



**Agreement on the Conservation of Albatrosses and Petrels**

**Fourth Meeting of Advisory Committee**

*Cape Town, South Africa, 22 – 25 August 2008*

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**REPORT ON**

**USA SEABIRD CONSERVATION EFFORTS, 2007-2008**

**Author: United States of America**



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**Prepared for 4th Meeting of the Advisory Committee**

**For the Agreement on the Conservation of Albatrosses and Petrels (ACAP)**  
**August 22-25, 2008**  
**Cape Town, South Africa**

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**Introduction** Although the USA is not a party to ACAP and whereas the primary albatross and petrel species that many USA efforts address are northern hemisphere species that are not currently in Annex 1 of ACAP, the USA has engaged in numerous activities that also contribute to the conservation of ACAP species. This report summarizes the USA's seabird conservation efforts in 2007 and 2008. Work has been undertaken by government agencies and non-government entities (e.g. universities, fishing industry associations, and conservation groups).

## 1. Species Conservation

<b><i>Outline of planned actions for national implementation over the next three years</i></b>	<b>Action Plan Reference</b>	<b>AC Work Programme Reference</b>	<b>Agreement Reference</b>
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*Briefly list major planned actions for carrying out the Agreement over the next three years. Specifically highlight particular themes, focuses, gaps, and challenges to completing fully such actions.*

<b><i>Measures to eliminate, control or prevent introduction of non-native species to breeding sites</i></b>	<b>Action Plan Reference</b>	<b>AC Work Programme Reference</b>	<b>Agreement Reference</b>
	1.4	3	III (1) b)

*Briefly describe efforts to eliminate, control, or prevent the introduction of non-native species to the breeding sites of Annex I species, with specific reference to how the success or failure of such efforts would impact the long-term survival of one or more Annex I species. Mention any obstacles to tackling this threat.*

### Rat eradication from Lehua Island, Hawaii

The US Fish & Wildlife Service (USFWS) and partners are in the planning stage to eradicate introduced rats from 290-acre Lehua Island in Hawaii. The goal is to conduct aerial (by helicopter) rodenticide broadcast in Winter 2009. Laysan and Black-footed Albatross both nest on Lehua and rare shearwater and petrel species are believed to be attempting to nest. Eradicating rats will increase seabird survival and productivity and will allow colonization by a variety of species not currently present. In addition to natural re-colonization, a variety of seabird restoration and attraction techniques will be considered following rat eradication. Logistical challenges are primarily associated with the distance of Lehua from the nearest heliport. Contact: Chris Swenson, USFWS.

### Rat Eradication--Alaska

The USFWS conducted an Environmental Assessment and is proceeding with a proposed plan for the eradication of non-native Norway rats on Rat Island, located in the Aleutian Island chain within the Alaska Maritime National Wildlife Refuge. The eradication will be through the aerial broadcast of bait containing the rodenticide brodifacoum. Pending final approval of permits and pesticide regulation compliance, eradication operations will begin on the 6,861 acre island in the fall of 2008. The USFWS is working in partnership with two NGO's, The Nature Conservancy and Island Conservation. Contact: Poppy Benson, USFWS.

**Fox Eradication—Alaska**

The USFWS , particularly the Alaska Maritime National Wildlife Refuge, continued to remove introduced foxes from islands to restore nesting seabirds including storm-petrels. Eradication is planned for two different islands in the Aleutians over the next 3 years. Contact: Steve Ebbert, USFWS.

<b>Report on any exemptions to prohibitions on the taking or harming of albatrosses and petrels</b>	<b>Action Plan Reference</b>	<b>AC Work Programme Reference</b>	<b>Agreement Reference</b>
	1.1.2		III (3)

*Provide a brief list of exemptions granted for the taking or harming of Annex I species in your country (as appropriate). Estimate the impact of such exemptions on the species and indicate how such exemptions are consistent with efforts to protect such species under the species conservation provisions of the Agreement.*

<b>Use and trade</b>	<b>Action Plan Reference</b>	<b>AC Work Programme Reference</b>	<b>Agreement Reference</b>
	1.1.1, 1.1.2		III (3)

*Provide a brief list of activities related to the use and trade of Annex I species in your country (as appropriate). Estimate the impact of such use and trade, or the restriction of such use and trade, indicating how such activities are consistent with efforts to protect Annex 1 species under the species conservation provisions of the Agreement.*

<b>Single or multi-species conservation strategies / action plans</b>	<b>Action Plan Reference</b>	<b>AC Work Programme Reference</b>	<b>Agreement Reference</b>
	1.1.3		

*Provide a brief description of single or multi-species conservation strategies or action plans focusing on Annex 1 species. Are such strategies and plans effective at conserving seabird species? What have the significant results been? What are the lessons learned from the implementation of such strategies and action plans?*

**Laysan and Black-footed Albatrosses Conservation Action Plan**

The USFWS released the first version of a Conservation Action Plan for the Black-footed *Phoebastria nigripes* and Laysan *P. immutabilis* Albatrosses in October 2007. This document is a partnership-based conservation plan that outlines specific actions the USFWS and partners should undertake to ensure the long-term conservation of these species. The involvement of partners and stakeholders was key to the development of this plan, and their continued involvement is essential for successful implementation. Many partners contributed to the development of this plan, including: NOAA Fisheries, State of Hawaii, U.S. Department of Defense, U.S. Department of Agriculture's Wildlife Services, U.S. Geological Survey, Fisheries Management Councils, university researchers, and conservation organizations including the North Pacific Albatross Working Group and Blue Oceans Institute. The plan is available on the web at

[www.fws.gov/pacific/migratorybirds/conservation.htm](http://www.fws.gov/pacific/migratorybirds/conservation.htm). Contact: Maura Naughton, USFWS.

<b>Emergency Measures</b>	<b>Action Plan Reference</b>	<b>AC Work Programme Reference</b>	<b>Agreement Reference</b>
	1.2		VIII (11) e)

*Have any emergency measures been authorised? If so, what steps were taken? Has anything been learnt from the experience?*

<b>Re-establishment schemes</b>	<b>Action Plan Reference</b>	<b>AC Work Programme Reference</b>	<b>Agreement Reference</b>
	1.3		

*Have you conducted any re-establishment schemes? For which species? What were the most important results of such schemes? Has an obvious benefit to at least one Annex 1-listed species been detected? What were the lessons learned?*

#### Short-tailed Albatross Translocation

The USFWS continues its collaboration with Japan's Yamashina Institute of Ornithology in an effort to translocate short-tailed albatrosses from their main nesting colony on Torishima to non-volcanic islands within the historic breeding range of this species. In 2006, researchers translocated Laysan albatross chicks from Midway to Kauai in an effort to develop translocation protocols using a proxy species. In 2007, Japanese researchers translocated Black-footed albatross chicks from a nearby island to Mukojima Island in the Bonins. In February 2008, 10 short-tailed albatross chicks (just over 1 month old) were successfully translocated from Torishima to Mukojima (Bonin Islands/Ogasawara). These 10 chicks are being hand-reared until they fly from the colony in late May. The Yamashina Institute for Ornithology reports that the chicks are eating and growing well. Before the chicks depart this spring, small (22 gram) solar powered GPS transmitters will be attached to a subsample of translocated chicks and an equal number on Torishima. This is a pilot study with the goal of assessing whether the translocated chicks continue to do well when at-sea and out of sight. This work is identified as a priority in the Short-tailed Albatross Recovery Plan. Contact: Kyoaki Ozaki, Yamashina Institute of Ornithology; Greg Balogh, USFWS; Rob Suryan, Oregon State University.

#### Short-tailed Albatross—Hawaii

Since 1999, an adult short-tailed albatross banded on Torishima Island, Japan as a fledgling in 1988 has returned to the same site on Eastern Island, Midway Atoll for extended periods during the breeding season. Several other short-tails have visited Midway during the breeding season but these birds were never seen in proximity to the adult on Eastern Island. In 2000, the U.S. Fish & Wildlife Service set up decoys and a sound system to attract a mate for this bird. On 11 January 2008, the adult was joined by a juvenile short-tailed albatross. During the two days the birds were together at the site, they were observed dancing and preening. They were last observed together on 12 January 2008, although the adult

returned to the site several times between 12 January and 28 March and the juvenile returned at least once on 4 April 2008. Contact: John Klavitter, Maura Naughton, USFWS.

<b>Any other conservation projects for ACAP species</b>	<b>Action Plan Reference</b>	<b>AC Work Programme Reference</b>	<b>Agreement Reference</b>

*Briefly provide information on any other activities that you carried out for benefit or that have benefited Annex 1 species. What are the most substantial and transferable results of these activities?*

## **2. Habitat Conservation**

<b>Measures (legal and policy instruments and actions) to implement protection and management of breeding sites including habitat restoration</b>	<b>Action Plan Reference</b>	<b>AC Work Programme Reference</b>	<b>Agreement Reference</b>
	2.1	3	III (1) a)

*Provide a list including brief descriptions of the main elements of national legislation or other legal measures in your country (if applicable) that directly pertain to or could be applied to the habitat conservation provisions of the Agreement. Include information on how these measures are being specifically used in or could potentially contribute to the protection of breeding sites of Annex I species. Are existing measures adequate and/or effective for fulfilment of the Agreement? How so or how not?*

<b>Sustainable management of marine living resources which provide food for albatrosses and petrels</b>	<b>Action Plan Reference</b>	<b>AC Work Programme Reference</b>	<b>Agreement Reference</b>
	2.3.1 a)		

*Provide a summary of whether the management of living marine resources under your authority (as appropriate) was carried out in such a way that provides sufficient food for Annex 1 species. How so? Were direct or indirect benefits achieved?*

<b>Management and protection of important marine areas for albatrosses and petrels</b>	<b>Action Plan Reference</b>	<b>AC Work Programme Reference</b>	<b>Agreement Reference</b>
	2.3.2, 2.3.3	4	

*Provide a brief description of the management and protection of important marine areas for or resulting in the benefit of Annex 1 species. Were these actions successful? In what ways? What were the most significant benefits?*

## **3. Management of Human Activities**

<b>Report on environmental impact statements related to albatrosses and petrels</b>	<b>Action Plan Reference</b>	<b>AC Work Programme Reference</b>	<b>Agreement Reference</b>
	3.1		

*Provide a description of environmental impact assessments or equivalents conducted that directly pertain to Annex 1 species, their habitats, or significant food sources. Were any mitigation measures employed?*

<b>Measures to reduce or eliminate incidental mortality in fisheries</b>	<b>Action Plan Reference</b>	<b>AC Work Programme Reference</b>	<b>Agreement Reference</b>
	3.2	6	

*Describe activities related directly to reducing or eliminating the incidental mortality of Annex I species in fisheries. What are the greatest challenges or obstacles to the full realization of the potential for these actions?*

**Mandatory Requirements for Seabird Avoidance Measures in Longline Fisheries**

Vessel operators in longline fisheries off Alaska (demersal longline gear for groundfish and halibut) and off Hawaii (pelagic longline gear for tuna and swordfish) continue to use required seabird avoidance measures. An Environmental Assessment/Regulatory Impact Review/Initial Regulatory Flexibility Analysis analyzed the impacts of revisions to seabird avoidance measures in the longline fisheries off Alaska. The action was based on results from research projects suggested by the North Pacific Fishery Management Council's Scientific and Statistical Committee, and conducted by Washington and Alaska Sea Grant Programs. The research included: 1) longline surveys in waters in and off Alaska, which revealed a rarity of seabird presence in inside waters, and 2) experiments conducted to test efficacy of seabird avoidance gear use on vessels smaller than 55 feet. The research results suggest that the effectiveness of seabird avoidance measures can be improved by strengthening the gear requirements, through construction standards, for use in waters where seabirds are more common, while eliminating requirements in waters where seabirds are rarely observed. The final research results of the Washington SG study were presented to the Council at its June 2006 meeting, the Council took initial action at its December 2006 meeting, and final action in February of 2007. The objective of the regulatory amendment was to revise the seabird avoidance requirements (last revised in 2004) to improve their effectiveness at reducing the incidental take of short-tailed albatrosses and other seabird species, while relieving an unnecessary regulatory burden and its associated costs. The revised measures require smaller vessels (26 to 55 ft) to use specified construction standards for streamer lines for use in specified areas. Satellite-tagging data from short-tailed albatross documented the occurrence of this rare albatross in certain coastal waters, thus justifying the retention of seabird avoidance requirements by vessels fishing in those areas. The final regulations were published December 2007 and became effective in January 2008 (<http://fakr.noaa.gov/frules/72fr71601.pdf> )

**Mitigation Research**

Washington Sea Grant Seabird Mitigation Studies Ed Melvin and colleagues have are engaged in several studies to evaluate mitigation gear to reduce the bycatch of seabirds: 1) characterization of the numerous Alaska trawl fisheries, 2) the mid-water trawl catcher-processor Pollock fleet in Alaska, and 3) continuation of the project to develop a streamer line system specifically for the high-seas pelagic longline fisheries.

Characterization of the Alaska trawl fisheries and the potential for albatross interactions  
In collaboration with NOAA Fisheries and USFWS, WSG engaged in a study of the Alaska trawl fishery to: 1) estimate the trawl warp and third wire effort by target fishery, large geographic region and vessel type for Alaska trawl fisheries, 2) provide information that will guide future investigations of the extent and significance of seabird cable strikes in the Alaska fisheries and inform the development of mitigation technologies and practices, should they be necessary. The WSG's study report includes: 1) a description of Alaska's trawl fleets, 2) information regarding third wire use in Alaska trawl fisheries, 3) albatross distribution and overlap with trawl fishing effort and a brief review of documented seabird-fishery interactions, and 4) recommendation of priority areas for future seabird interaction investigations. Based on its analysis, the WSG recommended that future efforts to determine the extent of interactions with trawl gear in the federal fisheries off Alaska focus on the rockfish target trawl fishery in the Gulf of Alaska, the Atka mackerel target trawl fishery in the Bering Sea and Aleutian Islands area from May to October, and possibly Pacific cod in the Aleutian Islands area in winter, due to previously observed interactions in this fishery. If few interactions are found in these fisheries with high overlap with albatrosses, it would be reasonable to conclude that Alaska trawl gear poses no significant risk to albatrosses. If high rates of interactions and mortalities are found in these fisheries, or if it seems likely that these fisheries may be interacting with species protected by the Endangered Species Act, mitigation development and testing should take place in the fisheries with the highest interaction rates. High interaction rates in fisheries with moderate to high albatross overlap would also justify a closer look at albatross cable collision rates in high-effort, minimal overlap fisheries and, based on the outcome of these observations, at the need for mitigation.

Mitigation of Seabird Interactions in the Pollock Catcher-Processor Fishery

The Alaska trawl fishery consists of a fleet of over 200 vessels targeting multiple species. Law requires that all discharge from processors (with a few exceptions) must be minced. According to estimates derived from fishery observer data, seabird mortality averaged 1057 birds per year from 2002 to 2004. Northern fulmars and short-tailed shearwaters were caught most often. Takes of albatrosses averaged 62 per year. To date there are no known takes of the endangered short-tailed albatross in Alaska trawl fisheries. The Bering Sea pollock catcher-processor fleet is a subset of the Alaska trawl fleet and consists of 19 vessels, 14 of which have meal plants on board. Their primary products are fillets and surimi. This component of the fleet decided to take a proactive approach to seabird conservation to be involved in research and development of mitigation to seabird strikes on trawl warp cables.

During mitigation trials in 2004 and 2005 there were 21 confirmed bird mortalities. Of these, most (17) were in the net, two were on the third wire, one was in the boom array and one was a vessel collision. Twelve were caught when no mitigation was used.

Although specific mitigation techniques to reduce seabird cable strikes were successfully identified in studies in 2004 and 2005 (paired streamer lines, snatch block, warp boom),

it was noted that albatrosses were exceedingly rare and most documented mortalities were associated with the net entanglements, and the extent to which warp strikes constitute a mortality threat to highly abundant, small-winged birds typical of this fishery is questioned. A risk assessment of the entire Alaska trawl fleet would allow managers to identify potential “worst case” situations in this highly diverse fleet and focus mitigation research where it is clearly needed. That assessment was published by Washington Sea Grant in April 2008 (cited above) Contact: Ed Melvin, Washington Sea Grant

#### Developing Best Management Practices to Conserve Seabirds in Pelagic Longline Fisheries

With funding from the David and Lucile Packard Foundation, Ed Melvin, Marine Fisheries Senior Scientist, Washington Sea Grant is developing a streamer line system for application to world high-seas pelagic longline fisheries and testing its effectiveness in fisheries where seabird interactions are most intense (“worst-case” locations in the Austral winter). The project has two phases. Phase I includes four tasks: forming an ad hoc advisory committee of world experts on seabird bycatch mitigation; assessing pelagic fishery operations to establish opportunities and constraints to using mitigation technologies; developing a streamer line towed device; and optimizing streamer line design specifically for pelagic longline fisheries. Phase II involves trialing the optimal streamline design developed in Phase I in at least two “worst case” southern hemisphere fisheries (South Africa, New Zealand and Chile).

Most phase I tasks were completed: The ad hoc advisory committee was formed (and morphed into a larger project as stated below); several towed device prototypes were fabricated and trialed in several pelagic fisheries; and the pelagic fishery assessment was carried out in the Japanese joint venture fishery for southern bluefin tuna within the New Zealand EEZ. Additional work in 2008 is scheduled for South Africa and Chile in cooperation with the BirdLife Albatross Task Force. Phase II research is being planned for New Zealand, South Africa and Chile in 2009.

Packard Foundation funding provided support for an international workshop on seabird bycatch mitigation in longline fisheries. The workshop, “Seabird Bycatch Mitigation in Pelagic Longline Fisheries”, was held on 14 October 2006 at the Museum of Natural History in Hobart, Tasmania. The significant products of the workshop included a critique of existing mitigation technologies being considered for application in RFMO pelagic fisheries and agreed global priorities for future research on seabird bycatch mitigation technologies. The critique and the priorities were based on the best available science and specific criteria. Information developed through the workshop was brought to bear directly on the recommended options for seabird mitigation by the Western Central Pacific Fishery Commission (WCPFC) in early December 2006. Subsequently, a research review and planning process became the focus of the first meeting of the Agreement on the Conservation of Albatrosses and Petrels (ACAP) Bycatch Working Group (WG) in Valdivia, Chile. Ultimately, the ACAP Advisory Committee adopted the research priorities developed within the Hobart Workshop “as representing the current best scientific advice of ACAP’s Seabird Bycatch Working Group, and encourages Parties to use these materials to guide development of policy and practice with the fisheries under their jurisdiction”.

*NOAA Fisheries Alaska Fisheries Science Center: Seabird Coordinated Activities*

The Alaska Fishery Science Center (AFSC) is currently increasing its research emphasis on seabird fishery interactions, and incorporating seabirds into ecosystems models being developed for the Bering Sea and Gulf of Alaska. This increased emphasis is partially in response to several national efforts by NOAA Fisheries to focus more effort on minimizing bycatch through fishing gear improvements, standardized reporting, and education and outreach. This national focus coincides with work that the AFSC has already been engaged in to characterize all components of seabird mortality from commercial fishing operations, and work collaboratively with the fishing industry and the USFWS to reduce seabird bycatch. This latter issue is being driven by the overlap between distribution of the endangered short-tailed albatross and commercial fishery operations. Current priorities include continued work to reduce longline seabird bycatch, investigating the incidence of seabird interactions with trawl third wires, developing options for monitoring halibut fleet seabird bycatch, and developing reporting procedures to ensure the public has access to seabird bycatch rates and the results of various studies being conducted.

The AFSC also obtained funds to support the development of first-generation seabird mitigation gear in Alaska Trawl fisheries. These funds were matched by industry to test three types of seabird mitigation gear on Bering Sea catcher/processor Pollock vessels. Gear tested in 2004 and 2005 included paired streamer lines, trawl warp booms, and third-wire snatch blocks. Washington Sea Grant received funds from the USFWS and support from the AFSC to conduct field tests of seabird response to these gears. The report is currently in preparation by Ed Melvin, Washington Sea Grant Program.

The North Pacific Groundfish Observer program, which provides extensive coverage for vessels over 60 feet length overall, continues to provide a wealth of information that managers and scientists can use. The seabird bycatch estimates are, of course, based on observer data. Observers also provide information that can be used to determine rates of compliance with seabird mitigation gear in the longline fleet. Given the collaborative approach used in studies to determine this gear, and the ongoing involvement of industry groups, compliance is nearly 100% on those sets where observers checked for seabird mitigation gear.

*Food Supplementation by Fisheries and Reproductive Success in Albatrosses* Dr. Ann Edwards, National Research Council post-doctoral fellow with the AFSC, completed field work on Laysan albatross at Midway Atoll in the Hawaiian Leeward Islands in coordination with the USFWS. The goals of the research were to sample small portions of feathers for nitrogen and carbon stable isotope analysis to investigate how foraging strategies (including the roles of a fisheries-supplemented diet, and of foraging location) change with season, breeding status, reproductive success and age. Feathers were sampled from current breeders of known breeding success over multiple years, as well as from birds salvaged from longline fisheries in Alaskan and Hawaiian waters, as well as from birds collected on the Hawaiian breeding colonies 80 to 100 years ago, before the advent of large-scale fishing. The feather samples chosen enabled sampling of diet throughout the year, and over multiple years, providing comparisons across seasons between breeding and non-breeding seasons, and between breeding and non-breeding birds. Laysan albatross salvaged from longline fisheries had higher delta-<sup>15</sup>N values over the long term compared to birds sampled recently on the colony, suggesting some birds tend to specialize more than others on foraging in association with fishing vessels.

Laysan albatross sampled recently on the colony on average had higher delta-<sup>15</sup>N values than birds sampled a century ago. This suggests a broad shift in diet over the last century that may be due to a large proportion of the current breeding population supplementing their diet to some degree with fisheries-associated food, or due to a climate-associated shift in prey availability, or both. Historic birds exhibited individual isotope values lower than any observed today, suggesting at least one foraging strategy available a century ago is not available today.

Most Laysan albatross forage in the central North Pacific (overlapping multiple longline fisheries), but a portion also forages along the continental shelf of Alaska, especially during the late spring and early summer (overlapping multiple fisheries in Alaska). Breeding success was associated with the distance between the colony and the foraging grounds, a pattern observed for other albatross species (the comparison was made between foraging in the mid-Pacific, relatively close to the colonies, versus foraging along the continental shelf of Alaska, far from the colonies). Birds that foraged exclusively in the mid-Pacific during both the breeding and non-breeding seasons had higher breeding success over consecutive years. Birds that skipped a year of breeding or failed early were the birds most likely to be found foraging in Alaskan waters, especially during spring and early summer. Of those skipped or failed breeders, those that foraged in Alaskan waters had higher fledging success in the subsequent year than those that did not forage in Alaskan waters. A separate analysis by Edwards suggests that a high proportion of the Laysan and black-footed albatross that travel to Alaskan waters associate with fishing vessels. Thus, supplementation by fisheries in Alaska may serve to enhance reproductive success in the short term, and help produce successful biennial breeders. However, the great distance from the breeding colonies does not make association with Alaskan fisheries an optimal foraging strategy for annual breeders.

A comparison of isotope values between pre-breeders (6 and 7 years old) sampled on the colony and older active breeders (> 25 years old) showed no effect of age on foraging strategy among adult birds.

In another study, Edwards quantified the availability of fish-processing discharge (macerated offal and discards, and surimi and fishmeal wash waters) from the eastern Bering Sea walleye pollock midwater trawl fishery, and compared that to the energy requirements of scavenging seabird populations in the eastern Bering Sea, and of the proportion of those populations that associate with fishing vessels. This Pollock fishery is North America's largest fishery with an annual catch of more than 1.4 million metric tons, approximately half of which is processed at sea. Albatrosses were the seabird species most likely to associate with fishing vessels in the eastern Bering Sea, but only a tiny proportion of the global population of Laysan or black-footed albatrosses forage in the Bering Sea during the summer. All scavenging seabirds attending pollock at-sea processors probably consumed <1% of the energy provided, leaving significant quantities for benthic scavengers, suggesting the birds' foraging requirements are not strongly compatible with discharge conditions, perhaps spatially, temporally or in particle size. Contact: Shannon Fitzgerald, NOAA Fisheries; Ann Edwards, NOAA Fisheries.

A third study completed by Stephani Zador, University of Washington, in collaboration with Dr. Julia Parrish, Dr. Andre Punt, and the AFSC looks at short-tailed albatross overlap with various sectors of the Alaskan trawl fisheries. Sectors are identified by processing mode (shoreside delivery or catcher/processor), target species or species

guild, and a vessels on board processing equipment (meal plant or no meal plant). This paper is in review.

Washington Sea Grant received partial support from the Alaska Fisheries Science Center, through the NOAA Fisheries National Seabird Program, to characterize the trawl fleet with regard to effort, use of cables (warps and third wires), and potential interactions with North Pacific Albatrosses (Dietrich and Melvin, 2007). This work helps to identify the potential fisheries with the highest albatross interactions rates which will be helpful in determining where future mitigation work should be conducted.

Risk Assessment of Alaska Groundfish Trawl Fishery and Interactions with Short-tailed Albatross As a result of requirements for the Endangered Species Act process, NOAA Fisheries undertook studies to ..." assessing short-tailed albatross interactions/collisions with trawl vessel gear to 1) document whether take occurs, and if so, 2) estimate the rate of such take..." To date, no observers have reported collisions between short-tailed albatross and trawl gear. Observers do not, however, directly monitor trawl gear during the towing process.

NOAA initiated several collaborative studies to look at the possibility of these interactions through fishery characterization, risk assessments, and decision analysis. One such study was recently completed by Stephani Zador, Andre Punt, and Julia Parrish of the University of Washington. They conducted a decision analysis that explores the effects of trawl-related fisheries mortality on achieving the population recovery goals for the short-tailed albatross. In their study, "Bayesian inference was used to assign probabilities to alternative plausible rates of fishing mortality and to conduct population projections with different levels of trawl mortality to determine their effects on achieving the population recovery goals.

The analyses of the impact of trawl mortality on the Torishima short-tailed albatross population suggests that exceeding the current expected incidental take in the Alaska groundfish trawl fishery, two in any five year period, by as much as a factor of 10 would have little impact on when the proposed recovery goals (as identified in the USFWS Draft Recovery Plan for the Short-tailed Albatross) for the species are achieved.

Contact: Shannon Fitzgerald and Stephani Zador, NOAA Fisheries

Seabird Surveys The AFSC's Seabird Program focused on two types of seabird surveys—stationary and strip-transect. The first is the stationary survey format developed by Washington Sea Grant for longline cruises in 2002. This format was expanded to a subset of AFSC charter cruises in 2004 and to all research and charter cruises in 2005. Staff also coordinated with the Northwest Fisheries Science Center to implement the surveys on its West Coast charter cruises beginning in 2007. That was accomplished and data are being collected throughout the summer. These surveys now cover NMFS research and charter cruises from southern California, up the West Coast, and throughout Alaska waters. The USFWS and many other clients have expressed great interest in the results. Data from previous years are being analyzed and will be made available to the public in the near future.

The second survey type is the strip-census. Staff have worked very closely with the USFWS Migratory Bird Division, Anchorage, Alaska, to support its North Pacific Research Board grant to conduct strip-census seabird surveys on appropriate platforms. The work will add to the extensive survey work completed in the 1970s and early 1980s

and will ultimately be made available to researchers through the North Pacific Pelagic Seabird Database ([www.absc.usgs.gov/research/NPPSD/index.htm](http://www.absc.usgs.gov/research/NPPSD/index.htm)). Contact: Shannon Fitzgerald, NOAA Fisheries

*Update on Demonstration Trial of Fish Tek Safe-Lead Pelagic Longline Gear in Hawaii Pelagic Longline Fishery*

Placing weights near hooks in pelagic longline fisheries can reduce seabird, sea turtle, shark and billfish bycatch. However, vessels that do not use a wire leader on branch lines, such as in the Hawaii-based longline swordfish fishery, do not place weights close to the hook, or use any weights on their branchlines, in part, due to safety concerns: If branchlines break during hauling, which frequently occurs when sharks are caught and bite off the terminal tackle, the weight can fly back at the vessel at extremely high velocity, infrequently causing serious injury, and in very rare cases, killing crew. A dockside trial and research fishing trip on a Hawaii longline swordfish vessel was conducted to assess the efficacy and commercial viability of two experimental designs of safer weights. Results from the dockside trial indicate that the two experimental weights present a substantially reduced risk of injury to crew relative to conventionally employed line weights. Results from one experimental fishing trip demonstrated that an experimental weight performed as designed, however, the sample size was too small to demonstrate a significant difference in weight behavior after lines brake during gear retrieval between the control and experimental weight. Additional research and development is needed to overcome identified practicality issues (threading one of the experimental weights onto the line, gear tangling due to absence of a swivel), and durability of the experimental weights, while keeping the per-unit cost low enough to be economical and competitive with conventional lead center swivels. All problems encountered with the two experimental leads are likely possible to overcome. With additional research and development, it will be possible to develop a simple, inexpensive, and durable safer lead weights for use in pelagic longline gear. Contact: Eric Gilman, IUCN and Lewis VanFossen, NOAA Fisheries

*Monitoring Artisanal Longline Fisheries in Peru---Waved Albatross*

For 2006-2007 NOAA Fisheries Service continued to support the work of the non-governmental organization Pro Delphinus (PD) to quantify and characterize seabird interactions with artisanal longline fisheries in Peru. In the past year researchers at Pro Delphinus (PD) have continued to monitor seabird interactions with Peru's artisanal longline and gillnet fisheries using at-sea and shore based observers. Most notably, this work has revealed fishery interactions with the waved albatross, but other ACAP

species, such as black-browed albatrosses and white-chinned petrel, are also affected. PD also continues to work closely with fishermen, local officials and students to disseminate information on seabird biology and conservation and has prepared a series of educational materials (i.e. posters, species and handling technique guides) for distribution at ports along the coast. Contacts: Joanna Alfaro and Jeffrey Mangel, Pro Delphinus.

*Argentina's NPOA-Seabirds*

In 2007, the American Bird Conservancy (ABC) worked with a team of Argentine scientists to hold two stakeholder workshops to develop the draft technical document for the Argentine National Plan of Action. Dr. Marco Favero and Dr. Gandini were the project leads. The first workshop involved local government, NGOs and researchers, and a follow up workshop included substantial representation by the fishing industry. The final draft of the document was completed in October 2007. Contact: Jessica Hardesty, ABC.

*Regional Fishery Management Organizations (RFMOs) and Seabirds*

The United States remains committed to working with RFMOs to advance U.S. international seabird conservation objectives, particularly where there is considerable spatial and temporal overlap between the distribution of albatrosses and petrels and longline fisheries. In fact, the United States is a member of several such RFMOs, including the Western and Central Pacific Fisheries Commission (WCPFC), the Inter-American Tropical Tuna Commission (IATTC), the Commission on the Conservation of Living Marine Resources, (CCAMLR), and the International Commission on the Conservation of Atlantic Tunas (ICCAT).

In 2007, the United States placed emphasis on working with fellow fishing nations and RFMO members to take a fuller accounting of seabird interactions and to take appropriate steps to mitigate them where they exist. The United States stressed the need for consultative and cooperative relationships between adjacent RFMOs where albatrosses and petrels move between areas of regional authorities and promoted the development and implementation of NPOAs, as appropriate. U.S. activities in 2007 related to several key RFMOs follow.

**WCPFC:** 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 that they may be annually reviewed for their effectiveness and ease of use. The United States actively participated in these negotiations.

The United States worked closely with ACAP member nations in the adoption of the conservation measure in 2006 and in the identification of minimum technical specifications within the Scientific Committee and the Technical and Compliance

Committee, as well as their ultimate adoption in 2007. The United States also encouraged key WCPFC members, including Australia, Japan, New Zealand, and Taiwan to work with the United States and with one another to conduct cooperative research into the specifications provisionally adopted for light-weight streamers. Plans for such research are ongoing with the hopes of informing the WCPFC technical bodies in future years. On behalf of CCAMLR, the United States made a statement to the WCPFC Commission regarding the desire of CCAMLR members to work with the WCPFC to reduce seabird bycatch, particularly where seabird distribution spanned both area's of jurisdiction. Contact: Nicole LeBoeuf, NOAA Fisheries.

*IATTC:* The issue of seabird interactions with IATTC fisheries was discussed at meetings of the IATTC's Stock Assessment and the Bycatch Working Groups in 2007. The Stock Assessment Working Group suggested areas where mitigation measures for reducing seabird mortality could be most effectively adopted (*i.e.*, where bird distributions and longline effort overlap), as well as suggest possible mitigation measures in these areas of vulnerability. The Bycatch Working Group recommended that seabird bycatch data be collected from all tuna longliners, with consideration given to making the provision of such data mandatory. The full Commission will consider these outcomes, as well as data considered at the 2008 meeting of the Stock Assessment Working Group at the Commission's annual meeting in June 2008. It is anticipated that a similar seabird bycatch mitigation measure, based on the WCPFC measure, will be submitted for discussion and possible adoption at the meeting. The United States attended and actively participated in all such meetings in 2007 and will attend the Stock Assessment Working Group and the Commission meetings in 2008 to present new data on seabird distribution in the IATTC fishing area and to encourage nations to adopt a binding seabird bycatch resolution, respectively. Contact: Kim Rivera, NOAA Fisheries.

*CCAMLR:* In 2007, 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 practice. 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 given that the continued declines of some albatross populations breeding in the CCAMLR Convention Area is thought to result from bycatch in fisheries outside the Convention Area. CCAMLR members are also proactively working with other RFMOs to implement its Resolution 22/XXV (International actions to reduce the incidental mortality of seabirds arising from fishing). Also in 2007, the United States presented information regarding seabird related activities at the WCPFC to CCAMLR's ad-hoc Working Group on Incidental Mortality and stressed to the full Commission the need to further develop the Memorandum of Understanding between CCAMLR and the WCPFC, particular to address issue of common concern such as seabird interactions within the WCPFC Convention Area. Contact: Kim Rivera, NOAA Fisheries.

*ICCAT:* At the 2002 Commission meeting, ICCAT adopted a resolution on the incidental mortality of seabirds in tuna fisheries. The resolution urges parties to inform ICCAT's Standing Committee on Research and Statistics (SCRS) and the Commission of the status of their National Plans of Action for Reducing Incidental Catches of Seabirds in

Longline Fisheries (NPOA-Seabirds) and to implement such plans, where appropriate. Furthermore, the resolution encourages parties to collect and provide to SCRS all available information on interactions with seabirds, including incidental catches in all fisheries under the purview of ICCAT. SCRS is to conduct an assessment of the impact of incidental catch of seabirds resulting from the activities of ICCAT related fishing activity in the Convention area. In 2006, the SCRS met to begin the process of undertaking this assessment.

Regarding seabird bycatch mitigation measures, a binding measure was adopted by ICCAT in 2007. The measure requires the use of tori lines on longline vessels fishing south of 20 degrees South with the exemption of longline vessels fishing at night provided they weight their lines. Improvements in data collection were also called for. The Commission agreed to consider changes to the new measure or adoption of additional measures to mitigate seabird bycatch based on the 2008 SCRS seabird assessment.

*ICCAT Bird Assessment and Data Collection:* In 2007, SCRS held a meeting of its Subcommittee on Ecosystems. The group considered the proposed framework for the seabird assessment (SCRS/2007/030). The framework proposed six objectives, which would form six stages of the assessment, as follows, (1) Identify seabird species most at risk from fishing in the ICCAT Convention area; (2) Collate available data on at-sea distribution of these species; (3) Analyze the spatial and temporal overlap between species distribution and ICCAT longline fishing effort; (4) Review existing bycatch rate estimates for ICCAT longline fisheries; (5) Estimate total annual seabird bycatch (number of birds) in the ICCAT Convention area; and (6) Assess the likely impact of this bycatch on seabird populations.

Given that most of the seabird bycatch information available for ICCAT fisheries is from longline fisheries and that this gear is the major focus of concern regarding seabird mortality, the SCRS agreed to focus the assessment primarily on ICCAT pelagic longline fisheries. However, it was agreed that the assessment should as far as possible take into account potential interactions of seabirds with other fisheries in the Atlantic and also those encountered by species that migrate to the Indian and Pacific Oceans. At its 2008 meeting, the SCRS Subcommittee on Ecosystems discussed methods for improving both the Atlantic longline fishing effort dataset (EFFDIS) and of determining the overlap between seabird distribution and longline fishing effort.

Following the advice of the Subcommittee regarding the effort to build a meta database of international observer programs, the United States presented document SCRS/2008/034 at the 2008 meeting of the Subcommittee, describing its pelagic longline observer program (POP). The POP started in 1992 as a mandatory program. The scientific observers placed onboard longline vessels collect detailed information on the fishing operation and gear configuration. Information on the status of boarded fish (alive, dead, or injured) and fate of the catch and bycatch (retained, discarded dead, released alive) is also recorded. The interactions with marine mammals, sea turtles and sea birds are recorded along with the result of such interactions (dead, injured, etc.). The target coverage of the POP is 8% of the sets deployed in each quarter/area stratum. The document also provided the forms used by the U.S. observers to collect the required information. The Subcommittee prepared a questionnaire to be filled by countries with observer programs in ICCAT fisheries. The goal of the questionnaire is to gain

knowledge on the information collected by each country through their observer programs.

During its 2007 and 2008 meetings, the Subcommittee encouraged CPCs to include experts in seabird and turtle biology and population dynamics on their delegations.

*ICCAT Outreach Activities* In 2007, the Subcommittee recommended the preparation of educational materials to increase awareness in the fishing community about seabird bycatch. With the subsequent adoption by ICCAT of the *Recommendation by ICCAT on Reducing Incidental Bycatch of Seabirds in Longline Fisheries* [Rec. 07-07] which requires the use of certain mitigation measures, the Subcommittee agreed that it was very important to produce and distribute this educational material in a timely manner. There was considerable discussion about the specific objectives of the educational materials depending on the target audience. One objective could be to improve species-specific information on seabird bycatch. To achieve this, the educational materials would be either guides with information on seabird groups (e.g., albatrosses, shearwaters, etc) to be distributed among fishers, or detailed guides for species identification for observers. Another objective would be to make fishers aware of the vulnerability of some seabird species and to provide guidance for the use of mitigation measures.

The Subcommittee also decided to produce a poster to increase awareness of seabird bycatch. The poster will be designed to have a simple message with as few words as possible, and it will be circulated among experts (including ACAP and Birdlife) for comments. Once finalized, the poster will also be translated to other languages for those fleets that do not speak any of the three official ICCAT languages (i.e., English, Spanish, and French), and distributed.

*ICCAT Bycatch Coordinator* The SCRS Subcommittee on Ecosystems has recommended that the Commission authorize the hiring of a Bycatch Coordinator at the Secretariat. In the absence of receiving sufficient funds for such a position through the Commission's ordinary budget, the Subcommittee also recommended that the Commission consider the receipt of external funds for this purpose. This type of funding mechanism has been used in the past for several special research projects coordinated by the Secretariat and is currently being utilized to support the seabird assessment framework. Efforts to find these funds are still underway.

ICCAT Contacts: NOAA Fisheries--Kimberly Blankenbeker, Terra Lederhouse

#### Other International Activities

The United States engaged in several other international activities in 2007 related to advancing the goal of reducing seabird bycatch around the world. The activities included working with international organizations and providing technical and financial support to important programs for reducing seabird bycatch in other nations.

*Agreement on the Conservation of Albatrosses and Petrels (ACAP)*: The United States undertakes a variety of seabird conservation activities, which are analogous to ACAP's conservation elements. Since ACAP's inception, the United States has participated in its meetings as an observer due to U.S. interest in seabird conservation and its status as a "Range State" under ACAP. In 2007, the President of the United States announced that he was encouraging U.S. federal agencies to increase their participation in ACAP. Subsequent to this announcement, U.S. Government began conducting legal and policy

analysis of whether the United States should accede to ACAP as a full member. These deliberations are ongoing and if affirmatively concluded would require the U.S. implementing agencies to undertake a formal process by which the President would submit a treaty transmittal package to the U.S. Senate Foreign Relations Committee for its advice and consent. In addition, if the implementing agencies believe that additional authority is required to fully comply with the requirements of the Agreement, implementing legislation would also have to be developed and adopted by both the U.S. House and Senate. Contact: Nicole LeBoeuf, NOAA Fisheries; Mila Plavsic, USFWS.

*Seabird Bycatch in Russian Longline Fisheries*

The World Wildlife Fund (WWF) continues to address seabird bycatch reduction measures in the Russian Far East longline fisheries. WWF is supporting work by Dr. Yuri B. Artyukhin of the Pacific Institute of Geography to further develop local manufacture and broad implementation of paired streamer lines in the Russian Far East longline fisheries. Dr. Artyukhin recently completed an analysis of the operations of longline fishing fleets in all regions of the Russian Far East from 2001-2005 based on the "Rybolovstvo" database. This information will be used to test streamer lines within other fishing companies and to target fishery managers and businesses with an informational campaign. The analysis also estimated overall mortality of seabirds due to bottom longline fishing in the waters near Kamchatka and assessed information related to the distribution of rare species of albatross in the Russian Far East waters. Using this analysis, Dr. Artyukhin approached fishing companies in different districts and in the Kamchatka region to test streamer lines on various types of fishing boats fishing for different commercial species. AKROS, Russia's largest longline fishing company, recently ordered the final supplies to begin production of the streamer lines within Russia. Dr. Artyukhin plans to place streamer lines on board seven of AKROS' vessels by June 2008 with others planned by the end of 2008. Several charitable foundations supported WWF project to reduce seabird bycatch in Russia's longline fisheries. The project was made possible thanks to funding and kind assistance from the University of Washington, US Fish and Wildlife Service, the North Pacific Longliners Association, and NOAA.

WWF also contracted Dr. Artyukhin to lead seabird work on the Commander Islands Nature Reserve as part of a new Sister Refuge Agreement between the Nature Reserve and the Alaska Maritime National Wildlife Refuge, who is providing technical assistance. Dr. Artyukhin designed a program for monitoring, research, and protection of birds in the reserve that was adopted by the reserve's management. Specific to that effort, Dr. Artyukhin launched a program for monitoring indicator seabird species on Toporkov and Ariy Kamen Islands and constructed a seasonal bird observation station on Ariy Kamen Island in May 2007. Dr. Artyukhin collected the first season of observations from the observation station during the summer of 2007 using methods identical to those used in the extensive Bering Sea seabird monitoring program by Alaska Maritime National Wildlife Refuge and results will be reported along with summary data from similar refuge monitoring sites elsewhere in the Bering Sea, thus joining the Commander Islands Nature Reserve as a part of the larger monitoring network. Contact: Bubba Cook, WWF, Vernon Byrd USFWS.

*Meeting of the International Council for the Exploration of the Sea (ICES)' Working Group on Seabird Ecology—Review of Seabird Bycatch in EU Longline Fisheries*

In response to a request by the European Commission, the problem of incidental catch of seabirds in longline fisheries in EU waters was reviewed by ICES' Working Group on Seabird Ecology (WGSE). The WGSE met in March 2008 and was attended by sixteen persons from eleven countries, including the United States. Although there are few data to indicate the true extent of the bycatch problem, enough information exists to recognize that there is a bycatch problem.

The WGSE was asked to review criteria previously used to assess the need for a plan of action to mitigate bycatch, to address the extent of the problem in EU waters, and to prioritize action for its mitigation here. Although there are too few data to inform the degree to which seabird populations in the EU (and within individual ICES areas and other seas) are being affected by mortality in longline fisheries, information is provided to indicate that there is a chronic problem. The problem would appear to be especially acute in the Mediterranean. This alone justifies the recommendation of WGSE that the European Union formulates a Plan of Action (POA) to reduce the bycatch. Such a plan should be modelled on the UN Food and Agriculture Organisation International POA-Seabirds.

Seabird bycatch and mortality occurs not only in longline fisheries; it has been recorded from all types of commercial fishery, notably gill net and drift netting. A brief review of this issue was presented with a view to future consideration by WGSE.

In May 2008, the United States also participated in a review of the ICES WGSE's report, during which advice to the European Commission regarding the development of a Community-wide Plan of Action - Seabirds was drafted. The WGSE 2008 report will be available at <http://www.ices.dk/iceswork/wgdetailacf.asp?wg=WGSE>

<b>Measures to combat illegal, unregulated, and unreported (IUU) fishing</b>	<b>Action Plan Reference</b>	<b>AC Work Programme Reference</b>	<b>Agreement Reference</b>
	3.2.4	6	

*Describe efforts and obstacles faced tackling illegal, unreported and unregulated (IUU) fishing that have direct consequences for protecting Annex 1 species from either direct or indirect harm from such fishing activities.*

Illegal, Unreported, or Unregulated (IUU) fishing is the focus of growing attention, due to the adverse impacts on target fish stocks, habitat, fish markets and bycatch species, and competition with legal fishing. The United States was instrumental in negotiating the terms of the FAO's IUU International Plan of Action (IPOA- IUU), which was completed in 2001 and, consistent with that Plan, the United States completed and released its National Plan of Action (NPOA) in June 2004. Based on the U.S. NPOA, IUU fishing is any fishing activity that does not respect applicable national and/or international laws and regulations, including activities which have not been reported or have been misreported.

*The Reauthorization of the Magnuson-Stevens Act:* The recently reauthorized Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act) in 2007 provides new authority to combat IUU fishing. The Magnuson-Stevens Act calls for the United States to work multilaterally through various fora, such as Regional Fishery Management Organizations (RFMO), to address IUU fishing. The Magnuson-

Stevens Act requires the Secretary to submit a biennial report to Congress that lists countries the United States has identified as having vessels engaged in IUU fishing. The Magnuson-Stevens Act also requires the development of procedures to certify whether these countries are taking appropriate corrective action, and calls on the United States to work with listed nations to address IUU fishing. The Magnuson-Stevens Act also calls on the United States to: promote improved monitoring, control, and surveillance for high seas and RFMO fisheries; improve the effectiveness of RFMOs through the adoption of IUU vessel lists, stronger port controls, and market-related measures; and build capacity in other countries to ensure sustainable fisheries and regulatory enforcement. As required by Magnuson-Stevens Act, NOAA's National Marine Fisheries Service (NMFS) published a definition of IUU fishing in the Federal Register. In addition, the rulemaking process to develop identification and certification procedures has been initiated, and several public meetings were conducted during 2007.

Most of the world's high seas are managed by RFMOs, with near universal coverage of tuna and tuna like species, and international management of other stocks is increasing. The United States is an active member of several RFMOs and works to address IUU fishing through these organizations. As one of the world's most important markets for seafood products, the United States participates fully in the trade monitoring programs of several RFMOs. To improve the efficiency of these programs to exclude fish and fish products that are caught by vessels engaged in IUU fishing, NMFS participates in the International Trade Data System, required by the U.S. Safe Ports Act. In addition, NMFS is actively involved in United States efforts at the World Trade Organization and the Organization for Economic Cooperation and Development to eliminate fishing subsidies that contribute to overcapacity and IUU fishing.

In 2007 and 2008, the NOAA Office for Law Enforcement (OLE) routinely engaged in international investigations that involved efforts to interdict and terminate unscrupulous business operations that are multi national in scope. Such efforts have resulted in the interdiction of the importation of illegally harvested and processed marine products trafficked on a world wide scale. In recent years the OLE has been able to identify, assure the prosecution of and termination of a number of multi million dollar IUU operations. Such cases have resulted in the elimination of activities that have caused or that are causing egregious harm to marine resources throughout the world.

The United States joined other countries to establish the international Monitoring, Control and Surveillance (MCS) Network, which works multilaterally to exchange fisheries and enforcement information, including information related to IUU fishing. The recent High Seas Task Force project on global IUU fishing recommended enhancement of the MCS Network as a key initiative. In response, NOAA has taken the lead to improve the network, including serving as Chair of the MSC Network. NOAA partners with other United States agencies to participate in coordinated enforcement and investigations of IUU fishing with foreign enforcement agencies, including United States Coast Guard sea and air patrols in the North Pacific Ocean to detect illegal large-scale high seas driftnet fishing. The United States also is working to improve the MCS capabilities in developing countries.

Foreign vessels are not authorized to engage in directed fishing operations in the United States EEZ, and foreign fishing vessels may not land their catches in United States ports

under the U.S. Nicolson Act<sup>1</sup>. Additionally, the U.S. Lacey Act is a highly effective tool to reduce access to United States ports and markets for internationally traded IUU fisheries products. The United States is also working to combat IUU fishing by participating in an FAO Technical Consultation to negotiate a binding global agreement on port state measures in an effort to deny ports, and therefore markets, to IUU-harvested fish. In addition, an increasing number of RFMOs have adopted IUU vessel lists and call upon member countries to deny port access and services to vessels identified on such lists. Some of these lists are intended to include only fishing vessels while others include transport vessels as well. NMFS is currently designing a system that will implement our obligations to apply these RFMO measures. CITES provides another potential tool to combat IUU fishing. The United States has been a leader in encouraging closer cooperation between the FAO and CITES to promote complementary actions between the two organizations. In addition, the Congress included language in its 2008 appropriations bill which authorizes the Secretary to develop a list of vessels engaged in IUU fishing and take action against listed vessels and vessel owners. The language provides NOAA with increased flexibility in the fight against IUU fishing, particularly as it relates to RFMOs to which the United States is not a party.

All of these activities contribute to the elimination of IUU fishing, which will either directly or indirectly benefit the conservation status of albatrosses and petrels.

<b>Measures to minimise discharge of pollutants and marine debris (with reference to the International Convention for the Prevention of Pollution from Ships (MARPOL)</b>	<b>Action Plan Reference</b>	<b>AC Work Programme Reference</b>	<b>Agreement Reference</b>
	2.3.1 b), 3.3		

*Describe activities related directly to the minimisation of pollutants and marine (including fisheries-derived) debris in or around important areas for Annex 1 species. How are such activities contributing to the conservation of Annex I species?*

<b>Measures to minimise disturbance in marine and terrestrial habitats</b>	<b>Action Plan Reference</b>	<b>AC Work Programme Reference</b>	<b>Agreement Reference</b>
	3.4		

*Describe measures conducted to minimise disturbance in marine and terrestrial habitats as they directly apply to Annex 1 species. Provide any noteworthy details of the execution of such measures.*

#### **4. Research and Monitoring**

<b>Ongoing research programmes relating to the conservation of albatrosses and petrels</b>	<b>Action Plan Reference</b>	<b>AC Work Programme Reference</b>	<b>Agreement Reference</b>
	4.1		

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<sup>1</sup> Exceptions include American Samoa and Guam. Fish and fish products may also be brought into the United States under the US-Canada Pacific Albacore Treaty.

*Provide a summary of more notable research activities and findings that may be noteworthy or of particular interest to other Agreement Parties, Range States, or participants. This may include substantial results, identification of major information gaps, or noteworthy results regarding shared species.*

*Population Monitoring of Laysan and Black-footed Albatrosses*

USFWS continued annual counts of breeding birds (active nests) at its long-term monitoring sites. These counts have been conducted using standardized techniques since 1980 at French Frigate Shoals, since 1991 at Midway Atoll, and since 1992 at Laysan Island. This effort directly accounts for approximately 93% of the entire world breeding population of Laysan Albatrosses and ~76% of the black-footed albatrosses. In 2005, USFWS, in cooperation with the U.S. Geological Survey, initiated a new, long-term demographic monitoring program in the Hawaiian Islands, based on mark/recapture of banded individuals. This monitoring program will provide estimates of adult survival, reproductive success, and proportion of the adult population that skips breeding annually. In addition, a sample of monitored birds will be sexed, using genetic techniques, to determine gender specific survival rates. Field data collection is being conducted at the three long-term monitoring sites: Midway Atoll, Laysan Island, and French Frigate Shoals. All three sites are located within the newly created Papahānaumokuākea Marine National Monument, which is currently the second largest Marine Protected Area in the world. This new monitoring program complements the counts and estimates of nesting populations. Contacts: Beth Flint, John Klavitter, Maura Naughton. USFWS.

*Black-footed and Laysan Albatross Satellite Tagging Project*

Tagging of Pacific Pelagics (TOPP) Program Tracking of adult and fledgling albatrosses will continue in 2008. A total of 54 deployments were conducted on adults of both species at Tern Island, French Frigate Shoals. This was TOPP's sixth consecutive season tracking adults at Tern Island. These deployments included the use of satellite transmitter, as well as archival GPS and geolocation tags. In addition, TOPP also collaborated with USFWS service to deploy 30 archival tags at Midway Atoll NWR. These tags were deployed to study the year round movements of both species at Midway Atoll. Similar deployments were conducted at Tern Island (30 tags), and Guadalupe Island, Mexico (15 tags), and deployments are planned from the main Hawaiian Island colonies. Further deployments on Laysan and Black-footed albatross fledglings will also continue on 9-10 individuals using satellite tags at Midway Atoll NWR. Contact: Dr. Scott A. Shaffer, University of California, Santa Cruz.

*Pink-footed Shearwater*

In the past year, Juan Fernandez Islands Conservancy and Oikonos have continued their ongoing, long-term research and monitoring program of the pink-footed shearwater (*Puffinus creatopus*), focusing on impacts of non-native mammals on breeding populations, potential interactions with fisheries, and important areas (hotspots) in their wintering range. Peter Hodum of Oikonos contributed to the writing of the Chile National Conservation Plan for the species and has developed a collaboration with the Corporacion Nacional Forestal regional office that oversees Isla Mocha, an important breeding site for the species. This collaboration will focus on determining status, threats and size of the breeding population on Isla Mocha. In addition, community-based conservation and education programs continue both in the Juan Fernandez Islands and

within the US, with a species webpage developed (available in late April 2008). Contact: Peter Hodum, Oikonos.

*Surveillance for Avian Influenza in Caribbean Seabirds* In 2008, researchers propose to sample live seabirds for avian influenza (AI) at breeding colonies in the Bahamas. The focal species are potentially wide-ranging and likely occur in coastal U.S. waters during at least part of the annual cycle. AI is well documented in waterbirds, particularly waterfowl and shorebirds, although the overall pattern of occurrence in seabirds is less clear. Gulls and terns are considered to be a reservoir for low pathogenic AI and seabirds in general have been noted as deserving additional AI surveillance. Of particular interest for AI surveillance are any species that may move between islands or countries. Olsen et al. (2006, *Science*) reviewed the occurrence of AI within all orders of birds for which at least 500 samples were tested. Positive samples of AI in seabirds were reported for numerous taxa, including shearwaters. The Bahamas are an important region for AI surveillance because of their proximity to the mainland of the United States. Seabirds breeding there move through the Caribbean Basin, the Gulf of Mexico, the South Atlantic Bight, and the western edge of the Gulf Stream. Prebreeding or wintering seabirds from the eastern and northern Atlantic, Mediterranean, Africa, and South America use some of the same foraging areas frequented by Caribbean seabirds. Hence ample opportunities exist for overlap of seabirds on a hemispheric scale and breeders from the Caribbean present an opportunity to capture some of that overlap. Geolocators will also be applied to allow for documentation of movement patterns of individual seabirds during the course of the annual cycle and hence assess the frequency with which these seabirds are found in coastal U.S. waters. Contacts: Patrick Jodice, USGS, South Carolina Cooperative Fish and Wildlife Research Unit, Clemson University, Clemson, SC and Dr. Jennifer M. Arnold, Pennsylvania State University.

*A Study to Compare Line Transects and Distance Sampling with Strip Transects* Recently, substantial support for the use of line transects and distance sampling to measure abundance of animals has accumulated following the publication of several books by Steve Buckland and his colleagues. Those working on seabirds at sea, however, have been reluctant to abandon strip transects in favor of line transects on the grounds that line transects are not practical to apply to seabirds at sea. The primary reason cited is that seabirds are too numerous and mobile, so that any potential increased precision of line transects is overridden by the "lost" birds not recorded by observers overburdened with measuring distance and angle to all birds seen.

The controversy has been difficult to resolve because the two techniques have never been compared side-to-side. To address this issue, College of Staten Island graduate students and Massachusetts Audubon collected data on seabird abundance on the Nantucket ferry in January and March 2008 using both strip and line transect sampling simultaneously. Data were collected by two separate groups with no communication between them.

Preliminary analysis has shown a small (13%) difference in abundance estimates between the techniques. Given that strip transect methods allow more time to record additional details on birds, such as age categories and behavior, our analysis fails to provide justification for the general adoption of line transects for surveys of seabirds at sea. Contact: Richard Veit, CSI/SUNY

*Atlantic-based At-sea Surveys*

During August 2007, the Northeast Fishery Science Center conducted a shipboard line transect abundance survey for cetaceans and seabirds in the Gulf of Maine (both US and Canadian waters). In addition, one or two seabird observers conducted sighting surveys while piggy-backing on a variety of research cruises conducted during all times of the year in 2007 and 2008 on the Atlantic continental shelf between North Carolina and Maine, where the main objective of the cruises relate to fish assessments. Contact: Debi Palka, NOAA Fisheries.

*Beached Bird Surveys*

Coastal Observation and Seabird Survey Team (COASST) is a citizen-science project in which trained volunteers collect monthly data on beached marine birds at more than 250 standard sites throughout the Pacific Northwest and Alaska. In the last year, COASST volunteers conducted more than 2300 surveys, walked more than 10,000 kilometers in more than 5000 hours, and found more than 1900 carcasses of 79 different species, including over 254 records of albatross and petrels from 7 different species. Contact: Jane Dolliver, University of Washington.

<b><i>Observer programmes to monitor fisheries bycatch of albatrosses and petrels</i></b>	<b>Action Plan Reference</b>	<b>AC Work Programme Reference</b>	<b>Agreement Reference</b>
	4.2	5.1	

*Describe actions taken to monitor fisheries bycatch of seabird species, specifically detailing techniques, technologies, or other aspects of such monitoring that may be of interest and/or use to other Parties, Range States, or participants.*

*Observer Manual on Seabirds—Atlantic off South America*

In 2007, the American Bird Conservancy and Fundacion Vida Silvestre Argentina produced an observer's manual for use by observers on fishing vessels of the Atlantic off South America. The guide was written by an observer from Argentina's National Observers Program, and includes over 100 photographs of birds taken from fishing vessels. Contact: Jessica Hardesty, ABC.

*NOAA Fisheries National Bycatch Report*

The National Bycatch Report summarizes regional and national estimates of: (1) at-sea discards of fish and (2) bycatch of protected species (e.g., marine mammals, sea turtles, seabirds, and other endangered or threatened living marine resources) in all U.S. commercial fisheries that are federally managed or have federal data collection programs. The report will also outline actions to enhance bycatch data collection and estimates, and to develop estimates for more of the nation's fisheries in future versions of the report. National Bycatch Report activities in 2007 included development of a scoring system to rank fisheries based on the quality of data and estimation methods available to estimate bycatch for fish, marine mammals, and Endangered Species Act (ESA) listed species, identification of regional key species (species, stocks, or populations with a bycatch problem), and the development of bycatch estimation improvement plans to develop specific recommendations for improving bycatch data collection and estimation in a subset of regional fisheries. It is anticipated that the report will be published fall, 2008. Contact: Samantha Brooke, NOAA Fisheries.

*Northwest Atlantic*

During 2007 the Northeast Fishery Observer Program observed about 3600 sea days in a variety of fisheries (including gillnets, trawls, dredges, etc.) and it is projected about 4000 sea days will be observed during 2008 (<http://www.nefsc.noaa.gov/femad/fishsamp/fsb/>). In addition, there has been effort to maximize the quality and completeness of the observer-collected data by using the commercial and vessel-reported fishing data.

During 2007/08 statistical analyses are being conducted to document the level of incidental mortality of loons in gillnets in the US waters of the Northwest Atlantic. In additional, it is planned to estimate bycatch of red-throated loons, greater shearwaters and other species in gillnet and bottom trawl fisheries in the US waters of the Northwest Atlantic. Contact: Debi Palka, NOAA Fisheries.

## 5. Education and Public Awareness

<i>Dissemination of information / training for ‘user audiences’ e.g. scientists, fishermen, conservation bodies, and decision-makers</i>	<i>Action Plan Reference</i>	<i>AC Work Programme Reference</i>	<i>Agreement Reference</i>
	6.1		

*Briefly describe actions taken in the dissemination of information/training for “user audiences”. Have such materials been shown to be effective at furthering the goals of the Agreement?*

NOAA Fisheries maintains information and weblinks on seabird conservation and fishery issues at

<http://fakr.noaa.gov/protectedresources/seabirds/national.htm>

USFWS maintains information and weblinks on seabird conservation and management at

<http://alaska.fws.gov/mbsp/mbm/seabirds/seabirds.htm>

[http://www.fws.gov/pacific/migratorybirds/Seabird\\_Conversation\\_Plan.pdf.htm](http://www.fws.gov/pacific/migratorybirds/Seabird_Conversation_Plan.pdf.htm)

USFWS, US Geological Survey, and other partners provide information on seabird conservation planning and other efforts at <http://www.waterbirdconservation.org/>.

The American Bird Conservancy has been actively engaged in the dissemination of information (6.1), especially to fishermen, conservation bodies, and decision-makers. ABC produced a fact sheet on ACAP, and distributed it in meetings in the Executive and Legislative branches of the US government, and among other stakeholders. We urged President Bush and First Lady to support ACAP, and ABC's president accompanied President Bush when he urged the US to increase its involvement in the treaty. We have also worked to increase acceptance of ACAP by fishermen via trade groups, fisheries councils and associations. Contact: Jessica Hardesty, ABC.

During the last year, Coastal Observation and Seabird Survey Team (COASST) maintained data collection and volunteers on more than 125 COASST beaches in the Pacific Northwest and Alaska, published and distributed results in "COASST Reports 06-07" to more than 600 volunteers, resources managers, environmental organizations and tribal offices, and submitted and published one scientific paper: Parrish, JK, Bond, N,

Nevins, H, Mantua, N, Loeffel, R, Peterson, WT, Harvey, JT. 2007. Beached birds and physical forcing in the California Current System. Marine Ecology Progress Series 352: 275-288. COASST also launched an improved, interactive website for COASST volunteers, agency personnel and members of the general public with species and location specific data query capabilities: <http://www.coasst.org>. Contact: Jane Dolliver, University of Washington.

<b>Dissemination of information to the general public</b>	<b>Action Plan Reference</b>	<b>AC Work Programme Reference</b>	<b>Agreement Reference</b>
	6.2		

*Provide a brief description of activities undertaken to disseminate information to the general public regarding seabirds and seabird conservation. Have these activities increased public awareness of such issues and how has this contributed to your overall seabird conservation efforts?*

See above.

The National Fish and Wildlife Foundation, USFWS, and partners support International Migratory Bird Day, which raises awareness, especially among school-age children, of bird conservation, including seabirds: <http://www.birdday.org/>

The American Bird Conservancy has been engaged in implementing the decisions of MOP2 to address the threats facing Waved Albatross through the Advisory Committee Work Programme and to provide capacity building support to Ecuador and Peru. In the past year, ABC has begun a series of comic books for fishermen education (in Peru, with Pro Delphinus), initiated the first-ever assessment of seabird and fisheries interactions in southern Ecuador (with Equilibrio Azul), and is supporting a vegetation management experiment on the breeding grounds of the Waved Albatross (with the Charles Darwin Foundation and Ecuador's Environmental Ministry -Ministerio de Ambiente). ABC is eager to continue and broaden its efforts to stop the decline of the Waved Albatross and ensure its survival. Contact: Jessica Hardesty, ABC.

## **6. Implementation**

<b>Summarise progress to implement decisions of previous Meetings of the Parties</b>	<b>Action Plan Reference</b>	<b>AC Work Programme Reference</b>	<b>Agreement Reference</b>

*Provide a summary of progress made to implement specific decisions made at previous Meetings of the Parties, in addition to those outlined generally in the Action Plan. How have these actions been integrated into larger seabird conservation efforts?*

## **Acknowledgements**

Many thanks to the scientists, managers, and all involved with conducting this seabird work and to the many contributors to this summary document: Joanna Alfaro (Pro Delphinus), Jennifer Arnold (Pennsylvania State University), Greg Balogh (USFWS), Poppy Benson (USFWS), Kimberly Blankenbeker (NOAA Fisheries), Samantha Brooke (NOAA Fisheries), Vernon Byrd (USFWS), Bubba Cook (World Wildlife Fund), Kim Dietrich (Washington Sea Grant Program), Jane Dolliver (University of Washington), Ann Edwards (NOAA Fisheries), Shannon Fitzgerald (NOAA Fisheries), Beth Flint (USFWS), Eric Gilman (IUCN), Jessica Hardesty (American Bird Conservancy), Peter Hodum (Oikonos), Patrick Jodice (Clemson University), Kate Little (University of Washington COASST), John Klavitter (USFWS), Nicole Le Boeuf (NOAA Fisheries), Terra Lederhouse (NOAA Fisheries), Jeffrey Mangel (Pro Delphinus), Ed Melvin (Washington Sea Grant Program), Richard Merrick (NOAA Fisheries), Maura Naughton (USFWS), Kyoaki Ozaki (Yamashina Institute of Ornithology, Japan), Debi Palka (NOAA Fisheries), Mila Plavsic (USFWS), Marc Romano (USFWS), Scott Shaffer (University of California at Santa Cruz), Melanie Steinkamp (USFWS), Rob Suryan (Oregon State University), Chris Swenson (USFWS), Lewis VanFossen (NMFS/PIRO), Richard Veit (CSI/CUNY), Stephani Zador (NOAA Fisheries).