



Agreement on the Conservation of Albatrosses and Petrels

Third Meeting of Advisory Committee

Valdivia, Chile, 19 – 22 June 2007

**Title: Report on USA Seabird Conservation Efforts,
2006 - 2007**

Author: USA

REPORT ON
USA SEABIRD CONSERVATION EFFORTS, 2006-2007

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Prepared for 3rd Meeting of the Advisory Committee
For the Agreement on the Conservation of Albatrosses and Petrels (ACAP)
June 19-22, 2007
Valdivia, Chile

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 2006 and 2007. Work has been undertaken by government agencies and non-government entities (e.g. universities, fishing industry associations, conservation groups).

Species Conservation

Strategic Engagement in Seabird Conservation

To determine where and how it can best continue to contribute to seabird conservation, the North American Waterbird Conservation Council (Council) retained a team of University of Maryland Sustainable Development and Conservation Biology graduate students to perform a strategic assessment of the state of seabird conservation and the capacity of the Council to address conservation needs. The team's recommendations centered around how the Council as a whole and its members individually can advance specific conservation objectives, while raising the overall profile of the Council and facilitating a more cohesive, coordinated, and strategic approach to seabird conservation in the Americas. The team noted that the Council and its individual members would benefit from careful deliberation related to a relatively small set of priority actions that the Council wishes to address and promote within the seabird conservation community. The Council acknowledged the quality and utility of the students work and reaffirmed its desire to increase efforts on behalf of the seabird in 2007. In response to the recommendations, the Council will draw on its members' influence in their affiliated organizations and geographic regions to raise awareness and increase support for current conservation programs (e.g., those of Birdlife International and American Bird Conservancy) and provide access to potential partnering organizations. In particular, it will emphasize coordination across organizations operating in the northern and southern Americas. The Council will also act as an entity to undertake specific recommended actions, charged its committees with initiating and coordinating relevant projects aimed at raising awareness and mitigating threats.

Atlantic Marine Bird Cooperative

Comprehensive planning by the Mid Atlantic/New England/Maritimes and the Southeast waterbird working groups indicate that not nearly enough is known about the Atlantic seabirds that occur in near- and offshore waters, and their vulnerability to a number of ongoing and emerging threats. Data on the pelagic distribution and abundance of seabirds are critical for understanding their basic ecology and role in marine ecosystems, monitoring population trends, assessing actual or potential impacts from oil spills, fishery by-catch, offshore development (shipping, wind generation, gas and mineral exploration), identifying critical marine habitats, and educating the public about marine conservation issues. Recently, funding has been obtained to assemble existing information through the development of a database developed by US Geological Survey. Moreover, an organizing entity -- the Atlantic Marine Bird Conservation Cooperative -- has emerged committed to using best information to prioritize research and management needs and to engage resource agencies and partners in and outside its membership to develop budget initiatives or outreach products to address these needs.

A workshop was held in January 2007, to bring a wide variety of people who are interested in seabirds to begin the development of consistent methodologies and databases, share ideas on techniques, and help to identify and seek increased resources to fill key gaps. It is envisioned that this workshop will be the beginning of a more long term dialogue and actions by an interested group of people, either through existing entities or with the development of *ad hoc* work groups.

Focal Species Strategy for Laysan and Black-footed Albatrosses In 2005, the U.S. Fish and Wildlife Service (USFWS) initiated a new strategy, *Focal Species Strategy for Migratory Birds*, intended to increase the number of migratory bird species at healthy and sustainable levels. To achieve this goal, partners interested in changing the status of a specific focal species are engaged to identify explicit, strategic and adaptive sets of conservation actions necessary to return a species to its desired status. Focal species were identified using five characteristics: 1) high conservation need, 2) representative of a broader species group sharing the same or similar conservation needs, 3) high level of current program effort, 4) potential to stimulate partnerships, and 5) high likelihood that factors affecting status can be addressed.

In 2005, the USFWS launched Focal Species campaigns for nine migratory bird species including Laysan and Black-footed Albatrosses. Each campaign includes: 1) distillation of comprehensive management and conservation documents into an action plan--a species specific mix of monitoring, research, assessment, habitat and population management, and outreach activities necessary to accomplish desired status; 2) clear statement of the responsibilities for actions within and outside the USFWS; 3) a focus of USFWS resources on implementing those actions; and 4) communications to solicit support/cooperation from partners within and outside the USFWS.

Laysan and Black-footed Albatrosses Conservation Action Plan

The first step in the Albatross Focal Species Campaign is the preparation of a Status Assessment for Laysan and Black-footed Albatrosses. This Status Assessment reviews the current taxonomy and life history characteristics; analyzes and evaluates population distribution, status and trends; assesses the impacts of known threats and limiting factors, and provides conservation recommendations. A draft assessment was distributed for peer review and comments are currently being addressed and incorporated into the final document. The next step in the process is the development of a collaboratively-based Action Plan that integrates albatross conservation efforts among the various partners. The Action Plan is a partnership-based conservation plan that outlines specific actions the USFWS and their partners should undertake to ensure the long-term conservation of these species. The involvement of partners and stakeholders, with management responsibility or an interest in albatross conservation, is key to the successful development and implementation of this plan. The Laysan and Black-footed Albatross Focal Species Action Plan will include: 1) a brief summary of the population status, trends, and limiting factors identified in the Status Assessment; 2) statement of the desired status of each species; and 3) a comprehensive, prioritized list of specific conservation actions necessary to achieve the desired status. The list of conservation actions is the core element of the Action Plan and includes actions beyond the scope of the USFWS. Each action will include identification of the responsible party/parties, estimated timeline, estimated cost, and a priority ranking. The engagement of signatory partners and stakeholders is essential for the creation and successful implementation of the Action Plan.

Potential Partners: U.S. Geological Survey, NOAA Fisheries, State of Hawaii, U.S. Department of Defense, U.S. Department of Agriculture's Wildlife Services, Fisheries Management Councils, fishing industry groups, researchers and universities, conservation organizations, Birdlife International, North Pacific Albatross Working Group, Blue Oceans Institute, Earth Justice, Grupo de Ecological y Conservacion de Islas, Island Conservation

Timeline for Laysan and Black-footed Albatross Focal Species Planning:

October 2006 Draft Status Assessment completed

October 2006 First Action Plan Meeting, Honolulu, HI

Spring 2007 Second Action Plan Meeting, Seattle, WA

Summer 2007 Partner review of draft Albatross Action Plan

Final Albatross Action Plan with signatory approval by participating partners

Re-establishments and re-establishment schemes

In 2006, the USFWS began collaborating 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. If all goes well, 2008 may be the year that Short-tailed albatrosses are moved from Torishima Island to Mukojima Island in Japan. This work is identified as a priority in the Short-tailed Albatross Recovery Plan.

Habitat Conservation and Restoration

Land-based conservation

The USFWS's Alaska Maritime National Refuge has an active Invasive Management Program that works to prevent rat spills from commercial fishing vessels and other vessels that port in the Aleutian Islands. See <http://www.stoprats.org/>

Eradication of Cats from Wake Island Feral cat control at Wake Atoll began in 1996 and a cat eradication program was initiated in 2003 and concluded in August 2004. As a result of these efforts, wedge-tailed shearwaters recolonized areas where they had nested prior to WWII and numbers of other seabirds increased also. Historically, Wake Island supported colonies of both Laysan and Black-footed Albatrosses but these colonies were decimated by feather hunters and finally extirpated during World War II. Both species have now returned to Wake Island and the first successful breeding by a pair of Laysan Albatross was recorded in 2001. A few pairs of Black-footed Albatrosses have laid eggs, but to date, none have successfully fledged chicks. In 2006, super typhoon Ioke hit Wake Island and in 2007 a new feral cat was accidentally released on the island in typhoon relief supplies. In June 2007, researchers will attempt to get the last cat(s) and assess the rat problem. This work is a cooperative effort by The Endangered Species Recovery Council, Marine Endeavors, and Wildlife Management International of New Zealand. Contact: Mark Rauzon, Marine Endeavours, mjrauz@aol.com.

Management of Human Activities

Environmental impact statements related to albatrosses and petrels

NOAA Fisheries completed a Final Programmatic Environmental Impact Statement (FPEIS) on Regulations Implementing Conservation and Management Measures Adopted by the Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR), October 2006. The FPEIS describes activities related to the management, monitoring, and conduct of the fisheries; the ecological relationships between harvested, dependent and related populations of Antarctic Marine Living Resources; and the potential impacts to protected species, non-target species, and fish habitat. The FPEIS focuses on four groups of actions: harvesting, trade, research, and enforcement. See http://www.nmfs.noaa.gov/sfa/domes_fish/news_of_note.htm for links to the CCAMLR FPEIS.

NOAA Fisheries completed an Environmental Assessment to analyze the impacts of revisions to current seabird avoidance measures in the hook-and-line fisheries off Alaska, March 2007. See <http://www.fakr.noaa.gov/protectedresources/seabirds/ea/draft0307/ea.pdf> and section below for details.

Measures to reduce or eliminate incidental mortality in fisheries

Revisions to Alaska's Seabird Mitigation Measures

NOAA Fisheries completed an Environmental Assessment to analyze the impacts of revisions to current seabird avoidance measures in the hook-and-line fisheries off Alaska. This proposed action is based on results from research projects suggested by the North Pacific Fishery Management Council's (Council) Science and Statistical Committee, and conducted by Washington and Alaska Sea Grant Programs (SGP). This research included: 1) hook-and-line surveys in Alaskan waters 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 seabird avoidance measures can be improved by strengthening the gear requirements through construction standards in waters where seabirds are more common and eliminating requirements in waters where seabirds are rarely observed. This analysis also contains options that eliminate the required use of a second "other device" and the Seabird Avoidance Plan as specified in current regulations. 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 North Pacific Fishery Management Council selected alternative 3 as its preferred alternative, with options as specified below. Alternative 3: Revise seabird avoidance measure requirements as follows:

A.) Eliminate seabird avoidance gear requirements for all hook-and-line vessels fishing in Prince William Sound (NMFS Area 649), the state waters of Cook Inlet, and Southeast Alaska (NMFS Area 659) with the following exceptions in the inside waters areas of SE Alaska where hook-and-line vessels would be subject to the same seabird avoidance gear requirements and standards as when fishing in the EEZ:

- 1.) Area in lower Chatham Strait south of a straight line between Point Harris (latitude 56.17.25 N) and Port Armstrong.
- 2.) Area in Dixon Entrance defined as ADF&G groundfish statistical areas 325431 and 325401.
- 3.) Area in Cross Sound west of a straight line from Point Wimbledon extending south through the Inian Islands to Point Lavinia (136.21.17 E).

B.) Require standards of hook-and-line vessels fishing in the EEZ as follows:

- 1.) Vessels >26 and ≤55 LOA with masts, poles, or rigging using snap-on hook-and-line gear are required to deploy one streamer line while setting gear. Specifically, the streamer line must be at least 45 m long and must be maintained with a minimum aerial extent of 20 m.
- 2.) Vessel >26 and ≤55 LOA with masts, poles, or rigging not using snap-on hook-and-line gear (conventional gear) are required to deploy one streamer line while setting gear. Specifically, the streamer line must be at minimum of 90 m long and must be maintained with a minimum aerial extent of 40 m.
- 3.) Vessels >26 and ≤55 LOA without masts, poles, or rigging and not capable of adding poles or davits to accommodate a streamer line (including bowpickers) must tow a buoy in such a way to deter birds from the sinking groundline, without fouling on the gear, while setting hook-and-line gear.
- 4.) All vessels using hook-and-line gear in the EEZ formerly required to "use one other device" are no longer required to use a second seabird avoidance measure (adding weight, deploying a second streamer line or buoy or strategic offal discharge).
- 5.) Eliminate the Seabird Avoidance Plan (SAP) requirement for all vessels.
- 6.) Weather Safety Standard: Use of seabird avoidance devices would be discretionary for vessels >26' to ≤55' LOA when winds exceed 30 knots.

The objective of this proposed regulatory amendment is to revise the current seabird avoidance requirements to improve their effectiveness at reducing the incidental take of short-tailed

albatrosses and other seabird species, while relieving unnecessary regulatory burden and its associated costs.

The EA is available at <http://www.fakr.noaa.gov/protectedresources/seabirds/ea/draft0307/ea.pdf>

The Washington Grant Sea Grant Program reports are available at

<http://www.wsg.washington.edu/pubs/seabirds/seabirddistlr.pdf>

<http://www.wsg.washington.edu/research/living/smallvesselshr.pdf>

Asia and Pacific Bycatch Consortium

The Asia and Pacific Bycatch Consortium is a collaboration of the commercial fishing industry; management authorities; seafood retailer industry; experts in fishing technology, marine ecology and fisheries science working; and other interested parties to promote the efficient direction of resources to solve bycatch problems in Asia and Pacific pelagic fisheries. The Consortium is a regional-level, voluntary, industry-lead approach to solve fishery bycatch problems. The Consortium promises to share information with fishery management authorities and amongst the fishing and retail industries, and provide an efficient means to support implementation of recommendations of the International Fishers Forum series and recommendations and resolutions of Regional Fishery Management Organizations and other international organizations. This will be achieved by promoting and supporting: (i) research and commercial demonstrations on practices to reduce interactions with unwanted bycatch species groups; (ii) increased awareness of bycatch solutions among various interest groups; (iii) where needed, augmented institutional and technical capacity to assess interactions with bycatch species groups; and (iv) ecosystem-based management.

The Consortium met in February 2007 in Honolulu, Hawaii, and identified its initial objectives to support addressing the following pelagic longline and purse seine bycatch issues:

- Pelagic longline fisheries: Considering large-scale vessels and smaller vessels < 24 m in length, (i) monitor and reduce bycatch of sea turtles and seabirds; (ii) monitor and promote management measures to ensure that shark catch levels are sustainable; and (iii) encourage practices to maximize post-release survival.
- Purse seine fisheries: Monitor and reduce bycatch of juvenile target and other species.

The Consortium identified short and long-term initiatives:

- 1) Commercial demonstrations: For pelagic longline fisheries, circle hook trials, safe leads, shark repellents, deeper setting, seabird avoidance methods. For purse seine fisheries, FAD designs.
- 2) Research experiments, research and development: Shark repellents, attracting sharks away from FADs with bait and sounds, circle hooks, FAD designs, differences in effects of anchored vs. free-floating FADs, flexible grid in purse seine, avoid cetacean depredation (removal of hooked fish and bait from gear) in longline gear. Catalyze the development of new concepts.
- 3) Improve observer program performance (to assess the existence of problematic bycatch and evaluate the efficacy of bycatch avoidance methods): Document and evaluate coverage rates, temporal gaps, spatial gaps, fleet gaps, training on species identification, data reporting protocols. Communicate to management authorities industry perspectives and needs with respect to onboard and dockside observers.
- 4) Sustainable seafood programs: Standardize assessment methodologies (e.g., numerous eco-labeling programs, FAO Code of Conduct, red/amber/green ranking programs). Facilitate improved communication of fishery and bycatch data from management authorities to organizations conducting fishery sustainability assessments.
- 5) Obtain reliable data: Obtain reliable data on the impact on Pacific tuna fisheries from catches of small yellowfin tuna and bigeye tuna by the Philippines and Indonesia tuna fisheries.
- 6) Outreach and education: Provide information to fishers to describe bycatch reduction methods; the efficacy, economic viability and practicality of alternative avoidance techniques; and the need for additional R&D to innovate new avoidance strategies. Raise seafood consumer

awareness (e.g., through improved information on packaging) of the value of seafood products derived from sustainable fisheries. Translate outreach products to enable broader distribution. Provide training opportunities.

Regional Fishery Management Organizations (RFMOs) and seabirds

ICCAT

ICCAT's Standing Committee on Research and Statistics (SCRS) held a meeting of its Subcommittee on the Ecosystem in February 2007 in Madrid. The group considered the proposed framework for the seabird assessment (SCRS/2007/030). The framework proposes 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 by-catch rate estimates for ICCAT longline fisheries; (5) Estimate total annual seabird by-catch (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 by-catch information available is from longline fisheries and that this gear is the major focus of concern regarding seabird mortality, the assessment will focus 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. The assessment should also take into consideration any potential landbased threats to seabird population. The Sub-Committee agreed to a workplan to advance the stages of the seabird assessment.

In order to promote further intersessional work on this topic, the Sub-Committee recommended that a web list be hosted at the Secretariat to allow easy access to data, documents, and to permit easy intercommunication between scientists involved/interested in this activity. While this mechanism will enhance the Sub-Committee's ability to work efficiently, the Sub-Committee anticipates the need to meet during species group week in September 2007 to review progress on this research.

The group identified that awareness materials already exist that might encourage the adoption of mitigation measures to reduce the potential risk of negative seabird interactions in ICCAT fisheries. The group recommended that ICCAT considers the development and distribution of awareness materials customized for Atlantic tuna fisheries.

The Commission should authorize hiring a By-catch Coordinator at the Secretariat and to encourage CPCs to enhance their scientific delegations to include experts in seabird and turtle biology and population dynamics. In the absence of receiving sufficient funds for such a position through the Commission's ordinary budget, the Commission should consider 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. It is anticipated that funding for the seabird assessment framework might need to continue into the future.

The Commission should develop educational materials for distribution to fisherman active in the Convention area. These materials should identify conservation issues related to seabirds, marine turtles, sharks and other species of concern and also identify easily implemented mitigation measures that have been demonstrated to reduce their unintentional catch and/or decrease incidental mortality.

The Sub-Committee recommended scientific observer and logbook programs, in combination, be used for the purpose of quantifying the total catch (including bycatch) composition. Future observer data collection should be based on the ICCAT best practice procedure for collecting bycatch data, including seabirds, sea turtles, marine mammals, and other species of concern.

ISC: Seabirds was on the agenda of the ISC's (International Scientific Committee for Tuna and Tuna-like Species in the North Pacific Ocean) Bycatch Working Group meeting (May 2-5, 2007). The ISC provides scientific advice to the Western and Central Pacific Fisheries Commission (WCPFC) on the status of stock of tuna and tuna-like species in the North Pacific. The report of the ISC 6th Plenary Meeting (March 23-27, 2006, La Jolla, California, USA) can be found at <http://isc.ac.affrc.go.jp/meetings.html>

The links for the annexes (Bycatch Working Group, Annex 9) appear on page 3, and the direct link address for the bycatch working group is;

http://isc.ac.affrc.go.jp/isc6/ISC06_Annex%209_ISC6%20BYCATWG%20REPORT.pdf

Inter-American Tropical Tuna Commission (IATTC)

Seabirds was on the agenda of the IATTC's Stock Assessment Working Group meeting May 7-11, 2007, in La Jolla, California, USA. The working documents for the IATTC's Stock Assessment Working Group meeting are at:

<http://www.iattc.org/IATTCandAIDCPMeetingMay07ENG.htm>

Since 2005, the IATTC has increasingly been addressing seabird-related issues. Actions and recommendations have included:

- Resolution C-05-01 on Incidental Mortality of Seabirds (73rd Meeting IATTC, 2005);
- that the Commission coordinate with the Western & Central Pacific Fisheries Commission (WCPFC), and other tuna Regional Fisheries Management Organizations (RFMOs) as appropriate, in its implementation of seabird resolutions and the development of scientific information and reports that support this implementation. This could include practical areas of cooperation on the mitigation of seabird bycatch. (7th Meeting of the IATTC's Stock Assessment Working Group (SAWG), 2006);
- The IATTC should develop, in coordination with the other RFMOs, a strategy to mitigate bycatches in the different fisheries involved. The program should include standardization of data collection (whenever possible), discussion of research programs and activities to be undertaken in each, and a mechanism for the timely sharing of results. This item could be included in the agenda of the upcoming Kobe meeting. (7th Meeting SAWG, 2006);
- The Stock Assessment Working Group suggest 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 Commission should then consider mitigation measures at its June 2007 meeting. (6th Meeting of the IATTC's Bycatch Working Group (BWG), 2007); and that
- Seabird bycatch data be collected from all tuna longliners, with consideration given to making the provision of such data mandatory. (6th Meeting BWG, 2007).

The IATTC will consider the recommendations from the Stock Assessment Working Group's 8th Meeting (May 2007) at its 75th Meeting of the Commission in Cancun, Mexico, June 25 to 29, 2007.

Measures to combat IUU fishing

NOAA Fisheries published a proposed rule (Federal Register Volume 71, page 39642, July 13, 2006; available from <http://www.gpoaccess.gov/fr/index.html>) that includes measures to assist in combating illegal harvesting of and trade in toothfish. Proposed measures would require the use of the centralized satellite-linked vessel monitoring system by all US vessels harvesting Antarctic Marine Living Resources and would be a condition of import for all US dealers seeking to import shipments of toothfish (*Dissostichus*) into the US.

Research and Monitoring

National Bycatch Report

In 2006, NOAA's National Marine Fisheries Service (NOAA Fisheries) initiated development of a National Bycatch Report. The National Bycatch Report will provide a comprehensive summary of regional and national estimates of the following two types of bycatch in select commercial fisheries: (1) at-sea discards of fish and (2) bycatch of protected species (e.g., marine mammals, sea turtles and seabirds). In addition to providing estimates, the report will outline actions to enhance bycatch data collection and estimates, and to develop estimates for more of the nation's fisheries.

Overall planning and guidance for the report is provided by the Office of Science and Technology National Observer Program (NOP). Regional teams composed of fish, marine mammal, sea turtle, and seabird experts from NOAA Fisheries Regional Offices and Science Centers were also formed to compile and analyze data for the report. The National Bycatch Report is scheduled for release in 2008.

Beached Bird Monitoring

University of Washington- Coastal Observation and Seabird Survey Team (COASST)
More than 400 Coastal Observation and Seabird Survey Team participants have collected beached bird data monthly on more than 250 beaches in Alaska, Washington, Oregon, and California. COASST data create the baseline against which short-term and long-term, natural and human caused changes can be measured. To date, COASST has recorded more than 100 species, including eight albatrosses and petrels. In addition to reporting beached bird trends for use by natural resource managers and scientists, COASST provides participants with information on seabird conservation issues and natural history through the publication of a quarterly newsletter and annual report.

Progress on Studies of Northern Fulmar in Alaska Fishery Bycatch

Preparation of a report is underway on the analysis of several hundred seabird carcasses (including a predominance of fulmars) to establish age/sex composition in the fishery bycatch (lab work completed last summer with assistance from Hannah Nevins and others in California). Another report is also being prepared on fulmar telemetry results (satellite transmitters deployed in previous years on 4 fulmars from each of the major Alaska colonies--Semidis, Chagulak I., Pribilofs, and Hall Island (St. Matthew group). No active transmitters remain from that study.

Fulmar genetic analyses (microsatellite markers and mtDNA haplotypes) to do a mixed stock analysis for the Bering Sea bycatch of fulmars is nearing completion. Contact: Dr. Scott Hatch, US Geological Survey, Anchorage, Alaska; Scott_Hatch@usgs.gov

NMFS's Pacific Region Annual Report on Seabird Interactions and Mitigation Efforts in the Hawaii Longline Fishery for 2006

[http://www.fpir.noaa.gov/SFD/pdfs/seabird/2006%20PIRO%20Annual%20Seabird%20Report%20\(Apr-2007\).pdf](http://www.fpir.noaa.gov/SFD/pdfs/seabird/2006%20PIRO%20Annual%20Seabird%20Report%20(Apr-2007).pdf)

Monitoring Laysan and Black-footed Albatross Breeding Populations in Hawaii

U.S. Fish and Wildlife Service conducted standardized counts of Laysan and Black-footed Albatross nests at Midway Atoll, Laysan Island, and French Frigate Shoals during December 2006. These three colonies represent >75% of the Laysan and >90% of the Black-footed breeding populations. The nesting population of Laysan Albatross (551,940 pairs) was below last year's count, but above the 15 year average. Black-footed Albatross counts (52,068 pairs) were the highest counts since standardized surveys began at these three sites in 1992. A new monitoring program to assess annual adult survival rates was initiated at these three islands and preliminary estimates should be available in 2009.

Mitigation Research

Washington Sea Grant (WSG) compared the performance of 50 g/m integrated weight (IW) longline with and without paired streamer lines (IWPS and IW, respectively) with unweighted longlines with paired streamer lines (UWPS) to a control of no deterrent (UW). Trials took place on two vessels targeting Pacific cod (*Gadus macrocephalus*) over a five-month period in the Bering Sea, Alaska, USA. All mitigation technologies dramatically decreased seabird bycatch rates while having little to no effect on fish catch rates. Mitigation was more effective for surface foraging seabirds than for diving seabirds (shearwaters), reducing mortality rates by 91% to 100% and 79% to 97%, respectively. IWPS performed best, reducing surface forager catch by 100% and shearwater catch by 97%, relative to controls. IW alone and UWPS performed similarly reducing surface forager catch by 91% and 95%, respectively, and shearwaters catch by 88% and 79%, respectively. A manuscript has been submitted for publication in *Biological Conservation*.

Based on results of the pilot study in the catcher processor fleet for pollock in the Bering Sea in 2004, full scale trials were conducted in 2005. These trials contrasted seabird interaction rates with cables with and without mitigation. Mitigation techniques included paired streamer lines, snatch block and warp booms. All mitigation techniques tested were effective at reducing cable strikes, but varied by vessel. Preliminary results suggest that both paired streamer lines and lowering the third wire with a snatch block successfully reduced seabird strikes with the third wire. Streamer lines were most effective at reducing both third wire strikes and warp strikes on both vessels. Cable distance astern and placement relative to the discharge, and vessel turns were shown to be determinants of seabird interaction rates with and without mitigation. A manuscript is in preparation.

The North Pacific Fishery Management Council took final action in February 2007 supporting the adoption of revised regulations for seabird avoidance in Alaska longline fisheries based on WSG research. Seabird avoidance gear will no longer be required in inside waters and requirements for small vessels operating in outside waters will be tightened up. New regulations will go into place with action by NOAA Fisheries.

With recent funding from the Packard Foundation, WSG will develop a streamer line system for application to world high-seas pelagic longline fisheries as the cornerstone of seabird bycatch mitigation in these extensive, multi-national fisheries targeting tuna and billfish worldwide. Design will focus on: 1) engineering widely applicable and easy to use deployment, retrieval and rigging systems, as well as towed devices that minimize the fouling of streamer lines on gear to maximize practical application by crews; and 2) identifying optimal streamer line materials, configuration, and performance standards that minimize seabird attacks on baited hooks. Testing will entail measuring the behavioral response of “worst case” seabirds to alternative designs in

“worst case” locations in cooperation with partner scientists and organizations. Products will include a preliminary report, a final report, and a package of seabird bycatch mitigation best practices that will be delivered to Regional Fisheries Management Organizations (RFMOs) via member nations and organizations.

Recognizing the imperative to develop best management practices for pelagic 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, Australia. The objectives of the workshop were to: share current and future plans for mitigation research and related initiatives; and develop the framework for a five-year mitigation research plan. The workshop report is available at <http://www.wsg.washington.edu/research/living/fisheries.html>

Demonstration Trial of FishTek Safe-Lead Pelagic Longline Gear The placement of lead weights on pelagic longline branchlines can be crucial to reducing seabird bycatch. Lead weights have been demonstrated to increase the sink rates of baits during gear setting putting them beyond the reach of most seabirds – especially, albatrosses. However, lead weights are often cited as safety hazards by pelagic longline fishermen because they tend to “sling-shot” back to towards the vessels potentially causing injuries to crewmembers.

The FishTek safe leads are fast to fit and can be moved up or down the line as required by squeezing hard on two release buttons. When the branch line breaks, the ‘safe lead’ weights are designed to fall from the line and not remain attached. The lead slides off as a result of the accelerating force when the line snaps. If the leads are fitted above a swivel, the safe leads have a safety feature that allows the lead halves to separate from the carrier. The force accelerating the lead is large, equivalent to over 100 kg pulling on the weights. FishTek has conducted preliminary trials, which confirm that the prototype ‘safe leads’ do in fact perform in this manner. In normal situations, the lead would remain fixed on the line with around 10-15 kg of force. The weights are fast to fit and can be moved up or down the line as required by squeezing hard on two release buttons. If fishermen want to use a swivel in addition to the new lead, the safe lead should be fitted below, so that in the event of the line breaking, the lead can slide off the end without getting stuck on the swivel. If the leads are fitted above a swivel, the safe leads have a safety feature that allows the lead halves to separate from the carrier. The cost of the device will be about the same as the leaded swivels currently used (\$0.75 each).

The project will be conducted on a 1-trip demonstration of the new lead aboard a Hawaii-based longline vessel in 2007. The experimental design will entail a balanced design, where branch lines are alternated containing conventionally used weighted swivels (the control treatment) with the new ‘safe lead’ (the experimental treatment). For each individual set during the trip, the number of branch lines containing swivels and number containing ‘safe leads’ will be recorded as well as the proportion of branch lines containing swivels and proportion containing ‘safe leads’ that break where either (i) the swivel remains on the line, (ii) flies towards the vessel or (iii) falls off the line safely into the water. Resulting data will be analyzed to determine if ‘safe leads’ perform significantly different from weighted swivels when a branch line breaks and to compare the costs from lost weights for each treatment. A successful demonstration in Hawaii, may encourage crews to use heavier and safer weights than are already required in the Hawaii-based pelagic longline fishery. Contacts are: Dr. Eric Gilman, Nigel Brothers, and Lewis VanFossen Lewis.VanFossen@noaa.gov

Pollutants and Marine Debris

Contaminant-Associated Alteration Of Immune Function In Black-Footed Albatross (*Phoebastria nigripes*), North Pacific Predators, Myra E. Finkelstein, Keith A. Grasman, Donald A. Croll,

Bernie R. Tershy, Bradford S. Keitt, Walter M. Jarman, Donald R. Smith, In press (due September 2007) in *Environmental Toxicology and Chemistry*.

To elucidate the impact of marine pollution on a pelagic species, authors assessed whether toxic contaminants accumulated in black-footed albatross (*Phoebastria nigripes*), a wide-ranging North Pacific predator, are correlated with altered physiological function. They found a positive significant relationship between organochlorines and increased lymphocyte proliferation ($p = 0.020$) as well as % lymphocytes ($p = 0.033$). Mercury was elevated in black-footed albatrosses, and high mercury levels appeared to be associated ($p = 0.017$) with impaired macrophage phagocytosis. The associations that were documented between multiple contaminant concentrations and immune function in endangered black-footed albatrosses provide some of the first evidence that albatrosses in the North Pacific may be affected by environmental contamination.

Satellite-Tracking Projects

Tagging of Pacific Pelagics (TOPPS) Program Tracking of fledgling albatrosses will continue in 2007. Depending on resources, 10 satellite tags will be deployed on each Laysan and Black-footed Albatrosses. Hopefully these tags will provide tracks of birds for 6-12 months.

Tracking effort on adults will continue beginning in November 2007. Depending on funding, some tags will be provided Dave Anderson for deployments on Waved Albatrosses. These would be archival tags only. Archival tags will also be provided to Rob Suryan for deployments on Short-tailed and Black-footed Albatrosses at Torishima. These would occur in Jan-Feb 2008. Work will also continue at Tern Island with deployments of archival tags for year round deployments, and continuation of satellite tags and GPS tags on both species (Laysan and Black-footed) during breeding. Archival tags will be deployed on Laysan Albatross at Guadalupe Island next season as well.

Depending on funding, more deployments are planned for Sooty Shearwaters in New Zealand and Chile.

At-Sea Tagging in Alaska

In the summer of 2006, researchers from USFWS and Oregon State University made their third trip to sea along the Aleutian Islands to capture and tag albatrosses. Ten Black-Footed Albatrosses, 10 Laysan Albatrosses, and 6 Short-Tailed Albatrosses were tagged. Preliminary analysis indicates that Individual Laysan Albatrosses are the least likely to come into contact with commercial fishing vessels in Alaska, Short-tailed Albatrosses were the only species to make regular use of the Bering Sea, concentrating along shelf slope and shelf break regions, where commercial fishing effort is high.

Population biology of Laysan Albatross

Lindsay Young, PhD student at University of Hawaii, is using geolocation technology to examine how widely separated breeding colonies of Laysan Albatross differ in their distribution and habitat use at sea. She is also investigating how genetically different each population is and whether there are population biases in bycatch mortality through the use of genetic assignment tests. Contact: Lindsay C Young <lindsayc@hawaii.edu>

Assessing Population-level Impacts from Fisheries on Albatross Species The University of Hawaii's Pelagic Fisheries Research Program sponsored a workshop on protected species modeling in 2001 (report available at http://imina.soest.hawaii.edu/PFRP/pdf/psmw_final_report.pdf). As a result of this workshop, the

PFRP funded development of several population assessment and projection models for albatrosses (Maunder & Hoyle, Goodman & Lebreton). Model development has progressed to the point where results should begin to be considered. The PFRP is therefore hosting a follow-up workshop in Honolulu on albatross modeling. November 2007 is a likely time for this workshop and Dan Goodman has generously offered to assist in convening the workshop.

International Projects

Monitoring Artisanal Longline Fisheries in Peru

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. Using a network of onboard and shore based observers PD documented seabird interactions, including interactions with waved albatrosses and white-chinned petrels, with the fishery. PD also held a series of educational workshops with fishermen, local officials and researchers to promote awareness of seabird biology, conservation, and the availability of techniques and mitigation measures to reduce seabird interactions and mortalities in fisheries.

Pink-footed Shearwater

In the past year, Oikonos and the Juan Fernandez Islands Conservancy (JFIC) have continued a long-term research and monitoring program on the pink-footed shearwater (*Puffinus creatopus*). On the breeding grounds in the Juan Fernández Islands, Chile, we have continued monitoring (1) the impacts of predation by non-native mammals, (2) breeding activity and reproductive success and (3) the population-level response to the eradication of European rabbits on one of their breeding islands, Isla Santa Clara. The groups also conducted a pilot migration tracking study, attaching solar satellite transmitters to five post-breeding adult shearwaters prior to the beginning of migration. Results have indicated two potential wintering hotspots for the species, one off the central coast of Peru and another off the Pacific coast of Baja California.

In addition to research, community-based conservation efforts have continued with the local community on the Juan Fernández Islands, including regularly involving local schoolchildren in monitoring a small breeding colony that is now a reserve. Locally, Oikonos and the JFIC have given a number of talks to local conservation organizations, focusing on the conservation issues confronting the seabird community of the archipelago and have presented three talks at national professional meetings.

Seabird Mitigation in Russian Far East Longline Fisheries

The World Wildlife Fund (WWF) continues to address seabird bycatch reduction measures in the Russian Far East longline fisheries. WWF previously supported controlled experiments involving the deployment of paired streamer lines and integrated weight lines in the Russian longline fisheries, which successfully showed the benefits of reduced seabird bycatch and stimulated industry support. WWF is currently supporting work by Dr. Yuri B. Artyukhin of the Pacific Institute of Geography to implement the local manufacture and broad implementation of paired streamer lines in the Russian Far East longline fisheries. In addition, Dr. Artyukhin is coordinating training in Vladivostok for seabird observers who will be stationed on some longline vessels. AKROS, Russia's largest longline fishing company, has agreed to assist in the construction and implementation of the paired streamers on all their vessels. WWF hopes to fully implement paired streamers on all longline vessels fishing in the Russian Far East by 2008. This project is supported by NOAA Fisheries.

Global Bycatch Database

Project GloBAL--Global Bycatch Assessment of Long-Lived Species -- is in its second year and

continuing to focus on research designed to improve our understanding of the impact of fisheries from multiple gear types on seabirds, sea turtles and marine mammals while promoting sustainable fisheries. Through collaborations with international partners and the development of new analytical approaches, Project GloBAL (PG) is moving forward on improving bycatch assessment.. The Project is also currently developing and testing rapid bycatch assessment protocols to provide data primarily in areas where bycatch data are absent, e.g. coastal fisheries. For more information on PG and for an list of project products, visit <http://bycatch.env.duke.edu/>

Education and Public Awareness

NOAA Fisheries Seabird Program links

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

Oikonos Updates on PFSH project at <http://www.oikonos.org/whatsnew.htm#pfsh.htm>

Wake Forest University's The Albatross Project <http://www.wfu.edu/biology/albatross/>

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), Dave Anderson (Wake Forest University), Yuri Artyukhin (Russian Pacific Institute of Geography), Greg Balogh (USFWS), Kimberly Blankenbeker (NOAA Fisheries), Samantha Brooke (NMFS), Vernon Byrd (USFWS), , Bubba Cook (World Wildlife Fund), Paul Dalzell (Western Pacific Fishery Management Council), Kim Dietrich (Washington Sea Grant Program), Myra Finkelstein (University of California at Santa Cruz), Beth Flint (USFWS), Eric Gilman (Blue Oceans Institute), Dan Goodman (Montana State University), Robert Gorrell (NOAA Fisheries), Scott Hatch (USGS), Peter Hodum (Oikonos), Kate Litle (University of Washington COASST), Scott Johnston (USFWS), Rebecca Lewison (San Diego State University), Jeffrey Mangel (Pro Delphinus), Mark Maunder (IATTC), Ed Melvin (Washington Sea Grant Program), Maura Naughton (USFWS), Mark Rauzon (Marine Endeavors), Scott Shaffer (University of California at Santa Cruz), Paul Sievert (USGS—Massachusetts Cooperative Fish and Wildlife Research Unit), Rob Suryan (Oregon State University), Lewis VanFossen (NMFS/PIRO), Robin Tuttle (NOAA Fisheries), and Jennifer Wheeler (USFWS), and Lindsay Young (University of Hawaii).