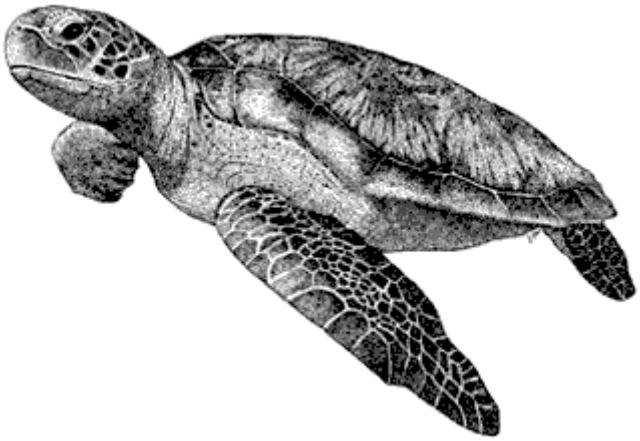
Annual Report to Congress on U.S. Fisheries Bycatch Reduction Standards and Measures

Issued Pursuant to Section 202(h) of the Magnuson-Stevens Fishery Conservation and Management Act



U.S. Department of Commerce
National Oceanic and Atmospheric Administration
National Marine Fisheries Service
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2007 REPORT ON U.S. FISHERIES BYCATCH REDUCTION STANDARDS AND MEASURES RELEVANT TO SECTION 202(h) OF THE MAGNUSON-STEVENS FISHERY CONSERVATION AND MANAGEMENT ACT

Section 202(h)(l) of the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act) states that "The Secretary of State, in cooperation with the Secretary [of Commerce], shall seek to secure an international agreement to establish standards and measures for bycatch reduction that are comparable to the standards and measures applicable to United States fishermen for such purposes in any fishery regulated pursuant to this Act for which the Secretary, in consultation with the Secretary of State, determines that such an international agreement is necessary and appropriate." Similar provisions are contained in both the Marine Mammal Protection Act (MMPA) and the Endangered Species Act (ESA).

Section 202(h)(3) of the Magnuson-Stevens Act requires that the Secretary of Commerce, in consultation with the Secretary of State, submit annually to the Senate Committee on Commerce, Science, and Transportation and the House Committee on Natural Resources a report describing actions pursuant to Section 202(h) of the Act.

In its 2000 Annual Report to Congress on International Bycatch Reduction Agreements, the National Oceanic and Atmospheric Administration's (NOAA's) National Marine Fisheries Service (NMFS) concluded, with Department of State concurrence, that seeking international agreements with foreign nations conducting pelagic longline fishing operations for Atlantic and Pacific highly migratory species was necessary to protect endangered and threatened sea turtles. An international strategy, referred to as the Course of Action to Promote International Agreements that Address the Need to Reduce Sea Turtle Bycatch in Foreign Longline Fisheries, was subsequently developed to address this issue and detailed in the 2001 Report to Congress on International Bycatch Reduction Agreements.

In January 2002, NMFS convened an International Bycatch Reduction Task Force to develop a Plan of Action to implement the sea turtle bycatch strategy. This Task Force was made up of NMFS and Department of State personnel. Although the initial focus of this group was to further discussions and ultimately to reduce sea turtle bycatch in longline fisheries internationally, the issues of incidental catch of seabirds in longline fisheries and the conservation and management of sharks were quickly added to the work of the Task Force. More information on the Course of Action to Promote International Agreements that Address the Need to Reduce Sea Turtle Bycatch in Foreign Longline Fisheries and the activities of the International Bycatch Reduction Task Force is available from NMFS.

In this report, NMFS identifies relevant bycatch standards and measures adopted in 2007 under fishery management plans addressing fish stocks also harvested by foreign fishermen. A description of these bycatch standards and measures by region, an update on initiatives identified in previous reports (where relevant), and NMFS' conclusions on the necessity and appropriateness of seeking international agreements establishing comparable standards and measures follow. This report also provides an update on the status and work of the International Bycatch Reduction Task Force.

I. NORTHEAST REGION

The Final Rule to amend the Atlantic Large Whale Take Reduction Plan (ALWTRP) to protect large whales (72 FR 57104) required broad-based gear modifications during specific times and in specific areas, designed to reduce incidental deaths and serious injuries of the Northern right whale, humpback whale, and fin whale. Minke whales also are intended to benefit from the regulations under the ALWTRP. This final rule affects fisheries currently covered by the ALWTRP (the Northeast sink gillnet, Northeast/Mid-Atlantic American lobster trap/pot, Mid-Atlantic gillnet, Southeast Atlantic gillnet, and Southeastern U.S. Atlantic shark gillnet fisheries). The rule also regulates some additional trap/pot and gillnet fisheries for the first time under the plan, including the following: Northeast anchored float gillnet; Northeast drift gillnet; Atlantic blue crab; and Atlantic mixed species trap/pot fisheries targeting species including, but not limited to, crab (red, Jonah, and rock), hagfish, black sea bass, scup, tautog, cod, haddock, pollock, redfish (ocean perch), white hake, conch/whelk, and shrimp. The Dynamic Area Management program will be replaced when most of the broad-based gear modifications become effective. Expanded Seasonal Area Management zones will apply for one year, and then affected fisheries will be required to use sinking and/or neutrally buoyant groundline on a broad-scale basis. This rule also expands exempted waters, includes regulatory changes for the purposes of clarification and consistency, and requires more markings on fishing gear to improve understanding of how and where entanglements occur.

The Final Rule to Amend American Lobster Regulations (72 FR 56935), designed to reduce catches of immature lobsters, required an increase in trap escape vent size to 2 1/16 inches x 5 3/4 inches rectangular (5.24 x 14.61 cm), or two circular vents at 2 11/16 inches diameter (6.83 cm), by July 1, 2010.

II. SOUTHEAST REGION

The Final Rule to Protect Right Whales off the Southeast United States (72 FR 34632) expanded the Southeast U.S. Restricted Area and modified regulations pertaining to gillnetting within the Southeast U.S. Restricted Area. Specifically, the rule prohibited gillnet fishing or gillnet possession, with limited exceptions, during annual restricted periods associated with the right whale calving season.

III. ATLANTIC HIGHLY MIGRATORY SPECIES

The Final Rule to Address Bycatch in the Commercial Shark Fishery (72 FR 5633) implemented additional handling, release, and disentanglement requirements for sea turtles and other non-target species caught in the commercial shark bottom longline fishery. This rulemaking also will prohibit all vessels issued highly migratory species (HMS) permits with bottom longline gear onboard from fishing with, or deploying, any fishing gear in six distinct areas off the U.S. Virgin Islands and Puerto Rico, year-round. This action complements a rule implemented by the Caribbean Fishery Management Council to prohibit bottom-tending fishing gear in these areas.

Beginning January 1, 2008, anglers fishing from HMS-permitted vessels and participating in billfish tournaments must use only non-offset circle hooks when deploying natural baits or natural bait–artificial lure combinations (72 FR 26735).

IV. NORTHWEST REGION

The Final Rule to Establish New Catch Accounting Requirements for the Pacific Whiting Fishery (72 FR 50906) was intended to improve NMFS' ability to effectively monitor the Pacific whiting shoreside fishery so that catch of Pacific whiting and incidentally caught species, including overfished groundfish species, do not result in a species' optimum yield, harvest guideline, allocations, or bycatch limits being exceeded.

V. SOUTHWEST REGION

The Final Rule to Amend Drift Gillnet Regulations (72 FR 31756) pertained to regulations governing closures of the drift gillnet fishery in the Pacific Loggerhead Conservation Area during El Niño events. These regulations help to avoid jeopardizing loggerhead sea turtles by clarifying the time period in which the area is to be closed and the methods that NMFS uses to determine whether an El Niño event is occurring or forecast to occur.

The Final Rule to Monitor and Prevent Interactions between Coastal Pelagic Fishermen and Southern Sea Otters (72 FR 29891) required coastal pelagic fishermen and vessel operators to employ avoidance measures when southern sea otters are present in the area they are fishing, and report any interactions that may occur between their vessel and/or fishing gear and sea otters.

VI. PACIFIC ISLANDS REGION

The Final Rule to Remove a Delay in Effectiveness when Closing the Hawaii-Based Longline Fishery provided for immediate closure of the Hawaii-based shallow-set longline fishery when annual limits are reached. This fishery for swordfish, tunas, and related species is managed under strict annual limits on the number of interactions that can occur between longline fishing operations and sea turtles.

VII. ALASKA REGION

The Final Rules to Set Gulf of Alaska (GOA) Groundfish Measures for 2007 and 2008 (72 FR 9676) and to Set Bering Sea and Aleutian Islands (BSAI) Groundfish Measures for 2007 and 2008 (72 FR 9451) established protected species catch limits for the groundfish fisheries of the GOA and BSAI.

The final rule to implement harvesting cooperatives for the BSAI head and gut catcher processors and quota allocations to all sectors (72 FR 52668) facilitated rationalization of some sectors in the BSAI. Rationalization would eliminate the race for fish and allow cooperative behavior to decrease discards.

The final rule to implement salmon bycatch avoidance measures (72 FR 31070) could reduce salmon bycatch by repealing salmon savings areas and allowing pollock vessels to utilize their voluntary rolling hotspot system to avoid high bycatch areas.

The final rule to extend the North Pacific Groundfish Observer Program beyond December 31, 2007 (72 FR 44795) would ensure continued collection of catch and bycatch data, and management monitoring programs.

VIII. MARINE MAMMAL PROTECTION ACT (MMPA) ACTIVITIES

MMPA List of Fisheries: NMFS finalized the 2007 List of Fisheries (LOF) on March 28, 2007 (72 FR 14466), the proposed the 2008 LOF on June 28, 2007 (72 FR 35393), and the final 2008 LOF on November 27, 2007. Final LOFs reflect new information on interactions between commercial fisheries and marine mammals. The LOF places all commercial fisheries into one of three categories based on the level of incidental serious injury and mortality of marine mammals that occur in each fishery.

Atlantic Large Whale Take Reduction Plan (ALWTRP): In 2007, NMFS finalized two regulations that modify the ALWTRP to reduce serious injuries and deaths of right, humpback, and fin whales incidental to commercial fishing gear. The first regulation, published in June 2007, is described in Section II of this report. The second regulation, published in October 2007, is described in Section I.

Bottlenose Dolphin Take Reduction Plan: In April 2006, NMFS finalized a plan to reduce bottlenose dolphin serious injury and mortality incidental to nine commercial fisheries along the U.S. East Coast. The plan includes both regulatory and non-regulatory measures to reduce dolphin bycatch. Regulatory measures include prohibiting fishing at night in certain areas during specific times and requiring that fishermen tend their gear. Non-regulatory measures include increased enforcement and monitoring efforts, outreach to fishermen, and research. NMFS reconvened the team in June 2007 to assess whether implementation of the plan had achieved the short-term goal of MMPA section 118 (i.e., reducing serious injury and mortality of marine mammals to below the stock's Potential Biological Removal level within 6 months of implementing the plan). The team recommended additional gear and bottlenose dolphin research, as well as enhanced monitoring strategies. The team felt that the data gathered in the 12 months following the plan's implementation were not sufficient to determine whether the plan has achieved the short-term goal of the MMPA. The team also felt that combining data gathered since the plan's implementation with data from years before the plan's implementation was not the most appropriate way to determine whether the plan was achieving the short-term goal of the MMPA. NMFS is currently working to address the team's recommendations and to determine how to best assess the plan's effectiveness given the data challenges.

Pacific Offshore Cetacean Take Reduction Plan: NMFS convened the Pacific Offshore Take Reduction Team in 1996 to reduce serious injuries and deaths of several marine mammal stocks incidental to the California/Oregon thresher shark/swordfish drift gillnet fishery. The strategic marine mammal stocks currently of most concern include short-beaked common dolphins, long-beaked common dolphins, short-finned pilot whales, and Northern right whale dolphins. NMFS

reconvened the team in April 2007 to address the long-term goal of MMPA section 118 (i.e., reducing serious injury and mortality of marine mammals to a rate approaching zero within 5 years of implementing the plan). The team recommended expanding the scope of the take reduction plan to include two additional fisheries that use similar gear and operate in similar areas to the California/Oregon drift gillnet fishery as well as expanding observer coverage in these two fisheries. NMFS is currently working to address these recommendations.

Pelagic Longline Take Reduction Team: In June 2005, NMFS convened a team of stakeholders to address the incidental mortality and serious injury of long-finned pilot whales, short-finned pilot whales, and Risso's dolphins in the mid-Atlantic region of the Atlantic pelagic longline fishery. Under section 118 of the MMPA, the team was charged with developing a take reduction plan to reduce bycatch of pilot whales and Risso's dolphins in the Atlantic pelagic longline fishery to a level approaching a zero mortality and serious injury rate within 5 years of implementation of the plan. The team submitted consensus draft recommendations to NMFS in June 2006. Recommended measures to reduce bycatch include: a 20-nautical-mile limit on mainline length in the Mid-Atlantic Bight; designation of a special research area off Cape Hatteras, North Carolina, with observer and other special requirements; development and use of equipment and methods for careful handling and release of entangled or hooked marine mammals; distribution of an updated informational placard on careful handling and release of marine mammals; and development of mandatory certification workshops on marine mammal bycatch for owners and operators of pelagic longline vessels. NMFS is currently developing a proposed rule to implement the draft recommendations from the team.

Atlantic Trawl Gear Take Reduction Team (ATGTRT): In September 2006, NMFS convened a team of stakeholders to address the incidental mortality and serious injury of long-finned pilot whales, short-finned pilot whales, common dolphins, and white-sided dolphins in the Northeast bottom trawl, Northeast mid-water trawl (including pair trawl), mid-Atlantic mid-water trawl (including pair trawl), and mid-Atlantic bottom trawl fisheries. Under section 118 of the Marine Mammal Protection Act (MMPA), the ATGTRT is charged with developing a take reduction plan to reduce bycatch of pilot whales, common dolphins, and white-sided dolphins in Atlantic trawl fisheries to a level approaching a zero mortality and serious injury rate within 5 years of implementation of the plan. The team met again in April 2007 to continue discussions for the development of a take reduction plan. At this time, the most current List of Fisheries and updated Marine Mammal Stock Assessment Reports showed that all of the fisheries covered by the ATGTRT were Category II fisheries and none of the marine mammal stocks were strategic. As a result, the team recommended that NMFS not develop a take reduction plan. Ultimately, team members agreed to separate into two subcommittees and develop an education and outreach plan, and a research and gear mitigation plan, for submission to NMFS to maintain progress toward the ultimate goal of reducing the serious injury and mortality of marine mammals in Atlantic trawl fisheries. The subcommittees are currently developing recommendations for submission to NMFS.

Harbor Porpoise Take Reduction Team (HPTRT): NMFS convened the Gulf of Maine Harbor Porpoise Take Reduction Team in August 1996 and the Mid-Atlantic Harbor Porpoise Take Reduction Team in 1997 to reduce serious injuries and deaths of harbor porpoise in the Gulf of Maine groundfish sink gillnet fishery and mid-Atlantic ocean gillnet fisheries, respectively.

NMFS published a joint Harbor Porpoise Take Reduction Plan (HPTRP) in December 1998 and modifications to the take reduction plan in September, 2001. Immediately following implementation of the HPTRP, harbor porpoise mortality and serious injury incidental to commercial gillnet fisheries was reduced to below the Potential Biological Removal (PBR) level, thereby achieving the short-term goal of MMPA section 118 (i.e., reducing serious injury and mortality of marine mammals to below the stock's PBR within 6 months of implementing the plan). Since then, NMFS has continued to monitor the effectiveness of the HPTRP. Recently, rather than moving toward the long-term Zero Mortality Rate Goal, harbor porpoise mortality and serious injury has been increasing due to compliance-related issues and potential shifts in harbor porpoise distribution. Currently, harbor porpoise mortality and serious injury levels in commercial gillnet gear exceed the PBR level. In response to the recent increase in observed harbor porpoise mortality and serious injury, NMFS held a series of voluntary outreach meetings for members of the fishing industry along the U.S. East Coast in late 2006 and early 2007. NMFS reconvened the HPTRT in late December 2007 to address the increasing harbor porpoise serious injury and mortality levels and other HPTRP administrative issues.

IX. OTHER ACTIVITIES—INTERNATIONAL BYCATCH REDUCTION

Larger Openings in Turtle Excluder Devices: Public Law 101-162 mandates that shrimp exported to the United States must be harvested in a manner that is comparable to the sea turtle regulations of the United States. The law requires foreign governments whose shrimp trawl fleets adversely impact sea turtles to adopt programs requiring the use of turtle excluder devices (TED) if they want to export shrimp to the United States. Beginning in 2003, U.S. shrimp fishermen were required to use larger openings in their TEDs. The larger openings allow leatherback sea turtles as well as large sexually mature loggerhead and green turtles to escape the shrimp nets. Due to the changes in U.S. requirements, large TED openings were required by August 31, 2004, for those nations that export wild-harvested shrimp to the United States. NMFS and the Department of State made 14 visits to these nations to inform them about the new TED opening requirements. During 2007, NMFS and the Department of State made inspections in 12 countries and conducted trainings in Gabon and Malaysia. NMFS is receiving more and more requests from countries to receive training in establishing TED programs. NMFS is hopeful that through partnerships, like the one mentioned below with the Department of State and the United States Agency for International Development, we will be able to accommodate all these requests.

International Bycatch Reduction Task Force: In January 2002, NMFS convened an International Bycatch Reduction Task Force made up of NMFS and U.S. Department of State representatives. The Task Force subsequently developed a Plan of Action to: (1) implement the strategy to promote international agreements that reduce sea turtle bycatch in foreign longline fisheries, and (2) promote the implementation of the Food and Agriculture Organization (FAO) International Plan of Action (IPOA) for Reducing Incidental Catch of Seabirds in Longline Fisheries and the FAO IPOA for the Conservation and Management of Sharks.

The Task Force Plan of Action outlines steps to be taken in implementing the U.S. strategy for international bycatch reduction. These tasks are broken up into four categories: (1) international sea turtle workshops, technology transfer, and gear experiments; (2) international seabird

workshops, technology transfer, and gear experiments; (3) international communications relating to sea turtles, sharks, and seabirds; and (4) other task force activities. NMFS activities during 2007 relating to these categories include the following:

a) *International Sea Turtle Workshops, Technology Transfer, and Gear Experiments:* Since 1999, NMFS has conducted and supported research to develop measures to reduce the incidental take, mortality, and serious injury of sea turtles in pelagic longline fisheries. Efforts have focused on fishing gear modifications and changes to fishing practices to reduce sea turtle interactions and mortality. Experiments conducted in the eastern and northwestern Atlantic Ocean demonstrated that the use of 18/0 and larger circle hooks in combination with certain bait significantly reduces loggerhead and leatherback interactions with longline gear. In addition, 16/0 and 18/0 circle hooks lessen the severity of associated injuries. Activities relating to sea turtle bycatch reduction in longline fisheries continued to be influenced by these studies.

In September 2007, NMFS held an internal workshop to synthesize and review longline bycatch reduction activities to date, evaluate current efforts and look toward future longline bycatch reduction efforts, and discuss approaches to garner greater international support for the use of circle hooks. This workshop looked not only at sea turtle interactions in longlines but also at marine mammals, seabirds, and billfish. This workshop will enable NMFS to continue moving forward on developing approaches to reduce the incidental capture and mortality in longline fisheries. NMFS remains committed to working cooperatively with other nations to share results and advance adoption of technology and fishing practices that will reduce global sea turtle longline interactions. A selection of 2007 activities relating to workshops, technology transfer, and gear research are included below.

- *International Sea Turtle Workshops and Meetings:* During 2007, NMFS continued to engage in discussions and organized working sessions on sea turtle longline interactions at numerous international fishery and conservation forums and at fisheries bilateral meetings with longlining nations, including the 27th Annual Symposium on Sea Turtle Conservation and Biology (February 2007, Myrtle Beach, South Carolina, United States); the Northwest Atlantic Fisheries Organization Annual Meeting (September 2006, Dartmouth, Nova Scotia); the 1st Extraordinary meeting of the Conference of Parties for the Inter American Convention for the Protection and Conservation of Sea Turtles (October 2007, Lima, Peru); the Annual Trilateral Committee Meeting (May 2007, Quebec City, Quebec, Canada); the U.S.-Canada Sea Turtle Bilateral (May 2007, Halifax, Nova Scotia, Canada); and the December 2007 meeting in Washington, D.C., to discuss environmental projects funded under the Central American–Dominican Republic Free Trade Agreement.

- *Technology Transfer and Outreach:* NMFS staff in the Southeast (SEFSC), Pacific Islands (PIFSC), and Southwest (SWFSC) Fisheries Science Centers are actively working with numerous longlining nations to provide information on results of gear experiments that have been conducted with the U.S. fleet; disseminate educational and outreach materials that have been translated into multiple languages; conduct training workshops on safe handling and release practices; provide technical guidance and circle hooks for

the development of research programs; and coordinate on longline gear experiments. The PIFSC, in cooperation with the Inter-American Tropical Tuna Commission (IATTC), held the First Technical Workshop of the Regional Sea Turtle Program of the eastern Pacific June 12–17, 2006, in Puntarenas, Costa Rica. The 2nd technical workshop of the Regional Sea Turtle Program of the eastern Pacific sponsored by IATTC was held in November 2007. The workshops focused on standardization and improvement in data collection and regional database development with participants from Central and South America, Spain, and Japan. Additionally, NOAA played an active role in the 4th International Fishers Forum in Puntarenas, Costa Rica, during November 2007.

- During the past year, NMFS (Pacific Islands Regional Office [PIRO] and PIFSC) partnered with the U.S. office of the World Wildlife Fund (WWF) and other collaborating contractors to identify areas of potential concern with respect to sea turtle bycatch throughout the Pacific Islands and Southeast Asia. In Vietnam, WWF and NOAA have sponsored outreach and education events focusing on sea turtle bycatch in fisheries. NMFS has also recently secured an agreement with the U.S. Department of State to ensure the delivery of fisheries-related items donated to either government or non-governmental organizations collaborating with NOAA in South and Central America.

- Since 2005, NMFS has partnered with the U.S. Department of State and the U.S. Agency for International Development to develop and support scientific, technological, and environmental initiatives in member countries of the Central America–Dominican Republic (CAFTA-DR) Free Trade Agreement. Specifically, NMFS will use funds to expand the capacity of the CAFTA countries to reduce bycatch of sea turtles in longline and trawl fisheries, improve fisheries management and enforcement, and reduce threats from invasive species. These research and management activities build upon past and ongoing cooperative activities and frameworks in the region, including existing regional programs to promote sustainable fisheries management and reduce marine turtle bycatch, as well as partnerships with the Central American Fisheries Organization (OSPESCA), WWF, and the IATTC.

- *Gear Experiments:* During 2006 and 2007, NMFS continued to assist in the planning and/or execution of international and domestic workshops focusing on technology transfer and outreach relating to reduction of sea turtle bycatch in longline fisheries. These workshops focused on transfer of circle hook and bait technology to Latin American, Asian, and other countries that have longline fleets that interact with sea turtles. In April 2005, NMFS convened the first Technical Assistance Workshop on Sea Turtle Bycatch Reduction Experiments. The purpose of this workshop was to provide technical assistance in the design of research programs for the development and testing of turtle bycatch reduction technology appropriate to the longline fisheries of participating nations. Australia, Indonesia, Malaysia, Mexico, and the Philippine Islands sent national delegations to the meeting, while individuals from Italy, New Caledonia, Papua New Guinea, Spain, the Solomon Islands, and Vietnam participated. In 2006 and 2007, NMFS remained actively involved in providing technical guidance for new research programs that evolved out of the 2005 workshop. In 2007, NMFS continued collaborative circle

hook and bait research with a number of additional countries, including Chile, Peru, and Ecuador. In February and March 2006, the SEFSC, in cooperation with the IATTC and PIFSC, worked with longline fishers in Peru and Ecuador to test a new circle hook design modification that effectively increases the width of the hook by using a wire appendage on the back side of the eye. If effective, this would allow smaller circle hooks in the Mahi-Mahi fishery, which has shown a significant loss of catch with the standard circle hooks tested to date. NMFS is also continuing to engage with Japan on Japanese-style tuna hook experiments. NMFS continues to monitor sea turtle interactions in domestic longline fisheries and to conduct research in this area. In 2006 a cooperative research project investigating bycatch in coastal longline fisheries in the Gulf of Mexico and Atlantic was completed. The project involved using hook timers and time-depth recorders to investigate temporal and spatial relationships between target and bycatch species and to further the testing of circle hooks and baiting techniques. When analyses are completed, it is anticipated that these findings will have application to international longline bycatch issues.

- In 2007, research was conducted by the IATTC in Central American artesanal longline fisheries to test the strength of the mainline in relation to rates of turtle capture, with significant reductions in turtle capture rates with stiffer (monofilament) line. In September 2007, NMFS sponsored the U.S. Longline Bycatch Reduction Assessment and Planning Workshop in Seattle, Washington. Research was also conducted in Baja California to test both shark shapes and lightsticks as means to reduce sea turtle bycatch in gillnet fisheries, with both modifications resulting in reduced capture rates of sea turtles.

- Circle hook trials were conducted in a tuna fishery in Hawaii, with circle hooks found to have similar rates of tuna catch per unit effort as compared to traditional tuna hooks. Circle hooks and mackerel baits are still being tested in swordfish fisheries in Brazil, Italy, and Uruguay, with encouraging results for both target species as well as sea turtle bycatch. These tests are funded, at least in part, with NMFS-PIFSC funds. Circle hook (plus a novel hook) trials are planned for the Cook Islands during May 2008, where sea turtle bycatch was recently found to be relatively high.

- NMFS' PIFSC continues to provide technical support to Spanish scientists testing the effects of bait types in longline fisheries, with promising findings regarding the effectiveness of fish bait to reduce sea turtle bycatch.

b) *International Seabird Workshops/Technology Transfer/Gear Experiments:* A number of Task Force members also participate as members of an Interagency Seabird Working Group, which works to increase coordination and collaboration between government agencies involved in the implementation of the U.S. National Plan of Action (NPOA) for Seabirds. A number of international workshops, gear experiments, and activities to promote technology transfer relating to reduction of seabird bycatch occurred during 2007. These efforts are summarized below.

- International Seabird Workshops and Meetings: During 2007, Task Force members participated in a number of workshops and meetings, including: the 3rd Meeting of the Advisory Committee to the Agreement for the Conservation of Albatrosses and Petrels in Valdivia, Chile (June 2007); FAO/BirdLife International workshop to develop best practices guidelines for the development of NPOAs in Hobart, Australia (October 2007); Co-convening the ad-hoc Working Group on the Incidental Mortality Associated with Fishing (WG-IMAF) at the Commission for the Conservation of Atlantic Marine Living Resources (CCAMLR), in Hobart, Australia (October/November 2007).

- Technology Transfer and Outreach: The results of seabird mitigation research conducted in the United States continue to be shared internationally. Support also continues for development of effective resolutions and mitigation measures in fora such as FAO's Committee on Fisheries (COFI), the International Commission for the Conservation of Atlantic Tunas (ICCAT), the Western and Central Pacific Fisheries Commission (WCPFC), CCAMLR, ISC, and the IATTC. Integrated weight groundlines and paired streamer lines (used and tested with demersal longline gear in Alaska to avoid seabirds) continue to be tested and used in Russian longline fisheries and elsewhere. A technical assistance program in the Hawaii pelagic longline fleet continues for vessel conversions to side-setting (used with pelagic longline gear to minimize seabird interactions).

- Research and Gear Experiments: NMFS and the U.S. Fish and Wildlife Service continue to collaborate with university Sea Grant programs, the longline industry, and non-governmental organizations to develop and evaluate the effectiveness of seabird mitigation devices. Continued efforts have included gear studies and sea trials on streamer lines, side-setting, integrated weight groundlines, and trawl mitigation devices. Research results have been presented at domestic and international scientific meetings. Through the Commission for Environmental Cooperation (CEC), the United States collaborates with Canada and Mexico on numerous projects involving marine species of conservation concern. A North American Conservation Action Plan for the Pink-footed Shearwater was developed, and research projects implementing this plan continued in 2007. A coordinated series of presentations on seabirds was provided to the CEC at its annual meeting in 2007.

c) *International Communications Relating to Sea Turtles, Sharks, and Seabirds:* Task Force members participated in a number of activities designed to communicate U.S. concern regarding bycatch of sea turtles, sharks, and seabirds. As noted above, many of these international communications and other activities focused on further dissemination of information relating to gear/bait modifications to reduce sea turtle bycatch in longline fisheries and measures to reduce the bycatch of seabirds in longline fisheries. Recent activities included:

- Over the past year, the United States continued to use international organizations, regional and subregional fishery management organizations and arrangements, and bilateral relationships to call attention to the international problems of sea turtle bycatch and incidental catch of seabirds and sharks in longline fisheries. We have continued to impress upon foreign governments the importance of this issue to the United States and

have stressed the need for their active engagement and concrete action as part of an effective strategy for the conservation and management of these species. In this regard, the Administration's efforts to address this pressing problem continue to focus on the following key areas:

1) Obtaining additional data on the level of sea turtle interaction with longline fisheries including distribution by time, depth, and area;
2) Continued research into new fishing gear and techniques to reduce sea turtle bycatch, including gear modifications, alternative baits, and alternative fishing strategies;
3) Identification of interim measures to promote at the international level to reduce sea turtle bycatch, while efforts continue to further identify and refine possible solutions through numbers 1 and 2, above;
4) Providing technical assistance and outreach to foreign nations to document sea turtle interactions in longline fisheries, conduct gear modification experiments and implement measures to reduce sea turtle bycatch, and implement safe-handling practices to reduce sea turtle injury and mortality; and
5) Promoting full implementation of the Guidelines adopted by the 2004 FAO Technical Consultation on Sea Turtle Conservation and Fisheries and supported by COFI.

d) Other Task Force Activities: In addition to tasks specifically associated with the Task Force Action Plan, members of the Task Force participated in the following activities:

- *Inter-American Sea Turtle Convention:* The United States was a driving force behind efforts to negotiate the Inter-American Convention for the Protection and Conservation of Sea Turtles in the Western Hemisphere. The Convention, which entered into force in May 2001, is the first international treaty dedicated solely to the conservation of sea turtles. It establishes a comprehensive framework for international efforts to protect sea turtles and their habitats, including specific provisions relating to the interaction of sea turtles in commercial fisheries. The First Conference of the Parties (COP1) took place in San José, Costa Rica, in August 2002 and August 2003. Delegates from all 11 signatory countries were present, along with 27 observers from 10 countries. The Parties agreed to procedural rules and bylaws, and also developed guidelines for international cooperation and the 2004 work program for the Secretariat *pro tempore*. The Second Conference of the Parties (COP2) took place in Isla de Margarita, Venezuela, in November 2004. Delegates from 10 of the 11 signatory countries were present, along with observer states and 11 non-governmental organizations. At COP2 the Parties constituted the Consultative Committee, finalized the format for the annual report form, extended the Secretariat *pro tempore*, continued discussions on the agreement of the structure of the Scientific Committee (SC), passed the Convention's first resolution (a largely advisory resolution on conservation of the leatherback sea turtle), and concluded its first Memorandum of Understanding between the Convention and the regional South American fisheries development organization OLDEPESCA.

All 11 Parties to the IAC sent delegates to COP3, which was held in September 2006 in Mazatlan, Mexico. The major issues discussed at COP3 included the rules of procedure for the Scientific Committee, establishing and funding a permanent Secretariat, revising the annual report format, and convening a meeting in 2007 to resolve important issues (e.g., establishing and funding a permanent Secretariat). Two resolutions were passed at COP3: (1) convening a regional meeting to discuss declines in hawksbill sea turtles in the Greater Caribbean, and (2) encouraging Parties to implement bycatch mitigation techniques outlined in the FAO guidelines to reduce sea turtle fisheries bycatch.

The IAC Parties met at the Extraordinary meeting of the Parties October 10–12, 2007, in Lima, Peru. Uruguay ratified the Convention in 2007, so 12 countries participated in this meeting. The focus of the Extraordinary meeting was to set up a framework for establishing the Permanent Secretariat and a regular funding scheme for the Convention. The negotiations were difficult, but the Parties were able to come to a provisional agreement on selecting the Permanent Secretary, establishing the Permanent Secretariat, and funding for 2008. The United States will continue to work to strengthen the IAC through its outreach to other countries and through its financial contributions.

- *Indian Ocean Sea Turtle Memorandum of Understanding:* The Memorandum of Understanding (MOU) on the Conservation and Management of Marine Turtles of the Indian Ocean and Southeast Asia (IOSEA), and its associated Conservation and Management Plan (CMP), provide a comprehensive framework for the conservation and protection of sea turtles and their habitats in the Indo-Pacific region. Though non-binding, the MOU and CMP contain strong, forward-looking provisions that, if effectively implemented, will advance conservation of endangered sea turtles populations and promote their recovery. Thus far, 28 countries have signed the MOU. The 3rd meeting of the Signatory States was held in March 2005, in Bangkok. Member States requested the IOSEA Advisory Committee to assess the impacts of the December 2004 tsunami on sea turtles and their habitats, with a special emphasis on leatherbacks. The IOSEA also decided to launch a region-wide Year of the Turtle initiative in 2006 to draw attention to the dramatic declines in turtle populations. The 4th meeting of the Signatories was held in March 2006 in Oman, the first Middle Eastern country to host an IOSEA meeting. This meeting focused largely on outreach, specifically launching the 2006 Year of the Turtle initiative. The advisory committee presented a draft report on the 2004 tsunami impacts on leatherback turtles, and the United States agreed to provide additional information before the report is finalized on threats to leatherbacks as they migrate through the high seas. Here again, the United States continues to work to establish through the MOU/CMP a strong and effective sea turtle conservation regime. The next IOSEA meeting will be sometime in 2008.

- *IATTC Consolidated Resolution on Bycatch:* In 2006, IATTC approved a Consolidated Resolution on Bycatch, which called for: the full retention all tuna species; the release of non-target species, including sea turtles and marine mammals; and mandatory safe handling and release training for all crews. Building on this effort, at its 75th annual meeting (June 25-29, 2007, in Cancun, Mexico), the IATTC approved a Resolution to Mitigate the Impact of Tuna Fishing Vessels on Sea Turtles. This resolution requires contracting Parties and cooperating non-Parties to implement the FAO Guidelines to

reduce the bycatch, injury, and mortality of sea turtles in fishing operations and to ensure safe handling. The resolution also requires reporting on all interactions with sea turtles in IATTC-managed fisheries. Further, the IATTC shall implement an observer program for IATTC fisheries that may impact sea turtles that currently are not observed. IATTC fishermen are also required to bring abroad, if practicable, any comatose or inactive hard-shell sea turtles as soon as possible and foster recovery. Purse seine vessels in the IATTC area are also required to avoid encirclement of sea turtles to the extent practicable, take actions necessary to monitor Fish Aggregating Devices (FADs) for the entanglement of sea turtles, release all observed sea turtles observed in FADs, and conduct research and development of modified FADs to reduce sea turtle entanglement. Longline vessels in the Convention area are required to carry and use the dehooking equipment when they interact with sea turtles. IATTC countries are also requested to undertake fishing trials to determine the feasibility and effectiveness of appropriate combinations of circle hooks and bait, depth, gear specifications, fishing practices, and other measures to reduce bycatch, injury, and mortality of sea turtles; assess their effects on the catch of target and other bycatch species; and provide results to the IATTC. In 2007, a seabird bycatch mitigation measure based on the WCPFC measure was proposed. Although the measure was not adopted, it was referred to the IATTC working groups and will be addressed again in 2008.

- *2007 ICCAT Annual Meeting:* During the 2007 ICCAT annual meeting, no additional measures were taken regarding species taken as bycatch. However, the Commission did decide to conduct its first ever assessment on the impact of ICCAT fisheries on seabird populations in the Convention area, an important step to improving fisheries management to protect these species. In addition, the Standing Committee for Research and Statistics (SCRS) formed a new working group whose focus will be ecosystem effects of fishing, mainly looking at impacts on sea turtles, seabirds, and sharks. Scheduled assessments for shortfin mako and blue sharks were delayed until 2008, with a SCRS data preparatory meeting scheduled for 2007. These assessments will be critical as ICCAT moves forward in its management of sharks. In 2002, ICCAT adopted a seabird resolution and in 2007 the Ecosystem Sub-committee initiated work on an assessment of the impact of seabird bycatch resulting from the activities of all the vessels fishing for tunas and tuna-like species in the Convention Area. The risk assessment will be presented to ICCAT's Standing Committee on Research and Statistics in 2008. At its annual meeting in 2007, the Commission adopted seabird measures based on those required by the Indian Ocean Tuna Commission. Measures include: data collection and reporting on seabird interactions, use of bird scaring lines (streamer lines) by all longline vessels fishing south of 20° South, and additional requirements (night-setting and line-weighting) for specified vessels targeting swordfish that are exempt from using streamer lines.

- *2007 Northwest Atlantic Fisheries Organization (NAFO) Annual Meeting:* The United States worked with other NAFO Parties at the 2007 NAFO Annual Meeting to develop and submit a request that the NAFO Scientific Council provide a range of information (including on incidental bycatch) relating to porbeagle shark (*Lamna nasus)* in advance of the 2008 NAFO Annual Meeting.

In 2006, NAFO adopted a resolution calling for implementation of the FAO *Guidelines to Reduce Sea Turtle Mortality in Fishing Operations*, and calling on Contracting Parties to: enhance implementation of existing sea turtle mitigation measures; collect and provide to the NAFO Secretariat information on sea turtle interactions in the NAFO Convention Area; and collaborate with each other and with subregional, regional and global organizations to share data on sea turtle interactions and to develop and apply compatible bycatch reduction measures. During 2007, there were relatively few reports on implementation of this resolution by Contracting Parties. However, the NAFO Secretariat will compile what data was provided during 2007, and NAFO will develop further strategies for consideration at the 2008 Annual Meeting.

- *WCPFC Annual Meeting:* In 2006, the WCPFC became the first tuna RFMO to establish required actions for mitigating seabird bycatch. The conservation measure includes two lists of mitigation methods that may be used to prevent seabird bycatch in the course of fishing operations. WCPFC member nations are required to employ at least two of the measures, which include tori lines (bird scaring lines), side setting with a bird curtain and weighted branch lines, night-setting, weighted branch lines, the use of blue dyed bait, management of offal discharge, the use of a deep line setting shooter, or an underwater setting chute.

  At its annual meeting in 2007, the WCPFC adopted minimum technical specifications for using the above measures and required nations to provide to the WCPFC Scientific Committee and its Technical and Compliance Committee details regarding the use of the measures, so they may be annually reviewed for their effectiveness and ease of use. The United States was actively involved in the adoption of the conservation measure in 2006, and has since participated in the identification of minimum technical specifications per its roles within the Scientific Committee and the Technical and Compliance Committee.

- *CCAMLR's ad hoc Working Group on Incidental Mortality Associated with Fishing (WG-IMAF):* With the exception of the French EEZ areas within the Convention Area, zero bird mortalities were reported in the regulated longline fisheries in the Convention Area, and for a second consecutive year there were no albatross mortalities in the Convention Area in regulated fisheries. CCAMLR continues to refine its seabird conservation measures to represent best practices. CCAMLR's seabird risk assessment has been documented and will be shared with other RFMOs, which could consider the experience of CCAMLR when developing approaches to minimizing bycatch in their own fisheries. This is particularly important because the continued declines of some albatross populations breeding in the CCAMLR Convention Area are thought to result from bycatch in fisheries outside the Convention Area. In 2007, CCAMLR is proactively working with other RFMOs to implement its Resolution 22/XXV (international actions to reduce the incidental mortality of seabirds arising from fishing).

- In 2007, NMFS provided financial support for two important and far-reaching initiatives: an ecological risk assessment to be conducted by BirdLife International to be used by ICCAT in the assessment of its fisheries' impacts on seabird populations ($21,000), and the FAO/BirdLife workshop for the development of technical guidelines for developing NPOA-Seabirds ($12,000).

CONCLUSION

During 2007, the United States continued its efforts to secure international agreements to establish standards and measures for bycatch reduction that are comparable to the standards and measures applicable to United States fishermen. It is the opinion of NMFS that it is both necessary and appropriate for the United States to continue its efforts to seek international agreements that establish standards and measures for bycatch reduction that are comparable to those applicable to U.S. fishermen.

Section 610 of the reauthorized Magnuson-Stevens Act contains substantial new obligations to address international issues in living marine resource stewardship, including actions to address bycatch of protected species. The implementation of these measures is an extremely high priority for NMFS, NOAA, and the Department of Commerce. This implementation, as well as the relationship between the new Magnuson-Stevens Act requirements and those contained in the MMPA and ESA, are currently under consideration.