants.

Season of operation: Year-round (closures subject to target and bycatch quota limits).

Total annual catch of target species: Total Groundfish = 2 million t (pollock = 1.2 million t, Pacific cod = 326,000 t, yellowfin sole = 181,000 t)

Total number of fishing days per year: Unknown; observer coverage days 30,000 - 35,000.

Observer Program Management

Brief overview of program structure: Program responsibilities are shared among NMFS, the North Pacific Observer Training Center of the University of

Alaska Anchorage (OTC), the fishing industry and five independent observer contractors (who are certified by NMFS). The contractors hired and deployed over 500 observers in 1997. NMFS and OTC train and brief observers. NMFS provides other observer support services (debriefing, observer gear, training documents, enforcement support), maintains field offices in Kodiak and Dutch Harbor, and is responsible for maintaining information systems for scientific and operational data, and administrative support.

Service delivery type and function of each entity: NMFS is responsible for funding and overall administration of the program including observer training (in partnership with OTC), debriefing and data management. The fishing industry is responsible for making arrangements with NMFS-certified contractors for placement of NMFS-certified observers aboard their vessels or at their processing facilities for and paying contractors for direct observer costs. The observer contractors are responsible for observer recruiting, deployment, logistics, insurance/benefits and delivery of observer data to NMFS.

Other participating agencies: North Pacific Observer Training Center of the University of Alaska Anchorage (see above).

Observer Coverage

Unit and definition of fishing effort for purpose of estimating coverage:

Fishing day = a day in which fishing gear is retrieved and groundfish retained.

Processing day = a day in which groundfish is received or processed.

Fraction of fishing activity observed:

Vessels 125 ft. or longer = 100% coverage of fishing days.

Vessels 60 - 124 ft. = 30% coverage of fishing days.

Shore plants processing >1,000 t/mo. = 100% coverage of processing days.

Shore plants processing >500 t/mo. = 30% coverage of processing days.

OFFSHORE PACIFIC WHITING FISHERY

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Observer Program Mandate and Authority

Mission of the program: Collect catch and biological data; characterize marine mammal and salmon bycatch; monitor compliance with federal fisheries regulations.

Fishery management: Federal.

Authority to place observers: Magnuson-Stevens Fishery Conservation and Management Act, Marine Mammal Protection Act.

Voluntary or mandatory: Voluntary.

Funding sources: Direct observer costs - industry funded; NMFS operational costs - government funded.

Program duration: 1975 to present. Originally monitored foreign and joint venture fishing, 100% domestic since 1991.

Annual program costs: Costs to industry approx. \$100,000. Government costs (see North Pacific Groundfish Program summary).

Fishery Description (1997)

Target species: Pacific whiting.

Other commercially landed species: None.

Bycatch: Salmon, marine mammals (several species), seabirds (several species). Fleet size: 16 processing vessels.

Season of operation: May - June (closures subject to target quota limits).

Total annual catch of target species: 120,000 t.

Total number of fishing days per year: 425.

Observer Program Management

Brief overview of program structure: Program responsibilities are shared among the fishing industry and five independent observer contractors (who are certified by NMFS). The contractors hire and deploy observers. NMFS trains and briefs observers. NMFS provides other observer support services (debriefing, observer gear, training documents, enforcement support) and is responsible for maintaining information systems for scientific and operational data and administrative support.

Service delivery type and function of each entity: NMFS is responsible for funding and overall administration of the program (including observer training), debriefing and data management. The fishing industry is responsible for making arrangements with NMFS-certified contractors for placement of NMFS-certified observers aboard their vessels and

paying contractors for direct observer costs. The observer contractors are responsible for observer recruiting, deployment, logistics, insurance/benefits and delivery of observer data to NMFS.

Other participating agencies: None.

Observer Coverage

Unit and definition of fishing effort for purpose of estimating coverage:

Fishing day = a day in which Pacific whiting is received or processed.

Fraction of fishing activity observed: 100%.

ALEUTIAN ISLANDS KING CRAB POT FISHERY

Larry Boyle, Alaska Department of Fish and Game Shellfish Observer Program, PO Box 920387 Dutch Harbor, AK 99692

Observer Program Mandate and Authority

Mission of the program: Collecting essential biological and fishery management data including quantifying species composition, bycatch, harvest, biological and legal crab carapace size distributions, the reproductive status of female crab, and monitor regulation compliance.

Fishery management: State.

Authority to place observers: Magnuson-Stevens Fishery Conservation and Management Act (Fishery Management Plan for Bering Sea/Aleutian Islands King and Tanner Crab); Alaska Statutes - 16.05.05 and 16.05.251; Alaska Board of Fisheries; Alaska Administrative Code - 5 AAC 39.141 and 5 AAC 39.645.

Voluntary or mandatory: Mandatory.

Funding sources: Direct observer costs - industry funded; Alaska Department of Fish and Game (ADF&G) operational costs from - State general fund.

Program duration: 1988 to present.

Annual program costs: Please refer to **Bering Sea red and blue king crab** program summary for overall crab observer program costs.

Fishery Description

Target species: Golden king crab, red king crab. (Red king crab fishery has been closed since 1996).

Other commercially landed species: *Lithodes couesi*

Bycatch: Female and sublegal golden king crab, Pacific cod, snails, sculpins and red king crab, Steller sea lion, gray whale, Pacific whitesided dolphin, northern elephant seal, Dall's porpoise, Harbor seal, California sea lion, northern fulmar, unidentified dark shearwater, unidentified storm-petrel, unidentified puffin, unidentified seabirds.

Fleet size: 15 - 24.

Season of operation: Golden king crab: September 1 until closed by Emergency Order when GHL is reached.

Avg. annual catch of target species: 7.8 million pounds.

Number of fishing days in 1997: 1,446.

Observer Program Management

Brief overview of program structure: ADF&G, the five certified independent contractors and the fishing industry share responsibilities for the Shellfish Observer Program.

Service delivery type and function of each entity: ADF&G is responsible for establishing observer and contractor qualifications, certification and decertification, conflict of interest standards, and observer sampling procedures. ADF&G is also charged with review of observer training programs, observer testing, briefings, debriefings, analysis of observer data and reporting. The contractors hire, train and deploy observers, provide all logistic support (food, lodging, transportation and sampling equipment), salary/benefits, and secure contracts directly with the vessels. The responsibility of the fishing industry is to procure and pay for observer coverage through a certified contractor, provide the observer food and accommodations while on board, catch information and the opportunity to sample the catch according to department requirements.

Other participating agencies: The North Pacific Observer Training Center (OTC), University of Alaska - Anchorage has provided observer training for the five certified contractors since 1991 and has trained all shellfish observers since 1994. The Alaska Department of Public Safety, Fish & Wildlife Protection Division, investigates observer's documentation of violations.

Observer Coverage

Unit and definition of fishing effort for purpose of estimating coverage: All catcher/processor and floating processor vessels that process shellfish at-sea. Since 1995, observer coverage has also been required on all vessels that catch king crab in the Aleutian Islands registration area.

Observer coverage in 1997 - three catcher/processor and 12 catcher vessels.

Fraction of fishing activity observed: 100%.

BERING SEA KOREAN HORSEHAIR CRAB POT FISHERY

Larry Boyle, Alaska Department of Fish and Game, Shellfish Observer Program, PO Box 920587 Dutch Harbor, AK 99692

Observer Program Mandate and Authority

Mission of the program: To collect essential biological and fishery management data including quantifying species composition, bycatch, harvest, biological and legal crab carapace size distributions, the reproductive status of female crab, and to monitor regulation compliance.

Fishery management: State.

Authority to place observers: Alaska Statutes - 16.05.05 and 16.05.251; Alaska Board of Fisheries, Alaska Administrative Code - 5 AAC 39.141, 5 AAC 39.210 and 5 AAC 39.645.

Voluntary or mandatory: Mandatory.

Funding sources: Direct observer costs - industry funded; ADF&G operational costs - State general fund.

Program duration: 1993 to present.

Annual program costs: Please see **Bering Sea red and blue king crab fisheries** program summary.

Fishery Description

Target species: Korean horsehair crab.

Other commercially landed species: None.

Bycatch: Female, sublegal, and legal but not retained male Korean horsehair crab; *C. bairdi*, *C. opilio*, red and blue king crab, sculpin and snails.

Fleet size: 25 (moratorium on new participants).

Season of operation: November 1 until closed by Emergency Order when GHL is reached.

Avg. annual catch of target species: 1.3 million pounds.

Number of fishing days, 1997: 232.

Observer Program Management

Brief overview of program structure: ADF&G, the five certified independent contractors and the fishing industry share responsibilities for the Shellfish Observer Program.

Service delivery type and function of each entity: ADF&G is responsible for establishing observer and contractor qualifications, certification and decertification, conflict of interest standards, and observer sampling procedures. ADF&G is also charged with review of observer training programs, observer testing, briefings, debriefings, analysis of observer data and reporting. The contractors hire, train and deploy observers, provide all logistic support (food, lodging, transportation, sampling equipment and insurance), sal-

ary/benefits, and secure contracts directly with the vessels. The responsibility of the fishing industry is to procure and pay for observer coverage through a certified contractor, provide the observer food and accommodations while on board, catch information and the opportunity to sample the catch according to department requirements.

Other participating agencies: The North Pacific Observer Training Center (OTC), University of Alaska Anchorage (OTC) has provided observer training for the five certified contractors since 1991 and has trained all shellfish observers since 1994. The Alaska Department of Public Safety, Fish & Wildlife Protection Division, investigates observer's documentation of violations.

Observer Coverage

Unit and definition of fishing effort for purpose of estimating coverage: All vessels over 44 feet that catch Korean horsehair crab in the Bering Sea, as a condition of their fishing permit. In 1997, 18 catcher vessels carried observers.

Fraction of fishing activity observed: 100%.

BERING SEA KING CRAB AND TANNER CRAB POT FISHERIES

Larry Boyle, Alaska Department of Fish and Game, Shellfish Observer Program, PO Box 920587 Dutch Harbor, AK 99692

Observer Program Mandate and Authority

Mission of the program: Collecting essential biological and fishery management data including quantifying species composition, bycatch, harvests, biological and legal crab carapace size distributions, the reproductive status of female crab, and monitor regulation compliance.

Fishery management: State.

Authority to place observers: Magnuson-Stevens Fishery Conservation and Management Act (Fishery Management Plan for Bering Sea/Aleutian Islands King and Tanner Crab); Alaska Statutes - 16.05.05 and 16.05.251; Alaska Board of Fisheries; Alaska Administrative Code - 5 AAC 39.141 and 5 AAC 39.645.

Voluntary or mandatory: Mandatory.

Funding sources: Direct observer costs - industry funded; ADF&G operational costs - State general fund, Observer training practicums - test-fish authority.

Program duration: 1988 to present.

Annual program costs: Industry costs: \$1.2 - \$1.7 million (U.S.) (est.); ADF&G: \$215,000 Observer Program administration; Data entry and analysis - \$225,000, Observer training practicum - \$30,000.

Fishery Description

Target species: Red and blue king crab and Tanner and Snow crab, *C. bairdi* and *C. opilio*.

Other commercially landed species: None.

Bycatch: Female and sublegal male crab of the target species, non-targeted crab, Pacific cod, sculpin and snails.

Fleet size: 280+.

Season of operation: September 15 through spring (fisheries are closed by regulatory date or by Emergency Order (EO) when GHLL is reached).

Avg. annual catch of target species:

red king crab: Pribilof fishery - 1.2 million pounds; Bristol Bay fishery - 4.2 million pounds.

blue king crab: Pribilof fishery - 0.6 million pounds; St. Matthew fishery - 3.6 million pounds.

C. bairdi - 4.5 million pounds (however, no fishery in 1997).

C. opilio - 102 million pounds.

Avg. number of fishing days per year: 13,500 est.

Observer days of coverage, 1997: 1,923.

Observer Program Management

Brief overview of program structure: ADF&G, the five certified independent contractors and the fishing industry share responsibilities for the Shellfish Observer Program.

Service delivery type and function of each entity: ADF&G is responsible for establishing observer and contractor qualifications, certification and decertification, conflict of interest standards, and observer sampling procedures. ADF&G is also charged with review of observer training programs, observer testing, briefings and debriefings, analysis of observer data and reporting. The contractors hire, train and deploy observers, provide all logistic support (food, lodging, transportation, sampling equipment and insurance), salary/benefits, and secure contracts directly with the vessels. The responsibility of the fishing industry is to procure and pay for observer coverage through a certified contractor, provide the observer food and accommodations while on board, catch information and the opportunity to sample the catch according to department requirements.

Other participating agencies: The North Pacific Observer Training Center (OTC), University of Alaska Anchorage has provided observer training for the five

certified contractors since 1991 and has trained all shellfish observers since 1994. The Alaska Department of Public Safety, Fish & Wildlife Protection Division, investigates observer's documentation of violations.

Observer Coverage

Unit and definition of fishing effort for purpose of estimating coverage: All catcher/processor and floating processor vessels that process king or Tanner crab at-sea. Observed vessels, 1997 - 16 catcher/processor and 11 floating processor vessels.
Fraction of fishing activity observed: 0-14%.

STATEWIDE SCALLOPS DREDGE FISHERY (EXCEPT COOK INLET)

Larry Boyle, Alaska Department of Fish and Game Shellfish Observer Program, PO Box 920587 Dutch Harbor, AK 99692

Observer Program Mandate and Authority

Mission of the program: Collecting essential biological and fishery management data including quantifying species composition and distribution, bycatch, harvest, scallop size distributions, and monitor regulation compliance.

Fishery management: Joint State and Federal.

Authority to place observers: Magnuson-Stevens Fishery Conservation and Management Act (Fishery Management Plan for Scallop Fishery off Alaska); Alaska Statutes - 16.05.05 and 16.05.251; Alaska Board of Fisheries; Alaska Administrative Code - 5 AAC 38.076, 5 AAC 39.141, 5 AAC 39.210 and 5 AAC 39.645.

Voluntary or mandatory: Mandatory, at the department's discretion.

Funding source: Direct observer costs - industry funded; ADF&G - state general funds; Federal - AKFIN.

Program duration: 1993 to present.

Annual program costs (\$U.S.) (1997): Industry - \$164,000 (est.); ADF&G - \$53,000; Federal - \$32,000.

Fishery Description (1997)

Target species: Weathervane scallop

Other commercially landed species: None.

Bycatch: *C. bairdi*, sole, skates, starfish, plus *C. opilio* in the Bering Sea.

Fleet size: 6.

Season of operation: January, February, July - December (Closure subject to scallop GHL or crab bycatch caps).

Catch of target species, 1997: 766,000 pounds shucked meat.
Number of fishing days, 1997: 483.

Observer Program Management

Brief overview of program structure: ADF&G, the five certified independent contractors and the fishing industry share responsibilities for the Shellfish Observer Program.

Service delivery type and function of each entity: ADF&G is responsible for establishing observer and contractor qualifications, certification and decertification, conflict of interest standards, and observer sampling procedures. ADF&G is also charged with review of observer training programs, observer testing, briefings, debriefings, analysis of observer data and reporting. The contractors hire, train and deploy observers, provide all logistic support (food, lodging, transportation, sampling equipment and insurance), salary/benefits, and secure contracts directly with the vessels. The responsibility of the fishing industry is to procure and pay for observer coverage through a certified contractor, provide the observer food and accommodations while on board, catch information and the opportunity to sample the catch according to department requirements.

Other participating agencies: North Pacific Fishery Management Council and National Marine Fisheries Service. The North Pacific Observer Training Center (OTC), University of Alaska Anchorage (OTA) has provided observer training for the five certified contractors since 1991 and has trained all shellfish observers since 1994. The Alaska Department of Public Safety, Fish & Wildlife Protection Division, investigates observer's documentation of violations.

Observer Coverage

Unit and definition of fishing effort for purpose of estimating coverage: All scallop fishing vessels (except the Cook Inlet registration area).

Fraction of fishing activity observed: 100% (for areas outside Cook Inlet).

ATLANTIC SEA SCALLOP DREDGE FISHERY

Darryl Christensen, Chief, Fisheries Sampling Branch, NOAA/NMFS, NEFSC, 166 Water St., Woods Hole, MA 02543

Observer Program Mandate and Authority

Mission of the program: The Northeast Fisheries Science Center (NEFSC), NMFS is required to collect scientific, management, compliance and economic data about fisheries through observers placed aboard U.S. domestic and foreign fishing vessels. These data, which cannot be obtained dockside or while aboard government research vessels, are necessary for the management of

fisheries occurring in the U.S. EEZ as well as the management of fisheries occurring on the high seas outside the EEZ. NMFS also has specific responsibilities concerning marine mammals and sea turtles within state waters.

Fishery management: Federal.

Authority to place observers: Magnuson-Stevens Fisheries Management and Conservation Act, Atlantic Sea Scallop Fishery Management Plan.

Voluntary or mandatory: Mandatory.

Funding source: Government funded.

Program duration: The domestic fisheries sampling program began in 1989 with collection of discard data. Foreign observer coverage was initiated in 1977.

Annual program costs: \$293,000 (U.S.).

Fishery Description (1996)

Target species: Atlantic sea scallop.

Other commercially landed species: Monkfish, winter flounder, summer flounder, yellowtail flounder, lobster, crabs.

Bycatch: Small crabs, spotted hake as well as many flounder species which may be discarded for regulatory reasons. There was no bycatch of marine mammals, sea turtles or seabirds in observed hauls.

Fleet size: A total of 355 vessels possess permits. Of those, 259 had permits in the full time category.

Season of operation: Year-round.

Avg. annual catch of target species: 7900 t scallops

Avg. number of fishing days per year: In 1996, vessels in the "full time" category of the Days at Sea (DAS) program had 182 fishing days. Those in the "part time" category had 82 fishing days. Those in the "occasional" category had 16 fishing days. A total of 33,950 days were fished, 31,939 by vessels possessing a full time category permit.

Observer Program Management

Brief overview of program structure: Program responsibilities are shared between NMFS and a contractor. The contractor provides observer candidates for training and testing by NMFS. An annual schedule for sea day coverage is provided by NMFS to the contractor. The contractor supervises, briefs, and debriefs the observers. The contractor is responsible for editing, entering and auditing data, using NMFS provided software.

Service delivery type and function of each entity: NMFS is responsible for complete funding of the program. Via direct contract with NMFS, the

observer contractor is responsible for observer recruiting, deployment, logistics, insurance and delivery of observer data to NMFS.

Other participating agencies: None.

Observer Coverage (1996)

Unit and definition of fishing effort for purpose of estimating coverage: A sea day is defined as a day when the vessel is not at the dock. This includes time spent steaming to, from and between fishing grounds, time doing repairs or waiting for weather at sea, time deploying or retrieving gear or time spent searching for fish. Thirty-eight trips aboard 31 different vessels totaled 485 days of coverage.

Fraction of fishing activity observed: Approximately 1.5%.

GIANT ATLANTIC BLUEFIN TUNA PURSE SEINE FISHERY

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Observer Program Mandate and Authority

Mission of the program: The Northeast Fisheries Science Center (NEFSC), NMFS is required to collect scientific, management, compliance and economic data about fisheries through observers placed aboard U.S. domestic and foreign fishing vessels. These data, which cannot be obtained dockside or while aboard government research vessels, are necessary for the management of fisheries occurring in the U.S. EEZ as well as the management of fisheries occurring on the high seas outside the EEZ. NMFS also has specific responsibilities concerning marine mammals and sea turtles within state waters.

Fishery management: Federal.

Authority to place observers: Magnuson-Stevens Fisheries Management and Conservation Act, Atlantic Tunas Convention Act.

Voluntary or mandatory: Mandatory.

Funding source: Government funded.

Program duration: The domestic fisheries sampling program began in 1989 with collection of discard data. Foreign observer coverage was initiated in 1977.

Annual program costs: \$84,000 (U.S.).

Fishery Description (1996)

Target species: Giant atlantic bluefin tuna.

Other commercially landed species: None.

Bycatch: Six pilot whales, 1 minke whale and 1 humpback whale were encircled and released alive in 1996. There was no other bycatch.

Fleet size: 5.

Season of operation: August 15 approximately through October (the season ends when each vessel has caught its individual quota.
 Avg. annual catch of target species: 225 t allocated as 75 t to each of the 5 permitted vessels.

Avg. number of fishing days per year: The vessels fished 138 days in 1996.

Observer Program Management

Brief overview of program structure: Program responsibilities are shared between NMFS and a contractor. The contractor provides observer candidates for training and testing by NMFS. An annual schedule for sea day coverage is provided by NMFS to the contractor. The contractor supervises, briefs, and debriefs the observers. The contractor is responsible for editing, entering and auditing data, using NMFS provided software.

Service delivery type and function of each entity: NMFS is responsible for complete funding of the program. Via direct contract with NMFS, the observer contractor is responsible for observer recruiting, deployment, logistics, insurance and delivery of observer data to NMFS.

Other participating agencies: None.

Observer Coverage (1996)

Unit and definition of fishing effort for purpose of estimating coverage: A sea day is defined as a day when the vessel is not at the dock. This includes time spent steaming to, from and between fishing grounds, time doing repairs or waiting for weather at sea, time deploying or retrieving gear or time spent searching for fish.

Fraction of fishing activity observed: Forty-three of the 45 trips that were made were observed for 95.6% coverage.

LARGE PELAGIC DRIFT GILLNET FISHERY

Darryl Christensen, Chief, Fisheries Sampling Branch, NOAA/NMFS, NEFSC, 166 Water St., Woods Hole, MA 02543

Observer Program Mandate and Authority

Mission of the program: The Northeast Fisheries Science Center (NEFSC), NMFS is required to collect scientific, management, compliance and economic data about fisheries through observers placed aboard U.S. domestic and foreign fishing vessels. These data, which cannot be obtained dockside or while aboard government research vessels, are necessary for the management of fisheries occurring in the U.S. EEZ as well as the management of fisheries occurring on the high seas outside

the EEZ. NMFS also has specific responsibilities concerning marine mammals and sea turtles within state waters.

Fishery management: Federal.

Authority to place observers: Magnuson-Stevens Fisheries Management and Conservation Act, Marine Mammal Protection Act, Endangered Species Act, Atlantic Tunas Convention Act.

Voluntary or mandatory: Mandatory.

Funding source: Government funded.

Program duration: The domestic fisheries sampling program began in 1989 with collection of discard data. Foreign observer coverage was initiated in 1977.
 Annual program costs: \$285,000 (U.S.).

Fishery Description (1996)

Target species: Swordfish.

Other commercially landed species: Bigeye tuna, yellowfin tuna, albacore, makos, thresher sharks.

Bycatch: Bluefin tuna, skipjack tuna, manta rays, ocean sunfish and other sharks. In 1996 a total of 100 marine mammals were caught, two of which were released alive. Species included (in order of abundance) common dolphins, beaked whales (several species), striped dolphins, pilot whales and spotted dolphins.

Fleet size: Approximately 15 are active although there at least twice as many permitted vessels that have participated and may still retain permits.

Season of operation: Semiannual quotas for swordfish allow two seasonal fisheries starting in June and November with each season potentially lasting about 10 - 14 days. The fishery is temporarily closed.

Avg. annual catch of target species: The swordfish quota for 1996 was 101,000 lbs. The quota is set annually.

Avg. number of fishing days per year: The vessels fished 165 days in 1996.

Observer Program Management

Brief overview of program structure: Program responsibilities are shared between NMFS and a contractor. The contractor provides observer candidates for training and testing by NMFS. An annual schedule for sea day coverage is provided by NMFS to the contractor. The contractor supervises, briefs, and debriefs the observers. The contractor is responsible for editing, entering and auditing data, using NMFS provided software.

Service delivery type and function of each entity: NMFS is responsible for complete funding of the program. Via direct contract with NMFS, the observer contractor is responsible for observer recruiting, deployment, logistics, insurance and delivery of observer data to NMFS.

Other participating agencies: None.

Observer Coverage (1996)

Unit and definition of fishing effort for purpose of estimating coverage: A sea day is defined as a day when the vessel is not at the dock. This includes time spent steaming to, from and between fishing grounds, time doing repairs or waiting for weather at sea, time deploying or retrieving gear or time spent searching for fish.

Fraction of fishing activity observed: Thirteen of the 16 trips that were made were observed for 81% coverage.

LOBSTER POT FISHERY

Darryl Christensen, Chief, Fisheries Sampling Branch, NOAA/NMFS, NEFSC, 166 Water St., Woods Hole, MA 02543

Observer Program Mandate and Authority

Mission of the program: The Northeast Fisheries Science Center (NEFSC), NMFS is required to collect scientific, management, compliance and economic data about fisheries through observers placed aboard U.S. domestic and foreign fishing vessels. These data, which cannot be obtained dockside or while aboard government research vessels, are necessary for the management of fisheries occurring in the U.S. EEZ as well as the management of fisheries occurring on the high seas outside the EEZ. NMFS also has specific responsibilities concerning marine mammals and sea turtles within state waters.

Fishery management: Federal.

Authority to place observers: Magnuson-Stevens Fisheries Management and Conservation Act (American Lobster Fishery Management Plan), Marine Mammal Protection Act, Endangered Species Act.

Voluntary or mandatory: Mandatory.

Funding source: Government funded.

Program duration: The domestic fisheries sampling program began in 1989 with collection of discard data. Foreign observer coverage was initiated in 1977.

Annual program costs: \$43,000 (U.S.).

Fishery Description (1996)

Target species: American lobster.

Other commercially landed species: Red hake, black seabass.

Bycatch: There was no bycatch of marine mammals, sea turtles or seabirds in observed hauls.

Fleet size: Not currently available from industry data.

Season of operation: Early spring through mid-December.

Avg. annual catch of target species: 32500 t lobster.

Avg. number of fishing days per year: Not currently available from industry data.

Observer Program Management

Brief overview of program structure: Program responsibilities are shared between NMFS and a contractor. The contractor provides observer candidates for training and testing by NMFS. An annual schedule for sea day coverage is provided by NMFS to the contractor. The contractor supervises, briefs, and debriefs the observers. The contractor is responsible for editing, entering and auditing data, using NMFS provided software.

Service delivery type and function of each entity: NMFS is responsible for complete funding of the program. Via direct contract with NMFS, the observer contractor is responsible for observer recruiting, deployment, logistics, insurance and delivery of observer data to NMFS.

Other participating agencies: None.

Observer Coverage (1996)

Unit and definition of fishing effort for purpose of estimating coverage: A sea day is defined as a day when the vessel is not at the dock. This includes time spent steaming to, from and between fishing grounds, time doing repairs or waiting for weather at sea, time deploying or retrieving gear or time spent searching for fish. Eight trips aboard 6 different vessels totaled 71 days of coverage.

Fraction of fishing activity observed: Unable to calculate from currently available data. Seventy-one days of coverage were accomplished which is less than 0.1% of fishing days.

NEW ENGLAND AND MID-ATLANTIC GILLNET FISHERIES

Darryl Christensen, Chief, Fisheries Sampling Branch, NOAA/NMFS, NEFSC, 166 Water St., Woods Hole, MA 02543

Observer Program Mandate and Authority

Mission of the program: The Northeast Fisheries Science Center (NEFSC), NMFS is required to collect scientific, management, compliance and economic data about fisheries through observers placed aboard U.S. domestic and foreign fishing vessels. These data, which cannot be obtained dockside or while aboard government research vessels, are necessary for the management of fisheries occurring in the U.S. EEZ as well as the management of fisheries occurring on the high seas outside the EEZ. NMFS also has specific responsibilities concerning marine mammals and sea turtles within state waters.

Fishery management: Federal.

Authority to place observers: Magnuson-Stevens Fisheries Management and Conservation Act, Marine Mammal Protection Act, Endangered Species Act.

Voluntary or mandatory: Mandatory.

Funding source: Government funded.

Program duration: The domestic fisheries sampling program began in 1989 with collection of discard data. Foreign observer coverage was initiated in 1977.

Annual program costs: \$1,134,000 (U.S.).

Fishery Description (1996)

Target species: Atlantic cod, pollock, various flounders, spiny and smooth dogfish, monkfish, Atlantic croaker, weakfish, bluefish, mackerel, menhaden, shad, spot, Spanish mackerel, striped bass.

Other commercially landed species: Winter skate, clearnose skate, sea robin, Atlantic herring, little skate.

Bycatch: A total of 134 marine mammals were caught in 1996, including (in order of occurrence) harbor porpoise, harbor seal, harp seal, gray seal, common dolphin, white-sided dolphin and bottlenose dolphin. Eighty-five of the animals were sampled for measurements, entire carcass collection or tissue sampling. A total of 37 seabirds were caught (in order of occurrence) greater shearwater, northern gannet, cormorant, common loon, thin-billed murre, great black-backed gulls and sooty shearwater. Other bycatch includes loggerhead turtles as well as many species of fish that are discarded primarily for lack of market or by regulations such as closed seasons.

Fleet size: Unable to determine accurately from current industry data but approximately 600 which fish state coastal waters or EEZ waters. Vessels may have multiple permits for different state and federal fisheries, many of which are not used. Some states license fishers rather than vessels so counts of vessels operating within state waters do not exist.

Season of operation: Varying locations, year-round.

Avg. annual catch of target species: 25,300 t monkfish, 18,200 t spiny dogfish.

Avg. number of fishing days per year: Unable to calculate from current industry data.

Observer Program Management

Brief overview of program structure: Program responsibilities are shared between NMFS and a contractor. The contractor provides observer candidates for training and testing by NMFS. An annual schedule for sea day coverage is provided by NMFS to the contractor. The contractor supervises, briefs, and debriefs the observers. The contractor is respon-

sible for editing, entering and auditing data, using NMFS provided software. Service delivery type and function of each entity: NMFS is responsible for complete funding of the program. Via direct contract with NMFS, the observer contractor is responsible for observer recruiting, deployment, logistics, insurance and delivery of observer data to NMFS.

Other participating agencies: None.

Observer Coverage (1996)

Unit and definition of fishing effort for purpose of estimating coverage: A sea day is defined as a day when the vessel is not at the dock. This includes time spent steaming to, from and between fishing grounds, time doing repairs or waiting for weather at sea, time deploying or retrieving gear or time spent searching for fish. A total of 790 days were covered in the New England gillnet fishery. Coverage in the Mid-Atlantic fishery was 368 days.

Fraction of fishing activity observed: Unable to calculate accurately from currently available industry data. A total of 1,158 days of coverage was accomplished. This is approximately 5 -7% of days fished.

NORTHWEST ATLANTIC TRAWL FISHERIES

Darryl Christensen, Chief, Fisheries Sampling Branch, NOAA/NMFS, NEFSC, 166 Water St., Woods Hole, MA 02543

Observer Program Mandate and Authority

Mission of the program: The Northeast Fisheries Science Center (NEFSC), NMFS is required to collect scientific, management, compliance and economic data about fisheries through observers placed aboard U.S. domestic and foreign fishing vessels. These data, which cannot be obtained dockside or while aboard government research vessels, are necessary for the management of fisheries occurring in the U.S. EEZ as well as the management of fisheries occurring on the high seas outside the EEZ. NMFS also has specific responsibilities concerning marine mammals and sea turtles within state waters.

Fishery management: Federal.

Authority to place observers: Magnuson-Stevens Fisheries Management and Conservation Act, Marine Mammal Protection Act. The following Fishery Management Plans (FMP) authorize mandatory observer coverage: the Northeast Multispecies FMP, which includes, in addition to routine coverage, a Flexible Area Action System for emergency observer coverage to investigate discard problems associated with large concentrations of juvenile, sub-legal or spawning Multispecies; Mackerel, Squid, and Butterfish FMP; Summer Flounder FMP; Scup FMP.

Voluntary or mandatory: Both.

Funding source: Government funded.

Program duration: The domestic fisheries sampling program began in 1989 with collection of discard data. Foreign observer coverage was initiated in 1977.

Annual program costs: \$393,000 (U.S.).

Fishery Description (1996)

Target species: Northern shrimp, New England multispecies groundfish, monkfish, summer flounder, *Illex* squid, *Loligo* squid, Atlantic mackerel, scup, spiny dogfish, weakfish, bluefish, Atlantic croaker, and horseshoe crab.

Other commercially landed species: Butterfish, monkfish, sharks, weakfish, bluefish, flounders, croaker, hakes, black seabass, dogfish, skates, sturgeon, swordfish, tautog, tilefish, tunas and lobster.

Bycatch: Common dolphins, pilot whales, loggerhead turtles, various seabirds, finfish and invertebrates including non-target species or target species that are discarded for lack of market or by regulation such as closed seasons or sub legal size.

Fleet size: Accurate data are not available at this time. Vessels hold multiple permits but do not necessarily utilize them.

Season of operation: Year-round.

Avg. annual catch of target species: 9,500 t northern shrimp, 3,000 t pollock, 14,300 t cod, 2,400 t yellowtail flounder, 600 t haddock, 17,000 t *Illex* squid, 12,500 t *Loligo* squid, 1,500 t weakfish, 2,700 t bluefish, 15,800 t Atlantic mackerel, 4,000 t summer flounder.

Avg. number of fishing days per year: Under the Northeast Multispecies FMP, vessels fishing under the Fleet Days at Sea (DAS) permit, Individual DAS permit, and the Large Mesh DAS permit had a combined allocation of 225,309 days. Of these, a total of 49,871 were actually used. However, many of the vessels fish in other fisheries where effort is not regulated.

Observer Program Management

Brief overview of program structure: Program responsibilities are shared between NMFS and a contractor. The contractor provides observer candidates for training and testing by NMFS. An annual schedule for sea day coverage is provided by NMFS to the contractor. The contractor supervises, briefs, and debriefs the observers. The contractor is responsible for editing, entering and auditing data, using NMFS provided software.

Service delivery type and function of each entity: NMFS is responsible for funding of the program. Via contract with NMFS, the observer con-

tractor is responsible for observer recruiting, deployment, logistics, insurance and delivery of observer data to NMFS.

Other participating agencies: None.

Observer Coverage (1996)

Unit and definition of fishing effort for purpose of estimating coverage: A sea day is defined as a day when the vessel is not at the dock. This includes time spent steaming to, from and between fishing grounds, time doing repairs or waiting for weather at sea, time deploying or retrieving gear or time spent searching for fish. A total of 650 days of coverage was accomplished.

Fraction of fishing activity observed: We are not able to accurately calculate, due to lack of industry data. However, the total fraction of all trawl fisheries covered is less than 1%.

NORTH PUGET SOUND NON-TREATY SOCKEYE AND CHUM GILLNET FISHERIES

Observer Program Coordinator: Pamela Erstad, Washington Dept. of Fish and Wildlife, 16018 Mill Creek Blvd., Mill Creek, WA, 98102

Observer Program Mandate and Authority

Mission of the program: Investigate level of marbled murrelet and marine mammal entanglements with the non-treaty sockeye gillnet fishery in north Puget Sound

Fishery management: state.

Authority to place observers: Marine Mammal Protection Act; Endangered Species Act.

Voluntary or mandatory: Voluntary.

Funding source: NMFS.

Program duration: July 1994 through September 1994.

Annual program costs: \$250,00 (U.S.).

Fishery Description

Target species: Sockeye salmon harvest in north Puget Sound state management Areas 7 and 7A, and chum salmon harvest in Puget Sound.

Other commercially landed species: None.

Bycatch: Chinook and coho salmon, marine mammals, seabirds.

Fleet size: In 1994, approximately 1,100 licensed non-treaty gillnet boats in Washington state, although considerably less may participate in specific fisheries.

Season of operation: Sockeye: Late July through August or early September, depending on run size; Chum: Approximately mid-October through mid-to late November, depending on run size.

Avg. annual catch of target species: Total estimated sockeye catch in 1994: 621,032, information on the chum catch was unavailable at the time of this writing.

Avg. number of fishing days per year: 1994 = 13 days sockeye fishing; 6 days of chum fishing.

Observer Program Management

Brief overview of program structure: Washington Department of Fish and Wildlife (WDF&W) responsible for hiring and deploying observers; NMFS oversee project and conducted safety and species ID training.

Service delivery type and function of each entity: NMFS provided funding, state implemented project.

Other participating agencies: NMFS, WDF&W, Northwest Indian Fisheries Commission, Lummi Tribes, U.S. Fish and Wildlife Service, Puget Sound Vessel Owners Association.

Observer Coverage

Unit and definition of fishing effort for purpose of estimating coverage: unit = set or number of sockeye caught/set; total effort extrapolated by dividing total number of sockeye commercially harvested by the average of sockeye caught/set (derived from observer program).

Fraction of fishing activity observed: approximately 7% for sockeye, information unavailable for chum.

WEST COAST LIMITED ENTRY GROUND FISH TRAWL FISHERY

Project Leader: Mark Saelens, Oregon Department of Fish & Wildlife, 2040 SE Marine Science Drive, Newport, Oregon, 97365

Observer Program Mandate and Authority

Mission of the program: To determine present rates of discard by target strategy, area, and time of year, and to determine the reasons for the occurrence of discard.

Fishery management: Federal management; Pacific Fisheries Management Council, NMFS.

Authority to place observers: Magnuson-Stevens Fishery Conservation and Management Act, authorization of vessel owners.

Voluntary or mandatory: Voluntary.

Funding sources: Oregon Trawl Commission, Oregon Department of Fish and Wildlife (ODF&W), NMFS, Pacific States Marine Fisheries Commission (PSMFC), West Coast Seafood Processors Association.

Program duration: Mid-1995 through December 1998.

Annual program costs: approximate figures:

Oregon Trawl Commission: \$359,000.

Oregon Department of Fish & Wildlife: \$106,000.

National Marine Fisheries Service: \$319,000.

West Coast Seafood Processors Association: \$10,000.

Fishery Description

Target species: Major groundfish species harvested in U.S. federal waters of the U.S. West Coast off the coasts of Washington, Oregon, and California.

Other commercially landed species: Occasional sharks, invertebrates, sturgeon.

Bycatch: Halibut, salmon, Tanner crab, and seabirds are designated as prohibited species or protected species bycatch, and bycatch of groundfish in excess of trip limits also occurs.

Fleet size: 245 vessels landed in 1997.

Season of operation: Year-round.

Avg. annual catch of target species: Approximately 98,000 t landed in 1997 in Oregon.

Avg. number of fishing days per year: Approximately 125 days.

Observer Program Management

Brief overview of program structure: Under a cooperative agreement between ODF&W and the Oregon Trawl Commission, ODF&W performs all supervisory and field operations, database structuring and maintenance, vessel recruitment, observer hiring and training, and equipment purchasing.

Service delivery type and function of each entity: Observers are provided to vessels by ODFW. Project staff is employed by Pacific States Marine Fisheries Commission (PSMFC).

Other participating agencies: ODF&W, Oregon Trawl Commission, NMFS, PSMFC, West Coast Seafood Processors Association, Northwest Food Strategies, participating vessels and crews.

Observer Coverage

Unit and definition of fishing effort for purpose of estimating coverage: Coverage will be estimated using number of tows observed versus number of tows made in the fishery over a period of time as the primary method; coverage may also be expressed by area or target strategy.

Fraction of fishing activity observed: Preliminary coverage calculations show 5-10% depending on area and time. Coverage may also be expressed for the number of tows where discard was recorded by vessels keeping voluntary logbooks records of discards.

base, and provides in-season monitoring of whiting fishery and prepares end of season report.

Service delivery type and function of each entity: plant observers are employees of state agencies or industry; industry contributions toward program fixed costs are routed through Pacific States Marine Fisheries Commission.

Other participating agencies: Washington Department of Fish and Wildlife, CADFG, NMFS.

Observer Coverage

Unit and definition of fishing effort for purpose of estimating coverage: landing at shoreside processing plant.

Fraction of fishing activity observed: 14% (1997).

SOUTHEASTERN SHRIMP OTTER TRAWL FISHERY

Elizabeth Scott-Denton, Bycatch Observer Program Manager, 4700 Avenue U, Galveston, Texas 77551; 409-766-3571, fax 409-766-3508; elizabeth.scott-denton@noaa.gov

Observer Program Mandate and Authority

Mission of the Program: to characterize shrimp trawl bycatch and evaluate various gear types for the reduction of bycatch.

Fishery management: Federal.

Authority to place observers: Magnuson-Stevens Act, ESA.

Vessel selection: Voluntary.

Funding source: NMFS, Gulf and South Atlantic Fishery Development Foundation, Inc.

Federal program duration: 1991-present.

Annual program costs (broken down by source): \$500,000 (U.S.).

Fishery Description (1996)

Target species: Penaeid shrimp (brown, white and pink).

Other commercially landed species: None.

Bycatch: One Atlantic bottlenose dolphin and 72 sea turtles since 1992. Finfish bycatch includes red snapper, groundfish, with Atlantic croaker and longspine porgy being the dominant species both in number and by weight for the Gulf of Mexico (May 1992 - June 1997).

Fleet size: about 7,000 U.S. Coast Guard documented vessels and an unknown number of state registered boats.

Seasons and duration of fishery openers: year-round; main fishery is from May through December.

Average annual catch of target species: 200 million pounds.

SHORESIDE LANDINGS OF PACIFIC WHITING

Observer Program Coordinator: Hal Weeks, Oregon Department of Fish & Wildlife, 2040 SE Marine Science Drive, Newport, Oregon, 97365

Observer Program Mandate and Authority

Mission of the program: To document salmon and finfish bycatch in the shoreside whiting fishery; collect biological samples for use in assessments of Pacific whiting and groundfish species.

Fishery management: Federal.

Authority to place observers: Relevant statute(s) - n/a; authority to land unsorted whiting with indemnity from prohibited species and groundfish coverage violations through exempted fishing permits issued by National Marine Fisheries Service.

Voluntary or mandatory: Voluntary.

Funding source(s): Industry, Oregon Department of Fish and Wildlife (ODF&W), Washington Department of Fish and Wildlife, California Department of Fish and Game (CADFG), NMFS.

Program duration: Indefinite.

Annual program costs (\$U.S.) (broken down by source):

Industry - c. \$60,000/yr.

ODFW - c. \$20,000/yr.

WDFW - c. \$10,000/yr.

CADFG - c. \$10,000/yr.

NMFS - c. \$10,000/yr.

Fishery Description

Target species: Pacific whiting (*Merluccius productus*)

Other commercially landed species: Yellowtail and widow rockfish.

Bycatch: Groundfish species, Pacific salmon (almost exclusively chinook), occasional Pacific halibut or Dungeness crab.

Fleet size: 40 vessels.

Season of operation: Spring - summer.

Avg. annual catch of target species: 61,331 t (1991 - 1997 mean).

Avg. number of fishing days per year: 80 - 120.

Observer Program Management

Brief overview of program structure: Program is coordinated by ODF&W, Oregon processors contribute toward fixed costs of program (4 month data technician, observer supplies) and hire observers. Plants in Washington and California are observed by agency staff. Whiting landing and bycatch data are provided to ODF&W which enters and curates a data-

Average number of fishing days per year: 250,000 (24-hour days fished).

Observer Program Management

Two coordinated observer programs: Contracted Services: Individuals contracted and supervised by NMFS, or by the Gulf and South Atlantic Fishery Development Foundation, Inc. (Foundation). All observers are trained using standard protocol. Vessels are located through Sea Grant agents, NMFS port agents, Foundation contacts and fishery associations. Each observer group (i.e., NMFS or Foundation) is responsible to get observer to port of departure.

Observer Coverage

Unit and Definition of Effort: hours of trawling (nets in the water fishing). Estimate of Total Effort: about 6 million hours. Estimate is made by average catch per unit of effort for an area (based on dockside trip interviews by NMFS port agents) and total pounds for an area (based on data collection at seafood dealers by NMFS port agents). Estimate of observer coverage: <1%.

SEFSC PELAGIC LONGLINE OBSERVER PROGRAM

Dennis Lee and Cheryl Brown, Task Leader, SEFSC Miami Laboratory, 75 Virginia Beach Drive, Miami, FL 33149

Observer Program Mandate and Authority

Mission of the program: Collect data on effort, directed catch and bycatch quantity, morphometrics, biological characteristics, and interaction with marine mammals, turtles, and birds as they relate to federal fisheries regulations.

Fishery management: Federal.

Authority to place observers: Swordfish Fisheries Management Plan (50 CFR part 630) under the authority of the Magnuson-Stevens Fishery Conservation and Management Act, as well as the Marine Mammal Protection Act and Endangered Species Act.

Voluntary or mandatory: Mandatory.

Funding sources: NMFS operational costs - government funded.

Program duration: May 1992 to present. Five percent coverage by set effort is the sampling target.

Annual program costs: Agency cost has varied over the years. Funding for 1992-94 was between \$1.2 and \$1.4 million (U.S.); funding for 1995 was about \$600,000, whereas funding for 1996 to the present ranged from \$315,000-\$600,000.

Fishery Description (1992-present)

Target species: Swordfish directed fishery harvested inside and outside the U.S. EEZ primarily in the North Atlantic Ocean (above 5°N latitude) with some operations extending to the Equator.

Other commercially landed species: Yellowfin tuna, bigeye tuna, albacore tuna, dolphin (mahi mahi), shortfin mako, porbeagle, and other shark species (fin market).

Bycatch: Wide variety of species including billfish (prohibited by FMP), sharks (prohibited by periodic FMP closures), bluefin tuna (FMP quota restrictions), escolar, and marine mammals, turtles, and seabirds as protected species bycatch. Other commercially non-valuable species including oilfish, lancetfish, occasional rays and rare species (e.g., cubiceps, ringed dogfish).

Fleet size: Over 1,000 swordfish permit holders. Longline fleet consists of 250-300 vessels with 150-200 vessels active year-round.

Season of operation: Year-round (closures subject to swordfish quota and bycatch quota limits).

Total annual catch of target species: Annual U.S. catch of swordfish reported to IC-CAT in round weight (metric tons) from 1990 to 1996 was 5,519, 4,525, 4,236, 4,191, 4,074, 4,551, and 4,320, respectively.

Total number of fishing days per year: Unknown; 1992-97 SEFSC observers spent 4,115 days at-sea (excludes days at-sea spent by NEFSC for 1992-95).

Observer Program Management

Brief overview of program structure: The SEFSC Miami Laboratory is responsible for the administration of the Pelagic Longline Observer Program. The coordinators hire individual observer personnel under contractual agreements (Purchases of Services) and provide the observer support services (training, observer gear, documents, debriefing, data entry). Program coordinators are responsible for maintaining data storage and retrieval, quality control, and administrative support.

Service delivery type and function of each entry: NMFS is responsible for funding and overall administration of the observer program including observer training, debriefing, data management, and data analyses. Program coordinators are responsible for arranging placement of NMFS certified contractors aboard vessels, including logistics and travel support of observers to vessels selected for coverage. All administrative support is provided by the coordinators and agency.

Observer coverage:

Unit and definition of fishing effort for purpose of estimating coverage: Coverage is based on number of sets reported by the U.S. pelagic longline fleet in 11 geographical regions of the North Atlantic Ocean (north of 5°N latitude).

Fraction of fishing activity observed: Sampling design is a random draw of prior year reported longline fishing effort, stratified by fishing area and calendar quarter. Sampling 5% of the longline effort directed at Atlantic tunas and tuna-like species is required under a 1996 International Council for the Conservation of Atlantic Tuna (ICCAT) Recommendation that became binding on ICCAT cooperative parties in 1997. Realized sampling fraction has varied from about 2.5% to above 5%, depending on available resources. Sampling in 1997 and 1998 is expected to be less than 5%, given available resources.

CALIFORNIA/OREGON DRIFT GILLNET FISHERY

Timothy D. Price, Operations Coordinator, NMFS, Southwest Region, 501 West Ocean Boulevard, Suite 4200, Long Beach, CA 90802-4213

Observer Program Mandate and Authority

Mission of the program: To document the incidental take of marine mammals, sea turtles, seabirds, target and non-target fish species. To collect selected biological specimens.

Fishery management: Federal.

Authority to place observers: Marine Mammal Protection Act (MMPA), Endangered Species Act.

Voluntary or mandatory: Mandatory.

Funding source(s): Government (NMFS) funded.

Program duration: July 1990 to present.

Annual program costs: Agency costs \$650,000 (U.S.).

Fishery Description (1996)

Target species: Swordfish and thresher shark (common, bigeye).

Other commercially landed species: Mako shark, opah, louvar, and tunas (albacore, yellowfin, bluefin).

Bycatch: Blue shark, pelagic stingray, striped marlin, and molas.

Incidental takes: Cetaceans: Sperm whale, short-finned pilot whale, Minke whale, long-beaked common dolphin, short-beaked common dolphin, Risso's dolphin, Dall's porpoise, Pacific white-sided dolphin, northern right whale dolphin, Cuvier's and Baird's beaked whales, and *Mesoplodon* beaked whales. Pinnipeds: California sea lion and northern elephant seals. Sea turtles: Leatherback and loggerheads.

Fleet size: Marine Mammal Authorization Certificates are held by 130 vessels, approximately 110 are active.

Season of operation: The fishery is closed within 200 miles of the coast of California and Oregon from February 1 to April 30. From May 1 to August

14 the closure changes to 75 miles offshore. Most fishing occurs between August 15 and January 31, when closure restrictions are lifted. The majority of fishing effort takes place from October through December.

Avg. annual catch target species: Swordfish, 1.5 million pounds. Thresher shark (common, bigeye) 395,400 pounds. Mako shark, 178,300 pounds.

Avg. number of fishing days per year: Estimated 3,400 sets (equivalent to days fished) in 1996.

Observer Program Management

Brief overview of program structure: The Southwest Region is responsible for monitoring the CA/OR drift gillnet fishery. The program was contracted in 1996 as part of an effort to downsize the Federal workforce as required by the National Performance Review. Observer training is conducted in conjunction with Southwest Fisheries Science Center - La Jolla Laboratory, Los Angeles Natural History Museum, NMFS enforcement, U.S. Coast Guard, and the fishing industry. To date, 106 biological technicians have been hired and 793 trips completed. In 1997, there were 25 observers observing the drift gillnet fleet. Trips typically last 6 to 20 days. The Southwest Fisheries Science Center receives observer data to calculate estimates of incidental take rates of marine mammals in preparation of Annual Stock Assessments Reports.

Service delivery type and function of each entity: NMFS is responsible for funding and overall administration of the program including observer training (two, 2-week sessions, plus one, 1-week briefing were conducted for a total of 25 observers in 1997), initial debriefing, and data management. Vessel owners and operators are responsible for contacting the designated contractor to make arrangements for placement of NMFS trained observers aboard their vessels. The Contractor is responsible for observer recruitment, monitoring vessel activity, observer deployment, logistics, insurance/benefits, and delivery of observer data to NMFS.

Other participating agencies: Through a cooperative agreement with the California Department of Fish and Game, total annual fishing effort is calculated for use in estimating total marine mammal mortality.

Observer Coverage

Unit and definition of fishing effort for purpose of estimating coverage: Drift gillnet vessels in this fleet make a single net-pull (e.g., set) each day, thus each day that a vessel makes a set is a sampling unit.

Fraction of fishing activity observed: During 1996, there were 421 observed sets, representing 12.4% of the total fishing effort.

HAWAII PELAGIC LONGLINE FISHERY

Timothy D. Price, Operations Coordinator, NMFS, Southwest Region, 501 West Ocean Boulevard, Suite 4200, Long Beach, CA 90802-4213

Observer Program Mandate and Authority

Mission of the program: To observe and document all species caught, including sea turtles, seabirds, marine mammals, swordfish, tunas, sharks, and other non-target fishes. To collect selected biological specimens. Fishery management: Federal.

Authority to place observers: Pelagic fishery management plan established under the Magnuson-Stevens Fishery Conservation and Management Act (required by the biological opinion and incidental take statement, Section 7 consultation of the Endangered Species Act). Voluntary or mandatory: Mandatory.

Funding source(s): Government (NMFS) funded.

Program duration: February 1994 to present.

Annual program costs: Agency costs \$370,000 (U.S.).

Fishery Description (1996)

Target species: Swordfish and tunas (bigeye, yellowfin, albacore, skipjack)

Other commercially landed species: Marlin (blue, striped, shortbill spearfish), mako shark, dolphinfish, wahoo, opah, barracuda, and pomfrets.

Bycatch: Blue shark, oceanic white tip shark, thresher shark (bigeye, common), pelagic stingray, lancet fish, snake mackerel, escolar, and oilfish.

Incidental takes: Sea turtles: Loggerhead, leatherback, olive ridley, and greens. Seabirds: Black-footed and Laysan albatross. Cetaceans: Risso's dolphin, short-finned pilot whale, and false killer whales.

Fleet size: There were 164 Federal limited-entry longline permits in 1996, with only 103 active.

Season of operation: Year-round.

Avg. annual catch target species: Swordfish, 6.2 million pounds. Bigeye tuna, 4.2 million pounds. Yellowfin tuna, 1.6 million pounds. Albacore, 1.9 million pounds.

Avg. number of fishing days per year: Estimated 11,400 sets (equivalent to days fished) in 1996.

Observer Program Management

Brief overview of program structure: The Southwest Region is responsible for monitoring the Hawaii pelagic longline fishery. Upon medical clearance, observers are hired as direct NMFS employees. NMFS established a Port Field Station in Honolulu, Hawaii for monitoring vessel

activity and deploying observers. Observer training is conducted in conjunction with Southwest Fisheries Science Center - Honolulu Laboratory, Bishop Museum, NMFS enforcement, U.S. Coast Guard, U.S. Fish and Wildlife Service, and the fishing industry. To date, 18 biological technicians have been hired and 196 trips completed. Currently there are six observers covering the longline fleet. Trips typically last 14 to 42 days. The NMFS Honolulu Laboratory analyzes the data in conjunction with logbook data (Pacific Islands Area Office) to estimate total sea turtle takes and mortalities. Data are used to prepare annual reviews of biological opinions, as required by the current biological opinion, quarterly reports to the Western Pacific Fishery Management Council, and estimates of bird mortality to the U.S. Fish and Wildlife Service.

Service delivery type and function of each entity: NMFS is responsible for funding and administration of the program including observer recruitment, training (one, 3-week session was conducted for 6 observers in 1996), placement aboard vessels, debriefing, and data management. Vessel owners and operators are responsible for contacting NMFS to make arrangements for placement of observers aboard their vessels.

Other participating agencies: Western Pacific Fishery Management Council, U.S. Fish and Wildlife Service

Observer Coverage

Unit and definition of fishing effort for purpose of estimating coverage: Unit of effort is defined as the number of hooks deployed (i.e., 1,000 hooks = 1 unit of effort).

Fraction of fishing activity observed: During 1997, there were 748,781 observed hooks retrieved, representing 5.3% of the total fishing effort.

NORTHWESTERN HAWAIIAN ISLANDS LOBSTER FISHERY

Timothy D. Price, Operations Coordinator, NMFS, Southwest Region, 501 West Ocean Boulevard, Suite 4200, Long Beach, CA 90802-4213

Observer Program Mandate and Authority

Mission of the program: Collect data on catch and bycatch quantity and composition, characterize the fishery, and evaluate high grading. Fishery management: Federal.

Authority to place observers: Magnuson-Stevens Fishery Conservation and Management Act.

Volunteer or mandatory: Voluntary.

Funding sources: Government (NMFS) funded.

Program duration: 1997 fishing season (July)

Annual program costs: Agency costs \$65,000 (U.S.).

Fishery Description (1997)

Target species: Spiny (*Panulirus marginatus*) and common slipper (*Scyllarides squammosus*) lobsters harvested in the Northwestern Hawaiian Islands.

Other commercially landed species: Ridgeback (*Scyllarides haanii*) and chinese (*Parribacac antarcticus*) slipper lobsters, kona crab, octopus.

Bycatch: filefish, reef shark (grey, whitetip), butterflyfish, goatfish, wrasse, surgeonfish, moray eels.

Fleet size: There are 15 limited entry permits. Nine vessels were active in 1997.

Season of operation: Summer (closure subject to harvest quota limit).

Total annual catch of target species: Total harvest quota set annually. Harvest limit in 1997 was 322,000 animals.

Total number of fishing days per year: Variable. Quota dependent fishery. In 1997, there were 198 fishing days.

Observer Program Management

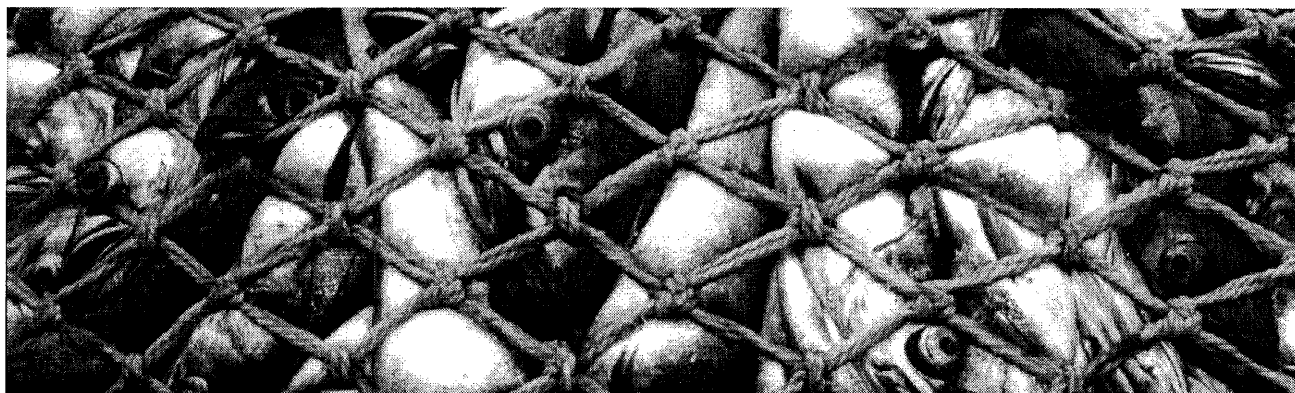
Brief overview of program structure: Management, administration, and observers provided by Southwest Region, Observer Management. Lobster training conducted by Southwest Fisheries Science Center, Honolulu Laboratory staff. Pacific Islands Area Office staff met with the Western Pacific Regional Fishery Management Council to gain cooperation from fishing vessels to carry observers. NMFS reimbursed vessels for observer subsistence costs.

Service delivery type and function of each entity: NMFS is responsible for funding and overall administration of the program including observer training, debriefing and data management. The Southwest Fisheries Science Center, Honolulu Laboratory, receives observer data to calculate estimates of harvest, discard rates, and sorting and handling techniques.

Observer Coverage

Unit and definition of fishing effort for purpose of estimating coverage: The number of traps set and hauled.

Fraction of fishing activity observed: 66% of the fishing effort was observed during the 1997 fishing season.



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GULF REGION - COD

*Observer Program Chief: Ron Manderson
Scientific Coordinator: Alan Sinclair*

Observer Program Mandate and Authority

Mission of the program: To monitor compliance with closed areas, quota, landing requirements, gear restrictions, discarding and reporting requirements. To collect data for stock assessments.

Fishery management: Federal.

Authority to place observers: Section 46 Fishery (General) Regulations.

Voluntary or mandatory: Mandatory.

Funding source(s): Federal Govt./Fishing industry.

Annual program costs: \$ 1,500,000 (Cdn.).

Fishery Description

Target species: Cod.

Other commercially landed species: American plaice.

Fleet size: 300.

Season of operation: April - December.

Annual catch of target species: 600 t (under moratorium).

Average number of fishing days/year: 240.

Observer Program Management

Brief overview of program structure: Management of program is federal. The regional manager is responsible for program delivery. A contract for services is tendered for all observer services in the region. The contractor works in close consultation with the program manager to ensure timely and cost-effective deployments. The contractor is responsible for ensuring sufficient observers are available for deployment. The contractor briefs observers based on input from the program manager and scientific coordinator. Data entry is completed by the contractor.

Observer Coverage

Fraction of fishing activity observed: Cod - 20 %; 50 days.

GULF REGION - GROUND FISH MOBILE GEAR

*Observer Program Chief: Ron Manderson
Scientific Coordinator: Alan Sinclair*

Observer Program Mandate and Authority

Mission of the program: To monitor compliance with closed areas, quota, landing requirements, gear restrictions, discarding and reporting requirements. To collect data for stock assessments.

Fishery management: Federal.

Authority to place observers: Section 46 Fishery (General) Regulations.

Voluntary or mandatory: Mandatory.

Funding source(s): Federal Govt./Fishing industry.

Annual program costs: \$ 200,000 (Cdn.).

Fishery Description

Target species: American plaice

Other commercially landed species: Cod, flounders.

Fleet size: 400.

Season of operation: April - December.

Annual catch of target species: 8,000 t.

Observer Program Management

Brief overview of program structure: Management of program is federal. The regional manager is responsible for program delivery. A contract for services is tendered for all observer services in the Region. The contractor works in close consultation with the program manager to ensure timely and cost-effective deployments. The contractor is responsible for ensuring sufficient observers are available for deployment. The contractor briefs observers based on input from the program manager and scientific coordinator. Data entry is completed by the contractor.

Observer Coverage

Fraction of fishing activity observed: American plaice - 20%; 700 days.

GULF REGION - HERRING

*Observer Program Chief: Ron Manderson
Scientific Coordinator: Alan Sinclair*

Observer Program Mandate and Authority

Mission of the program: To monitor compliance with closed areas, quota, landing requirements, gear restrictions, discarding and reporting requirements. To collect data for stock assessments.

Fishery management: Federal.

Authority to place observers: Section 46 Fishery (General) Regulations.

Voluntary or mandatory: Mandatory.

Funding source(s): Federal Govt./Fishing industry.

Annual program costs: \$ 50,000 (Cdn.).

Fishery Description

Target species: Herring.

Other commercially landed species: Mackerel.

Fleet size: 6 seiners.

Season of operation: May - December.

Annual catch of target species: 12,000 - 15,000 t.

Average number of fishing days per year: 1,500.

Observer Program Management

Brief overview of program structure: Management of program is federal. The regional manager is responsible for program delivery. A contract for services is tendered for all observer services in the region. The contractor works in close consultation with the program manager to ensure timely and cost-effective deployments. The contractor is responsible for ensuring sufficient observers are available for deployment. The contractor briefs observers based on input from the program manager and scientific coordinator. Data entry is completed by the contractor.

Observer Coverage

Fraction of fishing activity observed: Herring - 5-10 %; 150 days.

GULF REGION - NORTHERN SHRIMP

*Observer Program Chief: Ron Manderson
Scientific Coordinator: Alan Sinclair*

Observer Program Mandate and Authority

Mission of the program: To monitor compliance with closed areas, quota, landing requirements, gear restrictions, discarding and reporting requirements. To collect data for stock assessments.

Fishery management: Federal.

Authority to place observers: Section 46 Fishery (General) Regulations.

Voluntary or mandatory: Mandatory.

Funding source(s): Federal Govt./Fishing industry.

Annual program costs: \$62,000 (Cdn.).

Fishery Description

Target species: Northern shrimp.

Other commercially landed species: Turbot.

Fleet size: 1 in this Region; 16 total license holders.

Season of operation: January - December.

Annual catch of target species: 3000 t.

Average number of fishing days per year: 260.

Observer Program Management

Brief overview of program structure: Management of program is federal. The regional manager is responsible for program delivery. A contract for services is tendered for all observer services in the region. The contractor works in close consultation with the program manager to ensure timely and cost-effective deployments. The contractor is responsible for ensuring sufficient observers are available for deployment. The contractor briefs observers based on input from the program manager and scientific coordinator. Data entry is completed by the contractor.

Observer Coverage

Fraction of fishing activity observed: Northern shrimp - 100%; 260 days.

GULF REGION - SNOW CRAB AREA 12

*Observer Program Chief: Ron Manderson
Scientific Coordinator: Alan Sinclair*

Observer Program Mandate and Authority

Mission of the program: To monitor compliance with closed areas, quota, landing requirements, gear restrictions, discarding and reporting requirements. To collect data for stock assessments.

Fishery management: Federal.

Authority to place observers: Section 46 Fishery (General) Regulations.

Voluntary or mandatory: Mandatory.

Funding source(s): Federal Govt./Fishing industry.

Annual program costs: \$200,000 (Cdn.).

Fishery Description

Target species: Snow crab.

Other commercially landed species:

Fleet size: 230.

Season of operation: April -July.

Annual catch of target species: 15,500 t.

Average number of fishing days per year: 15-30/vessel.

Observer Program Management

Brief overview of program structure: Management of program is federal. The regional manager is responsible for program delivery. A contract for services is tendered for all observer services in the region. The contractor works in close consultation with the program manager to ensure timely and cost-effective deployments. The contractor is responsible for ensuring sufficient observers are available for deployment. The contractor briefs observers based on input from the program manager and scientific coordinator. Data entry is completed by the contractor.

Observer Coverage

Fraction of fishing activity observed: Snow crab - 20%; 650 days.

NEWFOUNDLAND REGION - GROUND FISH AND SHRIMP FISHERIES: NAFO REGULATORY AREA

*Observer Program Chief: Ben Rogers
Scientific Coordinator: Dave Kulka*

Observer Program Mandate and Authority

Mission of the program: To monitor compliance with the NAFO Conservation and Enforcement Measures.

Fishery management: Northwest Atlantic Fisheries Organization (NAFO).

Authority to place observers: NAFO Conservation and Enforcement Measures.

Voluntary or mandatory: Mandatory.

Funding source(s): Federal.

Fishery Description

Target species: Groundfish and Shrimp (1996).

Season of operation: January - December.

Avg. annual catch of target species: Groundfish 46,000 t; shrimp 650,000 t.

Avg. number of fishing days per year: 20,000 days.

Observer Program Management

Brief overview of program structure: Management of program is federal. The regional manager is responsible for program delivery. A contract for services is set up equally between the three Atlantic Observer Contractors annually. The contractors are briefed by the Program Manager. The reports generated by observers on foreign vessels are sent directly to the appropriate nation. The information is then sent to the NAFO Secretariat for dissemination to all contracting parties. The contractor is responsible for ensuring sufficient observers are available for deployment. Data collected by observers are forwarded to the flag state of the vessel.

Observer Coverage

Fraction of fishing activity observed: Groundfish and Shrimp - 100 %; 3,800 days in 1996 and 2,400 days in 1997

It is a requirement that all vessels fishing in the NAFO Regulatory Area have 100% observer coverage. Canada provided coverage on Canadian vessels and countries without an Observer Program (Latvia, Russia, Lithuania, and Estonia). Canada has assisted these countries in setting up an observer program and they have recently begun deploying their national Observers. Other countries fishing in the NRA are EU (primarily Spain and Portugal), Faroe Islands, Greenland, Iceland, Norway, etc.

NEWFOUNDLAND REGION - LARGE PELAGICS

Observer Program Chief: Ben Rogers
Scientific Coordinator: Dave Kulka

Observer Program Mandate and Authority

Mission of the program: To monitor compliance with closed areas, quotas, gear restrictions, bycatch, finning sharks, reporting requirements, unauthorized trans-shipping at sea.

Fishery management: Federal.

Authority to place observers: Section 46 Fishery (General) Regulations.

Voluntary or mandatory: Mandatory.

Funding source(s): Industry.

Fishery Description

Target species: Large pelagics.

Season of operation: January - December.

Avg. annual catch of target species: 2,600 t (combined NFLD and Maritimes).

Avg. number of fishing days per year: 600 days (NFLD based observers).

Observer Program Management

Brief overview of program structure: Management of program is federal. The regional manager is responsible for program delivery. A contract for services is tendered for all observer services in the region, for one (1) year with two (2), 2-year option periods. The contractor works in close consultation with the program manager to ensure timely and cost-effective deployments. The contractor is responsible for ensuring sufficient observers are available for deployment. The contractor briefs observers based on input from the program manager and scientific coordinator. Data entry is completed by the contractor.

Observer Coverage

Fraction of fishing activity observed:

Shark	10%	10 days.
Swordfish	20%	80 days.
Tuna	20%	20 days.

The coverage levels are directed nationally. Historically funded federally, it is now an industry funding requirement.

NEWFOUNDLAND REGION - GROUND FISH (EXCEPT COD)

Observer Program Chief: Ben Rogers
Scientific Coordinator: Dave Kulka

Observer Program Mandate and Authority

Mission of the program: To monitor compliance with closed areas, bycatch levels, landing requirements, gear restrictions, discarding and reporting requirements. To collect data for stock assessments and for input into opening and closing fisheries.

Fishery management: Federal.

Authority to place observers: Section 46 Fishery (General) Regulations.

Voluntary or mandatory: Mandatory.

Funding source(s): Industry.

Fishery Description

Target species: Groundfish (except cod).

Season of operation: January 01 - December 31.

Avg. annual catch of target species: 30,000 t (excluding cod).

Avg. no. of fishing days per year: mobile gear - 3,000 days; Fixed Gear > 45 ft - 4,000 days; Fixed Gear 35-45 ft - 12,000 days.

Observer Program Management

Brief overview of program structure: Management of program is federal. The regional manager is responsible for program delivery. A contract for services is tendered for all observer services in the region, for one (1) year with two (2), 2-year option periods. The contractor works in close consultation with the program manager to ensure timely and cost-effective deployments. The contractor is responsible for ensuring sufficient observers are available for deployment. The contractor briefs observers based on input from the program manager and scientific coordinator. Data entry is completed by the contractor.

Observer Coverage

Fraction of fishing activity observed:

Fixed gear	35-45 ft	5%.
Fixed gear	>45 ft	10%.
Mobile gear	all	20%.

The coverage levels are directed nationally. Historically funded federally, it is now an industry funding requirement. 1997 was a transitional year and coverage was approximately half the recommended levels.

NORTHWEST ATLANTIC SHRIMP

Observer Program Chief: Ben Rogers
Scientific Coordinator: Dave Kulka

Observer Program Mandate and Authority

Mission of the program: To monitor compliance with closed areas, quota, catch of juvenile groundfish species, landing requirements, gear restrictions, high-grading and reporting requirements. To collect data for stock assessments and quota management.

Fishery management: Federal.

Authority to place observers: Section 46 Fishery (General) Regulations.

Voluntary or mandatory: Mandatory.

Funding source(s): Industry.

Fishery Description

Target species: Shrimp.

Season of operation: April - December.

1997 catch of target species: 46,000 t.

Observer Program Management

Brief overview of program structure: Management of program is federal. The regional manager is responsible for program delivery. A contract for services is tendered for all observer services in the region, for one (1) year with two (2), 2-year option periods. The contractor works in close consultation with the program manager to ensure timely and cost-effective deployments. The contractor is responsible for ensuring sufficient observers are available for deployment. The contractor briefs observers based on input from the program manager and scientific coordinator. Data entry is completed by the contractor.

Observer Coverage

Fraction of fishing activity observed: The coverage levels are directed nationally. Northern shrimp has been subject to 100% coverage, paid by industry since 1987.

A major increase in the biomass led to quota allocations to vessels less than 65 feet in 1997. These smaller vessels had 140 days (8%) industry funded observer coverage. Fishing effort by the small vessels is expected to triple in 1998.

NEWFOUNDLAND REGION - RE-OPENED COD FISHERY

Observer Program Chief: Ben Rogers
Scientific Coordinator: Dave Kulka

Observer Program Mandate and Authority

Mission of the program: To monitor compliance with closed areas, quota, landing requirements, gear restrictions, discarding and reporting requirements. To collect data for stock assessments.

Fishery management: Federal.

Authority to place observers: Section 46 Fishery (General) Regulations.

Voluntary or mandatory: Mandatory.

Funding source(s): Federal.

Fishery Description

Target species: Cod.

Season of operation: April - December.

Annual catch of target species: 15,000 t.

Observer Program Management

Brief overview of program structure: Management of program is federal. The regional manager is responsible for program delivery. A contract for services is tendered for all observer services in the region, for one (1) year with two (2), 2-year option periods. The contractor works in close consultation with the program manager to ensure timely and cost-effective deployments. The contractor is responsible for ensuring sufficient observers are available for deployment. The contractor briefs observers based on input from the program manager and scientific coordinator. Data entry is completed by the contractor.

Observer Coverage

Fraction of fishing activity observed: Cod - 5%; 400 days.

The total cod catch off Newfoundland was historically more than 300,000 t. Observer coverage was federally funded at 30% to 100% (depending on the area) from the mid-1980s until the fishery was closed in 1992.

When reopened in selected areas in 1997, it was primarily a small boat fishery using gillnets and baited hooks. Observer coverage was federally funded in 1997 as a transitional year. Funding levels and source is undecided for 1998.

NEWFOUNDLAND REGION - SCALLOPS

Observer Program Chief: Ben Rogers
Scientific Coordinator: Dave Kulka

Observer Program Mandate and Authority

Mission of the program: To monitor compliance with closed/licensed areas, catch of undersize scallops, discarding and reporting requirements. Collection of scientific data.

Fishery management: Federal.

Authority to place observers: Section 46 Fishery (General) Regulations.

Voluntary or mandatory: Mandatory.

Funding source(s): Industry.

Fishery Description

Target species: Scallops.

Season of operation: January - December.

Avg. annual catch of target species: 10,600 t.

Avg. number of fishing days per year: 8,150 days.

Observer Program Management

Brief overview of program structure: Management of program is federal. The regional manager is responsible for program delivery. A contract for services is tendered for all observer services in the region, for one (1) year with two (2), 2-year option periods. The contractor works in close consultation with the program manager to ensure timely and cost-effective deployments. The contractor is responsible for ensuring sufficient observers are available for deployment. The contractor briefs observers based on input from the program manager and scientific coordinator. Data entry is completed by the contractor.

Observer Coverage

Fraction of fishing activity observed:

Inshore scallops	10%	790 days.
Offshore scallops	20%	50 days.

The coverage levels are directed nationally. Historically funded federally, it is now an industry funding requirement. 1997 was a transitional year; these levels were not attained.

NEWFOUNDLAND REGION - SMALL PELAGICS

Observer Program Chief: Ben Rogers
Scientific Coordinator: Dave Kulka

Observer Program Mandate and Authority

Mission of the program: To monitor compliance with closed areas, quotas, catch of undersize species, gear restrictions, bycatch, discarding and reporting requirements. To collect data on roe condition and fish size which can be used in decisions to open and close fisheries. To collect scientific data.

Fishery management: Federal.

Authority to place observers: Section 46 Fishery (General) Regulations.

Voluntary or mandatory: Mandatory.

Funding source(s): Industry.

Fishery Description

Target species: Small pelagics.

Season of operation: January - December.

Avg. annual catch of target species: 29,000 t.

Avg. number of fishing days per year: 4,500 days.

Observer Program Management

Brief overview of program structure: Management of program is federal. The regional manager is responsible for program delivery. A contract for services is tendered for all observer services in the region, for one (1) year with two (2), 2-year option periods. The contractor works in close consultation with the program manager to ensure timely and cost-effective deployments. The contractor is responsible for ensuring sufficient observers are available for deployment. The contractor briefs observers based on input from the program manager and scientific coordinator. Data entry is completed by the contractor.

Observer Coverage

Fraction of fishing activity observed:

Capelin	5%	100 days.
Herring seiners	20%	260 days.
Herring fixed gear	5%	100 days.
Mackerel	5%	10 days.

The coverage levels are directed nationally. Historically funded federally; it is now an industry funding requirement. 1997 was a transitional year and the above levels were not attained.

NEWFOUNDLAND REGION - SNOW CRAB

Observer Program Chief: Ben Rogers
Scientific Coordinator: Dave Kulka

Observer Program Mandate and Authority

Mission of the program: To monitor compliance with closed areas, gear restrictions, discarding, dumping, highgrading and reporting requirements. To monitor catches and method of discard of soft shell crab and collect scientific data.

Fishery management: Federal.

Authority to place observers: Section 46 Fishery (General) Regulations.

Voluntary or mandatory: Mandatory.

Funding source(s): Industry.

Fishery Description

Target species: Snow crab.

Season of operation: May - August.

Avg. annual catch of target species: 45,000 t.

Avg. number of fishing days per year: 12,000 days.

Observer Program Management

Brief overview of program structure: Management of program is federal. The regional manager is responsible for program delivery. A contract for services is tendered for all observer services in the region, for one (1) year with two (2), 2-year option periods. The contractor works in close consultation with the program manager to ensure timely and cost-effective deployments. The contractor is responsible for ensuring sufficient observers are available for deployment. The contractor briefs observers based on input from the program manager and scientific coordinator. Data entry is completed by the contractor.

Observer Coverage

Fraction of fishing activity observed: The coverage levels are directed nationally. Historically funded federally, it has been funded by industry for the past two (2) years. The recommended level is 20%; only 5% has been achieved.

LAURENTIAN REGION - CRAB

Observer Program Chief: John Chouinard
Scientific Coordinator: Jean-Denis Lambert

Observer Program Mandate and Authority

Mission of the program: To monitor compliance with closed areas, quota, landing requirements, gear restrictions, discarding, highgrading and reporting requirements. To collect data for stock assessments.

Fishery management: Federal.

Authority to place observers: Section 46 Fishery (General) Regulations.

Voluntary or mandatory: Mandatory.

Funding source(s): Federal Govt./Fishing industry.

Fishery Description

Target species: Snow crab.

Other commercially landed species: None.

Fleet size: 177 coastal and offshore.

Season of operation: April - July.

Annual catch of target species: 12,000 t.

Average number of fishing days per year: 15-30 days per boat.

Observer Program Management

Brief overview of program structure: Management of program is federal. The regional manager is responsible for program delivery. A contract for services is tendered for all observer services in the region. The contractor works in close consultation with the program manager to ensure timely and cost-effective deployments. The contractor is responsible for ensuring sufficient observers are available for deployment. The contractor briefs observers based on input from the program manager and scientific coordinator. Data entry is completed by the contractor.

Observer Coverage

Fraction of fishing activity observed: 10-20%; 550 days observed.

LAURENTIAN REGION - SCALLOP

*Observer Program Chief: John Chouinard
Scientific Coordinator: Jean-Denis Lambert*

Observer Program Mandate and Authority

Mission of the program: To monitor compliance with closed areas, quota, landing requirements, gear restrictions, discarding and reporting requirements.
To collect data for stock assessments.

Fishery management: Federal.

Authority to place observers: Section 46 Fishery (General) Regulations.

Voluntary or mandatory: Mandatory.

Funding source(s): Federal Govt./Fishing industry.

Fishery Description

Target species: Iceland scallop, giant scallop.

Other commercially landed species: None.

Fleet size: 82 draggers.

Season of operation: May to September.

Annual catch of target species: 2,300 t.

Average number of fishing days per year: ~100 days per boat.

Observer Program Management

Brief overview of program structure: Management of program is federal. The regional manager is responsible for program delivery. A contract for services is tendered for all observer services in the region. The contractor works in close consultation with the program manager to ensure timely and cost-effective deployments. The contractor is responsible for ensuring sufficient observers are available for deployment. The contractor briefs observers based on input from the program manager and scientific coordinator. Data entry is completed by the contractor.

Observer Coverage

Fraction of fishing activity observed: 10%; 50 days observed.

LAURENTIAN REGION - SHRIMP

*Observer Program Chief: John Chouinard
Scientific Coordinator: Jean-Denis Lambert*

Observer Program Mandate and Authority

Mission of the program: To monitor compliance with bycatch restrictions, quota, landing requirements, gear restrictions, discarding and reporting requirements. To collect data for stock assessments.

Fishery management: Federal.

Authority to place observers: Section 46 Fishery (General) Regulations.

Voluntary or mandatory: Mandatory.

Funding source(s): Federal Govt./Fishing industry.

Fishery Description

Target species: Northern shrimp.

Other commercially landed species: None.

Fleet size: 57 trawlers.

Season of operation: April to October.

Annual catch of target species: 13,000 t.

Average number of fishing days per year: ~ 80 days per boat.

Observer Program Management

Brief overview of program structure: Management of program is federal. The regional manager is responsible for program delivery. A contract for services is tendered for all observer services in the region. The contractor works in close consultation with the program manager to ensure timely and cost-effective deployments. The contractor is responsible for ensuring sufficient observers are available for deployment. The contractor briefs observers based on input from the program manager and scientific coordinator. Data entry is completed by the contractor.

Observer Coverage

Fraction of fishing activity observed: 5%; 200 days observed.

LAURENTIAN REGION - NORTHERN SHRIMP*Observer Program Chief: John Chouinard**Scientific Coordinator: Jean-Denis Lambert***Observer Program Mandate and Authority**

Mission of the program: To monitor compliance with closed areas, quota, landing requirements, gear restrictions, discarding and reporting requirements.

To collect data for stock assessments.

Fishery management: Federal.

Authority to place observers: Section 46 Fishery (General) Regulations.

Voluntary or mandatory: Mandatory.

Funding source(s): Federal Govt./Fishing industry.

Fishery Description

Target species: Northern shrimp.

Other commercially landed species: None.

Fleet size: 4 vessels in region.

Season of operation: January - December.

Annual catch of target species: 12,000 t.

Average number of fishing days per year: ~300 days per boat.

Observer Program Management

Brief overview of program structure: Management of program is federal. The regional manager is responsible for program delivery. A contract for services is tendered for all observer services in the region. The contractor works in close consultation with the program manager to ensure timely and cost-effective deployments. The contractor is responsible for ensuring sufficient observers are available for deployment. The contractor briefs observers based on input from the program manager and scientific coordinator. Data entry is completed by the contractor.

Observer Coverage

Fraction of fishing activity observed: 100%; 1,050 days observed.

LAURENTIAN REGION - GROUND FISH - MOBILE GEAR*Observer Program Chief: John Chouinard**Scientific Coordinator: Jean-Denis Lambert***Observer Program Mandate and Authority**

Mission of the program: To monitor compliance with closed areas, quota, landing requirements, gear restrictions, discarding and reporting requirements.

To collect data for stock assessments. To open closed areas (test fishery). To assess cod abundance (sentinel fishery).

Fishery management: Federal.

Authority to place observers: Section 46 Fishery (General) Regulations.

Voluntary or mandatory: Mandatory.

Funding source(s): Federal Govt./Fishing industry.

Fishery Description

Target species: Cod (sentinel fishery).

Other commercially landed species: American plaice, flounders, other groundfish.

Fleet size: 20.

Season of operation: July to October.

Annual catch of target species: 3,000 t.

Average number of fishing days per year: N/A.

Observer Program Management

Brief overview of program structure: Management of program is federal. The regional manager is responsible for program delivery. A contract for services is tendered for all observer services in the region. The contractor works in close consultation with the program manager to ensure timely and cost-effective deployments. The contractor is responsible for ensuring sufficient observers are available for deployment. The contractor briefs observers based on input from the program manager and scientific coordinator. Data entry is completed by the contractor.

Observer Coverage

Fraction of fishing activity observed: 10% (100% for test and sentinel fisheries); 200 days observed.

LAURENTIAN REGION - GROUND FISH - FIXED GEAR

Observer Program Chief: John Chouinard
Scientific Coordinator: Jean-Denis Lambert

Observer Program Mandate and Authority

Mission of the program: To monitor compliance with closed areas, quota, landing requirements, gear restrictions, discarding and reporting requirements. To collect data for stock assessments. To open closed areas (test fishery). To assess cod abundance (sentinel fishery).

Fishery management: Federal.

Authority to place observers: Section 46 Fishery (General) Regulations.

Voluntary or mandatory: Mandatory.

Funding source(s): Federal Govt./Fishing industry.

Fishery Description

Target species: Greenland halibut, cod (sentinel fishery).

Other commercially landed species: Other groundfish.

Fleet size: 120.

Season of operation: June - July.

Annual catch of target species: 2,100 t.

Average number of fishing days per year: 20 days.

Observer Program Management

Brief overview of program structure: Management of program is federal. The regional manager is responsible for program delivery. A contract for services is tendered for all observer services in the region. The contractor works in close consultation with the program manager to ensure timely and cost-effective deployments. The contractor is responsible for ensuring sufficient observers are available for deployment. The contractor briefs observers based on input from the program manager and scientific coordinator. Data entry is completed by the contractor.

Observer Coverage

Fraction of fishing activity observed: 5% (100% for test and sentinel).

SCOTIA-FUNDY FISHERIES - MARITIMES REGION - BLUEFIN TUNA - DOMESTIC

Observer Program Coordinator: Hugh Parker
Scientific Coordinator: Mark Showell

Observer Program Mandate and Authority

Mission of the Program: To monitor fisheries legislation and collect scientific data. Fishery Management: Federal.

Authority to Place Observers: Section 46 Fishery (General) Regulations.

Voluntary or Mandatory: Mandatory.

Funding Source(s): Industry/Government.

Program Duration: One year contract with two 24 month option periods.

Annual Program Costs: \$1.9 Million (Cdn.) (Admin \$427,000 Operation \$1,451,000).

Fishery Description (1997 Calendar Year)

Target species: Bluefin tuna.

Bycatch: Swordfish, shark, other tunas.

Fleet Size: 46.

Season of operation: June 01 to March 31. Peak: July to September.

Annual catch of target species: 370 t (1997).

Number of fishing days per year: 1,638.

Observer Program Management

Brief overview of program structure: The Observer Program is managed by the Federal Government, with the day to day operation the responsibility of the region. Regionally, the ultimate responsibility for the program resides with the Chief of Surveillance Operations who reports to the Director of the Conservation and Protection Branch. The observer contractor is responsible for supplying and training observers.

Observer Deployment Coverage (1997 Calendar Year)

Fraction of fishing activity observed: Observer levels are directed nationally. Regionally deployments are often based on consultation between DFO Enforcement, Resource, Science, and fishers.

Fisheries	Target level		Number of observed sea days	
	Actual	Actual	Actual	Actual
Bluefin tuna <100 ft. (SW Nova Scotia)	20%	20%	35	35
Bluefin tuna <100 ft.	10%	10%	3	3
Bluefin tuna > 100 ft.	100%	100%	17	17

SCOTIA-FUNDY FISHERIES - MARITIMES REGION - BLUEFIN TUNA - FOREIGN

Observer Program Coordinator: Hugh Parker
Scientific Coordinator: Mark Showell

Observer Program Mandate and Authority

Mission of the program: To monitor fisheries legislation and collect scientific data. Fishery management: Federal. Authority to place observers: Section 12 (e) Coastal Fish. Protection Regulations. Voluntary or mandatory: Mandatory. Funding source(s): Industry/Government. Program duration: One year contract with two 24 month option periods. Annual program costs: \$ 1.9 Million (Cdn.) (Admin. \$427,000 Operation \$1,451,000).

Fishery Description (1997 Calendar Year)

Target species: Bluefin tuna.
Bycatch: Other tunas, swordfish, shark.
Fleet size: Approximately 6 vessels
Season of operation: November 01 to January 15.
Annual catch of target species: 40 t.
Number of fishing days per year: 60 days.

Observer Program Management

Brief overview of program structure: The Observer Program is managed by the Federal Government, with the day to day operation the responsibility of the region. Regionally, the ultimate responsibility for the program resides with the Chief of Surveillance Operations who reports to the Director of the Conservation and Protection Branch. The Observer contractor is responsible for supplying and training observers.

Observer Coverage

All foreign vessels had observer coverage.

Fisheries	Target level	Actual	Number of observed sea days
Bluefin tuna	100%	100%	64

SCOTIA-FUNDY FISHERIES - MARITIMES REGION - CRAB

Observer Program Coordinator: Hugh Parker
Scientific Coordinator: Mark Showell

Observer Program Mandate and Authority

Mission of the program: To monitor fisheries legislation and collect scientific data. Fishery management: Federal. Authority to place observers: Section 46 Fishery (General) Regulations. Voluntary or mandatory: Mandatory. Funding source(s): Industry/Government. Program duration: One year contract with two 24 month option periods. Annual program costs: \$ 1.9 Million (Cdn.) (Admin. \$427,000 Operation \$1,451,000).

Fishery Description (1997 Calendar Year)

Target species: Snow crab, other crab.
Bycatch: Lobster.
Fleet size: Approximately 177.
Season of operation: July through September.
Annual catch of target species: Snow crab 1,688 t.
Other crab 16,111 t.
Number of fishing days per year: 3,864.

Observer Program Management

Brief overview of program structure: The Observer Program is managed by the Federal Government, with the day to day operation the responsibility of the region. Regionally, the ultimate responsibility for the program resides with the Chief of Surveillance Operations who reports to the Director of the Conservation and Protection Branch. The observer contractor is responsible for supplying and training observers.

Observer Coverage (1997 Calendar Year)

Snow crab	20%	373 days
Other crab	20%	399 days

Fisheries	Target level	Actual	Number of observed sea days
Snow crab	20%	73 days	
Other crab	20%	nil	

SCOTIA-FUNDY FISHERIES - MARITIMES REGION - GROUND FISH - FIXED GEAR

Observer Program Coordinator: Hugh Parker
Scientific Coordinator: Mark Showell

Observer Program Mandate and Authority

Mission of the program: To monitor fisheries legislation and collect scientific data.
 Fishery management: Federal.
 Authority to place observers: Section 46 Fishery (General) Regulations.
 Voluntary or mandatory: Mandatory.
 Funding source(s): Industry/Government.
 Program duration: One year contract with two 24 month option periods.
 Annual program costs: \$ 1.9 Million (Cdn.) (Admin. \$427,000 Operation \$1,451,000).

Fishery Description (1997 Calendar Year)

Target species: Groundfish.
 Bycatch: Pelagics.
 Fleet size: 900.
 Season of operation: January - December.
 Annual catch of target species:
 Number of fishing days per year: 19,500.

Observer Program Management

Brief overview of program structure: The Observer Program is managed by the Federal Government, with the day to day operation the responsibility of the region. Regionally, the ultimate responsibility for the program resides with the Chief of Surveillance Operations who reports to the Director of the Conservation and Protection Branch. The observer contractor is responsible for supplying and training observers.

Observer Coverage (1997 Calendar Year)

Fisheries	Target level		Number of observed sea days	
	Target level	Actual	Number of observed sea days	Actual
Fixed Gear <45 ft.	5%		149 days	
Fixed Gear 45-65 ft.	10%		5 days	
Fixed Gear 65-99 ft.	10%		295 days	

SCOTIA-FUNDY FISHERIES - MARITIMES REGION - GROUND FISH - MOBILE GEAR

Observer Program Coordinator: Hugh Parker
Scientific Coordinator: Mark Showell

Observer Program Mandate and Authority

Mission of the Program: To monitor fisheries legislation and collect scientific data.
 Fishery management: Federal.
 Authority to place observers: Section 46 Fishery (General) Regulations.
 Voluntary or mandatory: Mandatory.
 Funding source(s): Industry/Government.
 Program duration: One year contract with two 24 month option periods.
 Annual program costs: \$ 1.9 Million (Cdn.) (Admin. \$427,000 Operation \$1,451,000).

Fishery Description (1997 Calendar Year)

Target species: Groundfish.
 Bycatch: Lobster.
 Fleet size: Approximately 234.
 Season of operation: January - December.
 Number of fishing days per year: 14, 500.

Observer Program Management

Brief overview of program structure: The Observer Program is managed by the Federal Government, with the day to day operation the responsibility of the region. Regionally, the ultimate responsibility for the program resides with the Chief of Surveillance Operations who reports to the Director of the Conservation and Protection Branch. The observer contractor is responsible for supplying and training observers.

Observer Coverage (1997 Calendar Year)

Fisheries	Target level		Number of observed sea days	
	Target level	Actual	Number of observed sea days	Actual
Mobile gear <45 ft.	20%		5 days	
Mobile gear <65 ft.	20%		308 days	
Mobile gear 65-99 ft.	20%		45 days	
Mobile gear >100 ft.	20%		483 days	

SCOTIA-FUNDY FISHERIES - MARITIMES REGION - LARGE PELAGICS - SHARK

Observer Program Coordinator: Hugh Parker
Scientific Coordinator: Mark Showell

Observer Program Mandate and Authority

Mission of the program: To monitor fisheries legislation and collect scientific data. Fishery management: Federal.
Authority to place observers: Section 46 Fishery (General) Regulations.
Voluntary or mandatory: Mandatory.
Funding source(s): Industry/Government.
Program duration: One year contract with two 24 month option periods.
Annual program costs: \$ 1.9 Million (Cdn.) (Admin. \$427,000 Operation \$1,451,000).

Fishery Description (1997 Calendar Year)

Target species: Shark.
Bycatch: Tuna, swordfish.
Fleet size: Approximately 15.
Season of operation: January - December; Swordfish: May - October.
Annual catch of target species: Shark 1,241 t
Swordfish 1,007 t
Other tuna 295 t
Number of fishing days per year: 2,151.

Observer Program Management

Brief overview of program structure: The Observer Program is managed by the Federal Government, with the day to day operation the responsibility of the region. Regionally, the ultimate responsibility for the program resides with the Chief of Surveillance Operations who reports to the Director of the Conservation and Protection Branch. The observer contractor is responsible for supplying and training observers.

Observer Coverage (1997 Calendar Year).

Fisheries	Target level	Actual	Number of observed sea days
Shark	10%		28 days

SCOTIA-FUNDY FISHERIES - MARITIMES REGION - LARGE PELAGICS - SWORDFISH

Observer Program Coordinator: Hugh Parker
Scientific Coordinator: Mark Showell

Observer Program Mandate and Authority

Mission of the program: To monitor fisheries legislation and collect scientific data. Fishery management: Federal.
Authority to place observers: Section 46 Fishery (General) Regulations.
Voluntary or mandatory: Mandatory.
Funding source(s): Industry/Government.
Program duration: One year contract with two 24 month option periods.
Annual program costs: \$1.9 Million (Cdn.) (Admin. \$427,000 Operation \$1,451,000).

Fishery Description (1997 Calendar Year)

Target species: Shark, swordfish, other tuna.
Bycatch: Tunas, shark.
Fleet size: 99.
Season of operation: January - December; Swordfish: May - October.
Annual catch of target species: Shark 1,241 t
Swordfish 1,007 t
Other tuna 295 t
Number of fishing days per year: 2,151.

Observer Program Management

Brief overview of program structure: The Observer Program is managed by the Federal Government, with the day to day operation the responsibility of the region. Regionally, the ultimate responsibility for the program resides with the Chief of Surveillance Operations who reports to the Director of the Conservation and Protection Branch. The observer contractor is responsible for supplying and training observers.

Observer Coverage (1997 Calendar Year)

Fisheries	Target level	Actual	Number of observed sea days
Swordfish	20%		195 days

SCOTIA-FUNDY FISHERIES - MARITIMES REGION - LOBSTER - OFF-SHORE

Observer Program Coordinator: Hugh Parker
Scientific Coordinator: Mark Showell

Observer Program Mandate and Authority

Mission of the program: To monitor fisheries legislation and collect scientific data.
 Fishery management: Federal.
 Authority to place observers: Section 46 Fishery (General) Regulations.
 Voluntary or mandatory: Mandatory.
 Funding source(s): Industry/Government.
 Program duration: One year contract with two 24 month option periods.
 Annual program costs: \$1.9 Million (Cdn.) (Admin. \$427,000 Operation \$1,451,000).

Fishery Description (1997 Calendar Year)

Target species: Lobster.

Bycatch: Groundfish, crab.

Fleet size: 7.

Season of operation: January - December.

Annual catch of target species: 8,886 t.

Number of fishing days per year: 839.

Observer Program Management

Brief overview of program structure: The Observer Program is managed by the Federal Government, with the day to day operation the responsibility of the region. Regionally, the ultimate responsibility for the program resides with the Chief of Surveillance Operations who reports to the Director of the Conservation and Protection Branch. The observer contractor is responsible for supplying and training observers.

Observer Coverage (1997 Calendar Year)

No deployments.

Fisheries	Target level		Actual		Number of observed sea days	
Lobster (offshore)	20%	0	0	0	0	0

SCOTIA-FUNDY FISHERIES - MARITIMES REGION - SCALLOPS - IN-SHORE

Observer Program Coordinator: Hugh Parker
Scientific Coordinator: Mark Showell

Observer Program Mandate and Authority

Mission of the program: To monitor fisheries legislation and collect scientific data.
 Fishery management: Federal.
 Authority to place observers: Section 46 Fishery (General) Regulations.
 Voluntary or mandatory: Mandatory.
 Funding source(s): Industry/Government.
 Program duration: One year contract with two 24 month option periods.
 Annual program costs: \$ 1.9 Million (Cdn.) (Admin. \$427,000 Operation \$1,427,000).

Fishery Description (1997 Calendar Year)

Target species: Scallops.

Bycatch: Groundfish.

Fleet size: 277.

Season of operation: January - December.

Annual catch of target species: 1,016 t.

Number of fishing days per year: 8,297.

Observer Program Management

Brief overview of program structure: The Observer Program is managed by the Federal Government, with the day to day operation the responsibility of the region. Regionally, the ultimate responsibility for the program resides with the Chief of Surveillance Operations who reports to the Director of the Conservation and Protection Branch. The observer contractor is responsible for supplying and training observers.

Observer Coverage (1997 Calendar Year)

Fisheries	Target level		Actual		Number of observed sea days	
Scallops	10%				184 days	

SCOTIA-FUNDY FISHERIES - MARITIMES REGION - SCALLOPS - OFFSHORE

Observer Program Coordinator: Hugh Parker
Scientific Coordinator: Mark Showell

Observer Program Mandate and Authority

Mission of the program: To monitor fisheries legislation and collect scientific data. Fishery management: Federal.

Authority to place observers: Section 46 Fishery (General) Regulations. Voluntary or mandatory: Mandatory.

Funding source(s): Industry/Government.

Program duration: One year contract with two 24 month option periods.

Annual program costs: \$1.9 Million (Cdn.) (Admin. \$427,000 Operation \$1,451,000).

Fishery Description (1997 Calendar Year)

Target species: Scallops.

Bycatch: Lobster, groundfish.

Fleet size: Approximately 32.

Season of operation: January - December.

Annual catch of target species: 46,921 t.

Number of fishing days per year: 3,759.

Observer Program Management

Brief overview of program structure: The Observer Program is managed by the Federal Government, with the day to day operation the responsibility of the region. Regionally, the ultimate responsibility for the program resides with the Chief of Surveillance Operations who reports to the Director of the Conservation and Protection Branch. The observer contractor is responsible for supplying and training observers.

Observer Coverage (1997 Calendar Year)

No deployments.

Fisheries	Target level	Actual	Number of observed sea days
Scallop (offshore)	20%	0	0

SCOTIA-FUNDY FISHERIES - MARITIMES REGION - SHRIMP - NORTHERN

Observer Program Coordinator: Hugh Parker
Scientific Coordinator: Mark Showell

Observer Program Mandate and Authority

Mission of the program: To monitor fisheries legislation and collect scientific data. Fishery management: Federal.

Authority to place observers: Section 46 Fishery (General) Regulations. Voluntary or mandatory: Mandatory.

Funding source(s): Industry/Government.

Program duration: One year contract with two 24 month option periods.

Annual program costs: \$ 1.9 Million (Cdn.) (Admin. \$427,000 Operation \$1,451,000).

Fishery Description (1997 Calendar Year)

Target species: Shrimp.

Bycatch: Turbot, redfish.

Fleet size: 4.

Season of operation: January - December.

Annual catch of target species: 13,000 t.

Number of fishing days per year: N/A.

Observer Program Management

Brief overview of program structure: The Observer Program is managed by the Federal Government, with the day to day operation the responsibility of the region. Regionally, the ultimate responsibility for the program resides with the Chief of Surveillance Operations who reports to the Director of the Conservation and Protection Branch. The observer contractor is responsible for supplying and training observers.

Observer Coverage (1997 Calendar Year)

Fisheries	Target level	Actual	Number of observed sea days
Northern shrimp	100%		879

SCOTIA-FUNDY FISHERIES - MARITIMES REGION - SHRIMP -**SCOTIAN SHELF**

Observer Program Coordinator: Hugh Parker
Scientific Coordinator: Mark Showell

Observer Program Mandate and Authority

Mission of the program: To monitor fisheries legislation and collect scientific data.
 Fishery management: Federal.
 Authority to place observers: Section 46 Fishery (General) Regulations.
 Voluntary or mandatory: Mandatory.
 Funding source(s): Industry/Government.
 Program duration: One year contract with two 24 month option periods.
 Annual program costs: \$ 1.9 Million (Cdn.) (Admin. \$427,000 Operation \$1,451,000).

Fishery Description (1997 Calendar Year)

Target species: Shrimp.
 Fleet size: 21.
 Season of operation: April - October.
 Annual catch of target species: 4,000 t.
 Number of fishing days per year: 1548 days.

Observer Program Management

Brief overview of program structure: The Observer Program is managed by the Federal Government, with the day to day operation the responsibility of the region. Regionally, the ultimate responsibility for the program resides with the Chief of Surveillance Operations who reports to the Director of the Conservation and Protection Branch. The observer contractor is responsible for supplying and training observers.

Observer Coverage (1997 Calendar Year)

No deployments.

Fisheries	Target level	Actual	Number of observed sea days
Shrimp (Scotia Shelf)	10%	0	0

SCOTIA-FUNDY FISHERIES - MARITIMES REGION - SHRIMP -**OTHER**

Observer Program Coordinator: Hugh Parker
Scientific Coordinator: Mark Showell

Observer Program Mandate and Authority

Mission of the program: To monitor fisheries legislation and collect scientific data.
 Fishery management: Federal.
 Authority to place observers: Section 46 Fishery (General) Regulations.
 Voluntary or mandatory: Mandatory.
 Funding source(s): Industry/Government.
 Program duration: One year contract with two 24 month option periods.
 Annual program costs: \$ 1.9 Million (Cdn.) (Admin. \$427,000 Operation \$1,451,000).

Fishery Description (1997 Calendar Year)

Target species: Shrimp.
 Fleet size: 13.
 Season of operation: April - October.
 Annual catch of target species: 4,000 t.
 Number of fishing days per year: 1548 days.

Observer Program Management

Brief overview of program structure: The Observer Program is managed by the Federal Government, with the day to day operation the responsibility of the region. Regionally, the ultimate responsibility for the program resides with the Chief of Surveillance Operations who reports to the Director of the Conservation and Protection Branch. The observer contractor is responsible for supplying and training observers.

Observer Coverage (1997 Calendar Year)

No deployments.

Fisheries	Target level	Actual	Number of observed sea days
Shrimp (others)	10%	0	0

SCOTIA-FUNDY FISHERIES - MARITIMES REGION - SILVER HAKE - DOMESTIC

Observer Program Coordinator: Hugh Parker
Scientific Coordinator: Mark Showell

Observer Program Mandate and Authority

Mission of the program: To monitor fisheries legislation and collect scientific data. Fishery management: Federal.
 Authority to place observers: Section 46 Fishery (General) Regulations.
 Voluntary or mandatory: Mandatory.
 Funding source(s): Industry/Government.
 Program duration: One year contract with two 24 month option periods.
 Annual program costs: \$ 1.9 Million (Cdn.) (Admin. \$427,000 Operation \$1,451,000).

Fishery Description (1997 Calendar Year)

Target species: Silver hake.
 Bycatch: Red hake, other groundfish.
 Fleet size: N/A.
 Season of operation: January - December.
 Annual catch of target species: N/A.
 Number of fishing days per year: N/A.

Observer Program Management

Brief overview of program structure: The Observer Program is managed by the Federal Government, with the day to day operation the responsibility of the region. Regionally, the ultimate responsibility for the program resides with the Chief of Surveillance Operations who reports to the Director of the Conservation and Protection Branch. The observer contractor is responsible for supplying and training observers.

Observer Coverage (1997 Calendar Year)

Fisheries	Target	Number of observed	
	level	Actual	sea days
Silver hake			7 days

SCOTIA-FUNDY FISHERIES - MARITIMES REGION - SILVER HAKE - FOREIGN

Observer Program Coordinator: Hugh Parker
Scientific Coordinator: Mark Showell

Observer Program Mandate and Authority

Mission of the program: To monitor fisheries legislation and collect scientific data. Fishery management: Federal.
 Authority to place observers: Section 12 (e) Coastal Fish. Protection Regulations.
 Voluntary or mandatory: Mandatory.
 Funding source(s): Industry/Government.
 Program duration: One year contract with two 24 month option periods.
 Annual program costs: \$ 1.9 Million (Cdn.) (Admin. \$427,000 Operation \$1,451,000).

Fishery Description (1997 Calendar Year)

Target species: Silver hake.
 Bycatch: Squid, groundfish.
 Fleet size: Approximately 10.
 Season of operation: February - September.
 Annual catch of target species: 8,872 t.
 Number of fishing days per year: 860 days.

Observer Program Management

Brief overview of program structure: The Observer Program is managed by the Federal Government, with the day to day operation the responsibility of the region. Regionally, the ultimate responsibility for the program resides with the Chief of Surveillance Operations who reports to the Director of the Conservation and Protection Branch. The observer contractor is responsible for supplying and training observers.

Observer Coverage (1997 Calendar Year)

Fisheries	Target	Number of observed	
	level	Actual	sea days
Silver hake	100%		1473 days

SCOTIA-FUNDY FISHERIES - MARITIMES REGION - SMALL**PELAGICS**

Observer Program Coordinator: Hugh Parker
Scientific Coordinator: Mark Showell

Observer Program Mandate and Authority

Mission of the program: To monitor fisheries legislation and collect scientific data.
 Fishery management: Federal.
 Authority to place observers: Section 46 Fishery (General) Regulations.
 Voluntary or mandatory: Mandatory.
 Funding source(s): Industry/Government.
 Program duration: One year contract with two 24 month option periods.
 Annual program costs: \$ 1.9 Million (Cdn.) (Admin. \$427,000 Operation \$1,451,000).

Fishery Description (1997 Calendar Year)

Target species: Herring, mackerel.
 Bycatch: Salmon, groundfish.
 Fleet size: Approximately 2,050.
 Season of operation: January - December.
 Annual catch of target species: Herring 101,131 t.
 Mackerel 3,402 t
 Number of fishing days per year: 6,508.

Observer Program Management

Brief overview of program structure: The Observer Program is managed by the Federal Government, with the day to day operation the responsibility of the region. Regionally, the ultimate responsibility for the program resides with the Chief of Surveillance Operations who reports to the Director of the Conservation and Protection Branch. The observer contractor is responsible for supplying and training observers.

Observer Coverage (1997 Calendar Year)

<u>Fisheries</u>	<u>Target level</u>	<u>Actual</u>	<u>Number of observed sea days</u>
Herring	20%		64 days

SCOTIA-FUNDY FISHERIES - MARITIMES REGION - SURF CLAMS

Observer Program Coordinator: Hugh Parker
Scientific Coordinator: Mark Showell

Observer Program Mandate and Authority

Mission of the program: To monitor fisheries legislation and collect scientific data.
 Fishery management: Federal.
 Authority to place observers: Section 46 Fishery (General) Regulations.
 Voluntary or mandatory: Mandatory.
 Funding source(s): Industry/Government.
 Program duration: One year contract with two 24 month option periods.
 Annual program costs: \$ 1.9 Million (Cdn.) (Admin. \$427,000 Operation \$1,451,000).

Fishery Description (1997 Calendar Year)

Target species: Surf clams.
 Bycatch: Quahaugs/propeller clams.
 Fleet size: 1.
 Season of operation: January - December.
 Annual catch of target species:
 Number of fishing days per year: 263.

Observer Program Management

Brief overview of program structure: The Observer Program is managed by the Federal Government, with the day to day operation the responsibility of the region. Regionally, the ultimate responsibility for the program resides with the Chief of Surveillance Operations who reports to the Director of the Conservation and Protection Branch. The observer contractor is responsible for supplying and training observers.

Observer Coverage (1997 Calendar Year)

No deployments.

<u>Fisheries</u>	<u>Target level</u>	<u>Actual</u>	<u>Number of observed sea days</u>
Surf clams (offshore)	20%	0	0

SCOTIA-FUNDY FISHERIES - MARITIMES REGION - TEST / EXPERIMENTAL

Observer Program Coordinator: Hugh Parker
Scientific Coordinator: Mark Showell

Observer Program Mandate and Authority

Mission of the program: To monitor fisheries legislation and collect scientific data. Fishery management: Federal.
Authority to place observers: Section 46 Fishery (General) Regulations.
Voluntary or mandatory: Mandatory.
Funding source(s): Industry/Government.
Program duration: One year contract with two 24 month option periods.
Annual program costs: \$ 1.9 Million (Cdn.) (Admin. \$427,000 Operation \$1,451,000).

Fishery Description (1997 Calendar Year)

Target species: All species.
Season of operation: January - December.
Annual catch of target species: N/A.
Number of fishing days per year: N/A.

Observer Program Management

Brief overview of program structure: The Observer Program is managed by the Federal Government, with the day to day operation the responsibility of the region. Regionally, the ultimate responsibility for the program resides with the Chief of Surveillance Operations who reports to the Director of the Conservation and Protection Branch. The observer contractor is responsible for supplying and training observers.

Observer Coverage (1997 Calendar Year)

Fisheries	Target	Actual
	level	
Test (all species)	100%	
	<u>Number of observed</u>	<u>sea days</u>
		137 days

PACIFIC REGION - DOMESTIC TRAWL FISHERY

Observer Program Chief: Barry Ackerman
Scientific Coordinator: Mark Saunders
Contracting Firm: Archipelago Marine Research Ltd.

Observer Program Mandate and Authority

Mission of the program: Observers are required to monitor compliance of the fishing vessel to area(s) or operations, gear restrictions and other fishery regulations. Observers provide independent estimates of retained and discarded catch for quota management purposes. Observers are also required to collect biological samples of target and bycatch species for the science objectives of the program.

Fishery management: Federal.

Authority to place observers: Section 46 Fishery (General) Regulations.

Voluntary or mandatory: Mandatory.

Funding source: Co-Funded by Industry and Government.

Program duration: At sea observer monitoring on domestic trawl vessels has been compulsory since 1996. Components of the fishery are exempt from observers (e.g., hake/pollock).
Annual program cost: \$2,300,000 (Cdn.).

Fishery Description (1997)

Target species: About 20 groundfish species including rockfish, flatfish, and other roundfish.

Bycatch: halibut and salmon are small component of catch.

Fleet size: about 70 trawlers (50-150 ft in length).

Season of operation: year-round.

Avg. annual catch of target species: about 45,000 t.

Avg. number of fishing days per year: about 5,500 (sea days).

Observer Program Management

Brief overview of program structure: DFO staff outline information and monitoring objectives required of observer program. Affected fishing industry groups have input on the operational requirements of program. Contractor is responsible for most aspects of program delivery including hiring and training observer staff; supervising, briefing, and debriefing of observers; entering, editing and quality control of data. Contractor also provides routine reporting and analysis for the time sensitive information requirements.

Service delivery type and function of each entity: DFO contracts with supplier firm for program delivery. Contracts are annual with two one-year renewal options.

Observer Coverage (1997)

Unit and definition of fishing effort: A sea day is defined as time, rounded to the nearest two hour interval, that a vessel is at sea (i.e., not at the dock). This includes time spent steaming to, from and between fishing grounds, time doing repairs or waiting for weather at sea, time deploying or retrieving gear or time spent searching for fish.

Fraction of fishing activity observed: 100%.

PACIFIC REGION - J/V HAKE FISHERY

Observer Program Chief: Barry Ackerman

Scientific Coordinator: Mark Saunders

Contracting Firm: Archipelago Marine Research Ltd.

Observer Program Mandate and Authority

Mission of the program: Observers are required to monitor compliance of the fishing vessel to area(s) or operations, restrictions on catch processing and dumping, and bycatch sorting requirements. Observers provide independent estimates of catch for quota management purposes. Observers are also required to collect biological samples of target and bycatch species for the science objectives of the program.

Fishery management: Federal.

Authority to place observers: Section 46 Fishery (General) Regulations.

Voluntary or mandatory: Mandatory.

Funding source: Industry Funded.

Program duration: At sea observer monitoring has been compulsory on foreign fishing vessels has been since 1987.

Annual program cost: \$200,000 (Cdn.).

Fishery Description (1997)

Target species: Pacific hake.

Fleet size: 3-5 foreign factory trawlers.

Season of operation: June - September.

Avg. annual catch of target species: 50,000 t.

Avg. number of fishing days per year: 500 (sea days).

Observer Program Management

Brief overview of program structure: DFO staff outline information and monitoring objectives required of observer program. Affected fishing industry groups have input on the operational requirements of program. Contractor is responsible for most aspects of program delivery including hiring and training observer staff; supervising, briefing, and debriefing of observers; entering, editing and quality control of data. Contractor also provides routine reporting and analysis for the time sensitive information requirements.

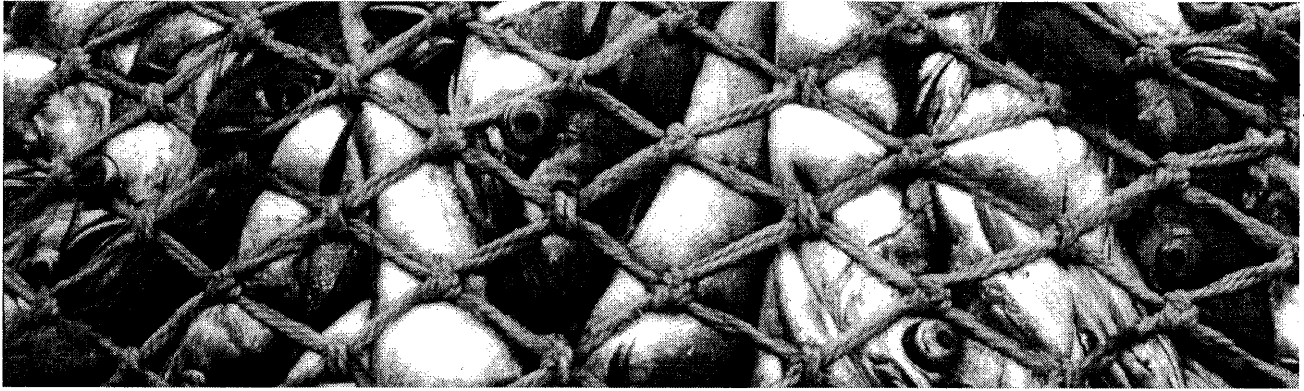
Service delivery type and function of each entity: DFO contracts with supplier firm for program delivery. Contracts are annual with two one-year renewal options.

Other participating agencies: None.

Observer Coverage (1997)

Unit and definition of fishing effort for purpose of estimating coverage: A sea day is defined as any day six hours or more that a vessel is at sea (i.e., not at the dock). This includes time spent steaming to, from and between fishing grounds, time doing repairs or waiting for weather at sea, time deploying or retrieving gear or time spent searching for fish.

Fraction of fishing activity observed: 100%.



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