Fishery, Aquaculture, and Marine Mammal Issues in the 111th Congress

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Summary

Fish and marine mammals are important resources in open ocean and nearshore coastal areas; many federal laws and regulations guide their management as well as the management of their habitat.

Commercial and sport fishing are jointly managed by the federal government and individual states. States generally have jurisdiction within 3 miles of the coast. Beyond state jurisdiction and out to 200 miles, the federal government manages fisheries under the Magnuson-Stevens Fishery Conservation and Management Act (MSFCMA) through eight regional fishery management councils. Beyond 200 miles, the United States participates in international agreements relating to specific areas or species. The 111th Congress may oversee implementation of the MSFCMA as well as address individual habitat and management concerns for U.S. commercial and sport fisheries to achieve a sustainable balance between resource use and protection. Current concerns include whether additional effort should be taken to eliminate overfishing, how fishery disaster assistance should be funded, and whether to more aggressively encourage fishing vessel capacity reduction and limited access privilege programs.

Aquaculture—the farming of fish, shellfish, and other aquatic animals and plants in a controlled environment—is expanding rapidly abroad, with more modest growth in the United States. In the United States, important species cultured include catfish, salmon, shellfish, and trout. The 111th Congress may consider legislation to modify federal activities related to aquaculture, including possible standards to guide aquaculture development in offshore federal waters.

Marine mammals are protected under the Marine Mammal Protection Act (MMPA). With few exceptions, the MMPA prohibits harm or harassment ("take") of marine mammals, unless restrictive permits are obtained. It also addresses specific situations of concern, such as dolphin mortality, primarily associated with the eastern tropical Pacific tuna fishery. The 111th Congress may consider bills to reauthorize and amend the MMPA as well as measures to address specific marine mammal habitat and management concerns, such as how to deal with the effects of increasing noise in the ocean.

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Most Recent Developments

On February 17, 2009, President Obama signed H.R. 1 into law, including language (1) providing as much as $50 million in total assistance to aquaculture producers for losses associated with high feed input costs during the 2008 calendar year; (2) including National Fish Hatcheries as eligible for $165 million in resource management funding as well as $115 million in construction funding for the U.S. Fish and Wildlife Service; and (3) broadening the determination of import increases for trade adjustment assistance for fishing and aquaculture to include wild-caught fish and seafood in addition to farm-raised fish and seafood. On February 13, 2009, both the House and Senate agreed to the conference report on H.R. 1. On February 12, 2009, the conference committee report on H.R. 1 was filed. On February 10, 2009, the Senate passed H.R. 1, amended, containing language providing as much as $50 million in total assistance to aquaculture producers for losses associated with high feed input costs during the 2008 calendar year. On January 28, 2009, the House passed H.R. 1, containing language (1) providing as much as $100 million in total assistance to aquaculture producers for losses associated with high feed input costs during the 2008 calendar year (Section 103(d)); (2) including National Fish Hatcheries as eligible for $300 million in construction funding for the U.S. Fish and Wildlife Service; and (3) including removal of fish passage barriers as eligible for $650 million in maintenance funding for the U.S. Forest Service (Title VIII). On January 15, 2009, the Senate passed S. 22, amended, containing language (1) authorizing the implementation of the San Joaquin River Restoration Settlement providing for the reintroduction of Chinook salmon (Title X, Subtitle A), (2) amending P.L. 106-392 to extend the authorizations for the Upper Colorado and San Juan River Basin endangered fish recovery programs through FY2023 (Section 9107), (3) directing the Secretary of Commerce to establish an ocean acidification program within NOAA, and to establish an interagency committee to develop an ocean acidification research and monitoring plan (Title XII, Subtitle D); and (3) reauthorizing (through FY2015) and amending the Fisheries Restoration and Irrigation Mitigation Act of 2000 (Section 13002). (Members and staff may request e-mail notification of new CRS reports on marine and freshwater fisheries, aquaculture, and marine mammal issues by contacting Gene Buck at gbuck@crs.loc.gov and requesting to be added to the notification list.)

Introduction

Increasing use of coastal and marine resources is driving proposals for Congress and the Administration to alter current relationships between environmental protection and sustainable resource management. Recent reports note declines in marine resources and shortcomings in what are perceived as fragmented and limited approaches to resource protection and management in federal and state waters.[1] A further concern is the increasing pressures and conflicts that arise from economic activity associated with continued human population growth in coastal areas. A common concern is habitat loss or alteration, due both to natural processes, such as climate variation, and to development, changes in land management practices, competition from invasive species, and other factors, nearly all related to economic, political, or social interests. Congress faces the issue of how to balance these diverse interests (which may fall on various sides of any

[1] For example, see *America's Living Oceans: Charting a Course for Sea Change*, available at http://www.pewtrusts.org/uploadedFiles/wwwpewtrustsorg/Reports/Protecting_ocean_life/env_pew_oceans_final_report.pdf, and *An Ocean Blueprint for the 21st Century*, available at http://www.oceancommission.gov/documents/full_color_rpt/000_ocean_full_report.pdf.

given controversy) while promoting the sustainable management of fishery and other marine resources and protection of the marine environment.

Congress last reauthorized and extensively amended the Magnuson-Stevens Fishery Conservation and Management Act (MSFCMA) in the 109th Congress (P.L. 109-479); the current funding authorization expires on September 30, 2013. The Marine Mammal Protection Act was last reauthorized in 1994 by P.L. 103-238, and funding authorization expired on September 30, 1999. The 111th Congress may consider measures to reauthorize the MMPA, address aquatic habitat concerns, provide funding for disaster assistance, and address fishery-specific concerns, as well as conducting oversight of MSFCMA implementation.

Commercial and Sport Fisheries

Background

Historically, coastal states managed marine sport and commercial fisheries in nearshore waters, where most seafood was caught. However, as fishing techniques improved, fishermen ventured farther offshore. Before 1950, the federal government assumed limited responsibility for marine fisheries, responding primarily to international fishery concerns and treaties (by enacting implementing legislation for treaties, e.g., the Northern Pacific Halibut Act in 1937) as well as to interstate fishery conflicts (by consenting to interstate fishery compacts, e.g., the Pacific Marine Fisheries Compact in 1947). In the late 1940s and early 1950s, several Latin American nations proclaimed marine jurisdictions extending 200 miles or further offshore. This action was denounced by those within the United States and other distant-water fishing nations who sought to preserve access for far-ranging fishing vessels. Beginning in the 1950s (Atlantic) and 1960s (Pacific), increasing numbers of foreign fishing vessels steamed into U.S. offshore waters to catch the substantially unexploited seafood resources. Since the United States then claimed only a 3-mile jurisdiction (in 1964, P.L. 88-308 prohibited fishing by foreign-flag vessels within 3 miles of the coast; in 1966, P.L. 89-658 proclaimed an expanded 12-mile exclusive U.S. fishery jurisdiction), foreign vessels could fish many of the same stocks caught by U.S. fishermen. U.S. fishermen deplored this "foreign encroachment" and alleged that overfishing was causing stress on, or outright depletion of, fish stocks. Protracted Law of the Sea Treaty[2] negotiations in the early and mid-1970s as well as actions by other coastal nations provided impetus for unilateral U.S. action.

The enactment of the Fishery Conservation and Management Act (FCMA); later renamed the Magnuson Fishery Conservation and Management Act and more recently the Magnuson-Stevens Fishery Conservation and Management Act (MSFCMA; 16 U.S.C. §§ 1801 et seq.), ushered in a new era of federal marine fishery management. The FCMA was signed into law on April 13, 1976, after several years of debate. On March 1, 1977, marine fishery resources within 200 miles of all U.S. coasts, but outside state jurisdiction, came under federal jurisdiction, and an entirely new multifaceted regional management system began allocating fishing rights, with priority given to domestic enterprise.

[2] The United Nations Convention on the Law of the Sea was reported favorably in the 110th Congress by the Senate Committee on Foreign Relations (S.Exec.Rept. 110-9) on December 19, 2007.

Primary federal management authority was vested in the National Marine Fisheries Service (NMFS, also popularly referred to as NOAA Fisheries) within the National Oceanic and Atmospheric Administration (NOAA) of the U.S. Department of Commerce.[3] The 200-mile fishery conservation zone was superseded by a 200-mile Exclusive Economic Zone (EEZ), proclaimed by President Reagan on March 10, 1983 (Presidential Proclamation 5030).

Eight Regional Fishery Management Councils were created by the FCMA.[4] Council members are appointed by the Secretary of Commerce from lists of candidates knowledgeable about fishery resources, provided by coastal state governors.[5] The councils prepare fishery management plans (FMPs) for those fisheries that they determine require active federal management. After public hearings, revised FMPs are submitted to the Secretary of Commerce for approval. Approved plans are implemented through regulations published in the *Federal Register*. Together these councils and NMFS have developed and implemented 40 FMPs for various fish and shellfish resources, with 9 additional plans in various stages of development. Some plans are created for an individual species or a few related ones (e.g., FMPs for red drum by the South Atlantic Council and for shrimp by the Gulf of Mexico Council). Others are developed for larger species assemblages inhabiting similar habitats (e.g., FMPs for Gulf of Alaska groundfish by the North Pacific Council and for reef fish by the Gulf of Mexico Council). Many of the implemented plans have been amended (one over 30 times), and three have been developed and implemented jointly by two or more councils. The MSFCMA was reauthorized in the final hours of the 109th Congress by P.L. 109-479, the Magnuson-Stevens Fishery Conservation and Management Reauthorization Act of 2006.[6] The authorization of appropriations in § 7 of the act expires at the end of FY2013.

Today, individual states manage marine fisheries in inshore and coastal waters, generally within 3 miles of the coast. Interstate coordination occurs through three regional (Atlantic, Gulf, and Pacific) interstate marine fishery commissions, created by congressionally approved compacts. Beyond state waters, out to 200 miles, the federal government manages fish and shellfish resources for which FMPs have been developed under the MSFCMA. Individual states manage fishermen operating state-registered vessels under state regulations consistent with any existing federal FMP when fishing in inshore state waters and, in the absence of a federal FMP, wherever they fish.

Under initial FCMA authority, a substantial portion of the fish catch from federal offshore waters was allocated to foreign fishing fleets. However, the 1980 American Fisheries Promotion Act (Title II of P.L. 96-561) and other FCMA amendments orchestrated a decrease in foreign catch allocations as domestic fishing and processing industries expanded. Foreign catch from the U.S. EEZ declined from about 3.8 billion pounds in 1977 to zero since 1992. Commensurate with the decline of foreign catch, domestic offshore catch in federal EEZ waters increased dramatically, from about 1.6 billion pounds (1977) to more than 6.3 billion pounds in 1986-1988.[7] Since this peak, annual landings have hovered around 6 billion pounds (**Figure 1**).

[3] NMFS programs are described in detail at http://www.nmfs.noaa.gov/.

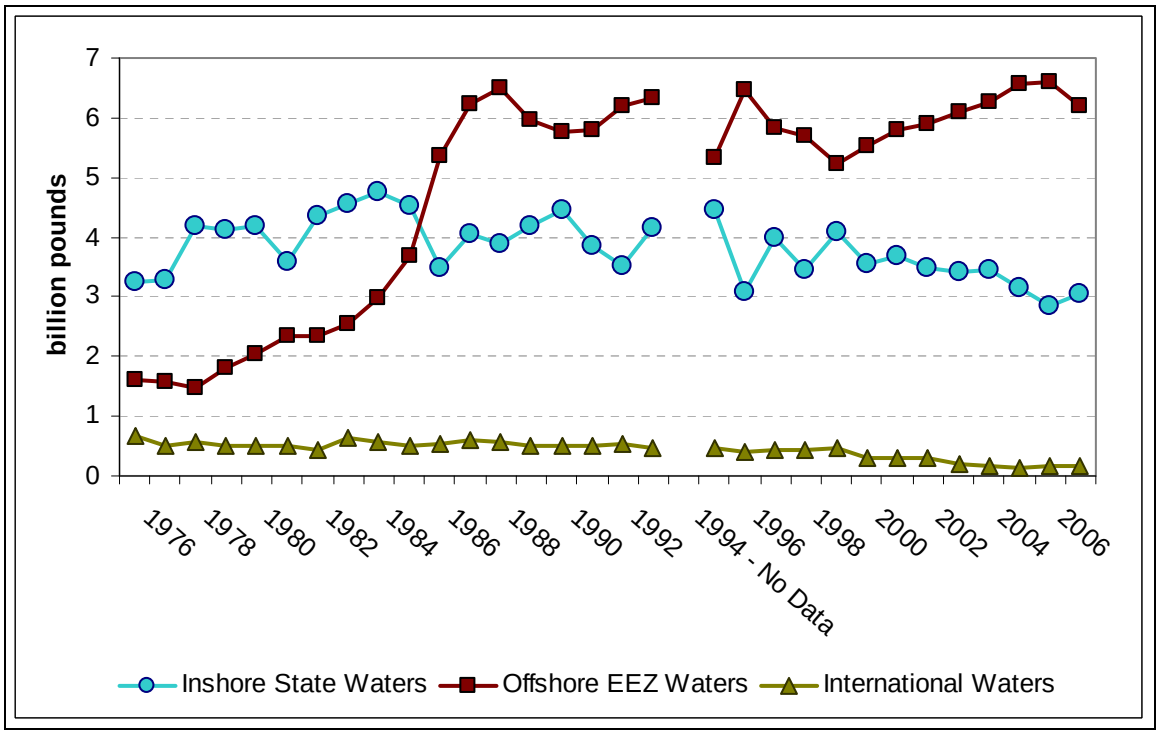
[4] Links to individual Council websites are available at http://www.nmfs.noaa.gov/councils/.

[5] For the 2007 Report to Congress on Council membership, see http://www.nmfs.noaa.gov/sfa/reg_svcs/Council_Reportocongress/07_RptCongress.pdf.

[6] A detailed summary of the Sustainable Fisheries Act, including an explanation of issues and legislative history, can be found at http://www.nmfs.noaa.gov/sfa/sfaguide/.

[7] This total includes both landings for human food and landings for industrial purposes, e.g., bait and animal food, reduction to meal and oil, etc.

Figure 1. U.S. Commercial Fish and Shellfish Harvest, 1976-2007



Source: NMFS, *Fisheries of the United States* (various years), Current Fishery Statistics series.

In 2007, U.S. commercial fishermen landed almost 7.5 billion pounds of edible, unprocessed fish and shellfish from combined state, federal, and international waters, worth almost $3.9 billion at the dock.[8] Imports of mostly processed products supplied 5.3 billion pounds, worth $13.7 billion. U.S. consumers spent an estimated $68.4 billion on edible seafood in 2007, with almost $45.8 billion of that amount spent in restaurants and other food service establishments. In addition, marine recreational anglers caught an estimated 468 million fish in 2007, of which the retained catch was about 255 million pounds.[9] In 2006, a nationwide survey estimated that recreational anglers spent more than $40 billion each year pursuing their sport.[10]

NMFS reports annually on the status of fish stocks managed under the MSFCMA.[11] For 2007, NMFS made determinations for 244 fish stocks and complexes,[12] finding that 41 (17%) of them were subject to overfishing[13] and 203 (83%) were not. In addition, NMFS made determinations for 190 stocks and complexes, finding that 45 (24%) were overfished[14] and 145 (76%) were not.

[8] For additional domestic commercial fishery harvest statistics, see http://www.st.nmfs.noaa.gov/st1/commercial/index.html. Statistics for 2007 are available at http://www.st.nmfs.gov/st1/fus/fus07/.

[9] Recreational fishing programs at NMFS are discussed at http://www.st.nmfs.gov/st1/recreational/index.html.

[10] Results of the 2006 survey can be found at http://library.fws.gov/nat_survey2006_final.pdf.

[11] See http://www.nmfs.noaa.gov/sfa/domes_fish/StatusofFisheries/2007/2007StatusofUSFisheries_Report_to_Congress.pdf.

[12] NMFS reviewed 528 individual stocks and stock complexes but had insufficient information to make determinations on all of them.

[13] A stock that is subject to overfishing has a fishing mortality (harvest) rate above the level that provides for the maximum sustainable yield.

[14] A stock that is overfished has a biomass level below a biological threshold specified in its fishery management plan.

These numbers reflect a decline in the overfishing percentage compared to 2006 (when 20% were subject to overfishing) as well as a slight decline in the overfished percentage compared to that year (when 25% were overfished).

In addition, NMFS developed a Fish Stock Sustainability Index (FSSI) in 2005 as a performance measure to evaluate progress nationwide in addressing overfishing.[15] Out of a possible maximum FSSI of 920, this index of success in curbing overfishing has increased from 481.5 (third quarter of calendar year 2005) to 535 (third quarter of calendar year 2008).

Magnuson-Stevens Act

The MSFCMA was reauthorized in the 109th Congress in 2006 by P.L. 109-479, the Magnuson-Stevens Fishery Conservation and Management Reauthorization Act of 2006.[16] Some of the major issues addressed by this comprehensive measure included:

- modifying requirements for the appointment and training of members of regional councils as well as the conduct of business by regional council committees and panels to enhance transparency of the regional council process;
- setting a firm deadline to end overfishing by 2011 and modifying how depleted fisheries are to be rebuilt;
- increasing the consideration of economic and social impacts in fishery management;
- modifying research programs and improving data collection and management;
- increasing protection for deep sea corals and bottom habitat;
- implementing a pilot program of ecosystem-based management;
- promoting new gear technologies to further reduce bycatch;
- establishing national guidelines for individual fishing quota (limited access privilege) programs;
- modifying regional council fishery management plan procedures, including better coordinating environmental review under the National Environmental Policy Act (NEPA; 42 U.S.C. §§ 4321, et seq.); and
- strengthening the role of science in fishery management decision-making.[17]

[15] FSSI is a performance measure for the sustainability of 230 fish stocks selected for their importance to commercial and recreational fisheries. The FSSI will increase as overfishing ends and stocks rebuild to the level that provides maximum sustainable yield. FSSI is calculated by assigning a score for each fish stock based on rules available at http://www.nmfs.noaa.gov/sfa/domes_fish/StatusoFisheries/2008/3rdQuarter/Q32008FSSISummaryChanges.pdf.

[16] For additional summary information on this measure, see http://www.nmfs.noaa.gov/msa2005/MSA%202006%20Implementation%20Overview.pdf.

[17] For additional highlights and commentary on this enactment, see http://cbbulletin.com/Free/199763.aspx; a detailed summary of enacted provisions is available at http://www.olemiss.edu/orgs/SGLC/National/Magnuson.pdf.

Implementation of P.L. 109-479

NMFS has summarized various tasks associated with implementing P.L. 109-479.[18] On January 13, 2009, NMFS released its first report to Congress on implementing Title IV of P.L. 109-479, relating to better control of illegal, unreported, and unregulated (IUU) fishing activities.[19] On January 15, 2009, NMFS issued final guidance amending the guidelines for National Standard 1, designed to end overfishing in response to provisions in P.L. 109-479 providing new requirements for annual catch limits and other accountability measures.[20]

Action in the 111th Congress

In the 111th Congress, H.R. 81 amends the MSFCMA to modify language related to the prohibition of shark finning.

Pacific Salmon

Background

Steelhead trout and five species of salmon spawn in Pacific coastal rivers and lakes, after which juveniles migrate to North Pacific ocean waters where they mature before returning to the same freshwater rivers and lakes to spawn. Management is complicated because these fish may cross several state and national boundaries during their life spans, and their different subpopulations/ stocks intermingle on fishing grounds. In addition to natural environmental fluctuations, threats to salmon include hydropower dams that block rivers and create reservoirs, sport and commercial harvests, habitat modification by competing resource industries and other human development, and hatcheries seeking to supplement natural production but sometimes unintentionally causing genetic or developmental concerns. In response to declining salmon populations in Washington, Oregon, Idaho, and California, discrete population units have been listed as endangered or threatened species under the Endangered Species Act.[21] On September 13, 2006, a San Joaquin River Restoration Settlement Agreement was announced, ending an 18-year legal dispute over the operation of Friant Dam in California. This agreement provides for river channel improvements and water flow to sustain Chinook salmon upstream (south) from the confluence of the Merced River tributary while reducing or avoiding adverse water supply impacts to Friant Division long-term water contractors that may result from restoration flows provided in the agreement.

To address some of their concerns about Pacific salmon management, the United States and Canada negotiated a bilateral agreement on Pacific salmon in 1985. However, by the mid-1990s, controversy stalled renegotiations to adjust cooperative management of these fish. This deadlock was resolved in June 1999 when a new accord was concluded. Annex IV of this bilateral agreement outlines, in detail, the fishery regimes to be followed by Canada and the United States

[18] Available at http://www.nmfs.noaa.gov/msa2007/Reauthorization_tasks.pdf. Additional information on NMFS's implementation of P.L. 109-479 can be found at http://www.nmfs.noaa.gov/msa2007/.

[19] Available at http://www.nmfs.noaa.gov/msa2007/docs/biennial_report011309.pdf.

[20] 74 *Federal Register* 3178-3213, January 16, 2009.

[21] For additional background on this issue, see CRS Report 98-666, *Pacific Salmon and Steelhead Trout: Managing Under the Endangered Species Act*, by Eugene H. Buck.

in cooperatively managing the six species of anadromous Pacific salmon and steelhead trout. Annex IV was recently renegotiated and took effect on January 1, 2009.[22]

Action in the 111th Congress

H.R. 372, S. 161, and Title X, Subtitle A, of S. 22 authorize the implementation of the San Joaquin River Restoration Settlement[23] providing for the reintroduction of Chinook salmon; the Senate passed S. 22, amended, on January 15, 2009. H.R. 1080 amends the Pacific Salmon Treaty Act to strengthen enforcement mechanisms so as to stop illegal, unreported, and unregulated fishing.

Additional Fishery Issues in the 111th Congress

Invasive Species

Title I of H.R. 500/S. 237 amends the Nonindigenous Aquatic Nuisance Prevention and Control Act of 1990 to establish vessel ballast water management standards; the remainder of this title focuses on improving coordination among various national and international efforts to control invasive species and authorizes various research programs to address invasive species concerns. H.R. 48 amends the Lacey Act to add four species of carp to the list of injurious species that are prohibited from being imported or shipped interstate. H.R. 51 directs the U.S. Fish and Wildlife Service to study the feasibility of various approaches to eradicating Asian carp from the Great Lakes watershed. H.R. 669 directs the Secretary of the Interior to promulgate regulations that establish a process for assessing the risk of non-native species proposed for importation into the United States, including lists of approved and unapproved species.

National Marine Sanctuaries

Section 7(b)(2)(h) of H.R. 223/S. 212 promotes cooperative research and education efforts with commercial fishermen operating within the Gulf of the Farallones National Marine Sanctuary and the Cordell Bank National Marine Sanctuary. H.R. 790 prohibits federal oil or natural gas leases in any marine national monument or national marine sanctuary or Georges Bank.

Habitat Protection and Restoration

Section 9107 of S. 22 amends P.L. 106-392 to extend the authorizations for the Upper Colorado and San Juan River Basin endangered fish recovery programs through FY2023; the Senate passed S. 22, amended, on January 15, 2009. H.R. 790 prohibits federal oil or natural gas leases in any marine national monument or national marine sanctuary or Georges Bank. H.R. 204 permanently prohibits oil and gas leasing off the coast of Mendocino, Humboldt, and Del Norte Counties in the State of California.

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[22] For background information on the Pacific Salmon Treaty, see CRS Report RL30234, *The Pacific Salmon Treaty: The 1999 Agreement and Renegotiation of Annex IV*, by Eugene H. Buck. For additional information on the renegotiated Annex IV, see http://www.dfo-mpo.gc.ca/media/back-fiche/2009/pr01-eng.htm.

[23] For additional information on this settlement, see CRS Report RL34237, *San Joaquin River Restoration Settlement*, coordinated by Betsy A. Cody and Pervaze A. Sheikh.

Assistance

On February 17, 2009, President Obama signed H.R. 1 into law, containing language in Section 1886 broadening the basis for determination of import increases relating to trade adjustment assistance for fishing and aquaculture to include wild-caught fish and seafood in addition to farm-raised fish and seafood.

Climate Change

H.R. 14; Title XII, Subtitle D of S. 22; and S. 173 direct the Secretary of Commerce to establish an ocean acidification program within NOAA, and establish an interagency committee to develop an ocean acidification research and monitoring plan.[24] The Senate passed S. 22, amended, on January 15, 2009.

Seafood Safety and Nutrition

S. 92 directs the Secretary of Health and Human Service to refuse entry of certain seafood imports and to specify actions to be taken on rejected shipments. Section 102 of H.R. 875 consolidates food safety and inspection programs, including seafood inspection.

Coral

H.R. 52/S. 345 amend the Tropical Forest Conservation Act of 1998 to provide debt relief to developing countries that protect coral reefs and associated coastal marine ecosystems. H.R. 860 amends and reauthorizes the Coral Reef Conservation Act of 2000 through FY2014.

Sport Fisheries

S. 297 authorizes charter boat operators and recreational fishermen to form associations to catch and market aquatic products, implement vessel capacity reduction programs, and undertake research.

Energy and Water Projects

Section 13002 of S. 22 reauthorizes (through FY2015) and amends the Fisheries Restoration and Irrigation Mitigation Act of 2000; the Senate passed S. 22, amended, on January 15, 2009.

Marketing

Section 131 of H.R. 759 amends the Federal Food, Drug, and Cosmetic Act to require labeling as a color additive whenever carbon monoxide is used to treat meat, poultry, and seafood.

[24] For background information, see CRS Report R40143, *Ocean Acidification*, by Eugene H. Buck and Peter Folger.

Tax Provisions

H.R. 115 amends the Internal Revenue Code to provide for tax-exempt qualified small issue bonds to finance fish processing facilities.

Enforcement

H.R. 1080 amends various fishery statutes to strengthen enforcement mechanisms so as to stop illegal, unreported, and unregulated fishing.

Sharks

H.R. 81 amends the High Seas Driftnet Fishing Moratorium Protection Act to increase sanctions on nations that permit shark finning.

Aquaculture

Background

Aquaculture is broadly defined as the farming or husbandry of fish, shellfish, and other aquatic animals and plants, usually in a controlled or selected environment.[25] The diversity of aquaculture is typified by such activities as fish farming, usually applied to freshwater commercial aquaculture operations (e.g., catfish and trout farms);[26] shellfish and seaweed culture; net-pen culture, used by the salmon industry, wherein fish remain captive throughout their lives in marine pens built from nets; and ocean ranching, used by the Pacific Coast salmon industry, whereby juvenile salmon are cultured, released to mature in the open ocean, and caught when they return as adults to spawn. Fish hatcheries can be either publicly or privately operated to raise fish for recreational and commercial stocking as well as to mitigate aquatic resource and habitat damage.

The U.N. Food and Agriculture Organization (FAO) has characterized aquaculture as one of the world's fastest-growing food production activities. World aquaculture production more than doubled in 10 years, from about 10 million metric tons in 1984 to 25.5 million metric tons in 1994; by 2002, global aquaculture production had reached almost 40 million metric tons. By mid-2006, FAO estimated that 43% of all fish consumed by humans came from aquaculture.[27] FAO has projected that aquaculture will surpass wild-harvested seafood as the source of more than half of global seafood consumption in 2008. In addition, FAO predicts that world aquaculture production could exceed 130 million metric tons by 2030.[28]

[25] For more background information, see CRS Report RL32694, *Open Ocean Aquaculture*, by Harold F. Upton and Eugene H. Buck, and out-of-print CRS Report 97-436, *Aquaculture and the Federal Role*, by Geoffrey S. Becker and Eugene H. Buck, available from the author at gbuck@crs.loc.gov.

[26] For statistics on freshwater production, see http://www.agcensus.usda.gov/Publications/2002/Aquaculture/index.asp.

[27] For more details, see http://www.fao.org/newsroom/en/news/2006/1000383/index.html.

[28] For more discussion of FAO projections for 2030, see Part 3 of http://www.fao.org/docrep/007/y5600e/y5600e00.htm.

U.S. aquaculture, until recently and with a few exceptions, has been considered a minor industry. The U.S. Department of Agriculture's *2005 Census of Aquaculture* reported that U.S. sales of aquaculture products had reached nearly $1.1 billion, with more than half this value produced in Alabama, Arkansas, Louisiana, and Mississippi.[29] Despite considerable growth, the domestic aquaculture industry faces strong competition from imports of foreign aquacultural products, from the domestic poultry and livestock industries, and from wild harvests. With growth, however, aquaculture operations face increasing scrutiny for habitat destruction, pollution, and other concerns. The major statute affecting U.S. aquaculture is the National Aquaculture Act of 1980, as amended (16 U.S.C. §§ 2801 et seq.). The purpose of this act is to ensure coordination of various federal programs and policies affecting the aquaculture industry, and to promote and support aquaculture research and development.

In October 2007, NOAA released a 10-year plan for its marine aquaculture program.[30] Legislation to modify the regulatory environment and promote the development of U.S. offshore, open-ocean aquaculture was introduced in the 110th Congress, but was not considered by either chamber.

Aquaculture Issues in the 111th Congress

National Fish Hatchery System

On February 17, 2009, President Obama signed H.R. 1 into law, containing language including National Fish Hatcheries as eligible for $165 million in resource management funding as well as $115 million in construction funding for the U.S. Fish and Wildlife Service. Section 8 of S. 313/H.R. 1065 addresses the relationship between the Department of the Interior and the White Mountain Apache Tribe (WMAT) for the operation and maintenance of the Alchesay-Williams Creek National Fish Hatchery Complex and the WMAT Fishery Center.

Asian Carp

H.R. 48 amends the Lacey Act to add four species of carp to the list of injurious species that are prohibited from being imported or shipped. Section 171 of S. 237 amends the Lacey Act to add bighead carp to the list of injurious species that are prohibited from being imported or shipped.

Assistance

On February 17, 2009, President Obama signed H.R. 1 into law, containing language in (1) Section 103(d) providing as much as $50 million in total assistance to aquaculture producers for losses associated with high feed input costs during the 2008 calendar year; and (2) Section 1886 broadening the basis for determination of import increases relating to trade adjustment assistance for fishing and aquaculture to include wild-caught fish and seafood in addition to farm-raised fish and seafood.

[29] See http://www.nass.usda.gov/aquaculture/index.asp. For the latest information on domestic production and statistics, see http://usda.mannlib.cornell.edu/MannUsda/viewDocumentInfo.do?documentID=1375.

[30] Available at http://aquaculture.noaa.gov/about/tenyear.html.

Delta Smelt

Section 4 of H.R. 856 authorizes the Secretary of the Interior to enter into a cooperative agreement with the State of California to establish a fish hatchery program for Delta smelt in the Sacramento-San Joaquin Delta.

Marketing

Section 131 of H.R. 759 amends the Federal Food, Drug, and Cosmetic Act to require labeling as a color additive whenever carbon monoxide is used to treat meat, poultry, and seafood.

Marine Mammals

Background

In 1972, Congress enacted the Marine Mammal Protection Act (MMPA; 16 U.S.C. §§ 1361 et seq.), due in part to the high level of dolphin mortality (estimated at more than 400,000 animals per year) in the eastern tropical Pacific tuna purse-seine fishery. While some critics assert that the MMPA is scientifically irrational because it identifies one group of organisms for special protection unrelated to their abundance or ecological role, supporters note that the MMPA has accomplished much by way of promoting research and increased understanding of marine life as well as encouraging attention to incidental bycatch mortalities of marine life by the commercial fishing and other maritime industries.

The MMPA established a moratorium on the "taking" of marine mammals in U.S. waters and by U.S. nationals on the high seas. It also established a moratorium on importing marine mammals and marine mammal products into the United States. The MMPA protected marine mammals from "clubbing, mutilation, poisoning, capture in nets, and other human actions that lead to extinction." It also expressly authorized the Secretary of Commerce and the Secretary of the Interior to issue permits for the "taking" of marine mammals for certain purposes, such as scientific research and public display.

Under the MMPA, the Secretary of Commerce, acting through NMFS, is responsible for the conservation and management of whales, dolphins, and porpoises (cetaceans), and seals and sea lions (pinnipeds). The Secretary of the Interior, acting through the Fish and Wildlife Service (FWS), is responsible for walruses, sea and marine otters, polar bears, manatees, and dugongs. This division of authority derives from agency responsibilities as they existed when the MMPA was enacted. Title II of the MMPA established an independent Marine Mammal Commission (MMC) and its Committee of Scientific Advisors on Marine Mammals to oversee and recommend actions necessary to meet the requirements of the MMPA.

Prior to passage of the MMPA, states were responsible for marine mammal management on lands and in waters under their jurisdiction. The MMPA shifted marine mammal management authority to the federal government. It provides, however, that management authority, on a species-by-species basis, could be returned to states that adopt conservation and management programs consistent with the purposes and policies of the MMPA. It also provides that the moratorium on taking can be waived for specific purposes, if the taking will not disadvantage the affected species or population. Permits may be issued to take or import any marine mammal species, including

depleted species, for scientific research or to enhance the survival or recovery of the species or stock. The MMPA allows U.S. citizens to apply for and obtain authorization for taking small numbers of mammals incidental to activities other than commercial fishing (e.g., offshore oil and gas exploration and development) if the taking would have only a negligible impact on any marine mammal species or stock, provided that monitoring requirements and other conditions are met.

The MMPA moratorium on taking does not apply to any Native American (Indian, Aleut, or Eskimo) who resides in Alaska near the coast of the North Pacific (including the Bering Sea) or Arctic Ocean (including the Chukchi and Beaufort Seas), if such taking is for subsistence or for creating and selling authentic Native articles of handicrafts and clothing, and is not done wastefully.

The MMPA also authorizes the taking of marine mammals incidental to commercial fishing operations. In 1988, most U.S. commercial fish harvesters were exempted from otherwise applicable rulemaking and permit requirements for a five-year period, pending development of an improved system to govern the incidental taking of marine mammals in the course of commercial fishing operations. This exemption expired at the end of FY1993, and was extended several times until new provisions were enacted in 1994 by P.L. 103-238, which reauthorized the MMPA through FY1999. The eastern tropical Pacific tuna fishery was excluded from the incidental take regimes enacted in 1988 and 1994. Instead, the taking of marine mammals incidental to that fishery is governed by separate provisions of the MMPA, and was substantially amended in 1997 by P.L. 105-42, the International Dolphin Conservation Program Act.

Section 319 of P.L. 108-136 amended the MMPA to provide a broad exemption for "national defense" activities. This section also amended the definition of "harassment" of marine mammals, as it applies to military readiness activities, to require greater scientific evidence of harm, and the consideration of impacts on military readiness in the issuance of permits for incidental takings.[31] The Navy's use of mid-frequency sonar and its possible effects on marine mammals has been the focus of much controversy and litigation.[32]

Marine Mammal Protection Act Reauthorization

The MMPA was reauthorized by P.L. 103-238, the Marine Mammal Protection Act Amendments of 1994; the authorization for appropriations expired on September 30, 1999. The 1994 amendments indefinitely authorized the taking of marine mammals incidental to commercial fishing operations and provided for assessing marine mammal stocks in U.S. waters, for developing and implementing take-reduction plans for stocks that have been reduced or are being maintained below their optimum sustainable population levels due to interactions with commercial fisheries, and for studying pinniped-fishery interactions.[33]

[31] For more background, see CRS Report RS22149, *Exemptions from Environmental Law for the Department of Defense (DOD)*, by David M. Bearden.

[32] For more background, see CRS Report RL34403, *Whales and Sonar: Environmental Exemptions for the Navy's Mid-Frequency Active Sonar Training*, by Kristina Alexander, and CRS Report RL33133, *Active Military Sonar and Marine Mammals: Events and References*, by Eugene H. Buck and Kori Calvert.

[33] For more background and information on the 1994 amendments, see out-of-print CRS Report 94-751 ENR, *Marine Mammal Protection Act Amendments of 1994*, by Eugene H. Buck, available from the author at gbuck@crs.loc.gov.

A December 2008 study by the Government Accountability Office (GAO) found that limitations in information available make it difficult for NMFS to accurately determine which marine mammal stocks meet the statutory requirements for establishing take reduction teams.[34] GAO found that NMFS did not have a human-caused mortality estimate or a maximum removal level for 39 of 113 marine mammal stocks, making it impossible to determine their strategic status in accordance with MMPA requirements. For the remaining 74 stocks, NMFS data have significant limitations that call into questions their accuracy. NMFS contends that funding constraints limit their ability to gather sufficient data. In addition, NMFS has not established take reduction teams for 14 marine mammal stocks for which NMFS data show them to be strategic and interacting significantly with commercial fisheries.

In the 111th Congress, H.R. 843 amends the MMPA to repeal the long-term goal for reducing the incidental mortality and serious injury of marine mammals to zero in commercial fishing operations, and to modify the goal of take reduction plans for reducing such takings. H.R. 844 amends the MMPA provisions relating to the John H. Prescott Marine Mammal Rescue Assistance Grant Program. H.R. 1054 amends the MMPA to allow imports of polar bear trophies taken in sport hunts in Canada before the date the polar bear was listed as a threatened species under the Endangered Species Act. H.R. 1055 amends the MMPA to allow imports of polar bear trophies taken in sport hunts in Canada.

Additional Marine Mammal Issues in the 111th Congress

Military Sonar

H.R. 672 restricts the use of military and national security exemptions to MMPA restrictions on marine mammal taking.

Dolphin Protection

H.R. 1080 amends the Dolphin Protection Consumer Information Act to strengthen enforcement mechanisms so as to stop illegal, unreported, and unregulated fishing.

Southern Sea Otter

H.R. 556 establishes a research program for the recovery of the southern sea otter.

NMFS Appropriations

On February 4, 2008, the Bush Administration released its FY2009 budget request, including about $782 million for NMFS. (See **Table 1.**) The FY2009 request for funding for NMFS within NOAA's Operations, Research, and Facilities (OR&F) Account was $15.87 million (2.24%) more than funding enacted for FY2008. However, total NMFS funding was to decrease by $46.76

[34] U.S. Government Accountability Office, *Improvements Are Needed in the Federal Process Used to Protect Marine Mammals from Commercial Fishing*, GAO-09-78 (December 8, 2008). Available at http://www.gao.gov/new.items/d0978.pdf.

million (5.64%) from that enacted for FY2008, primarily due to significant decreases for Pacific Coastal Salmon Recovery and for Other Accounts.

Table 1. NMFS Appropriations

(in thousands of dollars)

	FY2007 Enacted	*FY2008 Request*	FY2008 Enacted	*FY2009 Request*	FY2009 House Rpt	FY2009 Senate Rpt
Operations, Research, and Facilities (OR&F) Account						
Fisheries	515,301	*402,096*	409,209	*424,480*	429,184	460,672
Protected Resources	141,015	*165,095*	163,992	*167,241*	176,241	178,105
Habitat Conservation	43,544	*50,415*	50,245	*43,405*	49,905	48,405
Enforcement Surveillance	78,126	*86,973*	84,894	*89,085*	89,085	90,085
SUBTOTAL (OR&F)	**828,716**[a]	***704,579***	**708,340**	***724,211***	**744,415**	**777,267**
Non-OR&F Accounts						
Procurement, Acquisition, Construction	11,190	*0*	2,021	*0*	0	4,600
Pacific Coastal Salmon Recovery	66,638	*66,825*	67,000	*35,000*	65,000	90,000
Other Accounts	27,385	*24,550*	51,722	*23,112*	0	54,000
TOTAL	**933,929**	***795,954***	**829,083**	***782,323***	**809,415**	**925,867**

Sources: Budget Justifications, House and Senate Committee Reports, and floor debate.

a. Includes $ 50.73 million for "Alaska Composite Research and Development Program."

In the 110th Congress on June 23, 2008, the Senate Committee on Appropriations reported S. 3182 (S.Rept. 110-397), recommending almost $926 million for NMFS for FY2009, $97.8 million (11.8%) more than the FY2008 enacted level and $143.5 million (18.3%) more than the FY2009 request. In addition to what the Administration had requested, the Senate bill included an additional $55 million for Pacific Coastal Salmon Restoration, $50 million for fishery disaster mitigation, and $30 million for various fishery management activities.

On December 10, 2008, the House Committee on Appropriations reported H.R. 7322 (H.Rept. 110-919) containing FY2009 NMFS appropriations. The committee recommended almost $810 million for NMFS for FY2009, $19.7 million (2.4%) less than the FY2008 enacted level and $27.1 million (3.5%) more than the FY2009 request. Included by the House measure for Pacific Coastal Salmon Restoration was $30 million more than what the Administration had requested.

Division A of P.L. 110-329 provided continuing appropriations for NMFS, through March 6, 2009, at the level of FY2008 appropriations.

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