

THE U.S. NATIONAL PLAN OF ACTION FOR REDUCING THE INCIDENTAL CATCH OF SEABIRDS IN LONGLINE FISHERIES (NPOA): ITS IMPLEMENTATION IN THE U.S. ATLANTIC TUNA, SWORDFISH, AND SHARK LONGLINE FISHERIES

ICCAT Resolution on Incidental Mortality of Seabirds

_____At its 2002 annual meeting, ICCAT adopted a Resolution on Incidental Mortality of Seabirds (Resolution 02-14). 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. The resolution further states that when feasible and appropriate, SCRS should present to the Commission an assessment of the impact of incidental catch of seabirds resulting from the activities of all the vessels fishing for tunas and tuna-like species, in the Convention Area. For additional information and a copy of the resolution, visit the ICCAT website at <http://www.iccat.es/> The United States included seabird information in its 2003 and 2004 National Reports to ICCAT.

NPOA-Seabird Executive Summary

Increased concerns have arisen about the incidental capture of non-target species in various fisheries throughout the world. Incidental capture can be economically wasteful, it impacts living marine resources, and the accidental killing of non-harvested animals may be aesthetically aversive. Incidental catch of non-target marine species such as marine mammals, sea turtles, and seabirds has generated growing concern over the long-term ecological effects of such bycatch in longline and other fisheries conducted in many areas of the world's oceans.

The United States has voluntarily developed the U.S. *National Plan of Action for Reducing the Incidental Catch of Seabirds in Longline Fisheries* (NPOA-S) to fulfill a national responsibility to address seabird bycatch in longline fisheries, as requested in the *International Plan of Action for Reducing the Incidental Catch of Seabirds in Longline Fisheries* (IPOA-S). The IPOA-S applies to "States" (hereafter Countries) in whose waters longline fishing is being conducted by their own or foreign vessels, and to Countries that conduct longline fishing on the high seas and in the exclusive economic zones (EEZs) of other Countries. The IPOA-S is a voluntary measure that calls on Countries to: (1) assess the degree of seabird bycatch in their longline fisheries; (2) develop individual national plans of action to reduce seabird bycatch in longline fisheries that have a seabird bycatch problem; and (3) develop a course of future research and action to reduce seabird bycatch. The NPOA-S is to be implemented consistent with the *FAO Code of Conduct for Responsible Fisheries* and all applicable rules of international law, and in conjunction with relevant international organizations.

Development of the NPOA-S was a collaborative effort between the National Marine Fisheries Service (NMFS), the U.S. Fish and Wildlife Service (FWS) and the Department of State (DOS), carried out in large part by the Interagency Seabird Working Group (ISWG) consisting of representatives from those three agencies. This partnership approach recognizes the individual agency management authorities covering seabird interactions with longline fisheries. NMFS manages U.S. fisheries under the authority of the Magnuson-Stevens Fishery Conservation and Management Act and the High Seas Fishing Compliance Act. FWS manages birds predominately under the authority of the Endangered Species Act and the Migratory Bird Treaty Act. In addition, DOS has the lead role in international negotiations on fisheries conservation and management issues that should help promote IPOA implementation by encouraging other nations to develop NPOAs. Given each agency's responsibilities, the NPOA-S was developed collaboratively by NMFS and FWS. This collaborative effort has increased communication between seabird specialists and fishery managers in FWS and NMFS. Maintaining this cooperation is a high priority for both agencies.

The NPOA-S 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:

- Detailed assessments of its longline fisheries for seabird bycatch within 2 years of the adoption of the NPOA-S;
- If a problem is found to exist within a longline fishery, measures to reduce this seabird bycatch should be implemented within 2 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 bycatch; and
- NMFS, in collaboration with the appropriate Councils and in consultation with FWS, will prepare an annual report on the status of seabird mortality for each longline fishery, including assessment information, mitigation measures, and research efforts. FWS will also provide regionally-based seabird population status information that will be included in the annual reports.

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

3.) International Cooperation: The United States' commitment, through the DOS, NMFS and FWS, to advocate the development of National Plans of Action within relevant international fora. The development of the NPOA-S has emphasized that all U.S. longline fisheries have unique characteristics, 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-S does not prescribe specific mitigation measures for each longline fishery. Rather, this NPOA-S provides a framework of actions that NMFS, FWS, and the Councils, as appropriate, should undertake for each longline fishery. By working cooperatively, fishermen, managers, scientists, and the public may use this national framework to achieve a balanced solution to the seabird bycatch problem and thereby promote sustainable use of our nation's marine resources.

Detailed assessments should address the following:

- Criteria used to evaluate the need for seabird bycatch mitigation and management measures
- Longline fishing fleet data (numbers and characteristics of vessels)
- Fishing techniques data (demersal, pelagic, and other pertinent technical information)
- Fishing areas (by season and geographic location)
- Fishing effort data (seasons, species, catch, number of sets, and number of hooks/year/fishery)
- Status of seabird populations in the fishing areas, if known
- Estimated total annual seabird species-specific catch and catch-per-unit-effort (number/1,000 hooks set/species/fishery)
- Existing area and species-specific seabird bycatch mitigation measures and their effectiveness in reducing seabird bycatch
- Efforts to monitor seabird bycatch (e.g., observer program and logbooks), and
- Statement of conclusions and decision to develop and implement mitigation measures as needed.

Bycatch of Seabirds in Atlantic Tuna, Swordfish, and Shark Longline Fisheries

Introduction

The Secretary of Commerce manages Atlantic tunas, swordfish, and sharks - collectively known as highly migratory species or HMS - under the Fishery Management Plan for Atlantic Tunas, Swordfish, and Sharks. The HMS FMP includes five species of Atlantic tunas (bluefin, yellowfin, albacore, bigeye, skipjack), swordfish, and 39 species of sharks in the Atlantic Ocean, Gulf of Mexico, and Caribbean Sea. Longline fisheries for these species include the pelagic longline fishery for Atlantic tunas and swordfish and the bottom longline fishery for sharks. The HMS Management Division assesses seabird bycatch annually in the Stock Assessment and Fishery Evaluation Report.

Seabird Bycatch Assessment.

Atlantic pelagic longline fishery

Observer data from 1992 through 2003 indicate that bycatch is relatively low (Table 1). Since 1992, a total of 116 seabird interactions have been observed, with 79 seabirds observed killed in the Atlantic pelagic longline fishery. Approximately 80 to 100 active US pelagic longline vessels currently operate in the Atlantic Ocean, Gulf of Mexico, and Caribbean Sea.

Observed bycatch has ranged from 1 to 18 seabirds observed dead per year and 0 to 15 seabirds observed released alive per year from 1992 through 2003. Half of the seabirds observed have not been identified to species ($n = 58$). Of those seabirds identified, gulls represent the largest group ($n = 29$), followed by greater shearwaters ($n = 19$), and northern gannets ($n = 8$) (Table 2). Greater shearwaters experienced the highest mortality (100 percent), followed by gulls (76 percent), and unidentified seabirds (67 percent). Northern gannets had the lowest mortality rate (12 percent).

Preliminary estimates of expanded seabird bycatch and bycatch rates from 1995-2002, varied by year and species with no apparent pattern (Table 3). The estimated number of all seabirds caught and discarded dead ranged from 0 to 468 per year, while live discards ranged from 0 to 292 per year. The annual bycatch rate of birds discarded dead ranged from 0 to 0.0486 birds per 1,000 hooks while live discards ranged from 0 to 0.0303 birds per 1,000 hooks.

The Mid-Atlantic Bight experienced the highest number of seabirds observed caught and killed ($n = 42$, 90 percent). The Northeast Coastal area had the second highest number observed ($n = 34$) but third highest bycatch mortality (47 percent) compared to the South Atlantic Bight, which had a lower number of seabirds observed caught ($n = 16$) but higher mortality (81 percent).

Table 1. Seabird Bycatch in the U.S. Atlantic Pelagic Longline Fishery, 1992-2003. Source: NMFS Pelagic longline fishery observer program.

Year	Month	Area	Type of Bird	Number observed	Status
1992	10	MAB	GULL	4	dead
1992	10	MAB	SHEARWATER GREATER	2	dead
1993	2	SAB	GANNET NORTHERN	2	alive
1993	2	MAB	GANNET NORTHERN	2	alive
1993	2	MAB	GULL BLACK BACKED	1	alive
1993	2	MAB	GULL BLACK BACKED	3	dead
1993	11	MAB	GULL	1	alive
1994	6	MAB	SHEARWATER GREATER	3	dead
1994	8	MAB	SHEARWATER GREATER	1	dead
1994	11	MAB	GULL	4	dead
1994	12	MAB	GULL HERRING	7	dead
1995	7	MAB	SEA BIRD	5	dead
1995	8	GOM	SEA BIRD	1	dead
1995	10	MAB	STORM PETREL	1	dead
1995	11	NEC	GANNET NORTHERN	2	alive
1995	11	NEC	GULL	1	alive
1997	6	SAB	SEA BIRD	11	dead
1997	7	MAB	SEA BIRD	1	dead
1997	7	NEC	SEA BIRD	15	alive
1997	7	NEC	SEA BIRD	6	dead
1998	2	MAB	SEA BIRD	7	dead
1998	7	NEC	SEA BIRD	1	dead
1999	6	SAB	SEA BIRD	1	dead
2000	6	SAB	GULL LAUGHING	1	alive
2000	11	NEC	GANNET NORTHERN	1	dead
2001	6	NEC	SHEARWATER GREATER	7	dead
2001	7	NEC	SHEARWATER GREATER	1	dead
2002	7	NEC	SEABIRD	1	dead
2002	8	NED	SHEARWATER GREATER	1	dead
2002	8	NED	SEABIRD	1	dead
2002	9	NED	SHEARWATER GREATER	3	dead
2002	9	NED	SEABIRD	3	alive
2002	9	NED	SHEARWATER SPP	1	dead
2002	10	NED	GANNET NORTHERN	1	alive
2002	10	NED	SHEARWATER SPP	1	dead
2002	10	NED	SEABIRD	2	dead
2002	10	MAB	GULL	3	alive
2002	10	MAB	GULL	1	dead
2002	11	MAB	GULL	3	dead
2003	1	GOM	SEABIRD	1	alive
2003	8	NED	SEABIRD	1	dead
2003	9	MAB	SEABIRD	1	dead

MAB - Mid Atlantic Bight, SAB - South Atlantic Bight, NEC - Northeast Coastal, GOM - Gulf of Mexico, NED - Northeast Distant

Table 2. Status of Seabird Bycatch in the U.S. Atlantic Pelagic Longline Fishery, 1992-2003. Source: NMFS Pelagic longline fishery observer program.

Species	Release Status		Total	Percent Dead
	Dead	Alive		
GULLS (incl. Blackback, Herring, Laughing, and unid. gull)	22	7	29	75.9%
UNIDENTIFIED SEABIRD	39	19	58	67.2%
GREATER SHEARWATER	18	0	18	100%
SHEARWATER SPP	2	0	2	100%
NORTHERN GANNET	1	7	8	12.5%
STORM PETREL	1	0	1	100%
ALL SEABIRDS	83	33	116	71.6%

Atlantic bottom longline shark fishery

A single pelican has been observed killed from 1994 through 2003. The pelican was caught in January 1995 off the Florida Gulf Coast (between 25 18.68 N, 81 35.47 W and 25 19.11 N, 81 23.83 W) (G. Burgess, University of Florida, Commercial Shark Fishery Observer Program, pers. comm., 2001). No expanded estimates of seabird bycatch or catch rates are available for the bottom longline fishery.

Table 3. Expanded estimates of seabird bycatch and bycatch rates (discarded dead and discarded alive) in the U.S. Atlantic pelagic longline fishery, 1995-2002. Source: NMFS Pelagic longline fishery observer program.

Species	1995		1996		1997		1998		1999		2000		2001		2002	
	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D	A
Unid. seabirds	134	0	0	0	468	292	155	0	14	0	0	0	0	0	3	3
Gulls	0	15	0	0	0	0	0	0	0	0	0	18	0	0	14	83
Shearwaters	0	0	0	0	0	0	0	0	0	0	0	0	210	0	6	0
Northern gannet	0	30	0	0	0	0	0	0	0	0	11	0	0	0	0	1
Storm petrel	35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
All seabirds	170	44	0	0	468	292	155	0	14	0	11	18	210	0	23	87
Total hooks set	10,182,297		10,310,708		9,637,807		8,019,183		7,901,789		7,975,529		7,563,951		7,150,231	
Bycatch rate	0.0167	0.0044	0	0	0.0486	0.0303	0.0194	0	0.0017	0	0.0014	0.0023	0.0278	0	0.0032	0.0121

D = released dead; A = released alive

Bycatch rate = number of seabirds per 1,000 hooks

Description of Fisheries

Atlantic pelagic longline fishery

There are approximately 80 to 100 active pelagic longline vessels currently operating in the Atlantic Ocean, Gulf of Mexico, and Caribbean Sea. Fishermen target either swordfish (at night) or yellowfin and bigeye tuna (during the day). The nighttime fishery utilizes frozen bait (mackerel or squid, predominantly) and lightsticks. The daytime fishery had utilized frozen bait predominantly along the east coast and live bait in the Gulf of Mexico. However, NMFS prohibited the use of live bait on pelagic longline vessels in the Gulf of Mexico beginning in 2000 to minimize bycatch mortality of billfish. Additionally, NMFS prohibited pelagic longline fishing in the Florida East Coast, Charleston Bump, DeSoto Canyon, and Grand Banks areas beginning in 2000 and 2001 to reduce bycatch of swordfish, billfish, and sea turtles. In August 2004, NMFS limited vessels with pelagic longline gear onboard, at all times, in all areas open to pelagic longline fishing, excluding the NED, to possessing onboard and/or using only 16/0 or larger non-offset circle hooks and/or 18/0 or larger circle hooks with an offset not to exceed 10 degrees. Only whole finfish and squid baits may be possessed and/or utilized with allowable hooks. Effective the same time, NMFS opened the NED to pelagic longline fishing and limited vessels with pelagic longline gear onboard in that area, at all times, to possessing onboard and/or using only 18/0 or larger circle hooks with an offset not to exceed 10 degrees. Only whole mackerel and squid baits may be possessed and/or utilized with allowable hooks.

NMFS attempts to achieve five percent observer coverage (by number of sets) and has achieved approximately three to five percent annually between 1992 and 2000. Increased sampling in 2001, particularly in the Northeast Distant area, increased the sampling fraction to over 6 percent. Observer coverage in 2003 outside of the NED experimental fishery was approximately 6.5 percent with 100 percent observer coverage in the NED. Observers collect information about seabird bycatch by species and also take photographs of the birds. In addition, fishermen are required to submit logbooks for every trip made. Logbooks do not collect specific information about seabird bycatch at this time. Commercial pelagic longline fishing occurs throughout the North and South Atlantic, and the Gulf of Mexico.

Atlantic bottom longline shark fishery

There are approximately 250 bottom longline shark vessels currently operating in the Atlantic Ocean, Gulf of Mexico, and Caribbean Sea. The Atlantic bottom longline fishery targets large coastal sharks, with landings dominated by sandbar and blacktip sharks. Gear characteristics vary by region, but in general, a ten-mile long monofilament bottom longline, containing about 750 hooks is fished overnight. Skates, sharks, or various finfishes are used as bait. This fishery operates subject to a limited large coastal shark quota, with a typical two to three-month long season starting in January and July. Commercial shark bottom longline fishing is concentrated in the southeastern United States and Gulf of Mexico. Vessel owners must submit logbooks for each shark fishing trip and are subject to observer coverage.

The Commercial Shark Fishery Observer Program (CSFOP) has documented approximately 4% of the entire U.S. Atlantic commercial large coastal shark landings and 1.6% of all hooks set by the shark bottom longline fishery over the first nine years of the program from 1994-2002. During the 2002 second semi-annual season and the 2003 first semi-annual season, six observers logged 311 sea days on 68 shark fishing trips aboard 22 vessels for 3.8% coverage of all commercial large coastal shark landings. During the 2002 first and second semi-annual seasons, the CSFOP observed 2.5% of all hooks reported set by the shark bottom longline fishery. Observers collect information about seabird bycatch. Starting in 2001, 20 percent of shark fishermen will be selected to submit a supplemental discard form, which includes information on seabird bycatch, as part of their standard logbook submissions.

Amendment 1 to the Fishery Management Plan for Atlantic Tunas, Swordfish, and Sharks implements a time/area closure for bottom longline gear in the South Atlantic off the coast of North Carolina. The closure will be in effect from January to July beginning in January 2005. This measure was adopted to provide protection for dusky sharks, both juveniles and adults, and juvenile sandbar sharks. Although seabird bycatch in the bottom longline fishery is virtually non-existent, however, such a closure could afford additional protection for seabirds in that area.

Current Seabird Mitigation Efforts

No management measures are currently in place for seabird protection in either of these fisheries. Time/area closures for the pelagic longline fishery are in place in the Gulf of Mexico, along the east coast of Florida, in the Charleston Bump, in the Northeast Distant area, and in the Mid-Atlantic Bight. Such closures may positively affect seabirds. Evidence has been presented at international workshops that has indicated that, if necessary, streamer lines and line shooters are effective in reducing the bycatch of seabirds in longline fisheries.

Conclusion

Bycatch of seabirds in Atlantic HMS pelagic and bottom longline fisheries is relatively minimal and there does not appear to be a significant problem with seabird bycatch in these fisheries. Accordingly, no mitigation measures are proposed at this time. NMFS intends to continue to collect data on seabird bycatch through observer programs and supplemental logbooks programs and to increase the species-specific identification of seabirds observed. NMFS will reassess seabird bycatch in these fisheries as new information becomes available.

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