

Protecting, Sustaining, Rebuilding

N O A A F I S H E R I E S 2 0 0 1 R E P O R T

Our Nation's Living Oceans



U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL MARINE FISHERIES SERVICE



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CONSERVING OUR NATION'S LIVING MARINE RESOURCES

NOAA's National Marine Fisheries Service (NOAA Fisheries) is entrusted with ensuring the health, productivity, and diversity of our nation's ecologically and culturally valuable living ocean heritage—fish, sea turtles, whales, and countless other marine species. At the same time, we are charged with maximizing the benefits of these resources to all Americans and balancing multiple needs and interests, including commercial, recreational, and subsistence fishing; the historical importance of these resources to communities and tribes; aquaculture; and marine observation and research. For all of these reasons, we must ensure the fundamental sustainability of our living marine resources.

The Sustainable Fisheries Act of 1996 (SFA) changed NOAA Fisheries' legislative mandates in several significant aspects by requiring the agency and the eight regional fishery management councils to specify objective and measurable criteria to end overfishing, rebuild overfished stocks, develop measures to reduce bycatch, and establish essential fish habitat. We have devoted a tremendous amount of effort since then to implementing the new SFA standards.

As the foundation of these efforts, NOAA Fisheries is responsible for providing the best scientific information to enhance marine conservation and management decisions. Our most important asset is our people. Their competence,

creativity, commitment, and diversity are vital to fulfilling our stewardship responsibility. Our scientists conduct high-quality research in a broad range of disciplines and contribute to the design of innovative management approaches that are enhanced by technological improvements in monitoring and law enforcement.



William T. Hogarth, Ph.D.
*Assistant Administrator
for Fisheries*

This report comes at a critical junction in the evolution of federal marine fisheries stewardship. It records our activities and successes of the past fiscal year, the impacts we have had on our customers and constituents, and our contribution to the nation's economy. It also chronicles regional and national challenges and future concerns, the changes

we are making to meet those challenges, and our aspirations for the future of NOAA Fisheries and the conservation and management of our living marine resources.

Evaluating Our Business Processes

Our business processes were intensely examined during 2001. NOAA Fisheries and the councils faced significant legal and other challenges to our resource management decisions. Over the last several years, a series of internal and external review panels have evaluated NOAA Fisheries' expanding science and management responsibilities and the fiscal and human resources available to fulfill them. Their reports

have provided valuable recommendations for significantly improving how we go about meeting these challenges.

We have begun implementing their recommendations, and we are determined to continue to make rapid progress in fulfilling our responsibilities. For example, we have streamlined our administrative procedures by re-delegating responsibilities to our regional offices. We have also provided more specific and intensive support to the councils for fulfilling environmental assessments and other regulatory requirements. Furthermore, we are using electronic media more effectively and creatively, to improve public participation in our management processes and use of our scientific and technical products.

Meeting Present and Future Challenges

Many challenges remain. Over the next five years, we will concentrate on achieving five agency objectives: (1) developing better, more timely science-based information for decision making; (2) improving stock assessments and the ways we determine yields; (3) reducing bycatch; (4) reducing overcapacity and overfishing; and (5) improving tools, facilities, and human capital to effectively use our funding. Future reports will reflect the progress we intend to make in each of these areas.

NOAA Fisheries must be more transparent, timely, and effective in what we do and how we reach out to you—our constituents and partners. Meaningful communication—the open and honest exchange of information—is essential to the development and support of successful stewardship. We believe an informed and involved public will help us reach attainable and measurable objectives.

With our stakeholders' support and the assistance of our dedicated workforce, and with the commitment of the Administration and Congress, we will continue to work to improve the way we conduct our daily business. We welcome your comments on how we can improve our relationships with you and our service to the nation. Thank you.

William T. Hogarth

MARINE FISHERIES FUEL THE U.S. ECONOMY

More than one-fifth of the world's most productive marine waters lies within the U.S. Exclusive Economic Zone. The value of both commercial and recreational fishing is significant to the U.S. economy, to thousands of private firms, and to individuals, families, and communities.

- More than 170,000 people and 123,000 commercial fishing vessels are employed in the United States, the world's fifth largest seafood-producing country.
- In 2001, U.S. commercial fishermen landed 9.8 billion pounds of fish and shellfish, valued at \$3.3 billion (ex-vessel).
- The industry contributed an estimated \$28.6 billion (in value added) to the U.S. gross national product (GNP).
- Recreational fishing added another \$25 billion to the GNP.

REGIONAL COMMERCIAL LANDINGS IN 2001

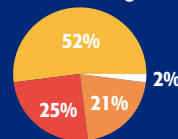
Region	Pounds (thousands)	Dollars (thousands)
New England	635,162	\$646,447
Middle Atlantic	217,975	\$172,503
Chesapeake	617,244	\$174,968
South Atlantic	199,554	\$176,488
Gulf of Mexico/Puerto Rico	1,609,038	\$806,359
West Coast	1,137,333	\$317,221
Alaska	5,036,338	\$869,885
Great Lakes	18,818	\$17,844
Western Pacific	32,647	\$64,494

TOP 10 COMMERCIAL SPECIES LANDED IN 2001

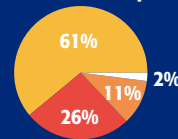
Top Ten by Quantity			Top Ten by Value	
Rank	Species	Pounds (thousands)	Species	Dollars (thousands)
1	Pollock	3,188,460	Shrimp	\$568,547
2	Menhaden	1,741,430	Crabs	\$381,667
3	Salmon	722,832	Lobsters	\$275,728
4	Cod	504,922	Pollock	\$236,923
5	Hakes	497,152	Salmon	\$208,926
6	Flounders	352,363	Tunas	\$207,300
7	Shrimp	324,481	Scallops	\$175,416
8	Tunas	331,100	Clams	\$161,992
9	Herring	300,488	Cod	\$150,157
10	Crabs	272,246	Halibut	\$115,169

RECREATIONAL FISHING STATISTICS FOR 2001

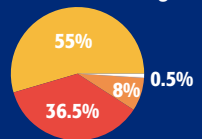
12.1 Million Anglers



86.8 Million Trips



444.2 Million Fish Caught



■ Puerto Rico ■ Pacific ■ Gulf of Mexico ■ Atlantic (w/o Alaska)

Note: Data for the Western Pacific were unavailable at the time of this report's publication.

REGIONAL ACTIVITIES

Overall, the number of overfished stocks (whose biomass abundance is below a prescribed threshold) in commercial and recreational fisheries varies from region to region, as does the number of stocks being overfished (their harvest rate is above a prescribed threshold). Because of the lengthy period they need to mature and reproduce, many long-lived species will require rebuilding schedules of up to decades. NOAA Fisheries has initiated various programs and activities in the five regions that are already yielding measurable results for many fisheries. PHOTO: ALLEN SHIMADA, NMFS

**PROTECTION
EFFORTS YIELD
MEASURABLE
RESULTS**





NORTHEAST

NORTHEAST REGIONAL OFFICE

Protection Efforts Advanced for Large Whales

On June 8, 2001, northern right whale #1102 (dubbed “Churchill”) was first spotted off Cape Cod entangled in commercial fishing line. Over the summer, NOAA Fisheries scientists collaborated in six attempted disentanglements of this critically injured animal. Unfortunately, a serious infection worsened as the line cut deeper into Churchill’s upper jaw. On September 19, 2001, the satellite telemetry signal from a buoy attached to Churchill during the early phase of the rescue operation stopped. Churchill has not been spotted since, and is presumed to have died.

Despite the loss of Churchill, the rescue operation accomplished the first successful sedation of a free-swimming large whale. The radio buoy provided the longest uninterrupted satellite track (more than 4,000 miles over 100 days) from an adult male of this endangered population by an unprecedented international team of experts from a dozen public agencies and private organizations.

Significant progress was made to protect North Atlantic right whales, which are among the most critically endangered large whales. Protective management measures adopted in 2001 included establishing a mandatory ship reporting system, designating critical habitat, revising a right whale recovery plan, instituting dynamic and seasonal area closures, and requiring broad-based gear modifications in the fishery management plans (FMPs) for lobster, monkfish, dogfish, and Northeast multispecies fisheries.

An international team of experts tries to free “Churchill,” a northern right whale entangled in commercial fishing line. PHOTO: © CENTER FOR COASTAL STUDIES (MA)





Students from the NOAA Fisheries Minority Serving Institutions Program join scientists from the Northeast Fisheries Science Center and Woods Hole Oceanographic Institution in an abandon-ship drill aboard the NOAA ship *ALBATROSS IV*. PHOTO: JEFFREY TAYLOR, LTJG, NOAA

Real-time Quota Monitoring Increased

In-season quotas consistent with the rebuilding goals of an FMP have become an integral component of fisheries management. Quota monitoring involves tracking reported catch landings against set quota levels by species, area, and/or states. Additionally, the setting of in-season adjustments to fishing regulations (e.g., changes in trip limits) requires constant monitoring of landings and at-sea fishing activity in the affected management area. The number of in-season trigger points has substantially increased as annual quotas are reduced or are broken into seasonal and state allocations.

Groundfish Limited-access Permits Retired

Between 1996 and 1998, a \$25 million federal buy-back program eliminated 79 of the most fishing-intensive vessels from the New England groundfish fleet, and permanently retired 463 other permits held by the fleet. In FY 2001, an additional \$10 million was appropriated to reduce excess fishing capacity in the multispecies groundfish fishery. Fishermen submitted bids totaling more than \$99 million to voluntarily retire inactive federal limited-access permits. The buy-back eliminates the potential of tripling fishing pressure should all the permits become active again.

Golden Tilefish Management Plan Approved

NOAA Fisheries implemented the nation's newest FMP in 2001 to prevent overfishing of golden tilefish and rebuild the resource within 10 years. A constant harvest strategy allows just under 2 million pounds each fishing year, unless adjusted through the Mid-Atlantic Fishery Management Council. A key management measure is the three-tiered, limited-access program that considers catch history (dating from June 1993) and current participation in the fishery. Qualified vessels operate under a limited-access permit and are restricted to longline gear only.



NEW ENGLAND FISHERY MANAGEMENT COUNCIL

Scallops Rebuild Under Innovative Program

Following the successful 1999 area-based access program for Georges Bank, where scallop vessels were allowed temporary access to areas closed to the groundfish fishery, two closed areas were reopened for 2001–2003. The combined effect of area closures, an extraordinary abundance of spawning-age scallops, and fishing effort reductions all contributed to record abundance levels on Georges Bank. Net revenues to the fishery are expected to increase by \$212 million by 2004.

MID-ATLANTIC FISHERY MANAGEMENT COUNCIL

Summer Flounder Fishery Rebounds

Before new measures were set in 1988, summer flounder abundance was in steady decline, and fishing mortality was excessively high. Greatly reduced fishing pressure helped spawning stock biomass increase sevenfold from 1989 to 2000. The stock had been rebuilding under a quota system since the 1993 season. Stock abundance almost doubled to 80 million pounds between 1992 and 1999, and the fishery was declared no longer overfished in 2001. For the 2002 season, NOAA Fisheries announced a 36 percent harvest quota increase of 6.4 million pounds over 2001.

MIXED NEWS FOR NORTHEAST GROUND FISH



NOAA's Dana Palmer and Scott Gudes sort Gulf of Maine cod, whose biomass has nearly doubled in the past four years.

PHOTO: NORTHEAST FISHERIES SCIENCE CENTER

For the first time in many years, some New England fish stocks are approaching sustainable fishery levels. Assessments from the Northeast Fisheries Science Center confirm an increasing trend in biomass and declining trends in exploitation rates, and the long-term outlook generally is favorable.

- American plaice biomass increased by 14 percent from 1999 to 2000 and is predicted to continue under a number of management scenarios.
- In 2000, sea scallops were nearly at or above biomass targets.
- The Gulf of Maine haddock stock, although still overfished, has dramatically increased from very depressed abundance in the early 1990s.
- The Gulf of Maine cod-spawning biomass has nearly doubled in the past four years.
- The Acadian redfish resource, although still overfished, has shown some significant increases, with estimates of total stock biomass more than tripling since 1993.

Reports from several of the major fishing ports in New England mirror the status of groundfish stocks. In 2001, Atlantic cod landings in Gloucester, Boston, and New Bedford totaled 1.4 million pounds—400,000 pounds more than in the same time period as 2000. Haddock (1.1 million pounds) and yellowtail flounder (1.7 million pounds) topped 2000's nine-week total by 100,000 and 200,000 pounds, respectively.

Several groundfish stocks continue to be in a serious state of decline. The 2002 report will describe additional stringent conservation and management measures that will be required.

NOAA Fishery Research Vessels Go Digital

In March 2001, the *ALBATROSS IV* and *DELAWARE II* were outfitted with a new, user-friendly, real-time Fisheries Scientific Computer System (FSCS) that will give researchers immediate access to fisheries survey data. Jointly developed by NOAA Fisheries and NOAA's Office of Marine and Aviation Operations, the system electronically records survey and biological collection data and transmits the data in near-real-time to the Woods Hole Laboratory, thus reducing the time between collection and analysis and improving data quality.

NORTHEAST FISHERIES SCIENCE CENTER



Cooperative Fishing Industry Research Funded

The Northeast Fisheries Science Center has been working in concert with the fishing industry to conduct cooperative research projects that build upon stakeholder expertise while maintaining scientific validity. This collaboration is resulting in better integration of management information needs with research efforts and is improving working relationships with stakeholders. Eleven research projects were funded in 2000 and seven in 2001 to support bycatch reduction studies, industry-based surveys, and fishing gear impact studies on habitat. This regional effort is expanding to a nationwide program.

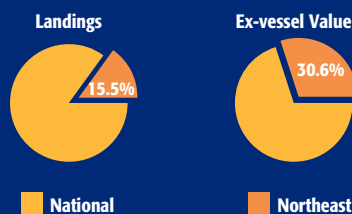
The Fisheries Scientific Computer System improves efficiencies in the collection of survey data aboard NOAA's fisheries research vessels. PHOTOS: ALLEN SHIMADA, NMFS (UPPER); NORTHEAST FISHERIES SCIENCE CENTER (LOWER)



STATUS OF NORTHEAST FISHERY STOCKS IN 2001

"Overfishing" Criteria		
Unknown	Without Overfishing	With Overfishing
7	30	14
"Overfished" Criteria		
Unknown	Not Overfished	Overfished
4	27	16
Regional Commercial Landings		
Pounds (thousands)	1,470,381	
Dollars (thousands)	\$993,918	

Regional vs. National Statistics





**SOUTHEAST
REGIONAL
OFFICE**

Caribbean Field Office Established

The region has been subjected to intensive habitat degradation that is threatening its tourism- and fishing-based economies. The Habitat Conservation Division's first field office opened in Cabo Rojo, Puerto Rico, to collaborate with local stewardship efforts for essential fish habitats in Puerto Rico and the U.S. Virgin Islands, including coral reefs, seagrasses, and coastal wetlands. A coral reef expert was added through NOAA's Coral Reef Initiative to serve as the focal point for coral reef issues.

Spanish and King Mackerel Stocks Rebuilding

Overfishing of the migratory stocks of South Atlantic and Gulf of Mexico Spanish mackerel and South Atlantic king mackerel was detected during the mid-1980s. In concert with the South Atlantic and Gulf of Mexico Fishery Management Councils, the Regional Office instituted regulations addressing a combination of contentious issues. These included restrictive catch, size, trip, and bag limits; allocation of catch quotas between commercial and recreational fishers; and a gillnet ban in Florida state waters. In 2001, both Spanish mackerel stocks had recovered to sustainable levels, and the Gulf of Mexico king mackerel stock was almost rebuilt. The Atlantic migratory stock of king mackerel has never been overfished due to proactive management.

Conservation of Northern Right Whales Enhanced

Collision with ships and entanglement in fishing gear are impairing efforts to recover northern right whales. The Regional Office coordinates daily reconnaissance flights for sighting right whales on their southeastern calving grounds. It also coordinates the Southeast Recovery Plan Implementation Team, which includes the Navy, Coast Guard, Army Corps of Engineers, and commercial maritime associations to reduce potential collisions. When whales are sighted in the area, recommendations for whale-safe vessel operations are transmitted through the Coast Guard's Broadcasts to Mariners and NOAA Weather Radio. In a positive development, 30 calves were counted off Florida and Georgia by the end of the 2001 calving season—more than the number observed in the previous three years combined.



Recreational fisherman displays King and Spanish mackerel caught offshore of Miami, Florida. PHOTO: WILLIAM FOLSOM, NMFS

The Marine Recreational Fishery Statistics Survey provides coverage of saltwater sport fishing from private/rental boats, charter and head boats, and the shore. PHOTO: WILLIAM FOLSOM, NMFS





Under test conditions, turtle excluder devices certified by NOAA Fisheries have successfully released as much as 97 percent of captured sea turtles.

PHOTO: IAN WORKMAN, NMFS

Red Snapper Rebuilding Plan Proposed

The red snapper fishery has been under stringent management measures since the late 1990s. A stock rebuilding plan proposed in 2001 provides (1) a 9.12-million-pound quota, and (2) bag limits, size limits, and commercial and recreational seasons. This plan, which will remain in effect until 2005, will provide stability and predictability in this important fishery for both industry and consumers.

Success of Turtle Excluder Devices Confirmed

The unintended capture and drowning of sea turtles through shrimp trawling in the Gulf of Mexico and South Atlantic have been contentious issues since the 1970s. Turtle excluder devices (TEDs) were originally developed by Center scientists to free captured sea turtles from actively fishing shrimp trawl nets. Today, more than 20 TED models are employed in the shrimp fishery, and gear specialists at NOAA Fisheries' Pascagoula (MS) Laboratory test 5–10 new prototypes every year and certify successful designs for use. Before the full implementation of TED requirements, annual sea turtle mortality was estimated at 5,000–50,000 for loggerhead turtles and 500–5,000 for Kemp's ridley sea turtles. NOAA Fisheries-certified TEDs have successfully released as much as 97 percent of captured sea turtles under test conditions.

**SOUTHEAST
FISHERIES
SCIENCE
CENTER**



Impacts on Essential Fish Habitat Examined

One of the greatest threats to the long-term viability of commercial and recreational fisheries is the continuing loss and degradation of aquatic habitat. Many high-value species commonly inhabit flooded salt marshes in the northern Gulf of Mexico, which has suffered extensive wetland loss. The Center's essential fish habitat research focuses on studies of the use of fish traps, measuring and modeling of flooded marsh habitats, and cooperative efforts to restore and monitor important fishery habitats. Through FY 2001, Galveston Laboratory staff examined the biology of red drum, shrimp, and blue crab in different estuarine habitats. They concluded that seagrass beds support the highest productivity, followed by salt marshes.

Fish and Habitat Surveyed in Tortugas Region

Responding to the Gulf of Mexico Fishery Management Council's Tortugas 2000 Amendment, which would create a marine reserve off southwestern Florida, the Center conducted a baseline census in the Dry Tortugas National Park and on Tortugas Bank. Center scientists completed 1,122 dives and, when combined with 1,036 dives during 1999, recorded data for more than 230 fish species and dozens of corals and sponges. This first census indicated a considerable decline in the abundance and size of snapper and grouper from presumed historical levels. The dive team also discovered unique areas of luxuriant coral reefs, and isolated pockets of high fish abundance and habitat richness in unmapped areas. Population assessments were completed for the commercially important species and will serve as the baseline for assessing future changes resulting from the creation of a Tortugas marine reserve.

A 2001 Southeast Fisheries Science Center baseline census of the Dry Tortugas National Park and Tortugas Bank discovered unique areas of luxuriant coral reefs and isolated pockets of high fish abundance and habitat richness in unmapped areas. PHOTOS: SOUTHEAST FISHERIES SCIENCE CENTER; © TYLER SWANSON (INSET)



U.S. Census Bureau Aids Study of Fishing Communities

The Magnuson–Stevens Act’s National Standard 8 requires that regional fishery management councils consider impacts to fishing communities when writing or amending fishery management plans. In 2001, the South Atlantic Council’s staff anthropologist secured a U.S. Census grant to gather baseline data about members of the fishing community who change residence more than once every six months, and thus are not counted. The study serves both the Council and the Census Bureau by generating social data that can be incorporated into existing or future fishery management plans and by providing insight into improving strategies for better statistical enumeration of the U.S. population.

SOUTH ATLANTIC FISHERY MANAGEMENT COUNCIL

Moratorium Declared for Recreational Charter Vessel/Headboat Fishery

On March 29, 2001, the Gulf Council implemented a three-year moratorium on the eligibility for and issuance of new charter vessel and headboat permits in the recreational for-hire fisheries for reef fish and coastal migratory pelagics (Spanish and king mackerel, cobia, dolphin, and wahoo). The moratorium was created to moderate short-term future increases in recreational fishing intensity and to attempt to stabilize fishing mortality rates while the Council considers a more comprehensive program to limit fishing pressures.

GULF OF MEXICO FISHERY MANAGEMENT COUNCIL

International Queen Conch Initiative

During the summer of 2001, more than 20 countries and international organizations participated in the Second International Queen Conch Conference. The Council serves as the Initiative’s coordinating mechanism, since it is also responsible for the Western Central Atlantic Fishery Commission’s Queen Conch Working Group.

CARIBBEAN FISHERY MANAGEMENT COUNCIL

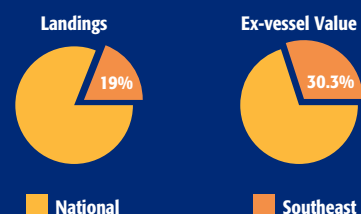
Mapping Coral Reef Habitat

The Council is coordinating the mapping of the region’s first marine reserve, southwest of St. Thomas in the U.S. Virgin Islands, established for the protection of extensive coral reef habitat. This reserve—Hind Bank Marine Conservation District—is an important component of the management strategy for protecting ecosystems and associated marine life, particularly spawning reef fish.

STATUS OF SOUTHEAST FISHERY STOCKS IN 2001

"Overfishing" Criteria			
Not Defined	Unknown	Without Overfishing	With Overfishing
20	247	49	19
"Overfished" Criteria			
Not Defined	Unknown	Not Overfished	Overfished
54	240	14	25
Regional Commercial Landings in 2001			
Pounds (<i>thousands</i>)	1,808,592		
Dollars (<i>thousands</i>)	\$982,847		

Regional vs. National Statistics for 2001





**SOUTHWEST
REGIONAL
OFFICE**

Sacramento River Fish Ladder Dedicated

The Anderson–Cottonwood Irrigation District owns and operates a barrier on the Sacramento River that diverts water from the heart of the spawning habitat of endangered winter-run Chinook salmon. The Regional Office played a key role in designing a major fish screen and two fish ladders, the largest in California. The screen will save millions of tiny Chinook fry, and the ladders will allow hundreds of adult fish to reach upstream spawning habitat. The facility, which includes public underwater fish-viewing windows, opened on June 15, 2001.

Pacific Sea Turtle Conservation Area Established

In October 2000, a NOAA Fisheries biological opinion determined that the California/Oregon drift gillnet fishery was jeopardizing leatherback and loggerhead sea turtle populations. The opinion established drift gillnet time-and-area closures to protect these populations, which were implemented in 2001. It also initiated a Western Pacific conservation and education program to protect nesting females and beach habitat, and to address incidental capture in local fisheries.



A new fish screen and two fish ladders on the Sacramento River will save millions of tiny Chinook salmon fry and allow hundreds of adult fish to reach upstream spawning habitat. PHOTO: SOUTHWEST REGIONAL OFFICE

A recent amendment to the Pelagic Fishery Management Plan requires observers to monitor the incidental bycatch of seabirds, such as this masked booby.
PHOTO: JIM McCALLUM, NMFS



ETP Dolphin Protection Measures Affirmed

Over the past decade, the NOAA Fisheries tuna/dolphin team worked on key milestones leading up to the Agreement on the International Dolphin Conservation Plan, its authorizing act, research and monitoring programs, and U.S. regulations. These actions have resulted in (1) a precipitous drop in Eastern Tropical Pacific (ETP) dolphin mortality—from 133,000 dolphins a year to fewer than 2,000 a year; (2) an international mechanism for setting dolphin mortality limits, tracking mortalities, and holding fishery participants accountable if quotas are exceeded; and (3) a system for tracking and verifying tuna catches.

Consultation Tracking Project Implemented

A pilot interactive geographic information system (GIS) was unveiled in 2001. The Web-based program links spatial data to databases for endangered species and essential fish habitat consultations conducted by NOAA Fisheries. Regional staff can specify GPS coordinates, showing the locations of proposed development, and can call up portable document format (PDF) files containing relevant data from the Administrative Record Database. The resulting composite display integrates all of the available information in a visual setting, facilitating cumulative impact determinations and faster agency response times.

Observers Required for Hawaii Longline Fishery

A recent amendment to the Pelagic Fishery Management Plan requires observers for the Hawaii-based pelagic longline fishery for billfish and tunas. Observers monitor protected species that interact with the fishery, such as loggerhead, leatherback, and

green sea turtles; Laysan albatross; and black-footed albatross. These activities are expected to form the basis for new management measures that reduce the incidental bycatch of these important species.

Hawaii Longline Ban Lifted

Region staff completed an Environmental Impact Statement and Biological Opinion on the Hawaii-based longline fishery. This satisfied a court order that had resulted in severe restrictions on the commercial fleet, and allowed a reopening of the tuna longline fishery—but with a minimum-depth requirement for setting baited gear at 328 feet to avoid hooking sea turtles and seabirds. A ban on fishing for swordfish remains in place.

Northwestern Hawaiian Islands Cleaned Up

As part of NOAA Fisheries' \$25 million, three-year coral reef conservation program, an interagency team led by scientists from the Center's Honolulu Laboratory spent three months at sea in the Northwestern Hawaiian Islands removing derelict fishing gear from fragile coral reefs and coastal waters. Joining the effort were NOAA's National Ocean Service, the Ocean Conservancy, the U.S. Coast Guard, Hawaii Sea Grant, the U.S. Fish and Wildlife Service, and other state and private partners. Teams of divers removed more than 70 tons of gear in seven expeditions, using three chartered

**SOUTHWEST
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An interagency team led by scientists from the Southwest Fisheries Science Center spent three months at sea in the Northwestern Hawaiian Islands removing derelict fishing gear from fragile coral reefs and coastal waters. PHOTO: SOUTHWEST FISHERIES SCIENCE CENTER





vessels and NOAA's *TOWNSEND CROMWELL*. The estimated 100-plus tons of "lost gear" remaining in these waters threaten Hawaiian monk seals, sea turtles, seabirds, and other endangered wildlife.

Coral Reef Study Sites Established

In May 2001, Coral Reef Ecosystem Investigations received \$4.8 million to assess and monitor coral reef ecosystems of the U.S. Pacific Islands. Activities, in partnership with scientists from the NOAA–University of Hawaii Joint Institute for Marine and Atmospheric Research, included mapping benthic habitat and characterizing essential fish habitat, as well as new field studies to evaluate the effectiveness of marine protected areas. Study sites were established at French Frigate Shoals, Maro Reef, Lisianski Island, Pear and Hermes Atoll, Midway Atoll, and Kure Atoll.

Santa Cruz Fisheries Laboratory Opened

On October 17, 2001, Commerce Secretary Norman Mineta opened a \$19.4 million state-of-the-art fisheries laboratory in Santa Cruz, adding to a growing research and academic community surrounding Monterey Bay. The 53,400-square-foot facility replaces the closed Tiburon Laboratory and will also be home to the new National Science Center for Marine Protected Areas. Laboratory staff members are focusing on two major groups of Pacific Coast fishes: groundfish and Pacific salmon.

As part of the International Dolphin Conservation Program Act, Southwest Fisheries Science Center scientists surveyed dolphin stocks and seabirds from the flying bridge of NOAA's *DAVID STARR JORDAN*. PHOTOS: SOUTHWEST FISHERIES SCIENCE CENTER



Eastern Tropical Pacific Dolphin Survey Completed

In December 2000, the NOAA ships *DAVID STARR JORDAN* and *McARTHUR* completed their third field season devoted to assessing dolphin stocks associated with yellowfin tuna and taken incidentally by the purse-seine fishery. As part of the International Dolphin Conservation Program Act, the Center assessed the population size of potentially affected dolphins and investigated whether the carrying capacity of their ecosystem has shifted over time. The study's findings will be central to the Secretary of Commerce's decision that determines the definition of "dolphin-safe" tuna.

Coral Reef Ecosystem FMP Finalized

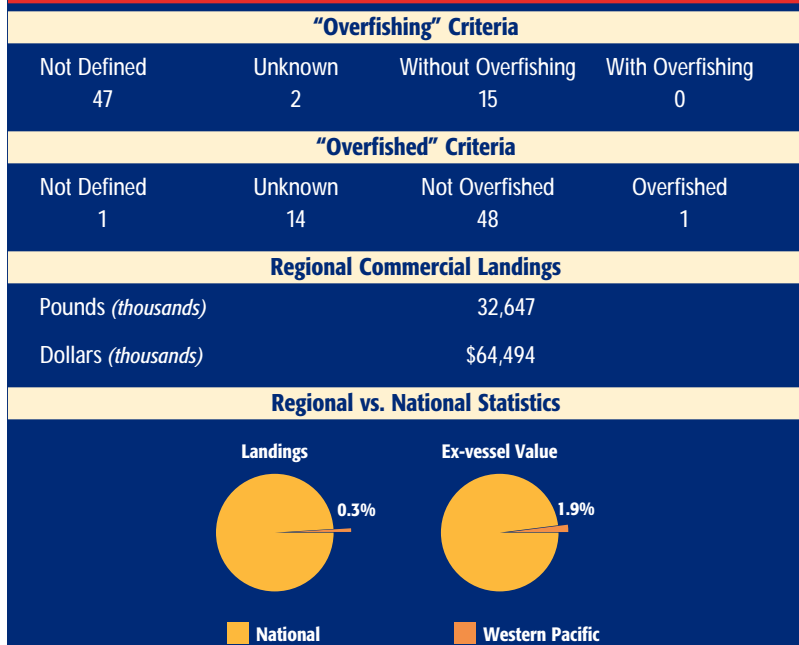
In 2001, the Council finalized a fishery management plan for Coral Reef Ecosystems of the Western Pacific Region. This is the first ecosystem-based FMP developed in the United States. It follows the NOAA Fisheries Ecosystems Principles Advisory Board's recommendation to Congress that all FMPs be developed as "fisheries ecosystem plans." The plan and accompanying Draft Environmental Impact Statement (DEIS) were developed over five years, with 30 public scoping hearings and meetings throughout the region. This DEIS received the Environmental Protection Agency's highest rating.

**WESTERN
PACIFIC
FISHERY
MANAGEMENT
COUNCIL**

Changes Recommended for Pelagic FMP

In 2001, the Council recommended regulatory changes to the pelagic fishery management plan that would prohibit vessels over 50-feet long from targeting pelagic species in the U.S. Exclusive Economic Zone within 50 miles of American Samoa, implement measures to reduce the incidental catch of seabirds in the Hawaii longline fishery, and require measures to reduce the incidental catch of sea turtles in the pelagic fisheries.

STATUS OF WESTERN PACIFIC FISHERY STOCKS IN 2001





**NORTHWEST
REGIONAL
OFFICE**

Salmon Recovery Efforts Expanded

Wild salmon populations have dramatically declined due to habitat loss, extensive hydropower systems, overharvesting practices, increased hatchery production, and changes in ocean conditions. Under the Endangered Species Act (ESA), NOAA Fisheries is responsible for developing recovery plans and working with other partners to prevent and reduce the impacts of human activities. In the late 1990s, the agency reviewed all West Coast salmon populations and subsequently listed 26 of them as endangered or threatened. Salmon recovery will take many years and requires the cooperative efforts of federal, state, local, tribal, and private entities. In 2001, key accomplishments included the following:

Columbia Basin-wide Salmon Recovery Strategy Developed by NOAA Fisheries and several other federal agencies, this strategy is a comprehensive, long-term approach to restore salmon and steelhead throughout the Columbia–Snake River Basin. It specifies actions to be taken by federal, tribal, state, and local governments. The strategy’s goal is to stem the decline in salmon populations within 5–10 years, and to establish increasing trends within 25 years.

Biological Opinion on Federal Columbia River Power System Issued on December 21, 2000, in conjunction with the Basin-wide Salmon Recovery Strategy, this opinion contained a jeopardy finding that current hydropower operations jeopardize the continued existence of ESA-listed salmon stocks. Under Section 7 of the ESA, the Regional Office proposed a time frame for implementation of reasonable and prudent



As part of coordinated efforts with the U.S. Army Corps of Engineers to improve fish passage at eight lower Columbia and Snake River dams, four sites have fish transport facilities where juvenile salmon can be routed to a holding area for loading on specially equipped barges for transport downriver.

PHOTOS: JONI PACKARD, NMFS; NORTHWEST FISHERIES SCIENCE CENTER (INSET)

alternatives. Specific checkpoints and pass/fail criteria will be re-evaluated in 2003, 2005, and 2008.

Pacific Coastal Salmon Recovery Fund NOAA Fisheries transferred \$90 million to Washington, Oregon, California, and Alaska and to Pacific coastal and Columbia River tribes to supplement federal programs and promote federal partnerships in salmon conservation efforts.

Habitat Conservation Plans HCPs protect ESA-listed salmon and their habitats, while providing stability of operations to the private sector. Three such agreements developed in 2001 allow commercial operations to continue, while ensuring that they are in full compliance with the ESA: the Plum Creek Native Fish HCP; the Simpson Timber Company HCP; and the Tacoma Water HCP, which covers its Green River municipal water supply operations—the primary water source for about 84,000 customers in Washington State.

National Fire Plan The extensive wildland fires in 2000 raised concern about the decades-old policy of fire suppression. In response, the federal government issued a National Fire Plan (NFP) in FY 2001 to reduce the risks of fires, especially at wildland-urban interfaces. Since these actions would occur in ESA-listed salmon habitat, Congress directed a portion of the NFP funds to NOAA Fisheries to expedite ESA Section 7 consultation on other federal agencies' actions affecting salmon. NOAA Fisheries hired, trained, and placed an additional 40 biologists in 11 field offices close to where NFP activities would occur.

RECOVERING ENDANGERED SOCKEYE SALMON



Four Northwest Fisheries Science Center scientists received the Commerce Department's Gold Medal for their efforts to save Idaho's endangered Redfish Lake sockeye salmon: Michael Wastel, Deborah Frost, Tom Flagg, and Carlin McCauley. Because of a combination of habitat challenges—such as low water flows, elevated water temperature, and destruction of spawning habitat—only 16 fish returned to the lake during the 1990s. The scientists removed the 16 fish as part of a captive broodstock program. Since 2000, more than 290 sockeye salmon have returned to the lake as a result of this recovery effort—a dramatic increase from what was once a point of near extinction.

Staff from the Marine Enhancement Research Group release to Redfish Lake sockeye salmon that were bred in captivity. PHOTO: NORTHWEST FISHERIES SCIENCE CENTER



**NORTHWEST
FISHERIES
SCIENCE
CENTER**

Method Developed for Prioritizing Habitat Restoration

Watershed restoration and stream habitat improvement cover a very large area and are very complex. Thus, prioritizing restoration activities is critical to successfully rebuilding stocks. In 2001, Center scientists evaluated the effectiveness of various restoration techniques and developed a method for prioritizing site-specific restoration strategies. The Center now makes recommendations that focus first on protecting areas with intact processes, such as the movement of sediment from hill slopes and delivery of water to stream channels and high-quality habitat. Recommendations next focus on activities that reconnect isolated high-quality habitat, such as in-stream habitats that are made inaccessible by culverts or other man-made obstructions.

New Data Collected on West Coast Groundfish

In the 1990s, many stocks in the once productive West Coast groundfish trawl fishery significantly declined. Little is known about the 82 commercially fished species of groundfish. Several of these species are taken as directed catches and as bycatch in other West Coast fisheries. Many rockfish species live a long time (in some cases up to 80 years or more) and take many years to mature and reproduce, making stock recovery even more challenging.

In partnership with the fishing industry, universities, and state, local, and tribal agencies, Center scientists are collecting basic scientific data about these valuable species to improve the management and recovery of the fishery. For example, in 2001 joint fieldwork between the Center's laboratory in Newport, Oregon, and the Canadian Department of Fisheries and Oceans yielded new information to support sound management practices for the Pacific whiting fishery from Queen Charlotte Sound to San Diego.

To fill the void of scientific data on the West Coast fleet's total catch and bycatch, NOAA Fisheries established an observer program in cooperation with the Pacific States Marine Fisheries Commission. The first of 25 observers trained during the summer are now at sea on commercial fixed-gear and trawl fishing vessels, transmitting real-time data electronically to the Center through the Observer Module of the Electronic Fish Catch Logbook project.

Fishery-independent surveys are collecting basic scientific data to improve the management and recovery of valuable West Coast groundfish.

PHOTOS: ALLEN SHIMADA, NMFS



Ocean and Estuary Research Expanded

Little is known about the nearshore ocean and estuaries that are essential habitat for many fish species. The Eastern Pacific has the highest levels of marine biotoxins in the world. Paralytic shellfish poisoning and domoic acid poisoning are two marine biotoxins that significantly impair shellfish industries, as well as seabirds, marine mammals, and finfish. In 2001 the Center studied new technology to better detect toxic algal species and understand the correlation between harmful algal blooms and ocean processes, such as El Niño and La Niña. The Center also continued to lead a multi-disciplinary project to investigate the origins of blooms of biotoxin-producing algae and to assess the environmental conditions under which they occur and are transported to coastal organisms. These efforts have greatly assisted state resource managers and tribes in establishing cost-effective monitoring programs to protect valuable fish and shellfish resources and human health.

FMP for Highly Migratory Species Near Completion

The Council is completing its fishery management plan for highly migratory tuna, billfish, and shark. Initial regulatory actions will affect the drift gillnet and longline fisheries, due to interactions with protected species. The plan will replace a mix of state and federal regulations and will provide a measure of consistency in regulating longline vessels operating out of Hawaiian and West Coast ports.

PACIFIC FISHERY MANAGEMENT COUNCIL

Rebuilding Plan for Cowcod Adopted

A year after cowcod was declared overfished in 2000, the Council adopted a rebuilding plan for the stock that incorporates technical analyses developed at the Southwest Fisheries Science Center in cooperation with the California Department of Fish and Game. The plan establishes a conservation area off southern California and limits catches to 2.4 metric tons a year to rebuild the stock to sustainable levels.

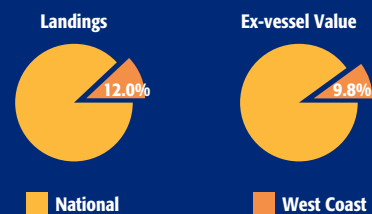


A plan for rebuilding cowcod stocks to sustainable levels establishes a conservation area off southern California and limits catches to 2.4 metric tons a year. PHOTO: NORTHWEST FISHERIES SCIENCE CENTER

STATUS OF WEST COAST FISHERY STOCKS IN 2001

"Overfishing" Criteria			
Not Defined	Unknown	Without Overfishing	With Overfishing
2	68	41	0
"Overfished" Criteria			
Not Defined	Unknown	Not Overfished	Overfished
0	69	30	7
Regional Commercial Landings			
Pounds (thousands)	1,137,333		
Dollars (thousands)	\$317,221		

Regional vs. National Statistics



ALASKA REGIONAL OFFICE

The western U.S. Pacific stock of Stellar sea lions has continued to decline, while the eastern Pacific stock appears to be either stable or slightly increasing. PHOTO: DAVID RUGH, NMFS



New Process Developed for Protecting Steller Sea Lions

In response to a 30-year decline in the abundance of Stellar sea lions, a lawsuit was brought against NOAA Fisheries in 1998 calling for increased protective measures from commercial fisheries. In 2000, NOAA Fisheries' Biological Opinion, prepared under the Endangered Species Act (ESA), concluded that groundfish fisheries for walleye pollock, Pacific cod, and Atka mackerel are jeopardizing the continued existence of Steller sea lions, which depend on these same resources and areas for food. As a result, in 2001 NOAA Fisheries developed a proactive, efficient, transparent, and inclusive management process for developing and assessing new measures to halt the decline in sea lion populations. This process required a creative blend of the ESA Section 7 consultations with the requirements of the National Environmental Policy Act.

Steller sea lion measures will continue to be controversial within the environmental community and the economically affected sectors of the fishing industry and coastal communities. Nevertheless, the new process used to develop these corrective measures has enhanced the working relationship among the North Pacific Fishery Management Council, industry, and NOAA Fisheries.

Program Created to Sustain BSAI Crab Fisheries

A new program for reducing fishing intensity in the Bering Sea/Aleutian Islands crab fishery commenced in January 2001. The program's first stage limits participating vessels to those meeting historical harvest qualifications, including criteria under the existing license limitation program. A second stage will include a crab license buy-back program administered by NOAA Fisheries Financial Services.

ALASKA FISHERIES SCIENCE CENTER

Annual quota and size restrictions require crews to sort snow crab in the eastern Bering Sea. PHOTO: © ALASKA SEAFOOD MARKETING INSTITUTE



Steller Sea Lion Critical Habitat Surveyed

In partnership with state agencies, academic institutions, and nongovernmental organizations, Center staff conduct fishery resource surveys and field camps at numerous Steller sea lion rookeries. Between February and March 2001, three chartered fishing vessels completed a winter bottom trawl survey within select areas of critical habitat. The survey assessed the potential impact of commercial groundfish trawl fisheries on

Steller sea lion food resources and the feasibility of conducting future winter surveys.

Scientists from the Center's National Marine Mammal Laboratory (NMML) and the Alaska Department of Fish and Game visited Steller sea lion winter haulout sites between Dutch Harbor and Kodiak Island. They captured and instrumented juvenile sea lions with satellite-linked time-depth



Scientists aboard NOAA's *MILLER FREEMAN* completed a second year of fieldwork on Gulf of Alaska walleye pollock to document whether fishing operations induced changes in the distribution of this important component in the diet of Steller sea lions. PHOTOS: WILLIAM FLOERING, NMFS

recorders, and collected a suite of samples and measurements to facilitate genetic identification and to determine the health and condition of individual sea lions.

Efficacy of No-trawl Zones Tested

Fishery surveys in no-trawl zones focused on the Atka mackerel and walleye pollock fisheries in FY 2001. A chartered fishing vessel tagged and released Atka mackerel in the Aleutian Islands. This effort was the Center's third consecutive year of study in Seguam Pass, where trawl exclusion zones have been established to ensure food availability for Steller sea lions. Tag recoveries to date show that fish did not appear to migrate from inside the trawl exclusion zone, and remain available to Steller sea lions.

Scientists completed a second year of fieldwork on the Gulf of Alaska walleye pollock fishery interaction experiment. Commercial fishing was allowed in one trough area and prohibited in the other. The principal objectives were to use standard acoustic survey methods to describe the variability in pollock abundance and distribution patterns within and between the two areas. Repeated surveys were conducted within each area before and during fishery activities to document whether fishing operations induced changes in the distribution of walleye pollock.

Research for Recovering Steller Sea Lions Expanded

During the summer of 2001, NMML scientists examined pup production at key rookeries and, in collaboration with other groups, deployed over 30 dive recorders to assess Steller sea lion foraging ecology. Other studies determined mortality/survival and reproductive rates by marking over 900 pups at rookeries in Alaska and Oregon. Scats collected from rookeries and haulouts and blubber samples taken from captured juveniles help determine sea lion food habits across their range in Alaska. Blood samples and morphometric measurements also monitored the health and condition of pups and juveniles. Small tissue samples were collected from pups to analyze the genetic relationship and subpopulation structure across the range. The Center continued its laboratory work on Steller sea lion diet by analyzing scat, fatty acid signatures of prey items, and stable isotopes.



**NORTH
PACIFIC
FISHERY
MANAGEMENT
COUNCIL**

Measures Adopted to Protect Marine Mammals and Seabirds

The Council and its partners developed a sweeping set of restrictions to disperse fisheries geographically and seasonally to minimize interactions with marine mammals, especially Steller sea lions. These measures, which were approved in late 2001 for the 2002 fishing season, bring the total area closed to trawling (and other gear types) to nearly 100,000 square miles. Three measures were also approved to address seabird bycatch in the hook-and-line fisheries off Alaska: the elimination of offal discharge and residual bait, the use of streamer lines to deter seabirds when setting gear, and the use of weighted lines to keep baited hooks below the water surface.

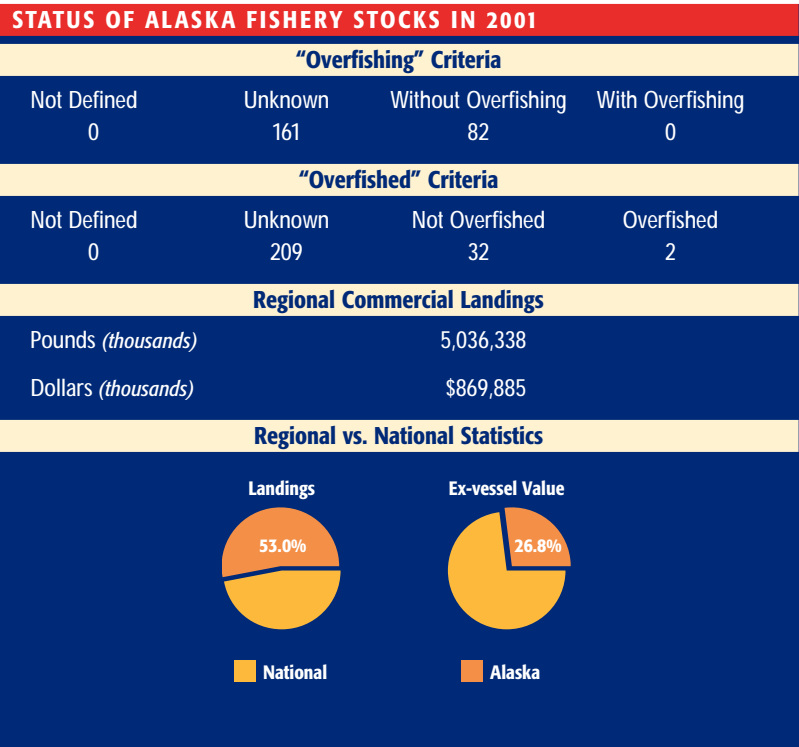
Actions Taken in Support of Community Allocations

The Community Development Quota program allocates 7–10 percent of each groundfish and crab species to 62 eligible Bering Sea communities. To further recognize the importance of fisheries to local economies, the Council amended the Pacific halibut and sablefish Individual Fishing Quotas program to allow Gulf of Alaska communities to purchase and retain quota shares. The Council also approved regulations recognizing and authorizing subsistence harvest of Pacific halibut.

Precautionary Management Continues

The Council applies a precautionary approach to setting annual quotas, following strictly the advice of its Plan Team and Scientific and Statistical Committee. This results in all species quotas being set well below overfishing levels, and in most cases below the acceptable biological catch level. Additionally, the Council recently initiated an independent scientific review of its basic fishing exploitation strategy, in order to improve incorporation of overall ecosystem considerations.

During 2001, the North Pacific Council and its partners developed measures to address the bycatch of seabirds, such as these common murrens. PHOTO: ALLEN SHIMADA, NMFS



NATIONAL AND INTERNATIONAL ACTIVITIES

The 1996 Sustainable Fisheries Act (SFA) provided NOAA Fisheries with better tools for addressing the impacts of human activities on the marine environment. These included more stringent requirements to end overfishing, rebuild overfished stocks, develop measures to reduce bycatch, and establish essential fish habitat. NOAA Fisheries also actively participates in scores of major international and regional activities to build sustainable fisheries. PHOTO: NMFS

**NEW TOOLS AND
PARTNERSHIPS
SUSTAIN
FISHERIES**

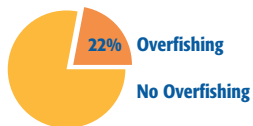
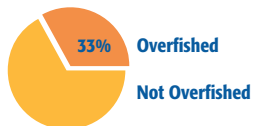
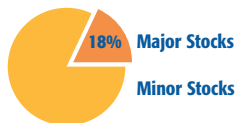
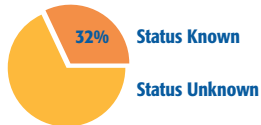


ASSESSING THE SUSTAINABILITY OF U.S. FISHERIES

Status of U.S. Fisheries Updated

As of 2001, many fish stocks around the country are healthy, and other stocks are being rebuilt. Despite this progress, a number of our most significant fisheries face serious challenges, including West Coast groundfish, the Southeast snapper-grouper complex, and Northeast mixed species.

Status of U.S. Fisheries Stocks in 2001



- The Office of Sustainable Fisheries reported the status of 595 marine fish and shellfish stocks—54 more than in 2000.
- Major and minor species and stock categories were defined for the first time. Major species have commercial landings of at least 200,000 pounds, while minor species represent catches of less than 200,000 pounds.
- Of the total 951 fish stocks, 655 (120 major and 535 minor) have unknown status relative to acceptable target stock abundance (overfished versus not overfished) and harvest rate (overfishing versus no overfishing). Stocks whose status is unknown represent less than 1 percent of all U.S. fishery landings by weight.
- Eighty-one stocks were overfished, compared to 92 in 2000, and 67 of these (83 percent) are steadily rebuilding.
- Twenty more stocks had sustainable harvest rates in 2001 than in 2000.
- Sixty-five stocks experienced catches exceeding allowable harvest levels.
- NOAA Fisheries has approved rebuilding plans for the majority of overfished stocks. Of the 81 stocks that are overfished, 67 have an approved rebuilding plan, and 9 have plans under development.

The increases in trawling efficiency brought about by technological advances have also increased fishing intensity and have led to overfishing in some areas of the U.S. Exclusive Economic Zone. PHOTO: ALLEN SHIMADA, NMFS



Fishing Overcapacity Report Published

Fishery managers need to address overcapacity in fisheries to reduce current and future overfishing. Overcapacity in a fishery is essentially the difference between (1) what fishermen could produce without any restrictions and (2) the level of fishing that would be allowed under an appropriate management regime. A recent NOAA Fisheries study of a number of federally managed fisheries reports that 55 percent of the assessed fisheries have some measure of overcapacity, 29 percent do not, and information is lacking for the remaining 16 percent. NOAA Fisheries' ongoing assessment of fishing capacity issues will be the subject of the 2002 *Our Living Oceans: Economic Status of U.S. Fisheries*.

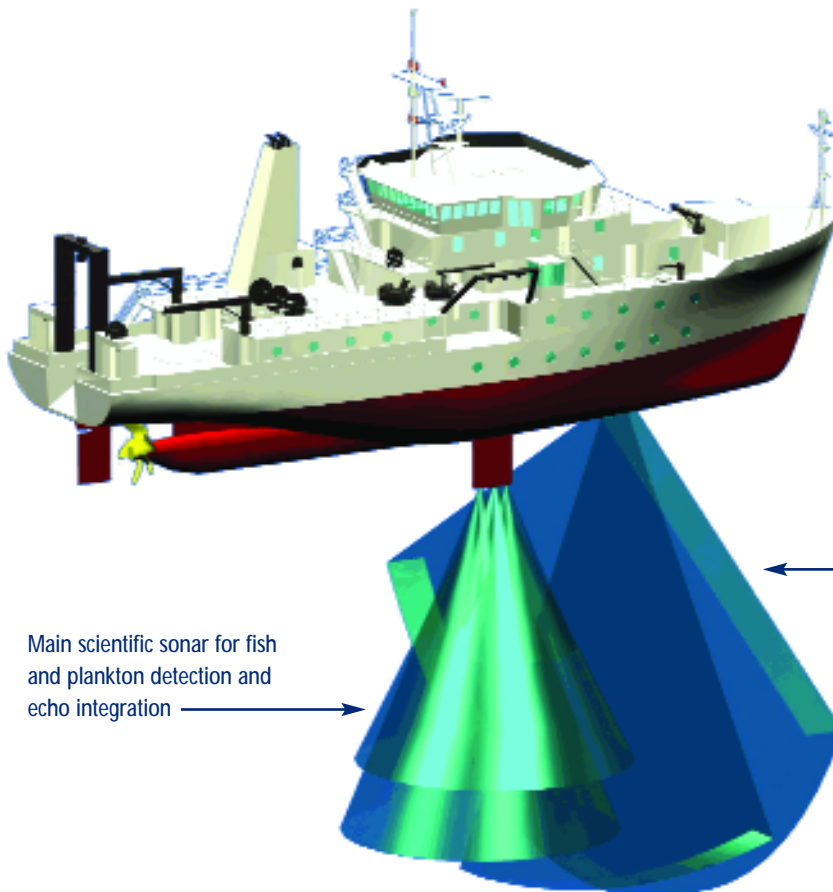
Science Quality Assurance Program Launched

In 2001, the Office of Science and Technology and the fisheries science centers collaborated on the agency-wide Science Quality Assurance Program to document, formalize, and, where appropriate, standardize these collective efforts. This initiative ensures that NOAA Fisheries' science is relevant, timely, objective, and accurate. Key components include:

Strategic Plan for Fisheries Research A five-year plan to meet the SFA's research requirements.

Marine Fisheries Stock Assessment Improvement Plan New national standards for fisheries stock assessments.

ENSURING THE QUALITY OF FISHERIES SCIENCE AND RESEARCH



On January 19, 2001, NOAA awarded a multi-year contract for the first of four new fisheries research vessels. The 208-foot NOAA ship *OSCAR DYSON* will be a state-of-the-art, acoustically quiet research platform outfitted for year-round fishing, hydroacoustic, and oceanographic operations out of Kodiak, Alaska. Delivery is scheduled for late 2004. ILLUSTRATION: PAUL ARCHIBALD, OAK MANAGEMENT

Multibeam echo sounder provides high-resolution data for classifying seafloor habitat

Main scientific sonar for fish and plankton detection and echo integration



NOAA Fisheries Data Acquisition Plan At-sea data collection needs supported by new NOAA fishery research vessels.

NOAA Fisheries Science Center Accreditation National quality standards for fisheries science center programs.

Fisheries Assessment Computational Toolbox Standardized suite of stock assessment modeling software.

Center of Independent Experts Reviews of agency science by external (non-NOAA Fisheries) experts.

External Study Reviews National Research Council studies of emerging issues of national significance commissioned by NOAA Fisheries.

NOAA Fisheries–National Sea Grant Joint Graduate Fellowship Program in Population Dynamics and Marine Resource Economics Financial support to Ph.D. students and mentoring by agency scientists.

SERVING CUSTOMERS THROUGH E-COMMERCE

Tracking System Provides Timely Information

The Public Consultation Tracking System is a recent Intranet Web site available to NOAA Fisheries staff that tracks the status of NOAA Fisheries consultations on federal agency actions under section 7 of the Endangered Species Act, and Essential Fish Habitat under the Magnuson–Stevens Act. This tracking system greatly facilitates public access to information on the status of their permit applications, promoting more timely and efficient business decisions.

Pilot Web Site Proposed for Public Comments

NOAA Fisheries is setting up a pilot system for an Internet-based system to allow the public to provide their comments directly on proposed rules. This system will open up the rulemaking process, and make it more effective and timely. Expected to be online in 2002, the system is being conducted in support of the “Expanding Electronic Government” reform, outlined in the President’s Management Agenda.

Web-Accessible Information Expanded

NOAA Fisheries has greatly increased the volume of scientific and commercial information available on the Web for enhanced public and private decision making. This information includes data sources and publications, such as *Fisheries of the United States*, the *Our Living Oceans* series, and the *Marine Fisheries Stock Assessment Improvement Plan* (see <http://www.nmfs.noaa.gov/publications.htm>). We also offer the Fishnews listserv (at <http://www.nmfs.noaa.gov/fishnews.htm>), and Cyberfish, an e-mail response service for the public to ask questions and submit comments (at cyber.fish@noaa.gov).

Fisheries Grants Management Database Up and Running

The Fisheries Grants Management Database enables federal program officers to electronically review and manage grant proposals, including conducting competitions. It

FEDERAL RELIEF PROVIDED

During 2001, NOAA Fisheries provided coastal communities with more than \$28.8 million to replace fishing revenues lost as a result of hurricane damage and emergency fishery closures. Congressionally appropriated funds were distributed to the Long Island Sound lobster fishery (Connecticut and New York), and the West Coast groundfish fishery (Washington, Oregon, and California). Funds were also distributed to six North Carolina and two Florida fisheries affected by four severe hurricanes between 1998 and 1999.

also allows them to interface with the Fisheries Financial Reporting System and the NOAA Grants Management Division database, and is a starting point for developing an on-line electronic grant system for all NOAA line offices.

Public Outreach Expanded for Protected Species

Public education is critical to building support for conserving protected and endangered marine life. NOAA Fisheries' most notable FY 2001 outreach efforts include:

Masters of the Ocean Realm A collaborative exhibit with the Smithsonian National Museum of Natural History featured hands-on displays and walk-through dioramas showcasing the evolution, biology, study, and conservation of marine mammals. NOAA Fisheries worked closely with the Smithsonian to provide examples of research tools, such as satellite tracking and genetic sampling, and highlight issues of marine mammal strandings and responsible viewing of marine mammals in the wild.

Protecting Dolphins NOAA Fisheries continues to work with NOAA Public Affairs, the Southeast Region, and the Pacific Islands Area Office on the "Protect Dolphins" outreach campaign. Major media feature stories appeared in *USA Today* and in *Boat U.S.*, *People*, and *Dive Training* magazines. Also, a new Web site was launched at: http://www.nmfs.noaa.gov/prot_res/MMWatch/MMViewing.html.



John Oliver at the 2001 NOAA Bring a Child to Work Day. PHOTO: JOHN BORTNIAK, NMFS

Marine Tackle Loaner Program Expanded

By loaning fishing poles and tackle to low-income children, this program strives to remove financial barriers to learning the joys of fishing at all ages, and teaches angling ethics and conservation practices as well. Partnerships are underway to cost-share additional venues, and have included state natural resource offices, the American Sportfishing Association, the National Ocean Service, and community organizations. In 2001, this program expanded from four to twelve sites. Currently there are nine programs in five states (MA, NY, SC, FL, CA) and a new pilot in North Carolina.

EXPANDING CONSERVATION OUTREACH



In 2001 NOAA Fisheries sponsored fishing trips for California Paralyzed Veterans of America and a national wheelchair fishing event in Tampa, Florida. PHOTO: MARTY GOLDEN, NMFS



ENHANCING ENVIRONMENTAL HEALTH AND SAFETY

Public and Environmental Safety Gets High Priority

Strong performance in the area of environmental health and safety is a key component of social responsibility for an organization that is responsible for the stewardship of the nation's living marine resources. For example, in 2001 NOAA Fisheries invested over a half million dollars in new technologies and methods to conduct scientific research in a manner that is safer for the environment, the public, and our employees.

IMPLEMENTING THE ENDANGERED SPECIES ACT

Endangered Species Listed

NOAA Fisheries is charged with implementing the Endangered Species Act (ESA) of 1973 for marine and anadromous species, while the U.S. Fish and Wildlife Service implements programs and regulations for terrestrial and freshwater species.

- In December 2000, NOAA Fisheries and the U.S. Fish and Wildlife Service determined that Atlantic salmon populations in seven Maine rivers constituted a distinct population segment and published a final rule listing Atlantic salmon as endangered.
- On April 29, 1999, NOAA Fisheries received a petition from the Center for Biological Diversity to list the white abalone as endangered and designate critical habitat. Following a status review completed in March 2000, the agency listed the white abalone as endangered on May 29, 2001.
- In November 1999, NOAA Fisheries received a petition from the Center for Marine Conservation to list smalltooth sawfish as endangered. The agency completed a status review in the first quarter of FY 2001, and published a proposed rule to add this species to the endangered list on April 16, 2001.

Northeast Salmon Team biologist Tim Sheehan holds an endangered Atlantic salmon reared at a commercial aquaculture facility to assist stock recovery. PHOTO: NORTHEAST FISHERIES SCIENCE CENTER



Coastal Wetlands Restored

NOAA Fisheries' Community-based Restoration Program has awarded cooperative agreements to 20 national and regional partners. Key elements of the program include restoration of an ecologically important habitat, a commitment by the community to serve as stewards of their coastal resources, and partners working together to leverage their resources. For every federal dollar spent on the program, partners invest \$3–\$5 on average.

Activities in 2001 raised the program total to over 400 fisheries habitat restoration projects across the nation since its inception in 1996. Examples of the more than 200 projects undertaken in 2001 include collaborating with TampaBayWatch, the Coastal Conservation Association, the Florida Aquarium, and the Boy Scouts to restore a severely eroding island in Tampa Bay, and with the New York City Parks Foundation to restore Bronx River habitat. Under the Coastal Wetlands Planning, Protection, and Restoration Act, the Southeast Fisheries Science Center led the single largest coastal planting project ever carried out in Louisiana, planting 81,000 cordgrass plants on Chandeleur Island.

Essential Fish Habitats Designated

The concept of "essential fish habitat" (EFH) was established with the 1996 Sustainable Fisheries Act. NOAA Fisheries staff collaborated with the fishery management councils to survey the best available science and designate those habitats deemed essential to each life stage of over 700 species included in more than 40 fishery management plans. The resulting compendiums of environmental and fishery information represent a powerful tool for sustainably managing fish habitat and other marine resources. For example, the Army Corps of Engineers changed its plans for the disposal of dredged material from a project in Delaware Bay after learning that it would compromise an important nursery ground for sandbar sharks.

EFH Reviews Streamlined

NOAA Fisheries took several steps to streamline the reviews of essential fish habitats required by the Magnuson–Stevens Act. These included producing:

- a national finding and guidance to allow federal agencies to combine EFH and ESA consultations into one action, thereby reducing overall costs and increasing efficiencies, particularly for Pacific salmon;
- a national finding and guidance for integrating EFH consultations for fishery management plan actions into the existing process for the National Environmental Policy Act; and
- guidance for developing geographic information systems (GIS) in every region to display current and future EFH and ESA designations.

DESIGNATING AND RESTORING FISH HABITATS



Bill Hogarth and friends spend a day restoring wetland habitat.

PHOTOS: NOAA RESTORATION CENTER



When complete, the system will provide EFH text and maps from more than 40 plans, covering 700 species and all life stages, via the Internet.

Value of Marine Protected Areas Affirmed

NOAA Fisheries is committed to improving conservation and research to preserve our great marine heritage and to harmonize commercial and recreational fishing activities with conservation efforts. Signed in 2001, Executive Order 13158 recognizes that Marine Protected Areas are effective tools in this balancing act of sustaining valuable marine resources, as well as the communities that depend on them.

ENHANCING COMPLIANCE AND ENFORCEMENT

Enforcement Efforts Bolstered

NOAA Fisheries has established a number of ongoing relationships with law enforcement partners through memorandums of understanding and cooperative enforcement agreements. Funding for these efforts was limited and uncertain until 2001, when Congress appropriated \$15 million to support and expand NOAA's partnerships through three cooperative enforcement programs:

Joint Enforcement Agreement The JEA greatly enhances NOAA's ability to conduct more investigations that result in the arrest of flagrant violators of federal laws protecting natural resources. To date, NOAA Fisheries has received JEA proposals from law

The U.S. Coast Guard Cutter *TAHOMA* (shown at its New Bedford, Massachusetts, home port) enforces domestic fishery regulations within the U.S. Exclusive Economic Zone.

PHOTO: ALLEN SHIMADA, NMFS



enforcement agencies in 21 coastal states, American Samoa, and Guam to strengthen their enforcement capabilities. Thus far NOAA Fisheries has awarded \$4.2 million to five states, with the remaining 18 grants to be awarded in the first quarter of FY 2002.

Vessel Monitoring System The development of a VMS continued, with progress made for standardizing software and hardware configurations throughout the field offices. A VMS includes established and emerging technologies that allow for satellite-based tracking of (and communications with) fishing vessels. It also provides powerful new tools for reporting catch, identifying vessels, reporting a ship's position, and communicating emergencies.

Homeland Security In the wake of the September 11th terrorist attacks, special agents, enforcement officers, and support personnel from NOAA Fisheries assisted the U.S. Marshals Service, the Federal Bureau of Investigation, and the U.S. Customs Service in a variety of tasks, including interviews, search warrants, arrests, evidence collection, airport security, and border operations.

Seafood Inspection Services Expanded

NOAA's Seafood Inspection Program offers a variety of professional services to ensure the seafood industry's voluntary compliance with all applicable federal food regulations. These services include sanitation and product inspection and evaluation for the 2,500 seafood processors, distributors, retailers, importers, and exporters participating in the program. Benefits to the industry include the ability to apply official marks, such as U.S. Grade A, Processed Under Federal Inspection, and Lot Inspection. In 2001, Giant Eagle, Winn-Dixie, and Wal-Mart joined Kroger, Albertson's, and other major corporations in requiring certified product from their suppliers.

The program also launched its Certificates Module, the first of an integrated system of modules dedicated to distinct data types: inspection certificates, product labels, mailing lists, inspector training data, and contracts. The Certificates Module allows inspectors to electronically generate 20 different inspection certificates, many of which are bilingual to meet the requirements of domestic and foreign buyers.

West Coast Groundfish Observer Program Launched

The Pacific States Marine Fisheries Commission cooperates with NOAA Fisheries in a number of data and research programs. For example, the Recreational Fisheries Information Network Program and the Pacific Fisheries Information Network are cooperative data programs that have been models for other similar fishery data programs. In 2001, the Commission collaborated with NOAA Fisheries, the Pacific Council, the state fishery agencies, and the fishing industry to develop a cooperative observer program for West Coast groundfish—a program essential to rebuilding the fishery.

**BUILDING ON
INTERSTATE
PARTNERSHIPS**



Gulf Resource Surveys Conducted

The Southeast Area Monitoring and Assessment Program (SEAMAP) includes components for the South Atlantic, the Gulf of Mexico, and the Caribbean. These components are state/federal/university cooperative programs for collecting, managing, and disseminating data and information in the southeastern United States. In 2001, SEAMAP resource surveys conducted in the Gulf of Mexico by the Gulf States Marine Fisheries Commission and NOAA Fisheries included the Spring and Fall Plankton Surveys, the Summer and Fall Shrimp/Groundfish Surveys, and the Reef Fish Survey. These data are available on the Internet at <http://www.gsmfc.org>.

Horseshoe Crab Fishing Restrained

NOAA Fisheries implemented a final rule for closed areas to control horseshoe crab fishing in nearly 1,500 square miles of federal waters off the mouth of Delaware Bay. This regulation was developed at the request of the Atlantic States Marine Fisheries Commission, and is part of a coordinated state–federal effort that includes New Jersey, Delaware, and Maryland.

Partnerships Formed to Sustain Chesapeake Bay Resources

The Chesapeake Bay Office (CBO) coordinates NOAA’s capabilities and integrates the expertise of NOAA and partner organizations in a wide array of activities in the Bay basin. For example, in cooperation with the Oyster Recovery Partnership (which involves all interest groups, including commercial watermen) the CBO is restoring oysters in 27 sites. The CBO also provides fisheries grants to state agencies and academic institutions for research, monitoring, and stock assessments, and is developing one

NOAA Fisheries implemented a final rule for closed areas to control horseshoe crab fishing in nearly 1,500 square miles of federal waters. PHOTO: JIM McCALLUM, NMFS



of the nation's first Fishery Ecosystem Plans, which will guide development of multi-species fishery management plans in the area.

National and International Efforts Support International Agreement

With the assistance of formal advisory panels, NOAA Fisheries has developed fishery management plans (FMPs) for Atlantic tunas, swordfish, sharks, and billfish. These fish are collectively known as highly migratory species that are found throughout the Atlantic Ocean, Gulf of Mexico, and Caribbean Sea. The FMP for Atlantic tunas, swordfish, and sharks, and Amendment 1 to the Billfish FMP prevent or end overfishing, establish rebuilding programs for overfished stocks, establish commercial and recreational catch limits and permitting/reporting requirements, reduce bycatch, identify essential fish habitat, and reflect traditional participation in the fisheries by U.S. fishermen relative to foreign fleets. Because effective management of highly migratory species requires international cooperation, NOAA Fisheries actively participates in the International Commission for the Conservation of Atlantic Tunas.

MANAGING HIGHLY MIGRATORY SPECIES

THE ECONOMIC VALUE OF MARINE RECREATIONAL ANGLING



Fishing provides a foundation for childhood memories and family traditions; a welcome retreat from everyday concerns; an opportunity for world-record competition and recognition; inexpensive, healthful food for the table; and a boon for our coastal communities. Recreational angling also generates significant dividends for the nation's economy. Preliminary results of NOAA Fisheries' valuation and expenditure survey data follow. PHOTO: EDWARD PASTULA, NMFS

Angler expenditures during 2000

Trip expenses	\$3.2 billion
Durable expenditures	\$17.2 billion

Additional amount anglers are willing to pay to maintain access to recreational fishing

Gulf Coast	\$3.2 billion
Mid-Atlantic	\$2.7 billion
South Atlantic	\$1.3 billion
New England	\$0.9 billion

Top six states in marine recreational fishing expenditures

Florida	\$8.4 billion
California	\$2.5 billion
North Carolina	\$1.6 billion
Washington	\$1.4 billion
Louisiana	\$1.2 billion
Massachusetts	\$0.8 billion

To put this information into more specific context, the \$846 million spent in Massachusetts supports 2,000 jobs, creates \$153 million in personal income, and generates \$86 million in state taxes and \$48 million in federal taxes. For more state and regional-level value and expenditure estimates, please visit NOAA Fisheries' Web site at <http://www.st.nmfs.gov/st1/econ/pubs.html>.



INTERNATIONAL

NOAA Fisheries actively participates in scores of major international and regional activities to build sustainable fisheries, such as the International Commission for the Conservation of Atlantic Tunas, the Inter-American Tropical Tuna Commission, the North Atlantic Fisheries Organization, and the International Whaling Commission; bilateral consultative arrangements; scientific organizations and nongovernmental bodies, such as the North Pacific Marine Science Organization; and other international arrangements of global significance, such as those through the United Nations Food and Agriculture Organization. NOAA Fisheries is also leading efforts to stem illegal, unregulated, and unreported fishing on the high seas, and is developing a strategy for international cooperation on sea turtle conservation and national and international plans of action for conserving sharks and seabirds.

Commercial Whaling Moratorium Maintained

The International Whaling Commission (IWC) continues to maintain a moratorium on commercial whaling. However, activities on the part of Japan, Iceland, and Norway, as well as the issue of aboriginal subsistence hunting, continue to be controversial. The IWC's 53rd Annual Meeting in London during July 2001 was marked by controversy surrounding Iceland's attempt to rejoin the IWC without participating in the commercial whaling moratorium. The United States successfully opposed this attempt. The United States also supported the passage of several resolutions, including urging Japan to refrain from issuing permits to take whales for scientific purposes. The IWC has concluded that these research programs are contrary to its conservation goals, and has repeatedly passed resolutions condemning these lethal takings. The United States also supported proposals to establish South Pacific and South Atlantic whale sanctuaries, which did not pass but are expected to be raised again. As it has done for the past 13 years, the Commission also denied, with U.S. support, Japan's request for an interim quota of minke whales for its small coastal whalers.

Trade in coral reef species is increasing at a rate of 10–30 percent a year. PHOTO: ANDREW BRUCKNER, NMFS



Responsible Trade of Stony Corals Promoted

Coral reef species are harvested globally for live fish markets, aquariums, jewelry, curios, pharmaceuticals, and other uses. Trade in these species is increasing at a rate of 10–30 percent a year. As the world's largest importer of coral reef organisms, the United States has a major responsibility to stem the damage to coral reef ecosystems arising from destructive fishing and unsustainable harvest practices. In one strategy to promote responsible use of coral reefs worldwide, NOAA Fisheries led an international workshop in Indonesia to help coral-exporting countries develop a sustainable management plan for stony corals. Over 125 representatives from government, industry, academia, and environmental organizations evaluated the status of trends of stony coral trade and developed a series of recommendations for best harvest practices, management, and monitoring.

Patagonian Toothfish Program Implemented

The United States is a signatory to the Convention on the Conservation of Antarctic Marine Living Resources, an international marine management authority established as part of the Antarctic Treaty. To assist in the management of toothfish, NOAA Fisheries developed procedures for individuals wishing to import toothfish into the United States. These procedures include a permitting system that has registered approximately 80 individuals and has tracked more than 3,000 imports of this species. The database is used to monitor compliance with the Convention's provisions. NOAA's Office of Law Enforcement is working closely with the U.S. Customs Service in implementing these measures.

Action Plan Developed for Seabird and Shark Bycatch

International concern is increasing about the incidental capture of nontarget species, such as marine mammals, sea turtles, and seabirds in various fisheries throughout the world. The United States has voluntarily developed the U.S. National Plan, as requested in the International Plan of Action. Voluntary national actions directed at seabirds are called upon to assess the degree of seabird bycatch in their longline fisheries, develop individual national plans to reduce seabird bycatch in longline fisheries, and chart a course of future research and action to reduce seabird bycatch. The U.S. plan also includes provision for assessing levels of directed and incidental catch and bycatch of sharks, collecting habitat and bycatch data, providing outreach and education to fishermen, exchanging information on shark fisheries and studies, and assessing the effectiveness of management measures. The U.S. plan is consistent with the U.N. Food and Agriculture Organization's Code of Conduct for Responsible Fisheries and all rules of international law.



An International Plan of Action calls on nations to voluntarily assess and reduce the degree of seabird bycatch in their longline fisheries. PHOTO: JOHN BORTNIAK, NMFS

Convention Adopted for Highly Migratory Fish Stocks

In September 2000, the Convention on the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific was adopted. The Convention will establish a commission to conserve and manage tuna and tuna-like species in the vast area of the western and central Pacific Ocean. The fishery is estimated to have an annual value of \$1.5–\$2.0 billion. Under the Convention, distant-water and coastal nations in the region will be subject to the same rules as those required of the U.S. fleet. Provisions include carrying observers, establishing a vessel monitoring system, restricting transshipment, and reporting catch and fishing effort. NOAA Fisheries is focused on the next two to five years to implement U.S. scientific, management, and enforcement obligations under this important new Convention.



NOAA Fisheries' international sea turtle program works closely with other nations and the U.S. Fish and Wildlife Service to conserve and recover sea turtles. PHOTO: © MARTY SNIDERMAN, DIGITAL STOCK CORPORATION



Sea Turtle Conservation Efforts Enhanced

NOAA Fisheries' international sea turtle program works closely with other nations as well as with our partner agency, the U.S. Fish and Wildlife Service, toward the global conservation and recovery of sea turtles. Ensuring the survival of these highly migratory animals throughout their range requires multilateral cooperation through agreements to which the United States is a party (e.g., CITES and the Inter-American Convention for the Conservation of Sea Turtles). U.S. citizens, including commercial fisherman and coastal residents, have been required to modify their activities to reduce threats to sea turtles. Similar conservation actions are needed in the international community, because activities in other countries can either enhance or undermine U.S. conservation efforts.

Recent highlights of international conservation efforts include:

- building capacity in the wider-Caribbean, Pacific, and Indian Ocean region;
- negotiating regional turtle protection agreements in the Americas (including activities regarding the Inter-American Sea Turtle Convention), the western Pacific, and the Indian Ocean;
- enhancing international sea turtle recovery through P.L. 101-162, Section 609, which requires that nations wishing to export wild-caught shrimp to the United States use conservation measures similar to those used in the United States (i.e., turtle excluder devices);
- conducting scientific studies of modifications to longline gear to reduce the incidental capture of sea turtles; and
- participating in international forums, such as the United Nations Food and Agriculture Organization, to raise awareness of the incidental capture of marine turtles in global longline fleets.

TRADE NEGOTIATIONS AND TECHNICAL INTERACTIONS

Approximately 40 percent (\$1.1 billion through November 2000) of U.S. seafood exports is destined for Japan, and 40 percent of that portion is governed by Japanese import quotas. NOAA Fisheries has negotiated with the Fisheries Agency of Japan and the Ministry of International Trade and Industry to improve U.S. access to the Japanese market for fisheries products and species governed by import quotas (which includes walleye pollock, cod, hake, herring, sardines, mackerel, and scallops).

NOAA Fisheries has also intervened on behalf of the U.S. industry with the European Union, individual EU member states, Korea, Georgia, Australia, Chile, and Brazil to clarify import requirements, eliminate nonscientific standards, and reduce duties applied to U.S. fisheries products. The agency has cooperated with the U.S. International Trade Administration, the U.S. Department of State, and the U.S. Trade Representative's office on initiatives that have included China's accession to the World Trade Organization, development of trade retaliation packages, and elimination of nontariff measures and subsidies in the fisheries sector.

MEETING THE CHALLENGE

The 1996 Sustainable Fisheries Act (SFA) dramatically shifted the focus of fisheries management from promoting new domestic fisheries in the U.S. Exclusive Economic Zone to emphasizing the sustainability and rebuild-

ing of fishery and marine resources and addressing specific environmental, socioeconomic, and community issues. In addition, under the National Environmental Policy Act (NEPA), other statutes, and executive orders, all NOAA Fisheries actions must be assessed and disclosed to decision makers and the public. These requirements have significantly increased our regulatory and administrative workload, which requires fuller use of a dedicated and modernized workforce and application of innovative approaches to our expanded responsibilities.

**A RENEWED
COMMITMENT
TO FISHERIES
STEWARDSHIP**

PHOTO: SOUTHWEST FISHERIES SCIENCE CENTER





MODERNIZING NOAA FISHERIES

In partnership with the regional fishery management councils, we are working to fully implement the SFA goals of preventing overfishing and restoring overfished stocks. Our objectives are to reduce fishing intensity, monitor the fisheries, and implement measures to reduce bycatch and protect essential fish habitat. To meet these objectives, we must employ the broadest possible range of management measures, including establishing marine protected areas and individual fishing quotas, reducing fishing capacity, and implementing ecosystem-based fishery management. Some of the many initiatives we have undertaken include streamlining regulatory operations, implementing the recommendations of independent review bodies, and expanding fisheries science and research. This fresh approach to meeting our stewardship mandates represents our renewed commitment to improving the structure, processes, and business approaches across our science, management, and enforcement responsibilities.

STREAMLINING REGULATORY OPERATIONS

We have undertaken a major regulatory streamlining project to improve the efficiency and effectiveness of our regulatory operations and decrease our vulnerability to litigation. The Regulatory Streamlining Project (RSP) initiative highlights the application of NEPA as a critical component of the regulatory process. NEPA provides an analytical framework for addressing the requirements of many other statutes and ensuring environmental compliance, consistent with all of NOAA Fisheries' mandates. Our goal is to provide better analyses and regulatory documentation that form the basis of our regulatory activities. The result will be improved service to and relationships with our constituents, and significantly fewer litigation losses on process issues. Following are the primary streamlining mechanisms we will use.

“Front-Loading” the NEPA Process

We plan to “front-load” the NEPA process through the active participation of all regional, science center, and council staff in key responsibilities at the early stages of development of fishery management actions to ensure full compliance with regulatory and other requirements.

Hiring Environmental Policy Coordinators

We have hired environmental policy coordinators to ensure national and regional consistency, facilitate front-loading of the NEPA process, provide advice on integrating statutes, coordinate national and regional NEPA training programs, and take full advantage of national policy developments related to environmental compliance.

Delegating Signature Authority

We will improve the administrative process by delegating signature authority, where appropriate, from headquarters to the regional administrators for certain activities under the ESA and, where appropriate, eliminating headquarters review of routine actions under the Magnuson–Stevens Act.

Improving Fishery Management

We will improve the fishery management process in cooperation with our partners, such as through electronic rulemaking and electronic permit application.

NOAA Fisheries has taken several steps to implement many of the fiscal resource and process recommendations from external review committees.

Improving Socioeconomic Analysis

We have provided guidelines for acquiring additional data, economists, and social scientists, and aggressively pursuing actions to improve socioeconomic analyses required by the regulatory process.

Approving a Marine Fisheries Stock Assessment Plan

We have approved a major plan for improving fishery stock assessments, which are fundamental to the success of NOAA Fisheries.

Expanding Cooperative Law Enforcement

We have expanded our cooperative enforcement efforts through new agreements with 25 states and territories and adding staff to handle arrangements.

Increasing the Number of Fishery Observers

We have increased the number of observers nationwide and have initiated greater data collection and analysis efforts with industry and regional and state authorities. These steps should help to reinforce other actions underway to improve NOAA Fisheries' stock assessments, information on bycatch, and enforcement activities.

Developing a Web-Based Annual Operating Plan

In response to the recommendation of an external review panel, we are developing a nationally coordinated plan for monitoring NOAA Fisheries' management and regulatory functions (i.e., fisheries, protected species, habitat conservation, and law enforcement). The recent pilot automated Web-based Annual Operating Plan will help senior managers determine future program requirements and support budget requests. Projected to be fully operational for FY 2003, this system will be capable of determining project-level performance in NOAA Fisheries' regional offices and science centers, and enhancing cooperation among the NOAA line offices in undertaking national activities.

Obtaining Budget Adjustments

We have obtained budget adjustments for inflationary cost increases that have seriously eroded core-mission program operations.

IMPLEMENTING BUDGET INITIATIVES



During 2001, NOAA Fisheries increased the number of special agents and fisheries observers nationwide, and initiated greater data collection and analysis efforts with industry and regional and state authorities. PHOTO: NMFS OFFICE OF LAW ENFORCEMENT



EXPANDING SCIENCE AND RESEARCH

We are evaluating a long-term Science and Research Modernization initiative to create a holistic, integrated science enterprise that, when added to the Recover Protected Species initiative, will begin to move NOAA Fisheries out of the mode of crisis management. Components of this initiative represent the implementation of recommendations by external reviewers, such as the National Academy of Sciences, as well as internal reviews, such as the Data Acquisition Plan and the Marine Fisheries Stock Assessment Improvement Plan. Following are highlights of the modernization needs.

Improving Resource Assessments

NOAA Fisheries needs improved and expanded living marine resource assessments, including cooperative research; a national observer program; enhanced protected species stock assessment capabilities; a national, Web-enabled, state-federal data collection program; increased charter vessel days at sea; and modern, acoustically quiet, fisheries research vessels.

Applying Advanced Technologies

We must improve our forecasting of living marine stock status and environmental impacts through advanced assessment technology, applied fisheries oceanography, and advanced conservation engineering technology for bycatch reduction and habitat protection.

Expanding Socioeconomic Impact Analyses

We can significantly improve our assessment of the human dimension of fisheries by hiring additional social scientists and conducting expanded analyses of the socioeconomic impacts of our fishery management programs.

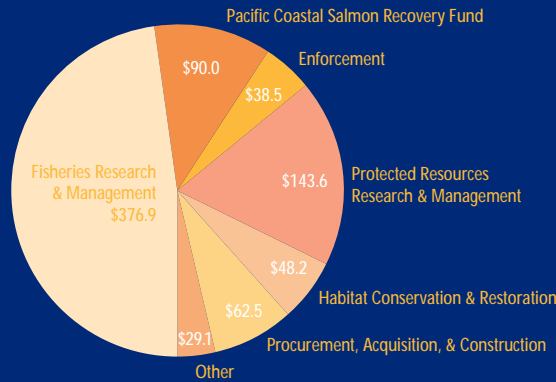
NOAA Fisheries is evaluating a long-term Science and Research Modernization initiative to create a holistic, integrated science enterprise. PHOTOS: WILLIAM FLOERING, NMFS; WILLIAM FOLSOM, NMFS (INSET)



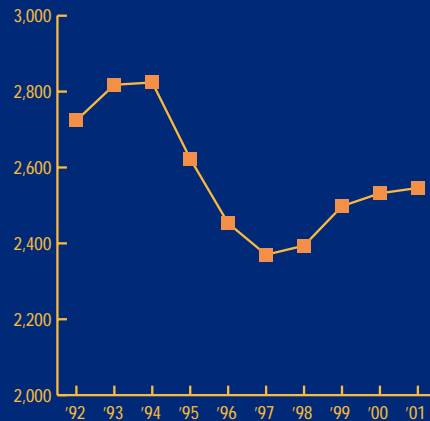
RESPONSIBILITIES AND FUNDING CONTINUE TO RISE

In response to NOAA Fisheries' rapidly increasing conservation and management responsibilities, Congress has provided major funding increases in recent years. As several recent external reviews have illustrated, however, major challenges remain, such as funding for additional fish and protected species stock assessments, bycatch reduction efforts, habitat programs, and infrastructure.

2001 BUDGET
(in millions)

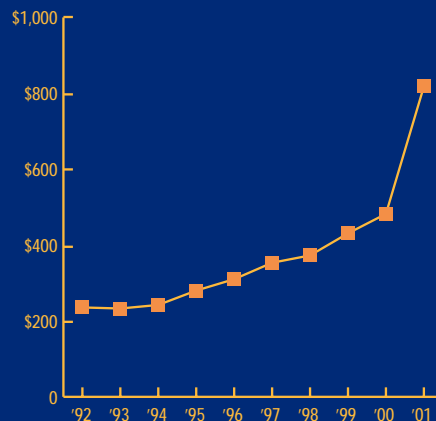


FTEs*:
1992–2001



*FTEs = Full-time equivalent staff positions

APPROPRIATIONS:
1992–2001
(in millions)



Fishery Management Plans

Fishery Management Plans are developed by the regional Fishery Management Councils (FMCs) and implemented by NOAA Fisheries. NOAA Fisheries develops management plans for Atlantic highly migratory species (HMS).

CURRENT REGIONAL FISHERY MANAGEMENT PLANS

New England FMC

- Atlantic Sea Scallops
- Northeast Multispecies Fishery (Cod, Haddock, and Yellowtail Flounder)
- Atlantic Salmon
- Monkfish
- Atlantic Herring

Mid-Atlantic FMC

- Atlantic Surf Clam and Ocean Quahog
- Atlantic Mackerel, Squid, and Butterfish
- Summer Flounder, Scup, and Black Sea Bass
- Atlantic Bluefish
- Spiny Dogfish (Joint FMP with the New England FMC)
- Golden Tilefish

South Atlantic FMC

- Snapper-Grouper of the South Atlantic Region
- Red Drum
- South Atlantic Shrimp
- Coral, Coral Reefs, and Live/Hard-Bottom Habitats
- Golden Crab

Gulf of Mexico FMC

- Spiny Lobster (Joint FMP with the South Atlantic FMC)
- Coastal Migratory Pelagic Resources (Joint FMP with the South Atlantic FMC)
- Coral and Coral Reefs
- Red Drum
- Stone Crab
- Shrimp
- Reef Fish

Caribbean FMC

- Shallow-Water Reeffish
- Corals and Reef-Associated Invertebrates
- Queen Conch
- Spiny Lobster

Pacific FMC

- West Coast Salmon
- Coastal Pelagic Species
- Pacific Coast Groundfish

Western Pacific FMC

- Crustaceans (Spiny and Slipper Lobster)
- Precious Corals
- Bottomfish and Seamount Groundfish
- Pelagic Fisheries (Tunas, Swordfish, and Billfishes)

North Pacific FMC

- Groundfish (Gulf of Alaska)
- High-seas Salmon
- Groundfish (Bering Sea and Aleutian Islands)
- King and Tanner Crab
- Scallops

REGIONAL PLANS UNDER DEVELOPMENT

New England FMC

- Skates
- Red Crab
- Small-mesh Fisheries

South Atlantic FMC

- Calico Scallops

Gulf of Mexico FMC

- Gulf of Mexico Butterfish

South Atlantic, Gulf of Mexico, and Caribbean FMCs

- Dolphin and Wahoo

Pacific FMC

- Highly Migratory Species off the West Coast

Western Pacific FMC

- Coral Reef Ecosystem of the Western Pacific

MANAGEMENT PLANS FOR ATLANTIC HMS

- Atlantic Tunas, Swordfish, and Sharks
- Atlantic Billfishes

