

Incidental Catch of Seabirds in Longline Fisheries

(Guide for Waterbird Conservation Practitioners)

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Summary

Seabirds are being taken incidentally in various commercial longline fisheries in the world, and concerns are arising about the impacts of that incidental take. The incidental catch of seabirds may also have an adverse impact on fishing productivity and profitability. Governments, nongovernmental organizations, and commercial fishery associations are petitioning for regulatory measures to reduce the mortality of seabirds in longline fisheries in which seabirds are incidentally taken.

Several avenues are available for addressing this issue in North American fisheries, some are international in scope and others arise from national domestic law. The United Nation’s Food & Agriculture Organization (FAO) adopted a voluntary *International Plan of Action for Reducing the Incidental Catch of Seabirds in Longline Fisheries (IPOA-Seabirds)* in 1999. The IPOA-Seabirds calls for member states to assess its longline fisheries and if a seabird bycatch problem exists, then a National Plan of Action would be developed. The Agreement on the Conservation of Albatrosses and Petrels (ACAP) is currently focused on Southern Hemisphere species but could be broadened in scope at a future date to include Northern Hemisphere species. The objective of ACAP is to achieve and maintain a favorable conservation status for albatrosses and petrels. In the United States, the Migratory Bird Treaty Act (MBTA) implements provisions of treaties between the United States and Great Britain, Mexico, Japan, or the former Union of Soviet Socialist Republics. Under the MBTA it is unlawful to pursue, hunt, take, capture, kill, possess, trade, or transport any migratory bird, or any part, nest, or egg of a migratory bird. In 2001, a Presidential Executive Order (EO) 13186 was issued and directs executive departments and agencies to take certain actions to further implement the Act.

Discussion of the Issue

Longlines catch surface-feeding seabirds that consume vertebrate and invertebrate prey which resemble bait. During setting of the line seabirds are hooked as they attempt to capture the bait. Birds that habitually scavenge floating material from the sea surface are also susceptible to being hooked on longlines (Brothers 1991, Alexander *et al.* 1997, Brothers, Cooper *et al.* 1999). Recent studies have implicated longline fishing in population declines of some albatross species (Weimerskirch and Jouventin 1987, Croxall and Prince 1990, Croxall *et al.* 1990, Murray *et al.* 1993). Longline fishing is considered the most recent and potentially most serious global threat faced by albatrosses and other procellariiform taxa (Brothers *et al.* 1999a). Except for the endangered short-tailed albatross, the U.S. Fish and Wildlife Service (USFWS) has not analyzed the potential impacts of the seabird incidental catch in U.S. longline fisheries on other seabird species populations.

Longline fisheries in which seabird incidental catch occurs are: tuna, broadbill (swordfish) and billfish in the South Pacific; toothfish in the Southern Ocean, and halibut, black cod, tuna, billfish, Pacific cod, Greenland halibut, cod, haddock, tusk and ling in the Northern Oceans (Pacific and Atlantic). The species of seabirds most frequently taken are albatrosses and petrels in the South Pacific and South

Atlantic fisheries, Northern fulmar in the North Atlantic and fulmars, gulls and albatrosses in the North Pacific fisheries.

Concerns about the world incidental catch of seabirds led to the development of the *International Plan of Action for Reducing the Incidental Catch of Seabirds in Longline Fisheries* (IPOA-Seabirds), a voluntary plan endorsed by the Food and Agriculture Organization of the United Nations Committee on Fisheries in February 1999. The IPOA-Seabirds applies to States in whose waters longline fishing is being conducted by their own or foreign vessels, and to States that conduct longline fishing on the high seas and in the EEZs of other States, and calls on all States to implement the IPOA-Seabirds through the development of individual National Plans of Action.

The development of a National Plan of Action for Reducing the Incidental Catch of Seabirds in Longline fisheries (NPOA-Seabirds) in the United States has emphasized that unique characteristics of all the Exclusive Economic Zone (EEZ, 3-200 miles) longline fisheries exist, and that the solution to seabird incidental catch issues will likely require a multi-faceted approach requiring different fishing techniques, the use of mitigating equipment, and education within the affected fisheries. Therefore, the NPOA-Seabirds does not prescribe specific mitigation measures for each longline fishery, nor does it attempt any intra- or inter-regional prioritizing. Rather, the NPOA-S provides a framework of actions that the National Marine Fisheries Service (NMFS), and the Fishery Management Councils as appropriate, should undertake with each longline fishery within its area of authority. By working cooperatively, fishermen, managers, scientists, and the public may use this national framework to achieve a balanced solution to the seabird incidental catch problem, promoting continuing sustainability of our national marine resources.

Although NMFS is responsible for fishery actions that may impact seabird species, the USFWS has expertise and legal responsibility for seabird management. Given each agency's responsibilities, the United States' NPOA-Seabirds has been developed collaboratively by NMFS and USFWS. The resulting NPOA-Seabirds is a collaborative effort that has increased communication between seabird specialists within both USFWS and NMFS. Maintaining this level of cooperation is a high priority for both agencies.

The ACAP initiative uses a different approach than the IPOA-Seabirds in that it also considers other threats to albatross and petrel populations. Although ACAP considers longline fishing to be the most significant threat to albatrosses and petrels, other threats are considered as well: predation of nest contents by feral pest species, human disturbance at the nest, parasites and disease, chemical contamination, marine pollution, and over-exploitation of food resources. ACAP incorporates an action plan for the achievement and maintenance of favorable conservation status of albatrosses and petrels. Elements of the action plan include: species conservation, habitat conservation and restoration, management of human activities, research and monitoring, collation of information, education and public awareness, and implementation. Conservation measures are also outlined in ACAP. The key potential benefits arising from the development of ACAP may be summarized as follows (Environment Australia 2001):

- coordinated action to mitigate known threats to albatross and petrel populations;
- coordination of data collection, analysis and dissemination of information;
- assessment of the international and regional conservation status of albatrosses and petrels and threats to the species; and
- communication of the conservation status of albatrosses and petrels to relevant international and regional bodies to promote action.

ACAP would enter into force upon the signature and ratification of at least five Range States or regional economic integration organizations. As of early 2002, Australia and New Zealand have ratified ACAP and several other countries (South Africa, Spain, Uruguay) are reported to be in various stages of the approval process.

EO 13186 calls for each Federal agency taking actions that have, or are likely to have, a measurable negative effect on migratory bird populations to develop and implement a Memorandum of Understanding (MOU) with the USFWS. MOU elements could include:

- restoration and enhancement of the habitat of migratory birds
- prevention or abatement of pollution for the benefit of migratory birds
- design of migratory bird habitat
- ensure that agency plans and actions promote programs such as the IPOA-Seabirds
- ensure that environmental analyses of Federal actions required by the National Environmental Policy Act evaluate the effects of actions and agency plans on migratory birds, with emphasis on species of concern
- minimize the intentional take of species of concern
- identify where unintentional take reasonably attributable to agency actions is having, or is likely to have, a measurable negative effect on migratory bird populations, focusing first on species of concern, priority habitats, and key risk factors. The agency shall develop and use principles, standards, and practices that will lessen the amount of unintentional take, developing any such conservation efforts in cooperation with the USFWS.

Approaches Taken and Recommended

The United States' NPOA-Seabirds contains the following themes:

1) Action Items: NMFS, with the assistance of the Regional Fishery Management Councils (Councils), the NMFS Regional Science Centers and FWS, as appropriate, should conduct the following activities:

- a) Detailed assessments of its longline fisheries for seabird incidental catch within two years of the adoption of the NPOA-Seabirds;
- b) If a problem exists within a longline fishery, measures to reduce this seabird incidental catch should be implemented within two years. These measures should include data collection, prescription of mitigation measures, research and development of mitigation measures and methods, and outreach, education, and training about seabird incidental catch; and
- c) Annual reports should be submitted to NMFS and USFWS national headquarters, on the status of seabird mortality for each longline fishery, including mitigation and research efforts and assessment information as available.

2) Interagency Cooperation: The continuation, wherever possible, of the ongoing cooperative efforts between NMFS and USFWS on seabird incidental catch issues and research.

3) International Cooperation: The United States' commitment, through the Department of State, NMFS and USFWS, to advocate the development of National Plans of Action within relevant international fora.

The development of the NPOA-Seabirds has emphasized that unique characteristics of all the EEZ longline fisheries exist, and that the solution to seabird bycatch issues will likely require a multi-faceted approach requiring different fishing techniques, the use of mitigating equipment, and education within the affected fisheries. Therefore, the NPOA-Seabirds does not prescribe specific mitigation measures for each longline fishery, nor does it attempt any intra- or inter-regional prioritizing. Rather, this NPOA-Seabirds provides a framework of actions that NMFS, and the Councils as appropriate, should undertake with each longline fishery within its area of authority. By working cooperatively, fishermen, managers, scientists, and the public may use this national framework to achieve a balanced solution to the seabird bycatch problem, promoting continuing sustainability of our national marine resources.

The United States NPOA-Seabirds is available at

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

Appendices of the NPOA-Seabirds include: the IPOA-Seabirds, summaries of pertinent U.S. law, text of the Executive Order 13186 and regional program descriptions for Alaska and Hawaii that include seabird avoidance regulations, seabird data collection components of observer programs, and outreach and education efforts.

Important Books, Chapters, and Web Sites

Alexander, K., Robertson, G., and Gales, R. "The incidental mortality of albatrosses in longline fisheries." *A report on the Workshop from the First International Conference on the Biology and Conservation of Albatrosses*, Hobart, Australia.

Brothers, N., Cooper, J., and Lokkeborg, S. (1999). "The Incidental Catch of Seabirds by Longline Fisheries: Worldwide Review and Technical Guidelines for Mitigation." *FAO Fisheries Circular, 937*, Food and Agriculture Organization of the United Nations, Rome. p. 100.

Melvin, E.F. and J.K. Parrish (eds.). 2001. *Seabird Bycatch: Trends, Roadblocks and Solutions*. University of Alaska Sea Grant, AK-SG-01-01, Fairbanks, Alaska.

Melvin, E.F, J.K. Parrish, K.S. Dietrich, and O.S. Hamel, 2001. *Solutions to seabird bycatch in Alaska's demersal longline fisheries*. Washington Sea Grant Program. Project A/FP-7. 53 pp. Seattle, Washington.

NMFS Alaska Regional Office Homepage. Protected Resources Division, Program to Reduce Seabird Bycatch in Alaska's Longline Fisheries. <http://www.fakr.noaa.gov/protectedresources/seabirds.html>

Robertson, G. and Gales, R. 1999. (Eds). *Albatross Biology and Conservation* Surrey Beatty & Sons, Chipping Norton, Australia.

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Brothers, N., Gales, R., and Reid, T. (1999a). "The influence of environmental variables and mitigation measures on seabird catch rates in the Japanese tuna longline fishery within the Australian Fishing Zone, 1991-1995." *Biological Journal of the Linnean Society*, 88, pp. 85-101.

Croxall, J.P. and Prince, P.A. 1990. Recoveries of wandering albatrosses *Diomedea exulans* ringed at South Georgia 1958-1986. *Ringing and Migration* 11:43-51.

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Environment Australia, 2001. Agreement on the Conservation of Albatrosses and Petrels, Environment Australia, Department of the Environment & Heritage.
<http://www.ea.gov.au/biodiversity/international/albatross/index.html>

Murray, T.E., Bartle, J.A., Kalish, S.R., and Taylor, P.R. 1993. Incidental capture of seabirds by Japanese southern bluefin tuna longline vessels in New Zealand waters, 1988-1992. *Bird Conservation International* 3:181-210.

Weimerskirch, H. and Jouventin, P. 1987. Population dynamics of the wandering albatross, *Diomedea exulans*, of the Crozet Islands: causes and consequences of the population decline. *Oikos* 49:315-322.