

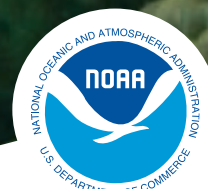
2009 Business Report

NOAA FISHERIES SERVICE

Science, Service, Stewardship

NOAA

Surgeon fish in the Pacific Islands region.



NOAA Fisheries Service Vision:

The American people enjoy the riches and benefits of healthy and diverse marine ecosystems.

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Eric C. Schwaab
Assistant Administrator
for Fisheries



I am pleased to transmit the 2009 NOAA Fisheries Business Report as your new Assistant Administrator for Fisheries. The many accomplishments reflected in this report represent impressive work in support of healthy, diverse and sustainable marine ecosystems.

This is a time of great challenge for our oceans, their living resources, and the nation's coastal communities. I am proud to be working as a part of this team as we take sustainable fisheries and ocean resource management into a new era – an era of both economic and environmental challenge – that will depend heavily on the best possible science to help make effective strategic decisions to meet current social and economic needs, while maintaining a commitment to long-term sustainability of resources and communities.

Already, I have encountered in many local communities great concern over fisheries and other living resource management decisions. And while there are difficult choices to be made, one of our greatest challenges is helping to frame those choices effectively to allow public debate to be as clear as possible regarding matters of science, risk and policy choice. This report represents not only a chronicle of 2009 work, but also a roadmap toward sustainable fisheries, healthy populations of protected resources, quality habitats and ever-increasing scientific understanding.

I would like to thank all of the NOAA Fisheries employees and contractors for their dedication and hard work. I also recognize the efforts of our many stakeholders , including the regional fishery management councils, tribes, states, regional commissions, recreational and commercial fishing industries, conservations, and organizations, who together help us accomplish our mission.

A handwritten signature in black ink, appearing to read "Eric Schwaab". The signature is fluid and cursive.

Eric C. Schwaab
Assistant Administrator for Fisheries



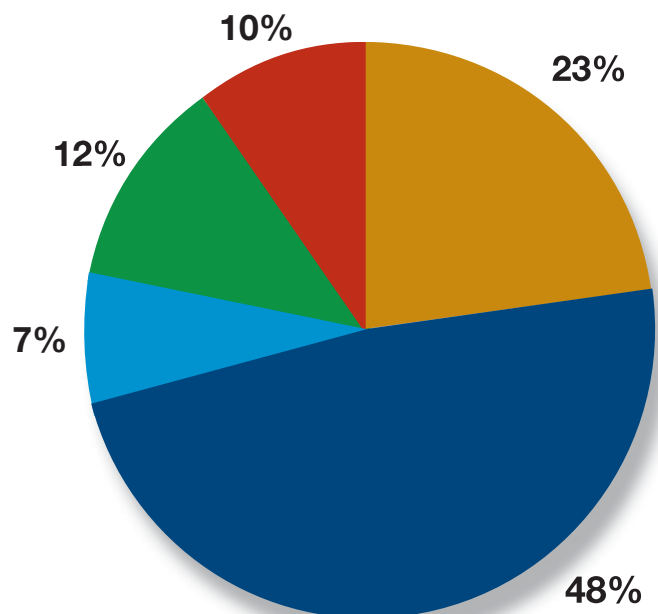
NOAA Fisheries Service Mission:

Stewardship of living marine resources through science-based conservation and management and the promotion of healthy ecosystems for the benefit of all Americans.

NOAA Fisheries Service Operating Budget by Major Program

FY 2009 Enacted

- **MMPA & ESA/Protected Resources**
\$173.9 M
- **MSRA/Fisheries Management**
\$360.8 M
- **Habitat Conservation and Restoration**
\$53.7 M
- **Law Enforcement and Observers**
\$90.1 M
- **Other (Aquaculture, Cooperative Research, Antarctic Research, etc)**
\$75.5 M



Does not include \$4.6 million in PAC, \$80.0 million in Pacific Coastal Salmon Recovery Funds, or \$40.8 million in other accounts.

Performance Measures

Performance measures under the Government Performance Results Act (GPRA) indicate that NOAA is effectively managing its budget and programs to achieve agency goals. NOAA Fisheries Service has four GRPA performance measures:

- The Fish Stock Sustainability Index captures information on most significant managed species. At the end of 2009, NOAA's score was 565.5, up from 535 in 2008.
- At the end of 2009, there were 25 threatened, endangered, or depleted protected species with stable or increasing population levels, up from 24 species in 2008.
- The performance measure, "percentage of living marine resources with adequate population assessments and forecasts," covers 230 fish stocks and 248 stocks of threatened, endangered, or depleted protected resources, up from 242 in 2008. Of these, 43.9% had adequate assessments.
- An additional 9,232 acres of habitat were restored and protected in 2009 to improve ecosystem function, a decrease from the 11,254 acres restored in 2008.



Sustainable Fisheries

1.



2.

1. NOAA Fisheries Service released a draft policy on the use of catch share programs in fishery management plans. The draft NOAA Fisheries Service policy encourages well-designed catch share programs to help rebuild fisheries and sustain fishermen, communities, and vibrant working waterfronts. The draft policy empowers local fishermen to be part of the process.



2-2a. NOAA Fisheries Service updated existing Essential Fish Habitat designations for Atlantic highly migratory species (sharks, tunas, swordfish, and billfish). A key feature of the update is the designation of a new Habitat of Particular Concern in the Gulf of Mexico for spawning western Atlantic bluefin tuna. This is the only known spawning area for western Atlantic bluefin tuna, a species of concern due to its overfished status.

3. NOAA Fisheries Service issued final guidelines on how to comply with new requirements to end and prevent overfishing through the use of annual catch limits and accountability measures. Starting in 2010 for stocks subject to overfishing and in 2011 for all other stocks (with some limited exceptions), Federal fishery management plans now must establish mechanisms for annual catch limits such that overfishing does not occur. If the limits are exceeded in a fishing year, accountability measures should provide for adjusting harvest levels within the season or setting responsive levels for the following year.



4. NOAA Fisheries Service provided its annual update for 2009 on the status of 519 individual stocks and stock complexes. In the 2009 update, the agency reported that four stocks were declared fully rebuilt to their target biomass (population) levels. Atlantic scup, black sea bass, St. Matthews Island blue king crab, and North Atlantic swordfish are all now at sustainable population sizes. The update was, in general, a mixed bag for progress on improving the population levels of all stocks, with four stocks being newly listed as overfished, and four additional stocks rebuilding to healthy levels and coming off the list. A stock that is overfished has its biomass, or population, level below a specified biological threshold. Things were a little better for improvements in the harvest rates of the stocks. For two stocks, overfishing has ended (that is, their harvest rates are below the level that provides for the maximum sustainable yield from the stock), and no new stocks were found to be subject to overfishing. Overall, 85 percent of assessed U.S. fish stocks are not subject to overfishing and 77 percent are not overfished.



5. NOAA Fisheries Service provided a grant to fund WWF International Smart Gear Competition. In 2009, NOAA Fisheries Service awarded a \$364,000 grant to the World Wildlife Fund (WWF) in support of its 2009 International Smart Gear Competition, which awards prizes for innovative gear designs that reduce fisheries bycatch. The two-year NOAA grant to the WWF supported the competition, plus extensive testing to further develop the winning designs. The 2009 International Smart Gear Competition attracted 71 entries from 27 countries. The grand prize winning idea, submitted by a team of Australian inventors, was the Underwater Baited Hook, a concept developed to address the bycatch problem associated with seabirds and pelagic longlining.



Protected Resources

1. The NOAA Fisheries Service Marine Mammal Health and Stranding Response Program and the National Ocean and Human Health Initiative conducted a joint research project to investigate the health of wild bottlenose dolphins along the coast of Georgia with Georgia Department of Natural Resources. Marine mammals can be sentinels of the ocean's health, and the results of this study will help NOAA Fisheries Service scientists and their partners assess how environmental changes can affect both wildlife and humans that depend on marine ecosystems to survive.

2. The Georgia Department of Natural Resources received support through the Section 6 Program to investigate the status of Atlantic sturgeon in Southeastern rivers; results will inform an upcoming determination by NOAA Fisheries Service whether to list this species under the Endangered Species Act.

3. NOAA Fisheries Service Marine Mammal Health and Stranding Response Program responds to injured or imperiled Hawaiian monk seals for health and safety reasons. Hawaiian monk seals are critically endangered and NOAA Fisheries Service is working with multiple government and non-governmental partners to assist in the survival and recovery of the species. The Hawaii Department of Land and Natural Resources has received funding through the ESA Section 6 Program to support this and other work for listed species in Hawaii.



4. Kemp's Ridley sea turtle population is recovering

as a result of protection on the nesting beaches and the use of turtle excluder devices in shrimp fisheries. In collaboration with Mexico and the U.S. Fish and Wildlife Service, these measures have improved the population dramatically. During the 2009 nesting season, more than 21,000 Kemp's Ridley nests were recorded in Mexico. In recent years, the number of nests documented in Texas is over nine times the nests recorded historically.



4.

5-5a. NOAA Fisheries Service issued an authorization to cover the use of mid-frequency active sonar (MFAS)

related to the take of marine mammals incidental to Navy training activities occurring in Hawaii, Southern California, and off the Atlantic Coast. These authorizations included the first the agency has ever issued to cover the use of MFAS and established new mandatory requirements that the Navy implement specific protective measures, conduct robust marine mammal monitoring, and submit comprehensive reports detailing both their training activities and their monitoring.



5.



5a.

Habitat Conservation

1. Commerce Secretary Gary Locke and NOAA Administrator Dr. Jane Lubchenco publicly announced the selection of 50 high-priority Coastal Restoration projects funded under the American Recovery and Reinvestment Act. When complete, NOAA's Habitat Restoration Recovery Act projects will restore more than 8,700 acres and open more than 700 miles of habitat. The projects also will remove more than 850 metric tons of debris, rebuild oyster and other shellfish habitat, and protect 11,750 acres to reduce threats to coral reefs. Healthy coastal and marine habitats support valuable fisheries and protected species, improve water quality, provide recreational opportunities for the public's use and enjoyment, and buffer coastal communities from the impacts of storms and sea level rise.

2. Dozens of Washington State contractors, engineers, and landscape architects worked to restore 140 acres of wetland habitat for chum, coho, threatened chinook salmon, and steelhead and other important species of fish. The project also helps protect 1,100 downstream acres of farmland from the devastating effects of reoccurring floods that damage crops.



3. NOAA Fisheries Service began implementation of the Deep-Sea Coral Research and Technology Program

with a major three-year deep-sea coral mapping and research effort in the Southeast U.S. Developed in consultation with the South Atlantic Fishery Management Council, NOAA Fisheries Service scientists and partners discovered new deep-sea coral areas. These areas refined the Council's proposal to protect more than 24,000 square miles of habitat in the new deepwater Coral Habitat Areas of Particular Concern.



4. NOAA Fisheries Service and federal agency partners responded to the Administration's call for strengthened federal leadership

in the restoration and protection of the Chesapeake Bay. As charged in a May 12, 2009, Executive Order, NOAA Fisheries Service co-led the development of three reports recommending new actions to restore the health of the Chesapeake ecosystem. NOAA Fisheries Service is leading the effort to bring targeted habitat restoration and aquatic area conservation, enhanced monitoring and observations, expanded watershed education, and scaled climate adaptation science and guidance to this integrated strategic effort.



5. The Office of Habitat Conservation is investigating how to modify the design and implementation of protection

and restoration projects to accommodate rising sea levels and other climate impacts. By assisting landowners in creating "living shorelines"—a "soft" shoreline stabilization alternative to installing hard structures like bulkheads—the agency is working to help buffer shorelines from storms and erosion and provide areas for marsh grass colonization and inland retreat as sea level rises.



Science and Technology

1. Research was conducted to explain how climate change may impact Alaska's walleye pollock fishery, the largest fishery in the U.S. by weight and one of the top ten U.S. fisheries by value. The researchers monitored the abundance of fish eggs and larvae, and their prey through warm and cold cycles in the eastern Bering Sea to better understand how production of fish, marine mammals, and seabirds responds to climate change. They have found that during periods of increased water temperatures, production of large prey items for larval and juvenile walleye pollock decreased. When colder conditions returned, the large prey populations rebounded.

2. The NOAA Fisheries Service National Observer Program co-sponsored the 6th International Fisheries Observer and Monitoring Conference in Portland, ME. The conference attracted over 300 delegates from 37 countries. The mission of the conference is to improve fishery monitoring programs worldwide through sharing of best practices and development of new methods for data collection and analysis.



1.



2.

3. Changing climate is one of the most significant long-term influences on the structure and function of marine ecosystems.

Physical changes in the ocean, such as changes in water temperature or currents, can affect species' distributions, ocean productivity, and the timing of biological events. Loss of sea ice can lead to reduced habitat for ice-dependent species and changes in habitat and productivity for other species. Ocean acidification may impact the growth and viability of marine organisms, while sea level rise can cause changes to and loss of coastal habitat. Changes in freshwater supply and quality can impact coastal habitat influenced by freshwater and affect spawning migrations and survival of species such as salmon. In response to these concerns, NOAA Fisheries Service observation and research programs are being integrated to provide a comprehensive view of the status of marine ecosystems, their relation to current climatic conditions, the potential impacts of future conditions, and the implications for assessments of living marine resource populations.



3.

4. NOAA Fisheries Service issued a final rule creating the National Saltwater Angler Registry.

This “phone book” of marine recreational fishermen will support the broader Marine Recreational Information Program initiative by providing a much more efficient and effective means of collecting anglers' fishing effort data. Beginning in 2010, recreational anglers living in non-exempt states – those without a comprehensive saltwater fishing license or approved regional recreational catch monitoring program—will have to register their contact information with NOAA Fisheries Service.



4.

5. The NOAA Fisheries Service Office of Science and Technology coordinated a unique Ocean Literacy Initiative

with an inner city school district, the District of Columbia Public Schools (DCPS). The pilot program, NOAA and D.C. Educators Moving Ocean Science Forward (NEMO), began in 2007 and was created to promote ocean literacy within DCPS and initiate DCPS participation in the National Ocean Sciences Bowl, a nationwide academic competition for high school students. In 2009, a NEMO-DCPS team defeated the nation's top-ranked high school in one round of competition.



5.

International Affairs

1. NOAA Fisheries Service has participated in negotiations to establish the South Pacific Regional Fisheries Management Organization.

The organization will be responsible for the management of non-highly migratory species throughout the Pacific Ocean, including deepwater fisheries such as orange roughy and pelagic fisheries such as jack mackerel. The treaty includes strong text concerning illegal, unregulated and unreported fishing.

2. NOAA Fisheries Service has continued its efforts to combat illegal, unregulated and unreported (IUU) fishing.

On January 13, 2009, NOAA Fisheries Service released a report to Congress that identified six nations whose fishing vessels were engaged in IUU fishing in 2007 or 2008. NOAA Fisheries Service also played a leading role in the successful conclusion of the Agreement on Port State Measures to Prevent, Deter and Eliminate Illegal, Unregulated and Unreported Fishing.



3. NOAA Fisheries Service and the Senegal Ministry of Fisheries conducted a joint fisheries observer training in Dakar, Senegal, in February 2009. The training was in support of the Magnuson-Stevens Act requirement to reduce IUU fishing and assist in capacity building in developing countries.

4. NOAA Fisheries Service participated in the 2nd Joint Meeting of Tuna Regional Fisheries Management Organizations, an ongoing process that is working to improve conservation and management of tunas in all oceans. For example, under the International Commission for the Conservation of Atlantic Tunas (ICCAT), the North Atlantic swordfish stock is now fully recovered, a significant achievement. This success can be attributed to U.S. leadership and major sacrifices by U.S. fishermen to conserve the swordfish stock and the broader ecosystem.



Aquaculture

1. NOAA Fisheries Service launched an effort to develop a comprehensive national policy for sustainable marine aquaculture. The national policy, which will be completed in 2010, will build on the agency's significant work to date to safeguard U.S. coastal and ocean environments while enabling sustainable domestic aquaculture that adds to the U.S. seafood supply and supports important commercial and recreational fisheries. The Aquaculture Program also added regional coordinators in the Southwest, Southeast, and Northeast regions in 2009 to focus on issues related to fish and shellfish farming, hatcheries and stock enhancement, permitting, and policy.

2. Aquaculture research at the Northwest Fisheries Science Center focused on integrated culture systems for the production of important Northwest species such as sablefish, rockfish, and lingcod. Also, in response to the West Coast oyster seed emergency, the Northwest Fisheries Science Center worked with industry, university, and NGO partners to examine the effects of ocean acidification and changing ocean conditions on shellfish seed survival.

3. Significant advances in algal culture and use of probiotic bacteria in shellfish hatcheries occurred at the Northeast Fisheries Science Center's Milford Laboratory in 2009. The Northeast Fisheries Science Center is also working to quantify plankton, nutrient, benthic, and other environmental effects of shellfish culture at various types of shellfish operations in the Long Island Sound. These advances in shellfish science will assist both commercial shellfish and shellfish restoration initiatives.



Law Enforcement

1. An investigation by NOAA Fisheries Service Office for Law Enforcement and its state and federal partners resulted in a guilty plea for a man who fatally shot a pregnant Hawaiian monk seal in May 2009. Hawaiian monk seals are protected under the Endangered Species Act of 1973, with about 1,200 estimated alive today.

2. The owner of a Taiwanese-flagged fishing vessel caught fishing in the U.S. exclusive economic zone around the Commonwealth of the Northern Mariana Islands in August 2009 settled the case with the U.S. Government for \$500,000. The case resulted in a 2009 NOAA General Counsel Award for attorney Alexa Cole of NOAA's General Counsel for Enforcement and Litigation and Office for Law Enforcement Special Agents John Barylsky, Frank Giaretto, and Charles Raterman, and all of the Pacific Islands Division.

3. NOAA Fisheries Service Office for Law Enforcement helped bring to justice, in October 2009, a German national who smuggled more than 40 tons of coral into Portland, Oregon. Due to the threat of extinction, stony corals such as the ones in this case are protected by international law.

4. NOAA Fisheries Service Office for Law Enforcement donated almost 33,000 cans of tuna to the Community Food Bank of New Jersey in December 2009. The cans were seized from a Peruvian company that attempted to import tuna mislabeled as bonito, a different species of fish, into the U.S. This action was in violation of the Lacey Act, which prohibits the failure to accurately mark/label shipments of fish and wildlife.





Partnerships and Outreach

1.

1-1a. NOAA Fisheries Service collaborated with the Oregon Museum of Science and Industry (OMSI) to bring two new permanent exhibits, Science on a Sphere and Ocean Today Kiosk, to OMSI's Earth Science Hall. The six-foot Science on a Sphere uses computers and video projectors to display animated images of Earth's atmosphere, oceans, animal migration patterns, global warming trends, and hurricane paths, as well as the surface of the sun, planets, moon, and more. The Ocean Today Kiosk is a highly dynamic and interactive exhibit. The installations are part of a long-term partnership between OMSI and NOAA on the West Coast.



1a.

2. NOAA Fisheries Service Teacher at Sea Program has provided hands-on research experiences for teachers aboard NOAA ships. In 2009, 34 teachers completed research cruises and now make up a portion of over 550 alumni from around the country using science in the classroom, reaching thousands of students every year. The Teacher at Sea Program also published its fourth children's book, "Mr. Tanenbaum Explores Atlantic Fisheries on the NOAA Ship Henry B. Bigelow", which includes 40 pages of educational illustrations and text that focus on North Atlantic fisheries research.



2.



Seafood Inspection

1. NOAA Fisheries Service and the FDA agreed to combine resources on seafood inspection to improve food safety. The agreement formalizes the working arrangements between NOAA Fisheries Service Seafood Inspection Program and the FDA to reinforce each agency's efforts through cooperation and information sharing in the inspection of fish, fishery products, and establishments. The Seafood Inspection Program works with the seafood industry domestically and overseas to help it comply with FDA food regulations and meet industry specifications.

2. The Seafood Inspection Program announced a new website through which current and new customers may now request health certificates for export to the European Union. The new online system will streamline and simplify the process to request export certification services and inspection services.

3. The Seafood Inspection Program facilitated trade in U.S. seafood products by certifying the food safety of more than 50,000 shipments of seafood exported to Europe, China, Russia, and other major overseas markets. In June 2009, the program became the only U.S. Government program authorized to issue health certificates to accompany U.S. seafood exports to overseas markets.

4. Normalization of Trade with the Russian Federation to ensure trade in U.S. fishery products to Russia will continue. An agreement was signed in late 2009 outlining new requirements to certify the products were produced under safe and sanitary conditions. Seafood processing establishments must now be approved by the NOAA Fisheries Service program in order to export to Russia.

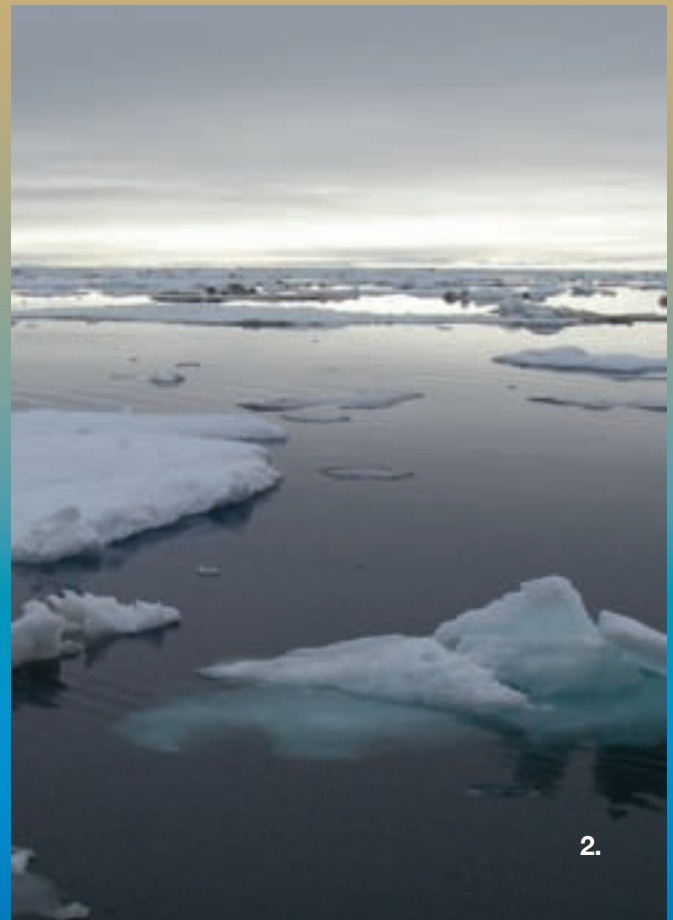
Alaska Region

1. NOAA Fisheries Service determined that spotted seals in and near Alaska are not currently in danger of extinction. Alaskan spotted seal populations total more than 200,000 seals, and NOAA Fisheries Service experts do not expect that fluctuations in annual sea ice will affect them enough to warrant listing. However, the agency has proposed to list as threatened a smaller population of 3,300 seals off China and Russia. The agency was petitioned to list four types of seals under the Endangered Species Act – ribbon, spotted, bearded, and ringed. NOAA Fisheries Service determined that ribbon seals should not be listed in 2008 and that spotted seals should not be listed in 2009. Decisions on the bearded and ringed seals are expected in 2010.

2. The 2009 Arctic Fisheries Management Plan is precautionary and ecosystem-based, designed to protect the Arctic from potential unregulated commercial fishing. The plan was unanimously recommended by the North Pacific Fishery Management Council and gathered broad support among the fishing industry, agency experts, tribal governments, conservationists, and other concerned individuals. It does not change subsistence harvest practices in the Arctic.



1.



2.



3. The Alaska Fisheries Science Center's Little Port Walter Marine Station in Southeast Alaska celebrated its 75th Anniversary on July 31, 2009. The Station is the oldest year-round biological station in Alaska. It supports research on marine resources, including freshwater and marine ecology of salmonids, life history and ecology of shellfish and juvenile rockfish, effects of oil pollution, growth of cold-water corals, regional oceanography, and stock enhancement aquaculture.

4. A groundbreaking survey of the Pribilof Canyon area in the eastern Bering Sea was completed in June 2009 using high-resolution multibeam echosounders. A diverse public-private partnership planned and executed the project as part of a long-term investigation of fish habitats in the Canyon and the potential impacts of ghost fishing by derelict or lost fishing gear. Overall, approximately 900 square nautical miles were surveyed at depths ranging from 200 to 2,200 meters.



Northwest Region

1. Final salmon recovery plans for Lake Ozette sockeye and Middle Columbia River Steelhead were completed in collaboration with local partners. These two plans make a total of five final recovery plans issued by NOAA Fisheries Service in the Pacific Northwest, for a total of 10 salmon or steelhead runs that now are covered by plans.

2. A record 720 adult sockeye salmon returned to Redfish Lake from captive broodstock releases. This was the highest number of adults returning since the early 1960s. The return of Redfish Lake sockeye salmon is attributed to the success of NOAA Fisheries Service Captive Broodstock Program, first implemented by Northwest Fisheries Science Center scientists in the early 1990s to rescue the fish gene pool from extinction.

3. Northwest Fisheries Science Center researchers have designed an acidification experimental facility. It provides water with controlled pH, CO₂, saturation state, temperature, and dissolved oxygen for multiple, simultaneous experiments on diverse organisms. The West Coast and North Pacific are highly susceptible to ocean acidification, which is caused by increased carbon dioxide in the water column. The acidification disrupts the calcification process affecting many shell-producing organisms that are often a cornerstone of marine food webs. The design will allow researchers to study susceptibility of key species to an acidified ocean environment, provide critical data for ecosystem modeling of changes in food web dynamics, and determine where ocean acidification has already had impacts on marine species.



4. NOAA Fisheries Service scientists and their collaborators found that a year-long closure in recreational razor clam digging

because of toxic algae could cost Washington State as much as \$22 million in lost sales to coastal counties. This groundbreaking report collected and analyzed data to reveal the economic impacts of harmful algal blooms on a major recreational fishery, and is part of a larger NOAA-funded effort to monitor and forecast blooms and prevent unnecessary or excessive harvest closures, reduce public health risks, and minimize economic impacts.



4.

5. Monitoring the effects of vessel traffic on Southern Resident killer whales

has been ongoing in the Puget Sound area. Northwest Fisheries Science Center scientists found that orcas increase the intensity of their calls and surface behavior as vessels get in close proximity. Scientists determined that the effort to raise their voices above the ambient noise levels could be causing the endangered Southern Resident killer whales to use up more energy during hunts for food. This study added to existing data that already prompted NOAA Fisheries Service to propose new rules to keep endangered orcas even further away from vessel traffic in Puget Sound.



5.

Pacific Islands Region

1. Coral reefs in the Republic of the Marshall Islands were restored by NOAA Fisheries Service personnel.

A response team consisting of a multiagency partnership moved and stabilized between 30 and 50 tons of debris. The debris was threatening to increase the injury to the reef through wave-generated impacts and abrasion. The team also reattached over 100 large coral colonies using underwater cementing techniques.

2. Three new monuments were established by Presidential Proclamation in the Pacific Islands Region.

The monuments joined Papahānaumokuākea in the Northwestern Hawaiian Islands as a major U.S. contribution to marine protected areas in the world, encompassing approximately 332,000 square miles or 50% of U.S. waters in the Western and Central Pacific Region. NOAA Fisheries Service has a key role in the implementation and co-management of these areas.

3. Barbless hook recreational fishery outreach

was conducted at the Fishing and Seafood Festival in Honolulu and shoreline fishing tournaments throughout Hawaii to convince anglers of the merits of using barbless circle hooks to reduce mortality of released fish. These activities were accomplished through cooperation with NOAA Fisheries Service, the State Ulua Tagging Project, and the Western Pacific Fishery Management Council's Partnering Project.





4.

4. The Pacific Island Region's Observer Program supported several observer trainings throughout the Western Pacific to help implement the Western & Central Pacific Fisheries Commission's Regional Observer Program. Program staff trained 104 observers in Fiji, Kiribati, Philippines, and Vietnam and two trainers from the observer programs in the Marshall Islands and Papua New Guinea.

5. TurtleWatch is a map providing up-to-date information about the thermal habitat of loggerhead sea turtles in the Pacific Ocean north of the Hawaiian Islands. It was created as an experimental product by the Pacific Islands Fisheries Science Center Ecosystem and Oceanography Division to help reduce interactions between Hawaii-based longline fishing vessels and loggerhead turtles. The TurtleWatch map displays sea surface temperature and ocean current conditions and the predicted location of waters preferred by the turtles.

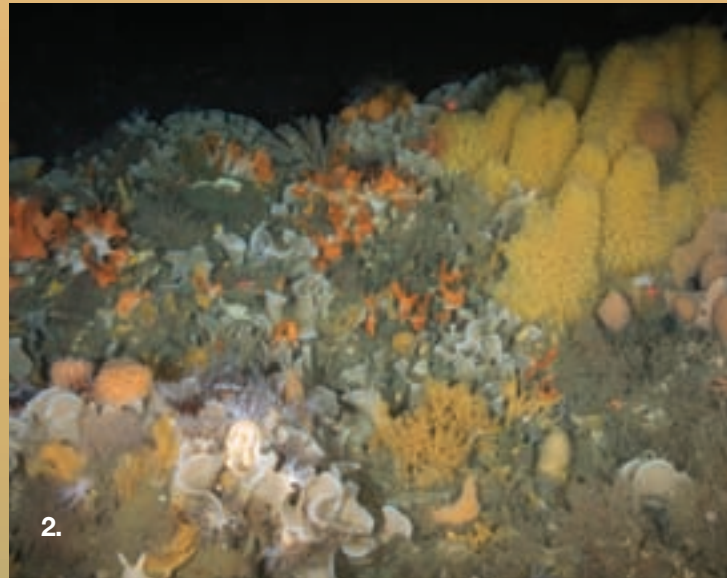


Southwest Region

1. The Inter-American Tropical Tuna Commission adopted tuna conservation measures in the eastern Pacific Ocean for 2009-2011. Bigeye and yellowfin tuna are subject to overfishing, so these conservation measures are essential to reduce the international fishing pressure on these resources. These measures include a bigeye tuna catch limit in the U.S. longline fishery and time-area closures in the U.S. purse seine fishery.

2. NOAA Fisheries Service detection of Vulnerable Marine Ecosystems (VMEs) has led the Commission on the Conservation of Antarctic Living Marine Resources to close 9307 km² of seabed to bottom fishing in the Atlantic Sector of the Southern Ocean. These fragile ecosystems are composed of benthic invertebrates that, among other things, significantly contribute to the creation of complex three-dimensional structure on the seafloor, and provide substrata for other organisms.

3. NOAA Fisheries Service scientists, fishermen, and academic collaborators have discovered five new “cryptic species” within previously described rockfish species from the U.S. west coast. Several of these cryptic species pairs are major components of local fisheries and, in all cases, the component species are split unevenly across management boundaries. Using genetic tools to improve taxonomy, scientists are able to improve management performance and ensure sustainable fisheries.





4. Scientists conducted an “Ecosystem Survey of Delphinus Species 2009” research cruise along the U.S. west coast to further understand abundance, stock structure, morphology, and life history parameters for the short- and long-beaked common dolphin. This research took a multidisciplinary approach and collected data to compare the life history and ecology of these two closely related species.

5. NOAA Fisheries Service along with 28 other parties finalized separate agreements to restore passage and reintroduce salmon and steelhead to over 400 miles of historic habitat from the headwaters of the Klamath River to the ocean. This represents the largest river restoration effort in U.S. history.



Southeast Region

1. The 2008-2009 North Atlantic right whale calving season was a record season; 39 new calves were observed on their only known calving grounds off the southeastern U.S. This record number gives managers hope that the population is slowly starting to reverse a previous downward trend. However, the number of entangled right whales documented in the southeast during the season also was the highest on record. Five whales were observed off the coasts of Georgia and Florida with fishing gear entanglements; twice the number of entangled whales usually seen in the southeast during the calving season. NOAA Fisheries Service and its partners from the Disentanglement Network successfully assisted all five whales, completely disentangling three and partially disentangling two.



2. NOAA Fisheries Service approved and implemented an individual fishing quota program for commercial Gulf of Mexico grouper and tilefish fishermen. The program is expected to afford more flexibility in where, when, and how these species are harvested, improve market conditions through a steadier supply of fresh fish, increase ex-vessel prices, improve safety at sea and working conditions, and reduce bycatch. The program started January 1, 2010, and was proposed by the Gulf of Mexico Fishery Management Council.



3. NOAA Fisheries Service established eight marine protected areas from North Carolina to Florida. Proposed by the South Atlantic Fishery Management Council, these areas range in size from 50 to 506 square nautical miles. Fishing for bottom dwelling snappers and groupers is prohibited within the marine protected areas to enhance the optimum size, age, and genetic structure of these vulnerable, long-lived species.



4-4a. NOAA Fisheries Service celebrated the commissioning of the NOAA Vessel PISCES and the dedication of the new Southeast Fisheries Science Center Pascagoula Laboratory on November 6, 2009. The Pascagoula Laboratory was destroyed by Hurricane Katrina in 2005. The new 53,000-square-foot facility boasts office space for approximately 104 scientists, a library, meeting rooms, and a new environmental laboratory. The PISCES, NOAA's latest state-of-the-art research vessel, is a cutting-edge platform for research and monitoring.



4.

5. Positive changes have occurred in coral reef fish density in the Florida Keys National Marine Sanctuary in the decade since Marine Reserves were established. The Florida Keys National Marine Sanctuary established 23 small no-take marine reserves in 1997 from Key Largo to Key West. NOAA Fisheries Service scientists monitoring reef fish populations within the protection of these areas in the Florida Keys National Marine Sanctuary have noted significant increases in reef fish populations over a 10-year period.

6. Scientists from NOAA Fisheries Service captured a giant squid (*Architeuthis* sp.) while conducting research off the Louisiana coast in the Gulf of Mexico. The giant squid, measuring just over 19½ feet long and 103 pounds, was caught at a depth of more than 1,500 feet. This is the first time a giant squid has been captured during scientific research and is only the second giant squid collected from the waters of the Gulf of Mexico.



4a.



5.



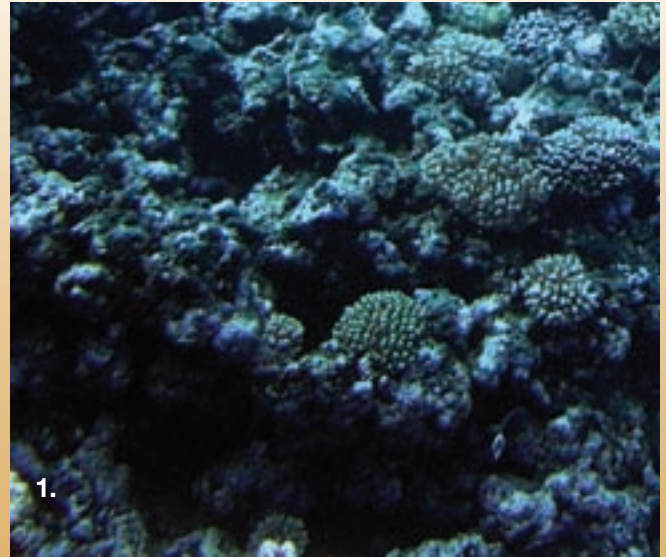
6.

Northeast Region

1. The first high-resolution sonar map of the Hudson Canyon bottom reveals surprising features. Using an autonomous underwater vehicle called Eagle Ray, researchers from the Northeast Fisheries Science Center, Rutgers University, and the National Institute for Undersea Science and Technology have produced the first high-resolution sonar maps of the bottom of Hudson Canyon off New Jersey. The images show crater-like depressions several hundred feet across and tens of feet deep, as well as hard-topped mounds resembling deepwater coral habitats found elsewhere in the world. The maps also show steep slopes like those that support sponges and soft corals in canyons off New England, and reveal expanses of hummocky terrain created by long-term burrowing by golden tilefish, an important commercial fish species.

2. Human impacts and environmental factors are changing the Northwest Atlantic Ecosystem. Warming of coastal and shelf waters has led to northward shifts in distribution of some fish species and changes to a warmer-water fish community in the Northwest Atlantic Ecosystem, according to a new report by NOAA Fisheries Service researchers. The 2009 Ecosystem Status Report also points out the need to manage the waters off the northeastern coast of the U.S. as a whole rather than as a series of separate and unrelated components.

3. Researchers surveyed the Mid-Atlantic Ridge looking for new forms of marine life, clues to deep-sea communities. In summer 2009, a NOAA-led international team of researchers surveyed the Mid-Atlantic Ridge halfway between Iceland and the Azores to determine its biodiversity and perhaps discover new species and clues to deep-sea food webs. The project is one of 14 field programs that are part of the Census of Marine Life, a 10-year global study of the abundance, distribution, and diversity of marine life in the world's oceans. The project is part of a 16-nation effort to determine if the underwater mountain chain in the middle of the North Atlantic Ocean has its own distinct animal communities.





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4. Two catch share programs were implemented for tilefish and scallops in 2009 in the Northeast Region and another is about to be approved for groundfish.

In the groundfish fishery, an expanded sector program is planned for 2010, which will allow fishermen to choose whether to continue to fish under days-at-sea and area closures or join one of 17 newly formed or two existing sectors. Amendment 3 to the Northeast Skate Complex Fishery Management Plan (FMP) was approved by the New England Fishery Management Council in April. The Skate FMP was first implemented in 2003 to manage seven skate species found in the Northeast Region, and rebuild overfished stocks.



4.

5. The Northeast Regional Office administered more than \$35 million in fishery resource disaster funds in 2009.

NOAA Fisheries Service approved state plans for spending \$5 million in federal disaster aid to assist shellfish industries in Massachusetts, Maine, and New Hampshire affected by a 2008 harmful algal bloom outbreak. The office also handled the distribution of funds to Maryland and Virginia, which each received nearly \$15 million in federal fishery disaster assistance following a declaration that the Chesapeake Bay soft and peeler blue crab fishery had suffered a commercial fishery failure.

6-6a. The Right Whale Ship Strike Reduction Rule is designed to reduce the likelihood of deaths or serious injuries to these endangered whales that result from collisions with vessels. Due in large part to the hard work of the Northeast Region's Protected Resource Division, mandatory speed restrictions of 10 knots or less are required for all vessels over 65 feet in length in areas and during times when right whales are likely to be present. This regulation will be in effect until December 9, 2013.



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