

MEMORANDUM

TO: Council, SSC and AP Members

FROM: Clarence G. Pautzke  
Executive Director

DATE: November 27, 1996

SUBJECT: Seabird Protection

ESTIMATED TIME

1 HOUR

ACTION REQUIRED

Possible emergency action and/or regulatory amendment to protect short-tailed albatross.

BACKGROUND

Short-tailed albatross are on the endangered species list, and their incidental take in groundfish fisheries is strictly limited. The allowable take in the early 1990s was set at two albatrosses based on a July 3, 1989 Biological Opinion, and then reduced by the USFWS to "not more than one" by amendment on February 7, 1995.

On July 25, 1995, NMFS distributed a press release urging hook-and-line fishermen to avoid takes of short-tailed albatross in the groundfish fisheries. Nonetheless, in August and September 1995, takes of short-tailed albatross were reported in the sablefish longline fisheries because the lines had not been adequately weighted to assure rapid descent of the baited hooks. NMFS promptly distributed a second press release again urging industry to avoid albatrosses. Other communications also were sent to heighten awareness of the incidental take and the need to be much more careful in the fisheries.

On January 24, 1996 a third press release went out to industry urging them to avoid albatrosses. Shortly thereafter, on February 7, 1996, NMFS requested an increase in take to four birds, and reinitiation of consultation with USFWS. NMFS noted that the estimated population of short-tailed albatrosses had increased from 400 in 1989 to 750 in 1994. In June, USFWS responded that the allowed take was two birds and requested an extension of the consultation to April 1, 1997.

At our September 1996 Council meeting, we received a letter from Steve Pennoyer confirming that two short-tailed albatross were taken in the 1995 IFQ sablefish fishery. Since then, NMFS and USFWS have reinitiated consultation on the 1997 groundfish specifications, but that will not be completed until sometime in the first half of 1997. NMFS anticipates that the take of short-tailed albatross will not exceed two birds in 1997.

In the meantime, on November 1, 1996, the Council received a letter from industry (item C-1(a)) requesting emergency action by the Council to impose regulations requiring the longline fleet to use various avoidance measures when birds are around. We have placed this request on the December agenda in anticipation that the measures will be acted on promptly by NMFS for earliest implementation in 1997. A summary of the alternatives is attached as item C-1(b). The draft analysis prepared by NMFS to accompany this regulatory amendment is included as item C-1(c).

November 1, 1996

Mr. Richard B. Lauber, Chairman  
North Pacific Fishery Management Council  
604 West 4th Avenue  
Anchorage, AK

**RE: Emergency Rule on Seabird Avoidance**

Dear Rick:

The undersigned associations and individuals respectfully request that you convene the Council by teleconference at the earliest possible time for the purpose of adopting an emergency rule to reduce seabird interaction in the longline fisheries off Alaska. It is our hope that such a rule can be in effect by January 1, 1997, or as soon thereafter as is practicable.

As you are aware two endangered short-tailed albatrosses were taken in longline fisheries off Alaska in 1995 - a third was taken in 1996. Longliners are not alone in taking seabirds, nor in taking albatrosses - but we have been responsible for the recent takings and are requesting swift action on the part of the Council to ameliorate this problem. The consequences of exceeding the limited take allowed under the Endangered Species Act could be serious for all of our fisheries.

The attached regulations to implement seabird-avoidance measures are modeled after federal regulations implementing the Antarctic Marine Living Resources Convention Act of 1984 (61 FR 8483). They have been modified to include some bird-avoidance techniques used successfully by fishermen off Alaska, and are aimed at the avoidance of all seabirds. These regulations have been circulated in the longline fleet for comment, and have been modified in response to comments received (please see Comments and Responses, attached). At a meeting on Wednesday longline representatives concluded that these regulations are now ready to go to the Council. We have engaged in this informal notice-and-comment process to assure the Council that the fleet believes these regulations will be effective, and that they are acceptable to us.

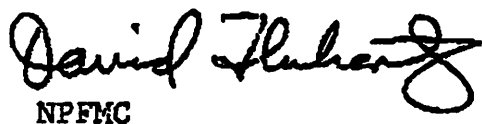
The Council has a fine record of conservative and responsible stewardship of marine resources. We hope that the Council will recognize the urgency of the current situation and that it will adopt these regulations in the very near future so they can be in place at the beginning of next season.

Sincerely,

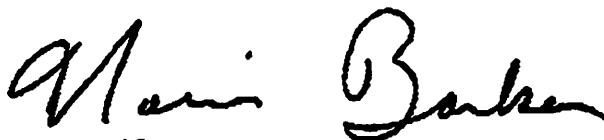
*Kevin B O'Leary*  
NPFMC/KVOA

*Linda Behnken*  
NPFMC/ALFA  
STF

Mr. Richard B. Lauber  
November 1, 1996  
Page 2



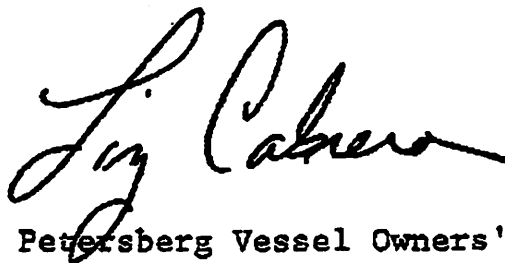
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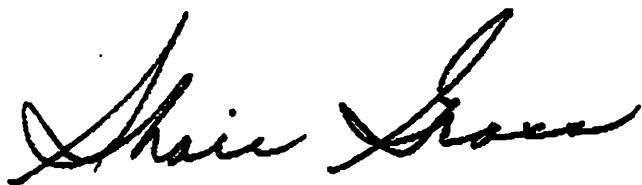
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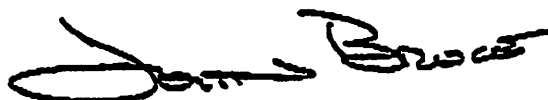
Fishing Vessel Owners' Association



Petersberg Vessel Owners' Association



Halibut Association of North America



Deep Sea Fishermens' Union



Baranof/Courageous Fisheries



North Pacific Longline Association

Mr. Richard B. Lauber  
November 1, 1996  
Page 3

Attached please find the fourth version of our DRAFT proposed emergency rule on bird avoidance, together with comments and responses. The first DRAFT was modeled after regulations implementing the Antarctic Marine Living Resources Convention Act of 1984, governing pelagic longline fisheries in Antarctica (similar regs are in force in Australian waters). We knew that some of the measures might not be appropriate for our bottom fisheries, and public comment has borne out that suspicion. This fourth version of the DRAFT proposed regs has been modified in response to public comment. The "Comments" and "Responses" below are meant to reflect the views expressed and the changes made.

We are firmly convinced that it is necessary to act now to absolutely minimize interaction between longline fisheries and seabirds of all sorts. These DRAFT proposed regulations would require that all longliners comply with the provisions under section (a), and that they employ one or more of the bird avoidance procedures under section (b) whenever birds are around. They are designed to allow maximum flexibility in selecting the most effective methods for different boats and fisheries. Vessels may very well have to change their avoidance methods over time if birds become used to them. Undoubtedly these measures will cause some operational problems - but that is the price we will have to pay to keep our fisheries going.

Nothing in these regs prevents experimentation with other methods of avoiding birds - quite to the contrary. If we can come up with other more effective methods, great. The regs can be modified later. Air horns, sirens at the frequency of a peregrine falcon's cry, and air detonators and propane cannons (used at airports to scare birds off runways), and jets of water sprayed from the stern over the bait setting area astern have been suggested. We have tried to introduce flexibility into the regulations by providing that with the approval of the Regional Director, NMFS Alaska Region, vessels will be able to substitute an experimental bird avoidance method for one of those set out at (b) below.

Comments and Responses, DRAFT Proposed Longlining Regs

**Comment:** We need to do more research on this - it isn't time for regulation.

**Response:** It would be great if we had time to experiment thoroughly and come up with the very best solution the first time out, for each longline fishery. We don't have the time, though. We are advised that we have taken short-tailed albatrosses, an endangered species. Other birds are of concern. We've got to act now. We know that the proposed measures work - they have been used here and in other parts of the world. You will have



Mr. Richard B. Lauber  
November 1, 1996  
Page 4

the flexibility to use the method or methods that best fit your operation. Have you read the newspapers lately?

**Comments:** "Weights sufficient for all conditions" is confusing. What conditions, who makes the judgement call? Different fisheries, different conditions require various amounts of weight.

Autoliners have a lot of tension on their lines, which may require more weight to sink the baited hooks. Hand-baited lines free-fall, and the prop wash sucks them down - it's not a question of weight.

In the longline tuna fishery they use much longer gangions than we do. These are buoyant, and cause their lines to stay on the surface. Our lines sink much faster.

**Response:** OK, maybe weights are not always the answer. "Weights sufficient" language at (a)(1) deleted. Just make sure your baited hooks sink as soon as possible after they hit the water. If your wake sucks, so much the better. We have had a report of a vessel with inadequate weights, such that his line extended a great distance on the surface - and he caught birds. In such cases, weights are the obvious answer.

**Comments (universal):** Do not require setting at night. Halibut bycatch and sand flea predation on the bottom are much worse at night.

We set most of our gear at night since in the winter it is mostly dark, and our fishery is conducted mostly in the winter - but we cannot set it all at night. Setting at night will in no way, shape or form cut down on the amount of birds caught. This is the absolute truth, especially albatrosses.

Night deployment doesn't help at all. Whoever is of this belief needs to go fishing. Who is this Thorn Smith, and why is he bothering me?

**Response:** What have we got, night albatrosses? Since much or most of our gear is already set at night, and since everybody thinks required night setting is a bad idea, we have deleted the language at (a)(2). Only minimum lights necessary for safety should be used at night, though.

**Comments (many):** You've got it backwards on offal dumping. Offal chums the birds away from the hooks, both when shooting and when hauling - dumbhead.

Mr. Richard B. Lauber  
November 1, 1996  
Page 5

Nobody ever caught a bird while hauling - the line comes up at a steep angle, and there is a crewmember there with a bull gaff to scare away any birds.

I caught a bird while hauling, but it was because my offal discharge was in front of my hauling station. The birds got chummed into the groundline. I am re-plumbing my boat to fix it. The offal need not go out on the opposite side from the hauler - the offal chute just needs to be aft of the hauler, where the offal chums the birds away from the hooks. It really works.

Don't call luring birds away from baited hooks "chumming" - chumming means intentionally baiting something.

Response: Well, you live and learn. Apparently offal discharge serves effectively as a method of chumming birds away from the hooks during both shooting and hauling. The regulatory language at (a)(3) has been changed. Offal should be discharged aft of the hauling station, on either side of the boat. Who do you suppose wrote those regs for Antarctica?

We are no longer "chumming." We're "distracting" birds from baited hooks.

Comments: Look, a bird that gets hooked during setting and spends twelve hours at forty fathoms is going to take a lot of reviving. Is this careful release meaningful?

I hooked one while hauling.

Response: A bird hooked while hauling, rare as that may be, is a good candidate for careful release. We will circulate careful release instructions. We'd better not hook birds while setting - that's what these regs are about. The regulation stays, modified to apply to living birds that are caught and come aboard the boat (heaven forbid).

Comments (many): There are times when there aren't any birds in sight. Why should I drag all this stuff around when there aren't any birds? ("Dumbhead" clearly implied).

Response: Good Point. The regs at (b) have been changed to require the alternative avoidance measures when you are shooting and birds are close enough to take bait. You'd sure better be on the lookout while setting, though, and ready to deploy a bird-avoidance device immediately if they show up. These measures are not aimed at hauling. If you discharge offal aft of your hauling station it sounds like you're not going to catch birds there.

Mr. Richard B. Lauber  
November 1, 1996  
Page 6

**Comments:** Lining tubes are very expensive. They may cause operational problems in backing down, or in rough seas. Have they been tested?

Don't make small boats use lining tubes - they can't.

**Response:** Yes, lining tubes are expensive. They have been tested in the toothfish fishery, where the sea is as rough as it gets. They have held up. Nobody is required to use a lining tube - it is merely one of several bird-avoidance alternatives set out at (b). We are trying to get one on a vessel to test it next year.

**Comment:** A powerful air horn mounted on the stern is terribly effective - though maybe not with albatrosses.

**Response:** Great. We're trying to avoid all birds, let's do whatever works. Using a variety of methods will probably be most effective.

**Comment:** This is going to cost me time and money. I may back down on a streamer line and get it caught in my wheel. What happens in bad weather?

**Response:** Right, but consider the alternative. You'd better have a repair kit for your streamer line.

**Comment (huskily):** I love seabirds. I was majoring in animal husbandry at college until one day they caught me at it.

**Response:** Aw, cut it out, will you, Don?

**DRAFT PROPOSED LONGLINING REGULATIONS to appear at 50 CFR PART 679 -- GROUND FISH OF THE GULF OF ALASKA (GOA) and GROUND FISH OF THE BERING SEA AND ALEUTIAN ISLANDS AREA (BSAI):**

**Section \_\_\_\_\_ Gear Restrictions**

(a) Longline fishing or longline fishing research in the (GOA/BSAI) shall be conducted as follows:

(1) Fishing operations shall be conducted in such a way that the baited hooks sink as soon as possible after they are put in the water.

(2) During longline fishing at night only the minimum ship's lights necessary for safety shall be used.

(3) Offal discharge shall take place aft of the location on the vessel where longlines are hauled, or on the other side of the vessel. Distracting birds from baited hooks with bait or offal shall not be considered dumping of offal for purposes of this subsection.

(4) Every effort shall be made to ensure that birds brought aboard alive during longlining are released alive and that wherever possible hooks are removed without jeopardizing the life of the bird concerned.

(b) One or more of the following procedures shall be employed at all times when baited hooks are being set and birds are close enough to the vessel to take baited hooks:

(1) A buoy shall be towed behind the vessel at a distance appropriate to prevent birds from taking baited hooks. Multiple buoys may be employed, or;

(2) A board, stick, broom or other device shall be towed behind the vessel at a distance appropriate to prevent birds from taking baited hooks. Multiple boards, sticks, or other devices may be employed, or;

(3) A streamer line or lines designed to discourage birds from settling on baits during deployment of longlines shall be towed. Suggested specification of the streamer line(s) is given in Figure \_\_\_\_\_ to Part \_\_\_\_\_. Details of the construction relating to the number and placement of swivels, length of the streamer line, and height of attachment to vessel may be varied so long as streamers are above all baited hooks on the surface. Details of the device dragged in the water in order to create tension in the line may also be varied.

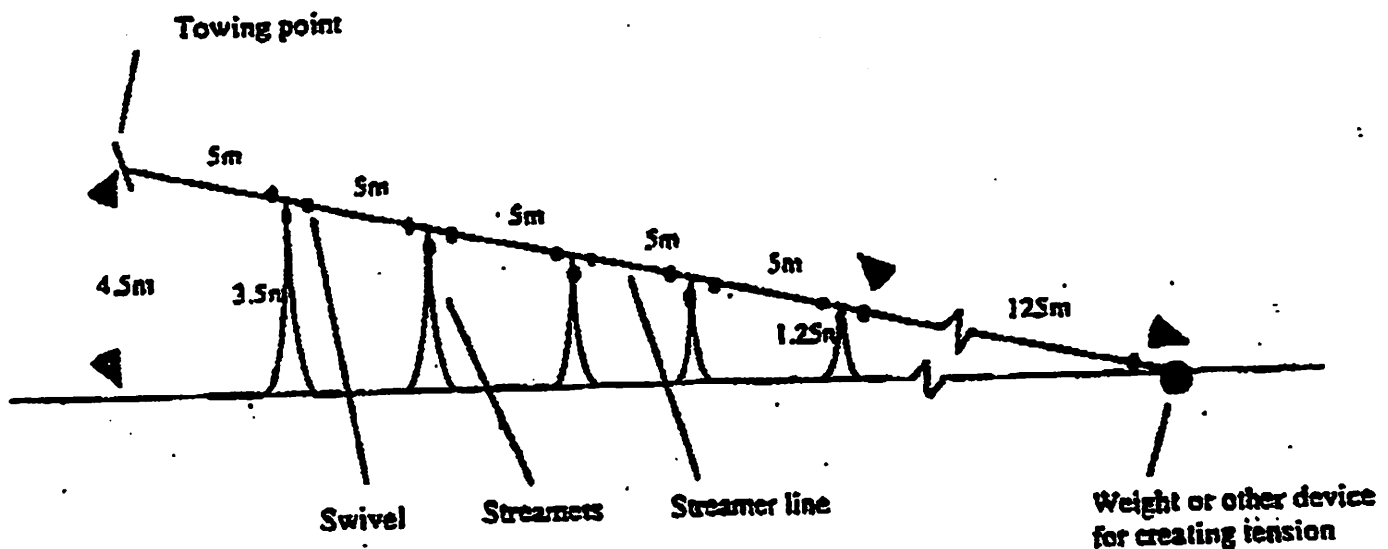
(i) The streamer line is to be suspended from the stern at an adequate height such that the line is above the point where the baits hit the water. This may require mounting on a pole.

(ii) The streamer line is to be approximately 3 mm in diameter, have a minimum length of 150 m and have a device at the end to create tension so that the main line streams directly behind the ship even in cross winds. These specifications may be varied to suit the needs of individual vessels.

(iii) At 5 m intervals commencing from the point of attachment to the vessel five branch streamers, each comprising two strands of approximately 3 mm cord should be attached. The length of the streamers should range between approximately 3.5 m nearest the vessel, to approximately 1.25 m for the fifth streamer. The streamer cords should be covered with red polyurethane tubing (inside diameter 5 mm). When the streamer line is deployed the branch streamers should reach the sea surface and periodically dip into it as the ship heaves. Swivels should be placed in the streamer line at the towing point, before and after each point of attachment of each branch streamer, and immediately before any weight placed at the end of the streamer line. Each branch streamer should have a swivel at its attachment to the streamer line. These specifications may be varied to meet the needs of individual vessels, or;

(4) Baited hooks shall be deployed under water through a lining tube at a depth sufficient to prevent birds from taking baits.

(c) With the approval of the Director, NMFS Alaska Region, other experimental bird avoidance techniques may be substituted for those listed at (b) above.



amendments to the regional channel exclusivity scheme established in the *PCP Exclusivity Order* will facilitate the development of seamless, wide-area 900 MHz paging systems. Otherwise, the Commission affirms the rules as adopted in the *PCP Exclusivity Order*.

#### V. Procedural Information

##### Regulatory Flexibility Analysis

Pursuant to the Regulatory Flexibility Act of 1980, the Commission's final analysis is as follows:

##### A. Need for and Purpose of This Action

This *Memorandum Opinion and Order* makes amendments to Part 90 of the Commission's rules relating to channel exclusivity for qualified local, regional, and nationwide private paging systems on certain channels at 929-930 MHz. The amendments will promote the efficient use of paging channels by encouraging investment in new paging technology. They also will foster the development of more efficient paging systems on a local, regional, and nationwide basis.

##### B. Summary of Issues Raised by Public Comments in Response to the Initial Regulatory Flexibility Analysis

Only one party, Radiofone, filed comments responding to the Initial Regulatory Flexibility Analysis (IRFA). Radiofone argued that the Commission has not adequately addressed the impact of the proposal on small paging systems and that exclusive licensing will preclude small business entry at 900 MHz. The Commission reviewed Radiofone's concerns in the context of *PCP Exclusivity Order*. No additional comments have been submitted.

##### C. Significant Alternatives Considered and Rejected

As the Commission determined in the *PCP Exclusivity Order* and affirms in this *Memorandum Opinion and Order*, this action is fully consistent with the Commission's small business policy objectives. The Commission noted in the IRFA that this action imposes certain conditions on the licensing of smaller 929-930 MHz paging systems, but these requirements are not unduly burdensome. The new rules contain significant benefits for small businesses by protecting dozens of small existing systems in place, allowing many such systems to obtain exclusivity, and creating opportunities for expansion and new entry by small business licensees.

##### Ordering Clauses

It is ordered that pursuant to the authority of Sections 4(f), 303(g) 303(r),

and 332(a) of the Communications Act of 1934, as amended; 47 U.S.C. §§ 154(f), 303(g), 303(r) and 332(a), 47 CFR Part 90, is amended as set forth below, effective April 4, 1996.

It is further ordered that the petitions for reconsideration filed by National Association of Business and Educational Radio/ Association for Private Carrier Paging Section, First National Paging Company, Inc., Afro-American Paging, American Mobilephone, Inc., Paging Network, Inc., MAP Mobile Communications, Inc. and Metrocall, Inc. are granted to the extent described above and are denied in all other respects.

It is further ordered that the waiver requests filed by American Mobilephone, Inc., Arch Communications Group, Inc., Comtech, Inc., First National Paging Company, Inc., Message Center Beepers, Inc., Metrocall, Inc. and PacTel Paging (now "Airtouch Paging") are granted to the extent described above.

It is further ordered that, pursuant to the authority of Section 0.331 of the Communications Act of 1934, as amended, we delegate to the Wireless Telecommunications Bureau the authority to address any request for waiver of our exclusivity rules, which shall be evaluated based on criteria set forth above.

It is further ordered that this proceeding is terminated.

##### List of Subjects in 47 CFR Part 90

###### Common carriers.

Federal Communications Commission.  
William F. Citron,  
Acting Secretary.

###### Rule Amendments

Part 90 of Chapter I of Title 47 of the Code of Federal Regulations is amended as follows:

##### PART 90—PRIVATE LAND MOBILE RADIO SERVICES

1. The authority citation for Part 90 continues to read as follows:

Authority: Sections 4, 303, 48 Stat. 1066, 1082, as amended; 47 U.S.C. 154, 303, and 332, unless otherwise noted.

2. Section 90.494 is amended by revising paragraph (g) to read as follows:

**§ 90.494** One-way paging operations in the 929-930 MHz band.

(g) Stations operating as part of regional or local systems under § 90.495(a)(1) or (a)(2) may also operate sites within their existing service area at a maximum effective radiated power of 3500 watts, provided that such an

increase in power does not expand the licensee's service-area contour, and the requirements of § 90.495(b)(2) are met as to any co-channel system that has preexisting exclusivity rights.

[FR Doc. 96-4723 Filed 3-4-96; 8:45 am]  
GILLMAN CODE 9712-01-9

#### DEPARTMENT OF COMMERCE

##### National Oceanic and Atmospheric Administration

##### 50 CFR Part 300

[Docket No. 950707173-8030-02; LD. 012296E]

RIN 0948-AP91

##### Antarctic Marine Living Resources Convention Act of 1984; Conservation and Management Measures

AGENCY: National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

**ACTION:** Final rule.

**SUMMARY:** The Secretary of Commerce (Secretary) amends the regulations governing harvesting and reporting of Antarctic living marine resource catches by vessels of, and persons subject to the jurisdiction of, the United States. The regulations implement conservation and management measures implemented by the Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR or Commission) and accepted in whole by the Government of the United States to regulate catches in Convention for the Conservation of Antarctic Marine Living Resources (Convention) statistical reporting areas 48 and 58. These measures restrict the use of gear, restrict the directed taking and bycatch of certain species of fish, prohibit the taking of other species, and require real-time and other reporting of the harvest of certain species.

**EFFECTIVE DATE:** February 29, 1996.

**ADDRESSES:** A copy of the framework environmental assessment may be obtained from the Assistant Administrator for Fisheries, NOAA, National Marine Fisheries Service, 1315 East-West Highway, Silver Spring, MD 20910.

Comments regarding burden estimates or collection of information aspects of this rule should be sent to Robin Tuttle, (See ADDRESSES), and to the Office of Information and Regulatory Affairs, Office of Management and Budget (OMB), Washington, D.C. 20503. Attention: NOAA Desk Officer.

(e) Monthly effort and biological data *D. eleginoides* for fishing in statistical subareas 48.3 and 48.4 from November 3, 1995, through November 1, 1996, is established as follows:

(4) Haul-by-haul data must be reported to the Assistant Administrator For Fisheries, NOAA (AA) not later than the end of following month on the CCAMLR fine-scale catch and effort data form for longline fisheries (Form C2, latest version). These data shall include numbers of seabirds and marine mammals of each species caught and released or killed.

(5) Completed forms B2 and C2 must be conveyed by cable, telex, rapidfax, or other appropriately timely method to the number or address specified in the vessel's permit, and must include the vessel's name, permit number, month of reporting, and the catch in metric tons (to the nearest tenth of a metric ton). If no restricted species are taken during a reporting period, the operator must submit a form showing no catch or bycatch.

(f) Reporting for crab fishing (Order Decapoda, Suborder Reptantia) in statistical area 48 is required as follows:

(1) The following data must be reported to the CCAMLR Data Manager by August 31, 1996 for catches taken between November 4, 1995, and July 31, 1996; by September 30, 1996 for catches taken between July 31, 1996 and August 31, 1996; and by November 17, 1996 for catches taken between August 31, 1996 and November 1, 1996:

(2) Data gathered during the experimental harvest regimens described in § 300.29 (k) shall be reported to CCAMLR Data Manager upon the completion of each phase of the experimental harvest.

(3) Every 10-day reporting of catch and effort data, as described in paragraph (b), is required during normal fishing between Phase 1 and Phase 2, and between Phase 2 and Phase 3 of the experimental harvest regimens. Reports shall be submitted to the CCAMLR Data Manager.

(4) Copies of all data provided directly to the CCAMLR Data Manager shall be concurrently provided to the AA to the number or address specified in the vessel's permit, and must include the vessel's name, permit number, month of reporting, and catch in metric tons (to the nearest tenth of a metric ton).

5. In § 300.28, paragraphs (b) through (f) are revised to read as follows:

§ 300.28. *Closures.*

(b) The fishery for *D. eleginoides* in statistical subarea 48.3 shall close on August 31, 1996, or when the total catch reaches 4,000 mt, whichever comes first.

(c) The fishery for *D. eleginoides* in statistical subarea 48.4 shall close on August 31, 1996, reaching the total allowable catch for *D. eleginoides* in statistical subarea 48.3, or when the total catch reaches 28 mt, whichever comes first.

(d) The fishery for *C. gunnari* in statistical subarea 48.3 shall close on November 1, 1996, or when the total catch reaches 1,000 mt, whichever comes first.

(e) The directed fishery for *E. carlsbergi* in statistical subarea 48.3 shall close November 1, 1996, or when the bycatch of any of the species *G. gibberifrons*, *C. aceratus*, *N. rossii*, *L. squamifrons*, *P. georgienus*, or *P.B. guntheri* reaches its bycatch limit, or when the total catch of *E. carlsbergi* reaches 109,000 mt, whichever comes first.

(f) The directed fishery for *E. carlsbergi* in the Shag Rocks region of statistical subarea 48.3 shall close November 1, 1996, or when the bycatch of any of the species named in paragraph (e) of this section reaches its bycatch limit, or when the total catch of *E. carlsbergi* reaches 14,500 mt, whichever comes first.

(g) The fishery for *L. squamifrons* on Lena Bank in statistical division 58.4.4 shall close November 1, 1996, or when the total catch reaches 715 mt, whichever comes first.

(h) The fishery for *L. squamifrons* on Ob Bank in statistical division 58.4.4 shall close November 1, 1996, or when the total catch reaches 435 mt, whichever comes first.

(i) The fishery for *C. gunnari* and *D. eleginoides* in statistical division 58.5.2 shall close the earlier of June 30 or until precautionary catch limits of 311 mt and 297 mt, respectively, are reached, whichever comes first.

8. Section 300.27 is revised to read as follows:

§ 300.27 Gear restrictions.

(a) Longline fishing or longline fishing research in the Convention area (except for waters adjacent to the Kerguelen and Crozet Islands and the Prince Edward islands) shall be conducted as follows:

(1) Fishing operations shall be conducted in such a way that the baited hooks sink as soon as possible after they are put in the water. Only thawed bait shall be used.

(2) For vessels using the Spanish method of longline fishing, weights should be released before line tension occurs; whenever possible weights of at

least 8 kg mass should be used, spaced at 20 m intervals.

(3) Longlines shall be set only at night (between the times of nautical twilight). During longline fishing at night, only the minimum ship's lights necessary for safety shall be used. Wherever possible, setting of lines should be completed at least 3 hours before dawn (to reduce loss of bait to catches of white-chinned petrels).

(4) The dumping of offal shall be avoided as far as possible while longlines are being set or hauled; if discharge of offal is unavoidable, the discharge must take place on the opposite side of the vessel to that where longlines are set or hauled.

(5) Every effort should be made to ensure that birds captured alive during longlining are released alive and that wherever possible books are removed without jeopardizing the life of the bird concerned.

(6) A streamer line designed to discourage birds from settling on baits during deployment of longlines shall be towed. Specification of the streamer line is given in Figure 2 to part 300. Details of the construction relating to the number and placement of swivels may be varied so long as the effective sea surface covered by the streamers is no less than that covered by the currently specified design. Details of the device dragged in the water in order to create tension in the line may also be varied.

(7) The streamer line is to be suspended at the stern from a point approximately 4.5 m above the water and such that the line is directly above the point where the baits hit the water.

(8) The streamer line is to be approximately 3 mm diameter, have a minimum length of 150 m and have a device at the end to create tension so that the main line streams directly behind the ship even in cross winds.

(9) At 5 m intervals commencing from the point of attachment to the ship five branch streamers each comprising two strands of approximately 3 mm cord should be attached. The length of the streamer should range between approximately 3.5 m nearest the ship to approximately 1.25 m for the fifth streamer. When the streamer line is deployed the branch streamers should reach the sea surface and periodically dip into it as the ship heaves. Swivels should be placed in the streamer line at the towing point, before and after the point of attachment of each branch streamer and immediately before any weight placed at the end of the streamer line. Each branch streamer should also have a swivel at its attachment to the streamer line.

(10) Variations in the design of the streamer lines may be tested on vessels carrying two observers, at least one appointed in accordance with the CCAMLR Scheme of International Scientific observation, providing that all other elements of this paragraph are complied with. The streamer lines under test should be constructed and operated taking full account of principles developed by the CCAMLR Working Group on Incidental Mortality Arising from Longline fishing (WG-IMALF) and available from the AERG. Testing should be carried out independently of actual commercial fishing and in a manner consistent with § 380.30 on exploratory fisheries.

(b) The use of net monitor cables on harvesting vessels in the Convention Area (Figure 1 to part 380) is prohibited.

(c) The use of bottom trawls in the directed fishery for *C. gunnari* in statistical subarea 48.3 from November 3, 1995, through November 1, 1996, is prohibited.

(d) The use of any gear, except trawls, in the fisheries for *C. gunnari* and *D. eleginoides* in statistical subdivision 58.2.2 is prohibited.

(e) The use of any gear, except longlines, in the directed fishery for *D. eleginoides* in statistical subarea 48.3 from November 3, 1995, through November 1, 1996, is prohibited.

(f) The use of any gear, except longlines, in the directed fishery for *D.*

*eleginoides* in statistical subarea 48.4 from November 3, 1995, through November 1, 1996, is prohibited.

(g) The use of any gear, except crab pots (traps), in the crab fishery in statistical area 46 from November 3, 1995, through November 1, 1996, is prohibited.

Figure 2 [Redesignated as Appendix A to Part 380; Amended]

7. Figure 2 to part 380 is redesignated as Appendix A to part 380 and Table 2 to newly redesignated Appendix A is removed.

Figure 3 [Redesignated as Appendix B to Part 380]

8. Figure 3 to part 380 is redesignated as Appendix B to part 380 and revised to read as follows:

Appendix B to Part 380—Data Requirements for the Crab Fishery in Statistical Subarea 48.3

#### I. Catch and Effort Data

(1) *Cruise Descriptions:* Cruise code, vessel code, permit number, year.

(2) *Pot Descriptions:* Pot shape, dimensions, mesh size, funnel attitude, number of chambers, presence of an escape port.

(3) *Effort Descriptions:* Date, time, latitude, and longitude of the start set, compass bearing of the set, total number of pots set, spacing of pots on the line, number of pots lost depth, soak time, bait type.

(4) *Catch Descriptions:* Retained catch in numbers, bycatch of all species, incremental record number for linking with sample information.

#### II. Data Requirements for Bycatch Species in the Exploratory Crab Fishery in Statistical Subarea 48.3

Species	Data requirements
<i>Dissostichus eleginoides</i>	Numbers and estimated total weight.
<i>Nototheron rossii</i>	Numbers and estimated total weight.
Other species	Estimated total weight.

#### III. Biological Data

For these data, crabs are to be sampled from the line hauled just prior to noon, by collecting the entire contents of a number of pots spaced at intervals along the line so that between 35 and 50 specimens are represented in the subsample.

(1) *Cruise Descriptions:* Cruise code, vessel code, permit number.

(2) *Sample Descriptions:* Date, position at the start of the set, line number.

(3) *Data:* Species, sex, length of at least 35 individuals, presence/absence of rhizocephalan parasites, record of the destination of the crab (kept, discarded, destroyed), record of the pot numbers from which the crab came.

9. In part 380, the words "Figure 2" and "Figure 3" are removed wherever they appear and the words "Appendix A" and "Appendix B" are added in their place, respectively.

10. A new Figure 2 is added to part 380 to read as follows:

SEALING CODE 3016-22-01



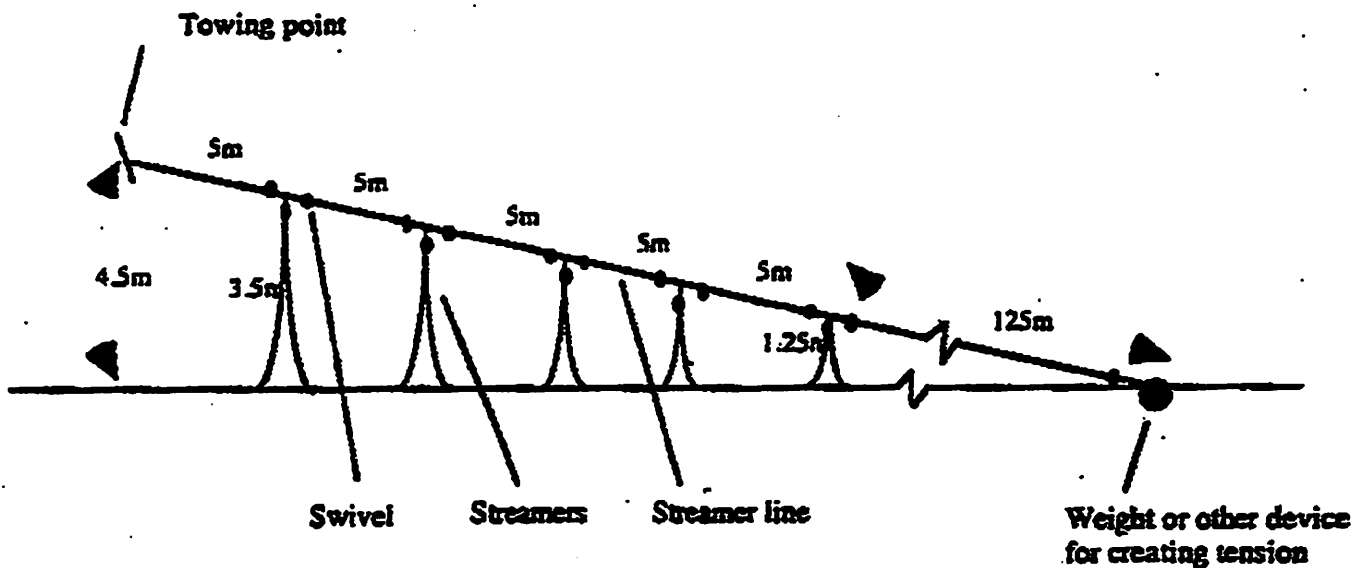


Figure 2 to Part 550—The Use of Streamer Lines to Minimize the Incidental Mortality of Seabirds in the Course of Longline Fishing or Longline Fishing Research Operations in the Convention Area (see § 550.27 for specifications on use)

IFR Doc. 96-4756 Filed 2-29-96; 3:19 pm  
BILLING CODE 3510-29-C

#### 50 CFR Part 550

[Docket No. 902229047-0047-01; LB  
0200000]

RIN 0649-A157

#### Atlantic Sea Scallop Fishery; Reduction in Crew Size Limit

AGENCY: National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

ACTION: Final rule.

**SUMMARY:** NMFS issues this final rule to implement measures contained in Framework Adjustment 7 to the Atlantic Sea Scallop Fishery Management Plan (FMP). This framework adjustment permanently reduces the maximum crew size from nine to seven.

**EFFECTIVE DATE:** March 11, 1996.

**ADDRESSES:** Copies of Amendment 4, its regulatory impact review and the final regulatory flexibility analysis contained therein, the final supplemental environmental impact statement (SEIS), and the supporting documents for Framework Adjustment 7 are available from Douglas Marshall, Executive Director, New England Fishery Management Council, Sunning Office Park, 5 Broadway, Saugus, MA 01906-1097.

**FOR FURTHER INFORMATION CONTACT:** Paul H. Jones, 508-281-0273.

**SUPPLEMENTARY INFORMATION:**

#### Background

The final rule implementing Amendment 4 to the FMP was published on January 19, 1994 (59 FR 2777), with implementation of most measures on March 1, 1994. The amendment retained the FMP's objectives to: (1) Restore adult stock abundance and age distribution; (2) increase yield-per-recruit for each stock; (3) evaluate plan research, development, and enforcement costs; and (4) minimize adverse environmental impacts on sea scallops.

Amendment 4 changed the primary management strategy from a meet count (size) control to effort control. The amendment controls total fishing effort through limited access permits and a schedule of reductions in allowable days at sea (DAS). Supplemental measures include limits on increases in vessel fishing power to control the amount of fishing pressure and to help control the size of scallops landed, gear restrictions, and limits on the number of crew members. Additionally, the amendment includes a framework procedure for adjusting the management measures in the FMP. Initially, the maximum crew size was set at nine.

In response to very high levels of recruitment documented in the Mid-Atlantic resource area, the New England Fishery Management Council (Council) recommended lowering the maximum crew size from nine to seven, because a

smaller crew lowers obstructed scallop production. This reduced production is exacerbated if a vessel operator is targeting small scallops. Thus, this restriction provides an incentive to target larger scallops in order to obtain the same amount of yield from fewer scallops. Framework Adjustments 1 (59 FR 36720, July 19, 1994) and 4 (59 FR 36720, April 5, 1995), temporarily lowered the maximum crew size from nine to seven. The current framework adjustment 4 expires on February 29, 1996.

Because the conditions that justified lowering the maximum crew size to seven still exist, the Council recommended reducing the maximum crew-size permanently from nine to seven, until changed by plan amendment or other action.

In Framework 1, the 7-member crew limit was expected to increase yield-per-recruit, which would be realized during 1995 and 1996. No preliminary 1995 data are available to document that year's yield-per-recruit results. Yields would increase and spawning stock biomass would be greatly enhanced, but only during 1994. With an extension of the 7-member crew limit, similar results are expected as analyzed in Framework 1. Increased yield-per-recruit would occur during 1997 and 1998, and spawning stock biomass would be enhanced during 1996.

The extension of the 7-member crew limit is expected to reduce total

## PROPOSED MEASURES TO REDUCE SEABIRD BYCATCH IN HOOK-AND-LINE FISHERIES

Possible measures to address the reduction of seabird bycatch in the hook-and-line fisheries are found in the alternatives and options as follows:

**Alternative 1:** Status quo, no action. Any gear modifications, seabird avoidance devices, or changes in fishing methods intended to reduce the incidental mortality of seabirds would continue to be voluntary.

**Alternative 2:** Gear modifications, seabird avoidance devices, or changes in fishing methods designed to reduce the incidental mortality of seabirds would be required in regulation. Required measures would include the following:

1. All hook-and-line fishing operations would be conducted in the following manner:
  - Baited hooks must sink as soon as possible after they are put in the water. This could be accomplished by the use of weighted groundlines or thawed bait.
  - When fishing at night, only the minimum vessel's lights necessary for safety shall be used.
  - Offal discharge must take place aft of the location on the vessel where longlines are set or hauled, or on the other side of the vessel. Distracting birds from baited hooks with bait or offal shall not be considered dumping of offal for purposes of this measure.
  - Every effort shall be made to ensure that birds brought aboard alive are released alive and that wherever possible, hooks are removed without jeopardizing the life of the bird.
  
2. One or more of the following measures would be employed at all times when baited hooks are being set and birds are close enough to the vessel to take baited hooks:
  - A buoy, board, stick, broom, or other like device shall be towed behind the vessel at a distance appropriate to prevent birds from taking baited hooks. Multiple devices may be employed, or;
  - A streamer line of specified construction that effectively discourages birds from settling on baits during deployment of gear, shall be towed, or;
  - Baited hooks shall be deployed under water using a lining tube designed and manufactured for such a purpose, or;
  - With the approval of the Regional Administrator, other experimental seabird avoidance devices may be substituted for those listed above.

**Option 1:** The required measures to reduce the incidental mortality of seabirds would be applicable to vessels using hook-and-line gear in BSAI directed groundfish fisheries.

**Option 2:** The required measures to reduce the incidental mortality of seabirds would be applicable to vessels using hook-and-line gear in both the GOA and BSAI directed groundfish fisheries.

DRAFT FOR COUNCIL REVIEW

ENVIRONMENTAL ASSESSMENT/REGULATORY IMPACT REVIEW/  
INITIAL REGULATORY FLEXIBILITY ANALYSIS

FOR A REGULATORY AMENDMENT TO REDUCE  
THE INCIDENTAL SEABIRD MORTALITY  
IN DIRECTED GROUND FISH HOOK-AND-LINE FISHERIES OFF ALASKA

Prepared by

National Marine Fisheries Service  
Alaska Regional Office

*November 27, 1996*

## Table of Contents

Executive Summary .....	ii
<b>1.0 INTRODUCTION .....</b>	<b>1</b>
1.1 Purpose of and Need for the Action .....	1
1.2 Alternatives Considered .....	2
1.2.1 Alternative 1 .....	2
1.2.2 Alternative 2 .....	2
1.3 Background .....	2
1.3.1 Description and History of the Hook-and-Line Fishery .....	2
1.3.2 Description of the Gear .....	4
1.3.3 Seabird Bycatch .....	4
1.3.3.1. Historical Background .....	4
1.3.3.2 Seabirds in Alaska .....	5
1.3.3.3 International Seabird Populations .....	6
1.3.3.4 Seabird Bycatch Avoidance Efforts to Date .....	7
<b>2.0 NEPA REQUIREMENTS: ENVIRONMENTAL IMPACTS OF THE ALTERNATIVES</b> .....	<b>8</b>
2.1 Environmental Impacts of the Alternatives .....	8
2.2 Impacts on Endangered or Threatened Species .....	8
2.3 Impacts on Seabirds not Listed under the ESA .....	10
2.3.1 Seabird Bycatch in the Alaskan Fisheries .....	10
2.3.2 Research on Effectiveness of Seabird Bycatch Avoidance .....	11
2.4 Impacts on Marine Mammals .....	12
2.5 Coastal Zone Management Act .....	12
2.6 Conclusions or Finding of No Significant Impact .....	12
<b>3.0 REGULATORY IMPACT REVIEW: ECONOMIC AND SOCIOECONOMIC IMPACTS</b> <b>OF THE ALTERNATIVES</b> .....	<b>12</b>
3.1 Identification of the Individuals or Groups that may be Affected by the Proposed Action .....	13
3.2 Economic and Social Impacts of the Alternatives .....	13
3.2.1 Impacts of Alternative 1 - Status Quo .....	13
3.2.2 Impacts of Alternative 2 - Require Seabird Bycatch Avoidances Measures in the Directed Groundfish Hook-and-Line Fisheries .....	14
3.3 Administrative, Enforcement and Information Costs .....	15
<b>4.0 INITIAL REGULATORY FLEXIBILITY ANALYSIS</b> .....	<b>15</b>
4.1 Economic Impact on Small Entities .....	15
<b>5.0 SUMMARY AND CONCLUSIONS</b> .....	<b>16</b>
<b>6.0 REFERENCES</b> .....	<b>17</b>
<b>7.0 AGENCIES AND INDIVIDUALS CONSULTED</b> .....	<b>19</b>
<b>8.0 LIST OF PREPARERS</b> .....	<b>19</b>

<b>9.0</b>	<b>LIST OF TABLES</b> .....	<b>19</b>
<b>10.0</b>	<b>LIST OF FIGURES</b> .....	<b>20</b>

## Executive Summary

In early November, 1996, several industry groups representing hook-and-line vessels in the Gulf of Alaska (GOA) and the Bering Sea/Aleutian Islands (BSAI) petitioned the North Pacific Fishery Management Council (Council) and the National Marine Fisheries Service (NMFS) to impose regulatory measures that are intended to reduce the incidental mortality of seabirds in their fisheries. This action was motivated by recent takes (two in 1995 and one in 1996) of the short-tailed albatross (*Diomedea albatrus*), a listed species under the Endangered Species Act (ESA). Pursuant to the ESA, the short-tailed albatross is afforded certain protections that are outlined in the section 7 consultation with the U.S. Fish & Wildlife Service (USFWS) regarding the GOA and BSAI groundfish fisheries.

Millions of birds, representing over 80 species, occur over waters of the EEZ off Alaska. The presence of "free" food in the form of offal and bait attract many birds to fishing operations. In the process of feeding, birds sometimes come into contact with fishing gear and are accidentally killed. For example, most birds taken during hook-and-line operations are attracted to the baited hooks when the gear is being set. These birds become hooked at the surface, and are then dragged underwater where they drown. The probability of a bird being caught is a function of many interrelated factors including: type of fishing operation and gear used; length of time fishing gear is at or near the surface of the water; behavior of the bird (feeding and foraging techniques); water and weather conditions (e.g. sea state); size of the bird; availability of food (including bait and offal); and physical condition of the bird (molt, migration, health). Almost any species which occurs in these waters is susceptible to interactions with fishing gear, although a few species are especially vulnerable.

The industry-proposed measures are modeled, in part, after NMFS regulations implementing conservation measures adopted by the Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR) (61 FR 8483; March 5, 1996) to reduce the incidental mortality of seabirds in the longline fisheries in Antarctic waters. Effective mitigation measures would reduce the incidental mortality of seabirds during longline fishing by minimizing the seabirds' attraction to fishing vessels and by preventing the seabirds from attempting to seize baited hooks, particularly during the period when the lines are set.

This Environmental Assessment/Regulatory Impact Review/Initial Regulatory Flexibility Analysis (EA/RIR/IRFA) addresses regulatory measures intended to reduce seabird bycatch and incidental mortality in the hook-and-line fisheries off Alaska. The alternatives and options are as follows:

**Alternative 1:** Status quo, no action. Any gear modifications, seabird avoidance devices, or changes in fishing methods intended to reduce the incidental mortality of seabirds would continue to be voluntary.

**Alternative 2:** Gear modifications, seabird avoidance devices, or changes in fishing methods designed to reduce the incidental mortality of seabirds would be required in regulation. Required measures would include the following:

1. All hook-and-line fishing operations would be conducted in the following manner:
  - Baited hooks must sink as soon as possible after they are put in the water. This could be accomplished by the use of weighted groundlines or thawed bait.
  - When fishing at night, only the minimum vessel's lights necessary for safety shall be

used.

- Offal discharge must take place aft of the location on the vessel where longlines are set or hauled, or on the other side of the vessel. Distracting birds from baited hooks with bait or offal shall not be considered dumping of offal for purposes of this measure.
- Every effort shall be made to ensure that birds brought aboard alive are released alive and that wherever possible, hooks are removed without jeopardizing the life of the bird.

2. One or more of the following measures would be employed at all times when baited hooks are being set and birds are close enough to the vessel to take baited hooks:

- A buoy, board, stick, broom, or other like device shall be towed behind the vessel at a distance appropriate to prevent birds from taking baited hooks. Multiple devices may be employed, or;
- A streamer line of specified construction that effectively discourages birds from settling on baits during deployment of gear, shall be towed, or;
- Baited hooks shall be deployed under water using a lining tube designed and manufactured for such a purpose, or;
- With the approval of the Regional Administrator, other experimental seabird avoidance devices may be substituted for those listed above.

Option 1: The required measures to reduce the incidental mortality of seabirds would be applicable to vessels using hook-and-line gear in BSAI directed groundfish fisheries.

Option 2: The required measures to reduce the incidental mortality of seabirds would be applicable to vessels using hook-and-line gear in both the GOA and BSAI directed groundfish fisheries.

Under the required ESA section 7 consultation on the 1996 GOA and BSAI groundfish fisheries, the USFWS anticipates that two short-tailed albatrosses could be taken. If the annual take exceeds two, NMFS must immediately reinstate section 7 consultation and review with USFWS the need for possible modification of the reasonable and prudent measures established to minimize take of the short-tailed albatross. Fishing operations could cease pending reinstitution of the section 7 consultation.

If the annual take of short-tailed albatross exceeded two under either alternative, the actual economic impacts resulting from the modification of the reasonable and prudent measures established to minimize take of the short-tailed albatross would depend upon the revised measures. It could range from measures proposed under Alternative 2 to a cessation of fishing operations. The economic impact of cessation of fishing operations would depend upon the length of time of the closed period.

The measures required of all applicable vessels under number 1 of Alternative 2 would be expected to be of minimal or no cost. Procedural or operational changes may be required in fishing operations.

In 1995, 1217 and 100 hook-and-line catcher vessels caught groundfish from the GOA and BSAI, respectively. Catcher/processors numbered 35 and 46 in those respective areas. Under Alternative 2, the economic impact on small entities would depend upon the option exercised (BSAI only or BSAI and GOA) and the particular measures chosen. A vessel operator would have a choice of several measures. Smaller vessels (< 100 ft) may find the cost of a lining tube to be prohibitive (approximately \$35,000 per vessel). Hook-and-line catcher vessels  $\geq$  60 ft numbered 154 and 53 in the GOA and BSAI, respectively; the  $\geq$  60 ft catcher/processors numbered 31 and 45. The other seabird bycatch avoidance devices (buoys,

bird streamer lines) ranged from \$50-\$250 per vessel.



## 1.0 INTRODUCTION

The groundfish fisheries in the Exclusive Economic Zone (EEZ) (3 to 200 miles offshore) off Alaska are managed under the Fishery Management Plan for the Groundfish Fisheries of the Gulf of Alaska and the Fishery Management Plan for the Groundfish Fisheries of the Bering Sea and Aleutian Islands Area. Both fishery management plans (FMP) were developed by the North Pacific Fishery Management Council (Council) under the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act). The Gulf of Alaska (GOA) FMP was approved by the Secretary of Commerce and become effective in 1978 and the Bering Sea and Aleutian Islands Area (BSAI) FMP become effective in 1982.

Actions taken to amend FMPs or implement other regulations governing the groundfish fisheries must meet the requirements of Federal laws and regulations. In addition to the Magnuson-Stevens Act, the most important of these are the National Environmental Policy Act (NEPA), the Endangered Species Act (ESA), the Marine Mammal Protection Act (MMPA), Executive Order (E.O.) 12866, and the Regulatory Flexibility Act (RFA).

NEPA, E.O. 12866 and the RFA require a description of the purpose and need for the proposed action as well as a description of alternative actions which may address the problem. This information is included in Section 1 of this document. Section 2 contains information on the biological and environmental impacts of the alternatives as required by NEPA. Impacts on endangered species and marine mammals are also addressed in this section. Section 3 contains a Regulatory Impact Review (RIR) which addresses the requirements of both E.O. 12866 and the RFA that economic impacts of the alternatives be considered. Section 4 contains the Initial Regulatory Flexibility Analysis (IRFA) required by the RFA which specifically addresses the impacts of the proposed action on small businesses.

This Environmental Assessment/Regulatory Impact Review/Initial Regulatory Flexibility Analysis (EA/RIR/IRFA) addresses regulatory measures intended to reduce seabird bycatch and incidental mortality in the hook-and-line fisheries off Alaska.

### 1.1 Purpose of and Need for the Action

Recent takes of the endangered short-tailed albatross (*Diomedea albatrus*) (two in 1995 and one in 1996) in hook-and-line fisheries in the BSAI and the GOA highlight a seabird bycatch problem. Under the required Endangered Species Act (ESA) section 7 consultation on the 1996 GOA and BSAI groundfish fisheries, the U.S. Fish & Wildlife Service (USFWS) anticipates that two short-tailed albatrosses could be taken. If the annual take exceeds two, NMFS must immediately reinstate section 7 consultation and review with USFWS the need for possible modification of the reasonable and prudent measures established to minimize take of the short-tailed albatross. Fishing operations could cease pending reinstitution of the section 7 consultation.

The NMFS Observer Program office has documented bycatch of other seabird species in the GOA and BSAI groundfish fisheries since 1989 (Table 1). In 1995, the seabird bycatch in observed samples from hook-and-line vessels in the GOA and BSAI was 351 and 4,417 birds, respectively (Tables 2 & 3), and far exceeded the seabird bycatch found in other gear types. Until statistically valid extrapolation procedures can be developed by NMFS, extrapolating at this time from the known seabird takes in observer samples to the total fleet catch would be inappropriate. Time and area fishing effort, seabird take reports from outside the observer sample, and seabird distribution should be considered. Proposed regulatory measures are intended to reduce seabird bycatch and incidental mortality in the hook-and-line

fisheries off Alaska.

## 1.2 Alternatives Considered

1.2.1 **Alternative 1:** Status quo, no action. Any gear modifications, seabird avoidance devices, or changes in fishing methods intended to reduce the incidental mortality of seabirds would continue to be voluntary.

1.2.2 **Alternative 2:** Gear modifications, seabird avoidance devices, or changes in fishing methods designed to reduce the incidental mortality of seabirds would be required in regulation. Required measures would include the following:

1. All hook-and-line fishing operations would be conducted in the following manner:

- Baited hooks must sink as soon as possible after they are put in the water. This could be accomplished by the use of weighted groundlines or thawed bait.
- When fishing at night, only the minimum vessel's lights necessary for safety shall be used.
- Offal discharge must take place aft of the location on the vessel where longlines are set or hauled, or on the other side of the vessel. Distracting birds from baited hooks with bait or offal shall not be considered dumping of offal for purposes of this measure.
- Every effort shall be made to ensure that birds brought aboard alive are released alive and that wherever possible, hooks are removed without jeopardizing the life of the bird.

2. One or more of the following measures would be employed at all times when baited hooks are being set and birds are close enough to the vessel to take baited hooks:

- A buoy, board, stick, broom, or other like device shall be towed behind the vessel at a distance appropriate to prevent birds from taking baited hooks. Multiple devices may be employed, or;
- A streamer line of specified construction that effectively discourages birds from settling on baits during deployment of gear, shall be towed, or;
- Baited hooks shall be deployed under water using a lining tube designed and manufactured for such a purpose, or;
- With the approval of the Regional Administrator, other experimental seabird avoidance devices may be substituted for those listed above.

Option 1: The required measures to reduce the incidental mortality of seabirds would be applicable to vessels using hook-and-line gear in BSAI directed groundfish fisheries.

Option 2: The required measures to reduce the incidental mortality of seabirds would be applicable to vessels using hook-and-line gear in both the GOA and BSAI directed groundfish fisheries.

## 1.3 Background

### 1.3.1 Description and History of the Hook-and-Line Fishery BSAI

Pacific cod has dominated the landings of the hook-and-line fishery. Pacific cod was taken by Japanese longline and trawl operation beginning in the early 1960's and joined by Russian vessels in 1971. The average harvest from 1971-1976 was 50,000 mt. Foreign fisheries were phased out by the domestic fleet by 1988. Catches have fluctuated around 165,000 mt since 1985. The Pacific cod total allowable catch (TAC) is apportioned by gear type. Harvests are typically constrained by halibut bycatch limits.

Sablefish was targeted by Japanese freezer longliners since 1959. Catches peaked in 1962 at 28,500 mt and averaged about 13,000 mt from 1963-1972. Russians entered the fishery in 1967. Catches dropped to less than 5,000 mt in 1974, a peak in 1987 of 8,000 mt, and reduced landings since then. The sablefish TAC is apportioned among gear types.

Greenland turbot has been targeted by trawl and longline gear. Significant amounts are also retained as bycatch in other fisheries. Most fishing occurs along the shelf edge and slope, as well as along the Aleutian Islands. Catches averaged about 30,000 mt during the 1960's. Catches increased to 60,000 mt in 1974, and remained in the 50,000 mt range through 1983. Catch has remained at or below 10,000 mt since 1986.

Rockfish are harvested by both trawl and longline gear. Small quantities of Pacific ocean perch were also harvested by longline gear in 1995. Much of the rockfish catch in hook-and-line fisheries is incidental to other target fisheries.

In 1995, the total groundfish catch was 127,100 mt (Table 4). One hundred catcher vessels and 46 catcher/processors operated in the BSAI (Table 5) and targeted sablefish, Pacific cod, Greenland turbot, and rockfish.

### GOA

Sablefish are an important demersal species of the slope region. Annual catches averaged about 1,500 mt in 1930-50, and exploitation rates remained low until the Japanese longline fleet expanded into the Gulf. Catches rapidly escalated during the mid 1960's and peaked in 1972. Evidence of declining stock abundance led to significant fishery restrictions from 1977 to 1985 and total catches were reduced substantially. Since 1995, sablefish has been managed under the IFQ system.

Pacific cod are a widespread demersal species found along the continental shelf from inshore waters to the upper slope. Catches of Pacific cod increased throughout most of the 1980's in response to a year class(es) which recruited to the fishery around 1980. Annual total catches dropped to about 14,000 t in 1985 as foreign effort began to be phased out, then grew again as the capacity of the domestic fleet increased. The 1991 and 1992 catches reached record levels of approximately 77,000 t and 80,000 t, respectively. Presently, the Pacific cod stock is exploited by a multiple-gear fishery, including trawl, longline, and pot components. Trawlers account for the majority of landings with pot gear catches increasing in recent years.

Rockfish have been landed incidental to other groundfish and halibut fisheries in Southeast Alaska since the turn of the century. The directed fishery for demersal shelf rockfish in East Yakutat increased substantially in 1991. The decline in directed harvest since 1992 is a consequence of in-season management to ensure that enough TAC remains for bycatch in the halibut fishery.

In 1995, the total groundfish catch was 34,800 mt (Table 4). 1217 catcher vessels and 35 catcher/processors operated in the GOA (Table 5) and targeted sablefish, Pacific cod, deep-water flatfish, and rockfish.

### 1.3.2 Description of the Gear

Hook-and-line vessels targeting Pacific cod set groundlines of varying length to a maximum of approximately seven miles, in water 25-100 fathoms deep. Typically two lines are set and hauled in a day. The vessel travels at a speed of about five knots during a two-hour set. Radar-reflecting buoys are connected to both ends of the groundline. Twelve-inch gangions with hooks are attached to the groundline at three-foot intervals. A seven-mile set would contain approximately 17,000 hooks. Most of the longline vessels in the BSAI targeting Pacific cod are freezer/longliners, many of which use autobaiting systems (pers. comm., North Pacific Longline Association).

Hook-and-line vessels targeting sablefish or Greenland turbot set gear in deeper water on the continental slope. The gear is rigged much the same as in the Pacific cod fishery, though the lengths of the groundlines are often shorter and may vary with the size of the vessel. Many smaller vessels participate in both the BSAI and GOA fisheries, and fewer are equipped with autobaiting machines.

### 1.3.3 Seabird Bycatch

#### 1.3.3.1. Historical Background

Problem. Millions of birds, representing over 80 species, occur over waters of the EEZ off Alaska. The presence of "free" food in the form of offal and bait attract many birds to fishing operations. In the process of feeding, birds sometimes come into contact with fishing gear and are accidentally killed. For example, most birds taken during hook-and-line operations are attracted to the baited hooks when the gear is being set. These birds become hooked at the surface, and are then dragged underwater where they drown. The probability of a bird being caught is a function of many interrelated factors including: type of fishing operation and gear used; length of time fishing gear is at or near the surface of the water; behavior of the bird (feeding and foraging techniques); water and weather conditions (e.g. sea state); size of the bird; availability of food (including bait and offal); and physical condition of the bird (molt, migration, health). Almost any species which occurs in these waters is susceptible to interactions with fishing gear, although a few species are especially vulnerable (NMFS, 1995).

Seabird bycatch occurs predominantly in the tuna, broadbill, hake, toothfish, and swordfish longline fisheries in the southern hemisphere. For instance, longline fishing for tuna has been shown to cause significant mortality of albatrosses and other seabirds species and is considered to be the most likely cause of the abnormally high rates of mortality and the decline of breeding populations recorded for several southern albatrosses species (Brothers, 1995). In Tasmanian waters, the average catch rate of albatrosses by Japanese longline vessels in 1988 was 0.41 birds per 1000 hooks, a total of 44,000 birds each year in waters south of 30°S, where 107 million hooks are set annually for southern bluefin tuna (Australian Fisheries, 1991). It has been estimated that worldwide, 180,000 birds are killed in longline fisheries annually. The issue of seabird bycatch and incidental mortality in commercial fishing operations has been heightened in recent years.

CCAMLR. Noting the need to reduce the incidental mortality of seabirds during longline fishing by minimizing their attraction to fishing vessels and by preventing them from attempting to seize baited

hooks, particularly during the period when the lines are set, the Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR) adopted conservation measures in 1996 to reduce the possibility of incidental mortality of seabirds during longline fishing (CCAMLR, 1996). The implementing regulations were agreed to by consensus of the 23 member countries and NMFS published regulations March 5, 1996 (61 FR 8483) that apply to U.S. vessels fishing in Convention for the Conservation of Antarctic Marine Living Resources (Convention) waters. The conservation measures regulate catches in Convention waters. In summary, the measures require:

- Fishing operations be conducted in such a manner that baited hooks sink as soon as possible after they are put in the water.
- The use of thawed bait.
- Longlines must be set only at night and only the minimum ship's lights necessary for safety shall be used.
- Dumping of offal shall be avoided as far as possible while longlines are being set or hauled; if discharge of offal is unavoidable, the discharge must take place on the opposite side of the vessel to that where longlines are set or hauled.
- Every effort should be made to ensure that birds captured alive during longlining are released alive and that wherever possible hooks are removed without jeopardizing the life of the bird concerned.
- A streamer line designed to discourage birds from settling on baits during deployment of longlines shall be towed (specification of the streamer line is provided).

Enforcement of the regulations is the responsibility of member countries and is carried out by designated inspectors and international scientific observers. The observers collect biological data and monitor compliance with regulations.

IUCN. The World Conservation Congress of the International Union for the Conservation of Nature (IUCN) adopted a resolution at its October, 1996, session that calls upon the IUCN, its members, all States, and regional fisheries institutions to reduce incidental seabird mortality within longline fisheries to insignificant levels for affected species. IUCN is a union of more than 850 governments and non-governmental organizations working on issues of the environment and sustainable development. The final resolution was adopted by approximately 75 national governments, with only Japan and Panama in opposition. The resolution commended CCAMLR for adopting conservation measures that call for minimizing the incidental taking of seabirds on longlines in Antarctic waters and commended the efforts now underway by some longline fishermen to reduce incidental mortality of seabirds, and encouraged their increased involvement in developing and implementing effective measures for reducing incidental mortality of seabirds. All longline vessels fishing with the New Zealand EEZ must now deploy a tori line (seabird avoidance device) of the type recommended by CCAMLR while longline setting (Duckworth, 1995). It is noteworthy to highlight that New Zealand has required seabird bycatch mitigation measures in its longline fisheries since 1992.

#### 1.3.3.2 Seabirds in Alaska

Seabird populations in Alaska are large and diverse owing to the extensive and nutrient-rich coastal estuaries and offshore areas, and the availability of large stocks of forage fish and other prey. Such areas in Alaska provide breeding, feeding, and migrating habitat for 66 species of seabirds of which 38 breed in Alaska at about 1,600 colonies. Alaska's breeding population of the 38 seabird species is estimated to be 50 million birds which is about 96 percent of all seabirds breeding in the continental United States.

Another 50 million seabirds of 28 species migrate from breeding areas in the central and south Pacific to spend the summer offshore the coast of Alaska. Seabird breeding populations in the BSAI and the GOA are estimated at about 22 million and 8 million birds, respectively (Wohl et al., 1995). See Section 2.2 for a discussion of the short-tailed albatross.

Population trends and productivity are monitored every 1 to 3 years at approximately 6 colonies in each area. The species monitored are common and thick-billed murres (*Uria aalge* and *U. lomvia*), red-legged and black-legged kittiwake (*Rissa brevirostris* and *R. tridactyla*), northern fulmar (*Fulmarus glacialis*), tufted puffin, fork-tailed and Leach's storm-petrel (*Oceanodroma furcata* and *O. leucorhoa*) and red-faced and pelagic cormorant (*Phalacrocorax urile* and *P. penicillatus*). Declines in kittiwake and murre populations have been recorded in the Pribilof Islands and St. Matthew Island. Kittiwake nesting success there has been low over the past 15 years, in association with inadequate food resources. The red-legged kittiwake, whose principal breeding colony in the world is on St. George Island, has been reduced by 50 percent since 1976. The species has been proposed for listing as threatened. In contrast, monitored populations in the Aleutian Islands area generally have been stable or have increased.

Declines have been documented for common murres throughout most of the GOA. Declines equaled or exceeded those found in areas affected by the *Exxon Valdez* oil spill. Declines at specific colonies ranged from 39 to 96 percent since 1989. They also noted large declines in the GOA in either breeding success or adult populations for black-legged kittiwakes, marbled and Kittlitz's murrelets, cormorants, and horned puffins.

Indirect competition between groundfish fisheries and seabirds does exist potentially. Seabirds eat small fish and large pelagic invertebrates. Seabird prey on schooling fish up to 15 cm in length. Kittiwakes and northern fulmars take fish at the surface; murres, cormorants, and puffins dive and pursue fish underwater. Although seabirds take fish opportunistically, and most species also consume invertebrates, they rely on forage fish when rearing their young. The birds require dense schools within foraging range of the breeding colony (foraging range is 3 to 100 km, depending on species). For kittiwakes and fulmars, the schools also must be at the surface. In most parts of the North Pacific, at a given place and time, only single suitable species of forage fish usually is available. Age 0 and 1 pollock are a major prey of seabirds. However, years of good breeding success, especially for kittiwakes, usually depend on availability of sand lance or capelin, which have a higher energy content and form dense schools near shore (NPFMC, September 1996).

The Circumpolar Seabird Working Group has identified the main causes for the steady population decline in some seabird species. The top five causes are: heavy hunting pressure, mortality in commercial fishing operations, human disturbances in seabird colonies, oil pollution, and introduced predators. The principal seabird species taken incidentally in groundfish gear include murres and shearwaters in trawls and northern fulmars, albatrosses, and gulls on longlines.

### 1.3.3.3 International Seabird Populations

Seabirds are a very visible and important natural resource in the Arctic. Many species of seabirds occurring in Alaska have circumpolar and southern hemisphere distributions; some seabirds populations are shared between Alaska and some of the other seven Arctic nations. Alaska also shares seabird populations with nations farther south, some of whose breeding species spend the northern summer in Alaskan waters. Seabirds may share common foraging and wintering areas, and exchanges between breeding colonies may occur in the Arctic. Seabirds sharing common areas and resources in the Arctic

are also impacted by similar human activities. Some shared seabird populations are declining, are unstable, or are listed as endangered or threatened by some Arctic countries. Traditionally, research, management, and conservation activities for international seabird populations have been conducted unilaterally with little coordination, exchange of information, or common direction, and without the use of uniform protocols for data collection and analyses. Clearly, research, management, and conservation activities for shared, internationally important, and vulnerable seabird resources can be more effective with a cooperative and coordinated approach (USFWS, 1992). Similarly, CCAMLR has expressed concern about the potential impact on seabirds from the Convention area of fisheries adjacent to the Convention area where use of mitigating conservation measures is not a requirement (CCAMLR, 1996).

#### **1.3.3.4 Seabird Bycatch Avoidance Efforts to Date**

The USFWS recently amended its 1989 Biological Opinion on the NMFS Interim Incidental Take Exemption Program and outlined reasonable and prudent measures that NMFS must implement with regard to the short-tailed albatross (USFWS, 1995). In general, NMFS was already implementing these measures.

- Observer data on short-tailed albatross sightings and fishery interactions is collected. Observers are trained in seabird identification and provided with instructions and materials for reporting short-tailed albatross observations.
- Incidental take of any short-tailed albatross is reported to USFWS.
- Short-tailed albatross that are found in fishing equipment, but still appear healthy, are released as soon as identification is confirmed.
- Dead short-tailed albatrosses are tagged with complete catch information and delivered to USFWS.
- An information program is conducted each year to inform fishermen about: 1) need and possible methods for avoiding entanglement of short-tailed albatross in fishery gear, 2) request reports of short-tailed albatross sightings, and 3) encourage compliance with MARPOL and related treaties to protect marine animals including the short-tailed albatross. This program may consist of electronic bulletin board and Internet announcements, distribution of written materials, newspaper or radio announcements, or any other appropriate means.

NMFS, USFWS, and the National Biological Survey are cooperating to obtain accurate information on the mortality of seabirds related to trawl, longline, and pot vessels fishing groundfish in the EEZ of the GOA and BSAI. This cooperative project will also address questions about the effects of various levels of take on the world-wide population of short-tailed albatrosses. Bird monitoring activities by NMFS began in 1990 and were expanded during the 1993 season. The major change was to ask observers to provide detailed information on the identity of incidentally caught seabirds. Other observer-collected information that NMFS forwards to USFWS is: sightings of sensitive species, sightings of miscellaneous species, bird/vessel interactions, gear-related mortality, intended and direct mortality, use of deterrent devices by the vessel, and detailed information found on the leg bands of banded seabirds.

USFWS is currently developing a population model for the short-tailed albatross which will determine the level of mortality that the species can sustain without affecting its recovery. NMFS will be developing a statistical basis for extrapolating the reported take of short-tailed albatrosses to determine the actual take fleetwide. This approach could be applied to other seabird species as well.

## 2.0 NEPA REQUIREMENTS: ENVIRONMENTAL IMPACTS OF THE ALTERNATIVES

An environmental assessment (EA) is required by the National Environmental Policy Act of 1969 (NEPA) to determine whether the action considered will result in significant impact on the human environment. If the action is determined not to be significant based on an analysis of relevant considerations, the EA and resulting finding of no significant impact (FONSI) would be the final environmental documents required by NEPA. An environmental impact statement (EIS) must be prepared for major Federal actions significantly affecting the human environment.

An EA must include a brief discussion of the need for the proposal, the alternatives considered, the environmental impacts of the proposed action and the alternatives, and a list of document preparers. The purpose and alternatives were discussed in Sections 1.1 and 1.2, and the list of preparers is in Section 8. This section contains the discussion of the environmental impacts of the alternatives including impacts on threatened and endangered species and marine mammals.

### 2.1 Environmental Impacts of the Alternatives

The environmental impacts generally associated with fishery management actions are effects resulting from (1) harvest of fish stocks which may result in changes in food availability to predators and scavengers, changes in the population structure of target fish stocks, and changes in the marine ecosystem community structure; (2) changes in the physical and biological structure of the marine environment as a result of fishing practices, e.g., effects of gear use and fish processing discards; and (3) entanglement/entrapment of non-target organisms in active or inactive fishing gear.

A summary of the effects of the annual groundfish total allowable catch amounts on the biological environment and associated impacts on marine mammals, seabirds, and other threatened or endangered species are discussed in the final environmental assessment for the annual groundfish total allowable catch specifications (NMFS, 1996).

### 2.2 Impacts on Endangered or Threatened Species

Endangered and threatened species under the ESA that may be present in the GOA and BSAI include:

#### Endangered

Northern right whale	<i>Balaena glacialis</i>
Sei whale	<i>Balaenoptera borealis</i>
Blue whale	<i>Balaenoptera musculus</i>
Fin whale	<i>Balaenoptera physalus</i>
Humpback whale	<i>Megaptera novaeangliae</i>
Sperm whale	<i>Physeter macrocephalus</i>
Snake River sockeye salmon	<i>Oncorhynchus nerka</i>
Short-tailed albatross	<i>Diomedea albatrus</i>

#### Threatened

Steller sea lion	<i>Eumetopias jubatus</i>
Snake R. spring and	



summer chinook salmon	<i>Oncorhynchus tshawytscha</i>
Snake R. fall chinook salmon	<i>Oncorhynchus tshawytscha</i>
Spectacled eider	<i>Somateria fischeri</i>

Listed or candidate species of seabirds include the endangered short-tailed albatross (*Diomedea albatrus*). The world breeding population of the short-tailed albatross was estimated to be 400 birds in 1988, and has now increased to over 700 (Richardson, 1994). As the population increases, the potential for interactions with commercial fisheries increases. However, the short-tailed albatross population is steadily increasing due to its protection on the breeding grounds (two islands in Japan and a recent report on Midway Island). Currently no evidence exists as to whether or not groundfish fisheries are impeding their recovery.

Past observations indicate that as with other albatrosses, older short-tailed albatrosses are present in Alaska primarily during the summer and fall months along the shelf break from the Alaska Peninsula to the GOA, although 1- and 2-year old juveniles may be present at other times of the year. Consequently, these albatrosses generally would be exposed to fishery interactions most often during the summer and fall.

Albatrosses are surface feeders that take principally small fish (e.g., larval and juvenile walleye pollock and sablefish), squid, and zooplankton, much of which is presumed to be of little commercial interest. The importance of commercial fish species in the diet of the short-tailed albatross and the effects of the commercial fishery on this species are not well known, but direct competition for food supplies is probably not a substantial problem for this species.

Formal consultation was concluded on the effects of the groundfish fisheries on the short-tailed albatross and other species listed under the ESA under the jurisdiction of the USFWS on July 3, 1989. That consultation concluded that BSAI and GOA groundfish fisheries would adversely affect the short-tailed albatross and would result in the incidental take of up to two birds per year, but would not jeopardize the continued existence of that species. The short-tailed albatross could be affected by: 1) direct injury or mortality from fishing equipment, 2) entanglement or ingestion of plastics and other debris disposed overboard from fishery vessels; 3) injury resulting from contact with petroleum products spilled or leaked from vessels, and 4) competition for food resources. Although any mortality caused by commercial fishing would be a cause for concern, based on the best available information, the expected incidental take of up to two short-tailed albatrosses during harvest of 1996 groundfish TACs is not expected to affect or jeopardize the continued existence of the listed species.

The 1989 USFWS biological opinion for an incidental take of two short-tailed albatrosses was based on a historical incidental take of two birds. In February 1996, NMFS requested that USFWS consider raising the incidental take of short-tailed albatross from two to four birds. In October 1996, USFWS indicated that the take level would remain at two birds and that reinitiation of section 7 consultation would be required for 1997 groundfish fishing activities. NMFS reinitiated consultation on the 1997 TAC specifications for the GOA and BSAI in November, 1996.

The first reported take of a short-tailed albatross in the Alaskan groundfish fisheries was in July, 1983, north of St. Matthew Island. The bird was found dead in a fish net. A second take occurred in October, 1987, and was caught by a vessel fishing for halibut in the GOA.

A juvenile short-tailed albatross was taken in the western Gulf of Alaska IFQ sablefish longline fishery south of the Krenitzin Islands on August 28, 1995. The captain of the vessel reported that hundreds of albatrosses were caught and drowned on sets of squid-baited hooks (the others were Laysan and black-

footed albatrosses). A NMFS-certified observer reported that longlines may have been inadequately weighted to assure rapid descent of baited hooks (A. Grossman, NMFS-PRMD, memo dated September 14, 1995). NMFS requested reinitiation of a formal consultation on the 1995 BSAI and GOA TAC specifications on September 8, 1995.

A take of a short-tailed albatross in the IFQ sablefish fishery occurred on October 8, 1995 in the Bering Sea; NMFS was notified of the bird death on November 14 at the closure of the IFQ longline fishery. By the time USFWS confirmed the bird's identification, the groundfish TACs were reached and NMFS had closed the fisheries. The reason for the second taking was also attributed to insufficient weighting of the longlines (A. Grossman, NMFS-PRMD, memo dated February 13, 1996).

The fifth short-tailed albatross was taken September 27, 1996, in the BSAI. The 5-year old adult bird was taken in a hook-and-line fishery.

All five albatross had been banded on their Japanese breeding grounds and their bands were recovered, allowing scientists to verify identification and age.

Beginning in 1994, NMFS informed participants in the commercial fisheries of the need and possible methods for avoiding entanglement of short-tailed albatross in fishing gear as well as requested reports on sightings and encouraged compliance with MARPOL (news releases, 1 in 1994, 2 in 1995 and 3 in 1996). A direct mailing to 1740 hook-and-line fishermen in the GOA and the BSAI will occur in December, 1996, and a mailing to 10,000 IFQ permit holders will occur in February, 1997. NMFS will reinitiate consultation if allowable incidental takes of listed species are exceeded, if new information on fisheries effects on listed species becomes available, if the subject fisheries are significantly modified, including increases in TAC specifications exceeding 10 percent, or if new listings occur of species or of designations of critical habitats that may be affected by the fisheries.

The bycatch of albatrosses by the North Pacific fishing fleet could impact the population of this species. NMFS, USFWS, and the National Biological Survey are cooperating to obtain accurate information on the mortality of seabirds related to trawl, longline, and pot vessels fishing groundfish in the EEZ of the GOA and BSAI. USFWS is currently developing a population model for the short-tailed albatross which will determine the level of mortality that the species can sustain without affecting its recovery.

None of the alternatives are expected to have a significant impact on endangered or threatened species or their critical habitats. Alternative 2 is expected to minimize fishery interactions between seabirds and the hook-and-line fishery.

### **2.3 Impacts on Seabirds not Listed under the ESA**

Over 80 species of seabirds occur over waters of the EEZ off Alaska and could potentially be impacted by interactions with the GOA and BSAI groundfish fisheries. See section 1.3.3 for a detailed discussion.

#### **2.3.1 Seabird Bycatch in the Alaskan Fisheries**

The NMFS Observer Program has documented bycatch of seabird species in the GOA and BSAI groundfish fisheries (see Section 1.3.3.4) since 1989 (Table 1). In 1995, the seabird bycatch in observed samples from hook-and-line vessels in the GOA and BSAI was 351 and 4,417 birds, respectively (Tables 2 & 3), and far exceeded the seabird bycatch found in other gear types. Until statistically valid

extrapolation procedures can be developed by NMFS, it is inappropriate at this time to extrapolate from the known seabird takes in observer samples to the total fleet catch. It will be important to take time and area fishing effort, seabird take reports from outside the observer sample, and seabird distribution into consideration.

Preliminary estimates of the incidental mortality of seabirds in Alaska groundfish fisheries between 1989 and 1993 indicates that about 85 percent of the total average seabird mortality in all groundfish fisheries during this time occurred in the BSAI (Wohl et.al., 1995). This possibly reflects the higher populations or concentrations of seabirds in the Bering Sea compared with the Gulf of Alaska. Although 88 percent of the groundfish in the two regions is harvested by trawlers, about 88 percent of the total seabird mortality occurred in the hook-and-line fisheries (Wohl et.al., 1995).

### **2.3.2 Research on Effectiveness of Seabird Bycatch Avoidance**

A recent New Zealand study (Duckworth, 1995) assessed the influence that 15 monitored environmental and fishery related factors had on seabird bycatch rates, and gauged the effectiveness of various mitigation measures. Data collected by observers on vessels in the Japanese southern bluefin tuna longline fishery in New Zealand in 1989-93 was analyzed. Three factors had a major influence on seabird bycatch rates: 1) area in which gear was deployed, 2) the presence and quality of a tori line (bird streamer line), and 3) the phase of the moon for night sets.

The streamer line is one of the seabird avoidance devices that would be required under Alternative 2. Duckworth (1995) found that the quality of a streamer line, both in construction and materials used, played a major role in the streamer line's effectiveness in preventing seabirds from seizing baited hooks. In fact, the difference in bycatch rates between sets which used no streamer line and sets which used a poorly-constructed streamer line, was not significant. Sets which used a high-quality streamer line were significantly less likely to catch seabirds than sets which used a poor-quality streamer line or no streamer line at all. The purpose of the streamer line is to 'scare' birds away from the stern of the vessel when gear is deployed and baited hooks are present near or on the water's surface. A well-constructed streamer line thrashes about unpredictably, thus the seabirds do not become habituated to its movement. The key characteristics of an effective streamer line were:

- Height above the water line at which the streamer line is attached to a pole-- ideal height was 3 to 4 m above sea level;
- Length of streamer line-- ideal length was a minimum of 175 m;
- Number of streamers attached to a streamer line--3-10 pairs;
- Streamers made of a heavy, flexible material that will allow the streamers to flop unpredictably;
- Streamers should just skim above the water's surface (over the baited hooks).

When night fishing, more seabirds were caught when the moon was full or nearly full (Duckworth, 1995). This implies that the birds required light by which to see the baited hooks. One implication to the Alaskan fisheries is to minimize the use of vessel's lights when fishing at night, thereby reducing the ability of seabirds to see and dive for baited hooks. This measure would be required under Alternative 2.

Although the other measures that would be required under Alternative 2 have not been rigorously tested, strong circumstantial evidence exists to indicate these measures, or a combination of measures, would minimize the impacts of the hook-and-line fishery on seabirds (Brothers et.al., 1995; Gorman, 1996;

Lundsten, 1996; Swenson, 1996; Unknown, 1991).

NMFS, USFWS, and the Western Pacific Fishery Management Council are currently addressing a seabird bycatch problem in the longline swordfish fishery in Hawaii. The Western Pacific Council funded the translation and printing of guides to distribute to longline fishermen in the northern islands. The guide provides information on how to reduce fishery interactions with seabirds. USFWS has held education workshops to instruct fishermen how to use bycatch avoidance methods. NMFS is modifying the fisherman logbook to request data on the bycatch avoidance methods used while fishing. This will allow NMFS to address the effectiveness of the methods used. The following seabird bycatch avoidance measures are recommended for use in the longline swordfish fishery: bird streamer line, weighted hooks, bait casters, towing 'broomsticks', no discard of bait at sea, gear deployment at night, deflate swim bladders of bait, use of thawed bait, and reduced lighting at vessel's stern (pers. comm.)

#### **2.4 Impacts on Marine Mammals**

Marine mammals not listed under the ESA that may be present in the GOA and BSAI include cetaceans, [minke whale (*Balaenoptera acutorostrata*), killer whale (*Orcinus orca*), Dall's porpoise (*Phocoenoides dalli*), harbor porpoise (*Phocoena phocoena*), Pacific white-sided dolphin (*Lagenorhynchus obliquidens*), and the beaked whales (e.g., *Berardius bairdii* and *Mesoplodon spp.*)] as well as pinnipeds [northern fur seals (*Callorhinus ursinus*), and Pacific harbor seals (*Phoca vitulina*)] and the sea otter (*Enhydra lutris*).

None of the alternatives are expected to have a significant impact on marine mammals.

#### **2.5 Coastal Zone Management Act**

Implementation of any of the alternatives would be conducted in a manner consistent, to the maximum extent practicable, with the Alaska Coastal Management Program within the meaning of Section 30(c)(1) of the Coastal Zone Management Act of 1972 and its implementing regulations.

#### **2.6 Conclusions or Finding of No Significant Impact**

None of the alternatives are likely to significantly affect the quality of the human environment, and the preparation of an environmental impact statement for the proposed action is not required by Section 102(2)(C) of the National Environmental Policy Act or its implementing regulations.

### **3.0 REGULATORY IMPACT REVIEW: ECONOMIC AND SOCIOECONOMIC IMPACTS OF THE ALTERNATIVES**

This section provides information about the economic and socioeconomic impacts of the alternatives including identification of the individuals or groups that may be affected by the action, the nature of these impacts, quantification of the economic impacts if possible, and discussion of the trade offs between qualitative and quantitative benefits and costs.

The requirements for all regulatory actions specified in E.O. 12866 are summarized in the following statement from the order:

In deciding whether and how to regulate, agencies should assess all costs and benefits of available regulatory alternatives, including the alternative of not regulating. Costs and

benefits shall be understood to include both quantifiable measures (to the fullest extent that these can be usefully estimated) and qualitative measures of costs and benefits that are difficult to quantify, but nevertheless essential to consider. Further, in choosing among alternative regulatory approaches, agencies should select those approaches that maximize net benefits (including potential economic, environment, public health and safety, and other advantages; distributive impacts; and equity), unless a statute requires another regulatory approach.

This section also addresses the requirements of both E.O. 12866 and the Regulatory Flexibility Act to provide adequate information to determine whether an action is "significant" under E.O. 12866 or will result in "significant" impacts on small entities under the RFA.

E. O. 12866 requires that the Office of Management and Budget review proposed regulatory programs that are considered to be "significant". A "significant regulatory action" is one that is likely to:

- (1) Have an annual effect on the economy of \$100 million or more or adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or State, local, or tribal governments or communities;
- (2) Create a serious inconsistency or otherwise interfere with an action taken or planned by another agency;
- (3) Materially alter the budgetary impact of entitlements, grants, user fees, or loan programs or the rights and obligations of recipients thereof; or
- (4) Raise novel legal or policy issues arising out of legal mandates, the President's priorities, or the principles set forth in this Executive Order.

A regulatory program is "economically significant" if it is likely to result in the effects described above. The RIR is designed to provide information to determine whether the proposed regulation is likely to be "economically significant."

### **3.1 Identification of the Individuals or Groups that may be Affected by the Proposed Action**

The most recent description of the groundfish fishery is contained in the Draft Economic Status of the Groundfish Fisheries Off Alaska, 1995 (Kinoshita et al. 1996). The report includes information on the catch and value of the fisheries, the numbers and sizes of fishing vessels and processing plants, and other economic variables that describe or affect the performance of the fisheries. Preliminary data for 1995 indicate that in the BSAI, 100 catcher vessels and 46 catcher/processors fished with hook-and-line gear, and 1217 catcher vessels and 35 catcher/processors fished with hook-and-line gear in the GOA. Under Option 1 of Alternative 2, only the BSAI hook-and-line vessels would be directly affected. Under Option 2 of Alternative 2, both GOA and BSAI hook-and-line vessels would be directly affected.

### **3.2 Economic and Social Impacts of the Alternatives**

#### **3.2.1 Impacts of Alternative 1 - Status Quo**

The status quo alternative would not require any gear modifications, seabird avoidance devices, or

changes in fishing methods intended to reduce the incidental mortality of seabirds. Such measures would continue to be voluntary.

Under the required ESA section 7 consultation on the 1996 GOA and BSAI groundfish fisheries, the USFWS anticipates that two short-tailed albatrosses could be taken. If the annual take exceeds two, NMFS must immediately reinitiate section 7 consultation and review with USFWS the need for possible modification of the reasonable and prudent measures established to minimize take of the short-tailed albatross. It is possible that fishing operations could cease pending reinitiation of the section 7 consultation.

If the annual take of short-tailed albatross exceeded two, the actual economic impacts resulting from the modification of the reasonable and prudent measures established to minimize take of the short-tailed albatross would depend upon the revised measures. It could range from measures proposed under Alternative 2 (see below for economic impacts) to a cessation of fishing operations. The economic impact of cessation of fishing operations would depend upon the length of time of the closed period.

### **3.2.2 Impacts of Alternative 2 - Require Seabird Bycatch Avoidances Measures in the Directed Groundfish Hook-and-Line Fisheries**

The measures required of all applicable vessels under number 1 of Alternative 2 (see below) would be expected to be of minimal or no cost. Procedural or operational changes may be required in fishing operations.

- Baited hooks must sink as soon as possible after they are put in the water. This could be accomplished by the use of weighted groundlines or thawed bait.
- When fishing at night, only the minimum vessel's lights necessary for safety shall be used.
- Offal discharge must take place aft of the location on the vessel where longlines are set or hauled, or on the other side of the vessel. Distracting birds from baited hooks with bait or offal shall not be considered dumping of offal for purposes of this measure.
- Every effort shall be made to ensure that birds brought aboard alive are released alive and that wherever possible, hooks are removed without jeopardizing the life of the bird.

Under number 2, the costs would depend on which and how many of the measures were used.

2. One or more of the following measures would be employed at all times when baited hooks are being set and birds are close enough to the vessel to take baited hooks:
  - A buoy, board, stick, broom, or other like device shall be towed behind the vessel at a distance appropriate to prevent birds from taking baited hooks. Multiple devices may be employed, or;
  - A streamer line of specified construction that effectively discourages birds from settling on baits during deployment of gear, shall be towed, or;
  - Baited hooks shall be deployed under water using a lining tube designed and manufactured for such a purpose, or;
  - With the approval of the Regional Administrator, other experimental seabird avoidance devices may be substituted for those listed above.

Per vessel costs associated with number 2 measures:

Buoy or bag of buoys	\$50-\$100
Streamer line	\$200-\$250
Lining tube for underwater deployment	\$35,000

It is possible that the lining tube would only be an appropriate choice of bycatch avoidance devices by the larger vessels ( $\geq 100$  ft). Smaller vessels may find the cost of a customized lining tube to be prohibitive. In 1995, 31 and 45 catcher/processors were  $\geq 60$  ft in the GOA and BSAI, respectively and 154 and 53 catcher vessels in those respective areas were  $\geq 60$  ft (Table 5).

### 3.3 Administrative, Enforcement and Information Costs

No additional costs for administration, enforcement, or information requirements are expected under any of the alternatives.

## 4.0 INITIAL REGULATORY FLEXIBILITY ANALYSIS

The objective of the Regulatory Flexibility Act is to require consideration of the capacity of those affected by regulations to bear the direct and indirect costs of regulation. If an action will have a significant impact on a substantial number of small entities an Initial Regulatory Flexibility Analysis (IRFA) must be prepared to identify the need for the action, alternatives, potential costs and benefits of the action, the distribution of these impacts, and a determination of net benefits.

NMFS has defined all fish-harvesting or hatchery businesses that are independently owned and operated, not dominant in their field of operation, with annual receipts not in excess of \$2,000,000 as small businesses. In addition, seafood processors with 500 employees or fewer, wholesale industry members with 100 employees or fewer, not-for-profit enterprises, and government jurisdictions with a population of 50,000 or less are considered small entities. A "substantial number" of small entities would generally be 20% of the total universe of small entities affected by the regulation. A regulation would have a "significant impact" on these small entities if it reduced annual gross revenues by more than 5 percent, increased total costs of production by more than 5 percent, or resulted in compliance costs for small entities that are at least 10 percent higher than compliance costs as a percent of sales for large entities.

If an action is determined to affect a substantial number of small entities, the analysis must include:

- (1) a description and estimate of the number of small entities and total number of entities in a particular affected sector, and total number of small entities affected; and
- (2) analysis of economic impact on small entities, including direct and indirect compliance costs, burden of completing paperwork or recordkeeping requirements, effect on the competitive position of small entities, effect on the small entity's cashflow and liquidity, and ability of small entities to remain in the market.

### 4.1 Economic Impact on Small Entities

Most catcher vessels harvesting groundfish off Alaska meet the definition of a small entity under the RFA. In 1995, 1217 and 100 hook-and-line catcher vessels caught groundfish from the GOA and BSAI, respectively. Catcher/processors numbered 35 and 46 in those respective areas. No regulatory measures are called for under Alternative 1, therefore, small entities would not be economically impacted as a result

of regulatory action.

Under Alternative 2, the economic impact on small entities would depend upon the option exercised (BSAI only or BSAI and GOA) and the particular measures chosen. A vessel operator would have a choice of several measures. It is anticipated that the smaller vessels (< 60 ft) would not require the use of a lining tube (approximately \$35,000 per vessel). Hook-and-line catcher vessels  $\geq$  60 ft numbered 154 and 53 in the GOA and BSAI, respectively; the  $\geq$  60 ft catcher/processors numbered 31 and 45. The other seabird bycatch avoidance devices (buoys, bird streamer lines) ranged from \$50-\$250 per vessel.

If the annual take of short-tailed albatross exceeded two under either alternative, the actual economic impacts resulting from the modification of the reasonable and prudent measures established to minimize take of the short-tailed albatross would depend upon the revised measures. It could range from measures proposed under Alternative 2 to a cessation of fishing operations. The economic impact of cessation of fishing operations would depend upon the length of the closed period. Such economic impacts on small entities could result in a reduction in annual gross revenues by more than 5 percent and could, therefore, potentially have a significant economic impact on a substantial number of small entities.

## 5.0 SUMMARY AND CONCLUSIONS

In early November, 1996, several industry groups representing hook-and-line vessels in the Gulf of Alaska (GOA) and the Bering Sea/Aleutian Islands (BSAI) petitioned the North Pacific Fishery Management Council (Council) and the National Marine Fisheries Service (NMFS) to impose regulatory measures that are intended to reduce the incidental mortality of seabirds in their fisheries. This action was motivated by recent takes (two in 1995 and one in 1996) of the short-tailed albatross (*Diomedea albatrus*), a listed species under the Endangered Species Act (ESA). Pursuant to the ESA, the short-tailed albatross is afforded certain protections that are outlined in the section 7 consultation with the U.S. Fish & Wildlife Service (USFWS) regarding the GOA and BSAI groundfish fisheries.

Millions of birds, representing over 80 species, occur over waters of the EEZ off Alaska. The presence of "free" food in the form of offal and bait attract many birds to fishing operations. In the process of feeding, birds sometimes come into contact with fishing gear and are accidentally killed. For example, most birds taken during hook-and-line operations are attracted to the baited hooks when the gear is being set. These birds become hooked at the surface, and are then dragged underwater where they drown. The probability of a bird being caught is a function of many interrelated factors including: type of fishing operation and gear used; length of time fishing gear is at or near the surface of the water; behavior of the bird (feeding and foraging techniques); water and weather conditions (e.g. sea state); size of the bird; availability of food (including bait and offal); and physical condition of the bird (molt, migration, health). Almost any species which occurs in these waters is susceptible to interactions with fishing gear, although a few species are especially vulnerable.

The industry-proposed measures are modeled, in part, after NMFS regulations implementing conservation measures adopted by the Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR) (61 FR 8483; March 5, 1996) to reduce the incidental mortality of seabirds in the longline fisheries in Antarctic waters. Effective mitigation measures would reduce the incidental mortality of seabirds during longline fishing by minimizing the seabirds' attraction to fishing vessels and by preventing the seabirds from attempting to seize baited hooks, particularly during the period when the lines are set.



The alternatives for seabird bycatch avoidance measures are described in Sections 1 and 2 of this document.

Under the required ESA section 7 consultation on the 1996 GOA and BSAI groundfish fisheries, the USFWS anticipates that two short-tailed albatrosses could be taken. If the annual take exceeds two, NMFS must immediately reinitiate section 7 consultation and review with USFWS the need for possible modification of the reasonable and prudent measures established to minimize take of the short-tailed albatross. Fishing operations could cease pending reinitiation of the section 7 consultation.

If the annual take of short-tailed albatross exceeded two under either alternative, the actual economic impacts resulting from the modification of the reasonable and prudent measures established to minimize take of the short-tailed albatross would depend upon the revised measures. It could range from measures proposed under Alternative 2 to a cessation of fishing operations. The economic impact of cessation of fishing operations would depend upon the length of time of the closed period.

The measures required of all applicable vessels under number 1 of Alternative 2 would be expected to be of minimal or no cost. Procedural or operational changes may be required in fishing operations.

In 1995, 1217 and 100 hook-and-line catcher vessels caught groundfish from the GOA and BSAI, respectively. Catcher/processors numbered 35 and 46 in those respective areas. Under Alternative 2, the economic impact on small entities would depend upon the option exercised (BSAI only or BSAI and GOA) and the particular measures chosen. A vessel operator would have a choice of several measures. Smaller vessels (< 100 ft) may find the cost of the lining tube prohibitive (approximately \$35,000 per vessel). Hook-and-line catcher vessels  $\geq$  60 ft numbered 154 and 53 in the GOA and BSAI, respectively; the  $\geq$  60 ft catcher/processors numbered 31 and 45. The cost of the other seabird bycatch avoidance devices (buoys, bird streamer lines) ranged from \$50-\$250 per vessel.

None of the alternatives is expected to result in a "significant regulatory action" as defined in E.O. 12866.

None of the alternatives are likely to significantly affect the quality of the human environment, and the preparation of an environmental impact statement for the proposed action is not required by Section 102(2)(C) of the National Environmental Policy Act or its implementing regulations.

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## 9.0 LIST OF TABLES

- Table 1. Estimated average annual incidental mortality of seabirds in selected Alaska's commercial fisheries, 1989-1993.
- Table 2. Number of seabirds reported in observer samples in 1995 in the Gulf of Alaska.
- Table 3. Number of seabirds reported in observer samples in 1995 in the Bering Sea/Aleutian Islands.
- Table 4. Gulf of Alaska groundfish catch by species, gear, and target fishery, 1994-95 (1,000 metric tons, round weight).

## 10.0 LIST OF FIGURES

Figure 1. Approximate locations of five short-tailed albatross takes, 1983-1996. Based on lat/longs in observer reports.

Table 1. Estimated average annual incidental mortality of seabirds in selected Alaska's commercial fisheries, 1989-1993. Effort in days represent the number of days in which sampling occurred. The sampling may have been only a subset of the entire haul for a given day. The percent of catch monitored varied from year to year and only the range (minimum-maximum) is provided in the table.

FISHERY	Observer Effort (Days)	Range of % of Catch monitored	Estimated Average Annual mortality
<b>Bering Sea Groundfish</b>			
Longline (1990-1993)	15,932	64-80	7,250
Pot (1990-1993)	1,603	43-64	10
Joint Venture Trawl (1989-1990)	6,114	43-56	0
Trawl (1989-1993)	48,378	49-69	910
<b>Gulf of Alaska Groundfish</b>			
Longline (1990-1993)	3,704	13-27	1,420
Pot (1990-1993)	814	3-11	0
Trawl (1989-1993)	9,714	5-45	10
		<b>SUBTOTAL</b>	<b>9,600</b>
<b>Prince William Sound Salmon</b>			
Drift and Set Gillnet (1990-1991)	-	-	1,230
<b>Unimak Pass Salmon</b>			
Drift Gillnet (1990)	-	-	340
		<b>TOTAL</b>	<b>11,170</b>

<b>Table 2. Number of seabirds reported in observer samples in 1995 in the Gulf of Alaska.</b>		
<b>Gear Description</b>	<b>Species Name</b>	<b>Number in sample</b>
Non-pelagic trawl	Shearwater--Unidentified	1
Hook-and-line	Fulmar, Northern	115
Hook-and-line	Albatross--Unidentified	93
Hook-and-line	Albatross, Black-footed	56
Hook-and-line	Seabirds--Unidentified	28
Hook-and-line	Albatross, Laysan	22
Hook-and-line	Gull--Unidentified	20
Hook-and-line	Shearwater, Dark--Unidentified	5
Hook-and-line	Gull, Glaucous-winged	3
Hook-and-line	Shearwater, Sooty	2
Hook-and-line	Kittiwake, Black-legged	2
Hook-and-line	Gull, Herring	2
Hook-and-line	Shearwater--Unidentified	1
Hook-and-line	Shearwater, Short-tailed	1
Hook-and-line	Storm Petrel--Unidentified	1
Trawl gear	TOTAL	1
Hook-and-line	TOTAL	351
	GOA TOTAL	352
<b>Notes:</b>		
1. Number in sample are the number of birds which were actually in the observer sample (remembering that not all fish in a set are sampled).		
2. Until statistically valid extrapolation procedures are developed by NMFS, it is inappropriate to extrapolate from the known seabird takes in observer samples to the total fleet catch.		
3. It will be important to take time and area fishing effort, take reports from outside the observer sample, and seabird distribution into consideration for an extrapolation procedure.		
4. In 1995, 2 short-tailed albatrosses were reported by observers, one in the BSAI and one in the GOA hook-and-line fishery. Since they were collected outside of the observer sample, they are not reflected in this table.		

**Table 3. Number of seabirds reported in observer samples in 1995 in the Bering Sea/Aleutian Islands.**

<b>Gear Description</b>	<b>Species Name</b>	<b>Number in sample</b>
Non-pelagic trawl	Albatross--Unidentified	1
Non-pelagic trawl	Seabirds--Unidentified	1
Pelagic trawl	Fulmar, Northern	7
Pelagic trawl	Seabirds--Unidentified	3
Pelagic trawl	Alcid--Unidentified	1
Pelagic trawl	Auklet/Murrelet--Unidentified	1
Pot	Fulmar, Northern	2
Pot	Auklet/Murrelet--Unidentified	2
Pot	Shearwater, Sooty	1
Pot	Gull--Unidentified	1
Hook-and-line	Fulmar, Northern	2448
Hook-and-line	Gull--Unidentified	909
Hook-and-line	Seabirds--Unidentified	658
Hook-and-line	Albatross, Laysan	104
Hook-and-line	Tubenoses--Unidentified	83
Hook-and-line	Shearwater--Unidentified	50
Hook-and-line	Storm Petrel--Unidentified	36
Hook-and-line	Gull, Glaucous-winged	26
Hook-and-line	Albatross--Unidentified	19
Hook-and-line	Albatross, Black-footed	18
Hook-and-line	Gull, Glaucous	17
Hook-and-line	Shearwater, Sooty	16
Hook-and-line	Shearwater, Dark--Unidentified	13
Hook-and-line	Kittiwake, Black-legged	10
Hook-and-line	Gull, Herring	5
Hook-and-line	Shearwater, Short-tailed	3
Hook-and-line	Cormorant--Unidentified	1
Hook-and-line	Murre, Thick-billed	1
Trawl gear	TOTAL	14
Pot gear	TOTAL	6
Hook-and-line	TOTAL	4417
	1995 BSAI TOTAL	4437
<b>Notes:</b>		
1. Number in sample are the number of birds which were actually in the observer sample (remembering that not all fish in a set are sampled).		
2. Until statistically valid extrapolation procedures are developed by NMFS, it is inappropriate to extrapolate from the known seabird takes in observer samples to the total fleet catch.		
3. It will be important to take time and area fishing effort, take reports from outside the observer sample, and seabird distribution into consideration for an extrapolation procedure.		
4. In 1995, 2 short-tailed albatrosses were reported by observers, one in the BSAI and one in the GOA hook-and-line fishery. Since they were collected outside of the observer sample, they are not reflected in this table.		

Table 4.--Gulf of Alaska groundfish catch by species, gear, and target fishery, 1994-95 (1,000 metric tons, round weight).

Year/Gear/Target	Species											Total
	Pollock	Sable fish	Pacific cod	Arrow tooth	Flathd. sole	Rex sole	Flat deep	Flat shallow	Rock fish	Atka mack.	Other	
1994												
Hook and line												
Sablefish	.0	20.1	.3	.8	.0	-	.0	.0	1.6	-	.4	23.2
Pacific cod	.0	.0	6.6	.0	.0	-	.0	.0	.1	.0	.2	6.9
Rockfish	.0	.0	.1	.0	-	-	.0	-	.9	-	.0	1.0
Total	.0	20.1	6.9	.9	.0	.0	.0	.0	2.6	.0	.6	31.1
1995												
Hook and line												
Sablefish	.0	18.5	.3	1.0	.0	-	.1	.0	1.3	-	.4	21.5
Pacific cod	.1	.0	10.8	.6	.0	.0	.0	.0	.1	.0	.7	12.3
Flat deep	-	.0	-	.0	-	-	.1	-	.0	-	.0	.1
Rockfish	-	.0	.0	.0	-	-	.0	-	.8	-	.0	.8
Total	.1	18.6	11.1	1.6	.0	.0	.1	.0	2.1	.0	1.1	34.8

Bering Sea and Aleutian Islands groundfish catch by species, gear, and target fishery, 1994-95 (1,000 metric tons, round weight).

Year/Gear/Target	Species												Total
	Pollock	Sable fish	Pacific cod	Arrow tooth	Flathd. sole	Rock sole	Turbot	Yellow fin	Flat other	Rock fish	Atka mack.	Other	
1994													
Hook and line													
Sablefish	.0	1.6	.0	.2	.0	.0	2.3	.0	.0	.3	.0	.1	4.5
Pacific cod	2.8	.1	86.2	1.5	.1	.0	.3	.2	.2	.2	.1	10.5	102.0
Turbot	.0	.1	.1	.1	-	.0	1.2	-	.0	.0	.0	.1	1.6
Total	2.8	1.9	86.3	1.8	.1	.0	3.8	.2	.2	.5	.1	10.7	108.3
1995													
Hook and line													
Sablefish	.0	1.3	1.3	.3	.0	.0	1.7	-	.0	.2	.0	.3	5.2
Pacific cod	3.1	.0	102.1	1.8	.3	.0	.3	.1	.0	.1	.1	10.7	118.5
Turbot	.0	.2	.1	.2	.0	.0	2.2	-	.0	.0	.0	.4	3.2
Rockfish	.0	.0	.0	.0	-	-	.0	-	.0	.1	-	.0	.1
Total	3.1	1.6	103.5	2.2	.3	.0	4.2	.1	.0	.4	.1	11.5	127.1

Notes: Totals may include additional categories. The target, calculated by AFSC staff, is based on processor, week, processing mode, NMFS area, and gear.

Source: Blend estimates, National Marine Fisheries Service, 7600 Sand Point Way N.E., BIN C15700, Seattle, WA 98115-0070.

(This table extracted from Tables 6&7 of "Draft Economic Status of the Groundfish Fisheries off Alaska, 1995" in the Preliminary SAFE Report for the Groundfish Resources of the BSAI Regions as Projected for 1997, prepared September 1996.)



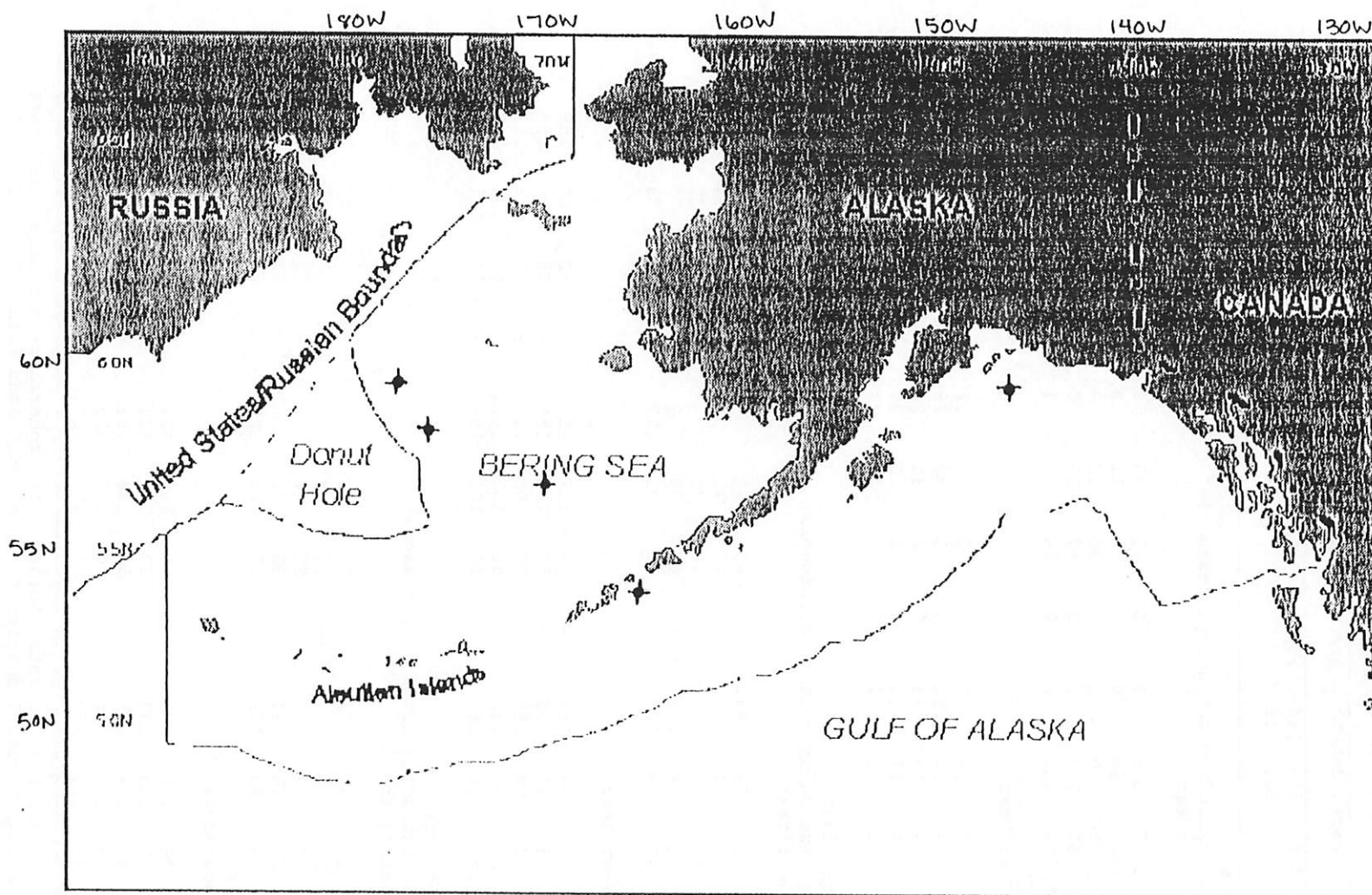
Table 5.--Numbers, mean length, and mean registered tons of vessels that caught groundfish off Alaska by area, vessel length class (feet), catcher type, and gear, 1992-96.

	Gulf of Alaska				Bering Sea and Aleutian				All Alaska			
	Vessel length class				Vessel length class				Vessel length class			
	<60	60-124	125-230	>230	<60	60-124	125-230	>230	<60	60-124	125-230	>230
Number of vessels												
Catcher vessels (excluding catcher-processors)												
Catcher type/Gear/Year												
Hook and line												
1992	1517	175	3	0	63	41	0	0	1527	182	3	0
1993	1285	136	0	0	35	21	0	0	1292	142	0	0
1994	1335	180	0	0	30	23	0	0	1339	184	0	0
1995	1063	153	1	0	47	53	0	0	1072	157	1	0
Jan-Jun1996	743	110	2	0	14	34	1	0	743	111	3	0
Catcher-processors												
Catcher type/Gear/Year												
Hook and line												
1992	3	24	19	0	0	27	32	0	3	29	34	0
1993	4	27	23	0	1	30	29	0	4	31	29	0
1994	3	29	20	0	2	31	24	0	3	33	24	0
1995	4	17	14	0	1	21	24	0	4	22	24	0
Jan-Jun1996	3	13	9	0	1	18	23	0	3	19	23	0
Mean vessel length (feet)												
Catcher vessels (excluding catcher-processors)												
Catcher type/Gear/Year												
Hook and line												
1992	40	75	163	-	42	71	-	-	40	76	163	-
1993	40	74	-	-	47	71	-	-	40	74	-	-
1994	41	75	-	-	48	70	-	-	41	75	-	-
1995	41	74	135	-	49	70	-	-	41	75	135	-
Jan-Jun1996	43	73	128	-	51	71	127	-	43	73	127	-
Catcher-processors												
Catcher type/Gear/Year												
Hook and line												
1992	52	98	154	-	-	102	157	-	52	100	159	-
1993	55	99	155	-	57	101	158	-	55	100	158	-
1994	54	98	155	-	57	98	162	-	54	96	162	-
1995	53	97	152	-	56	102	160	-	53	102	160	-
Jan-Jun1996	54	96	146	-	58	102	158	-	54	101	158	-
Mean registered net tons												
Catcher vessels (excluding catcher-processors)												
Catcher type/Gear/Year												
Hook and line												
1992	21	81	272	-	26	62	-	-	21	82	272	-
1993	21	80	-	-	30	63	-	-	21	80	-	-
1994	22	82	-	-	28	62	-	-	22	82	-	-
1995	22	78	134	-	33	66	-	-	22	79	134	-
Jan-Jun1996	28	69	162	-	33	65	120	-	28	70	148	-
Catcher-processors												
Catcher type/Gear/Year												
Hook and line												
1992	39	142	397	-	-	169	421	-	39	164	433	-
1993	47	143	393	-	63	157	421	-	47	154	421	-
1994	48	144	415	-	57	138	461	-	48	134	461	-
1995	33	116	445	-	30	147	429	-	33	146	429	-
Jan-Jun1996	40	120	381	-	52	152	407	-	40	149	407	-

Source: Blend estimates, fish tickets, Norpac data, federal permit file, CFEC vessel data, National Marine Fisheries Service, 7600 Sand Point Way N.E., BIN C15700, Seattle, WA, 98115-0070.

(This table extracted from Table 25 of "Draft Economic Status of the Groundfish Fisheries off Alaska, 1995" in the Preliminary SAFE Report for the Groundfish Resources of the BSAI Regions as projected for 1997, prepared September 1996.)

Figure 1. Approximate locations of five short-tailed albatross takes, 1983-1996. Based on lat/longs in observer reports.



Exclusive Economic Zone off Alaska



UNITED STATES DEPARTMENT  
National Oceanic and Atmospheric Administration  
National Marine Fisheries Service  
P.O. Box 21668  
Juneau, Alaska 99802-1668

AGENDA C-1  
DECEMBER 1996  
Supplemental

November 27, 1996

Dear Hook-and-Line Fisherman:

In continuing efforts to provide information to the commercial fishing industry regarding potential seabird bycatch, please find enclosed several items which may help you in your efforts to avoid fishery interactions with the endangered short-tailed albatross and other seabird species in Alaskan waters. The North Pacific Fishery Management Council will be addressing this issue and considering possible emergency actions to protect the short-tailed albatross at their meeting in Anchorage, December 9-15, 1996.

The short-tailed albatross is a listed species protected under the Endangered Species Act. Both you, and the seabirds, will benefit from actions you take to avoid entangling seabirds in fishing gear. The presence of "free" food in the form of offal and bait attract many birds to fishing operations. In the process of feeding, birds sometimes come into contact with fishing gear and are accidentally killed. For example, most birds taken during hook-and-line operations are attracted to the baited hooks when the gear is being set. These birds become hooked at the surface, and are then dragged underwater where they drown.

Efforts you make to minimize the seabirds' attraction to fishing vessels and to prevent the seabirds from attempting to seize baited hooks, particularly during the period when the lines are set, should help. The enclosed material offers suggestions on how you can do this.

We appreciate your help. For further information, contact Andrew Grossman, NMFS, at 907-586-7358 or your local fishing association.

Sincerely,

Steven Pennoyer  
Administrator, Alaska Region

enclosures



## **WHAT YOU CAN DO TO AVOID SEABIRD BYCATCH**

- Baited hooks should sink as soon as possible after they are put in the water. This could be accomplished by using:
  - well-weighted groundlines and/or
  - thawed bait
- When fishing at night, only the minimum vessel's lights necessary for safety should be used.
- Offal discharge should take place aft of the location on the vessel where longlines are set or hauled, or on the other side of the vessel.
- Every effort should be made to ensure that birds brought aboard alive are released alive and that wherever possible, hooks are removed without jeopardizing the life of the bird.

One or more of the following measures should be employed at all times when baited hooks are being set and birds are close enough to the vessel to take baited hooks:

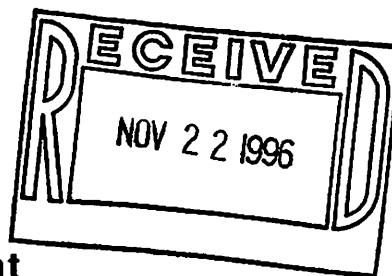
- A buoy, board, stick, broom, or other like device should be towed behind the vessel at a distance appropriate to prevent birds from taking baited hooks. Multiple devices may be employed, or;
- A streamer line of specified construction that effectively discourages birds from settling on baits during deployment of gear, should be towed. Streamer lines known to be effective meet the following criteria:
  - the streamer line, attached to a pole off the stern, should be 4-5 m above the water's surface
  - minimum length of 150-175 m
  - 3 to 10 pairs of streamers made of a heavy, flexible material that will allow the streamers to flop unpredictably
  - streamers should just skim above the water's surface (over the baited hooks) on a calm day, or;
- Baited hooks should be deployed under water using a lining tube designed and manufactured for such a purpose.

**SHORT-TAILED ALBATROSS:** This bird is extremely endangered with a world population of less than 800 individuals. The current allowable take level in BSAI & GOA fisheries is two. If more than two of these birds are taken, it is possible that under the Endangered Species Act, NMFS would close the fisheries for the year.

**DESCRIPTION:** This species has a wingspan of 6-7 feet. Adults are white-bodied, including white back and inner half of the wings; the outer wing is dark. Juvenile short-tailed albatrosses are more uniformly dark, but all have a distinctive heavy pink bill.

NMFS requests that short-tailed albatross sightings be reported to the U.S. Fish and Wildlife Service at 1-800-272-4174. For more information, contact Andrew Grossman, NMFS, 907-586-7358.

November 19, 1996



Attention: Mr. Chris Oliver  
North Pacific Fisheries Management  
605 W. 4th Ave, Suite 306  
Anchorage, AK 99501

Dear Mr. Oliver,

I am but a small voice from a small town in Alaska, but I am concerned about my environment and the management of the marine ecosystem. Yesterday the Anchorage Daily News ran a story on the disastrous effects of longline gear on the marine environment. The article related how lines used in Alaska extend up to 7 miles, but other nations use lines up to 80 miles long. The longline fishery is too efficient for the targeted fish populations: the fishery is aided by sophisticated modern technology such as automated equipment, satellite tracking, sonar, radar, and faxed weather reports. This has led to severe declines in fish populations such as the Atlantic Swordfish. Other species targeted are halibut, tuna, shark, black cod and Pacific cod. Apparently any pelagic fish caught commercially is likely to have been caught with a longline.

The longlines are also inadvertently killing seabirds, among them the Wandering Albatross whose population is in a steady decline. The baited hooks attract the feeding birds, and do not sink fast enough to prevent them and other seabirds from drowning in the gear.

The process of banning drift nets took years too long; the destruction continues from the miles of ghost nets floating loose in the sea. I am alarmed that these longlines are allowed to actively and legally continue the massive destruction of marine life.

I urge your organization to stop this destruction of the marine ecosystem. Require vessels world-wide to use longline equipment and methods that will not deplete our fisheries and damage the marine environment. These could include incentives for fishermen not to catch unwanted birds in the first place, limits on the number of vessels allowed to fish, reductions on catch quotas per boat, limits on gear length, requirements for biodegradable lines and hooks, use of less efficient methods of catching fish, and strict adherence to fishing techniques that absolutely avoid catching seabirds.

I would appreciate your direction of my concerns to any other organizations that could help be effective in this endeavor.

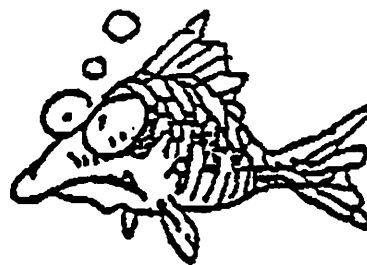
Thank you for your time.

Sincerely,

Carol Griswold P.O. Box 1342 Seward, AK 99664

*Carol Griswold*

**North  
Pacific  
Longline  
Association**



Agenda C-1

December 3, 1996

Mr. Richard B. Lauber, Chairman  
North Pacific Fishery Management Council  
605 West 4th Avenue  
Anchorage, AK

**RE: Bird Avoidance Regs, Amendment Proposals, Assumed  
Halibut Mortality Rates**

Dear Rick:

I am writing to thank you for your positive statement to Brad Matsen regarding the bird avoidance effort (printed in the current **National Fisherman**), to set out our reduced request for plan amendments to facilitate management of the BSAI fixed gear cod fishery, and to touch on assumed halibut mortality rates.

Bird Avoidance Regulations (C-1)

Enclosed please find the January issue of **National Fisherman**. The cover story (page 20) and **Pacific Coast Watch** (page 5) relate to seabirds. We have not sought press coverage on this issue - it has come to us through the efforts of certain environmentalists. In responding to press inquiries I have stressed that the Council and NMFS have for some time been concerned about seabirds, and that seabird protection was a consideration in BSAI Amendment 21a (Pribilof Islands trawl closure). I have stated that the bird avoidance program is a team effort involving the Council, NMFS, and the Fish and Wildlife Service. In an NPR interview I went so far as to mention yourself, Steve Pennoyer, and key staffers as helping with the effort. This sort of information does not seem to have a lot of appeal for the press.

Also enclosed is an excellent book on seabird avoidance by Nigel Brothers of the Tasmanian Parks and Wildlife Service. These folks are well ahead of us, and the book is a good read. They seem to have a well-honed if unPC concept of "birds," as well (pp. 30, 48). The fleet should get it.

If any of the Council members would like additional background on how our proposed DRAFT regs were developed, I will be in the office all week (except Thursday morning). I am hopeful that the Council will recommend their adoption more or less verbatim, since industry has worked them over heavily (NMFS

must of course have some latitude in drafting final regs). It would appear that a regulatory amendment can be in place just as fast as an emergency rule, and since such an amendment is permanent I believe that this would be our best approach.

**National Audubon Society**  
Scully Science Center  
306 South Bay Ave.  
Islip, NY 11751  
ph: (516) 277-4289  
fax: (516) 581-5268



National Audubon Society

Nov. 18, 1996

Thorn Smith  
North Pacific Longline Assn.  
Seattle, WA

Dear Thorn,

I've recently received some info on North Pacific Longline Assn.'s position on bird bycatch, specifically your response to IUCN's seabird resolution, and your October press release titled "Longliners Request Regulation on Seabird Interaction."

This press release says that you are asking the fishery management council for regulations that will minimize seabird mortality on longliners.

All I can say is, if everyone had your organization's attitude and approach, we'd eliminate 90% of our problems, we could all work together instead of fighting over things, and conservation groups would have little to do except teach kids to appreciate nature and tie fishing knots.

What a blast of fresh air. Thank you.

Sincerely,

Carl Safina, PhD  
Director



Steve Fish F/V Kariel  
P.O. Box 6448 Sitka, Alaska 99835

Richard Lauber, Chairman  
North Pacific Fisheries Management Council



Dear Rick,

I would like to comment on the proposed seabird bycatch avoidance regulations submitted by the North Pacific Longline Association and up for consideration at the December council meeting.

I'll address the merits of the proposed regulations only by saying that I feel that the measures required will go a long way toward minimizing seabird interaction in general and mortality especially. The proposed measures have been proven effective in fisheries elsewhere, and would be a good starting platform to get our incidental seabird takes down and avoid hitting the endangered species trigger with the short-tailed albatross.

I can think of three points which need to be stressed.

First is that we need to leave room for and encourage innovation in developing other methods of avoidance and in adapting the currently approved methods to different setting systems. Several other ideas have been suggested and need some experimentation and research. We can always enlarge our options "menu" in the reg's later, but it would be nice to have some flexibility in the language if possible.

Second; fishermen need to know that these reg's are enforceable and that they are accountable as individuals to the success of the reg's.

Third; we need the regulations at the beginning of 1997, not next summer. Without aggressive action, longliners could be tied up by summer because of catching a short-tailed albatross too many. I know that NMFS already has a full plate, but they need to be prevailed upon to fast-track these reg's because of the very real potential of huge forgone catches in the longline fisheries and unnecessary seabird mortality.

With the proposed regulations longliners are trying to solve our own problems. And with the cooperation of the council, NMFS, and the longline fleet we will be able to keep fishing and leave more hungry and frustrated but alive birds in our wakes.

Thank You for your consideration.

Sincerely,

Steve Fish

cc Steve Penoyer

## PROPOSED MEASURES TO REDUCE SEABIRD BYCATCH IN HOOK-AND-LINE FISHERIES

(Revised December 12, 1996)

**Alternative 1:** Status quo, no action. Any gear modifications, seabird avoidance devices, or changes in fishing methods intended to reduce the incidental mortality of seabirds would continue to be voluntary.

**Alternative 2:** Gear modifications, seabird avoidance devices, or changes in fishing methods designed to reduce the incidental mortality of seabirds would be required in regulation. Required measures would include the following:

1. All hook-and-line fishing operations would be conducted in the following manner:
  - Baited hooks must sink as soon as possible after they are put in the water. This could be accomplished by the use of weighted groundlines or thawed bait.
  - **The dumping of offal shall be avoided to the extent practicable while gear is being set or hauled; if discharge of offal is unavoidable, the discharge must take place aft of the hauling station or on the opposite side of the vessel to that where gear is set or hauled.**
  - Every effort shall be made to ensure that birds brought aboard alive are released alive and that wherever possible, hooks are removed without jeopardizing the life of the bird.
  
2. One or more of the following measures would be employed at all times when baited hooks are being set ~~and birds are close enough to the vessel to take baited hooks.~~
  - A buoy, board, stick, broom, or other like device shall be towed behind the vessel at a distance appropriate to prevent birds from taking baited hooks. Multiple devices may be employed, or;
  - A streamer line designed to effectively discourages birds from settling on baits during deployment of gear, shall be towed, or;
  - **Gear shall be set only at night (between the times of nautical twilight). ~~During fishing at night, only the minimum vessel's lights necessary for safety shall be used.~~ When fishing at night, only the minimum vessel's lights necessary for safety shall be used;** or (moved from #1 above and expanded; identical to the CCAMLR regulation)
  - Baited hooks shall be deployed under water using a lining tube designed and manufactured for such a purpose, or;
  - With the approval of the Regional Administrator, other experimental seabird avoidance devices may be substituted for those listed above.

The required measures to reduce the incidental mortality of seabirds would be applicable to vessels using hook-and-line gear in:

Option 1: BSAI directed groundfish fisheries.

Option 2: both the GOA and BSAI directed groundfish fisheries.

Option 3: both the GOA and BSAI directed groundfish fisheries and the halibut fishery. Rulemaking to require seabird avoidance measures would be initiated separately for the groundfish fisheries and the halibut fishery to provide the IPHC opportunity to review the proposed measures.

NMFS

December 1996  
Council Agenda item C-1

## SEABIRD BYCATCH AVOIDANCE

- ◆ Recent takes of the endangered short-tailed albatross (*Diomedea albatrus*) (two in 1995 and one in 1996) in hook-and-line fisheries in the BSAI and the GOA highlight a seabird bycatch problem.
- ◆ Under the required Endangered Species Act (ESA) section 7 consultation on the 1996 GOA and BSAI groundfish fisheries, the U.S. Fish & Wildlife Service (USFWS) anticipates that two short-tailed albatrosses could be taken.
- ◆ If the annual take exceeds two, NMFS must immediately reinstate section 7 consultation and review with USFWS the need for possible modification of the reasonable and prudent measures established to minimize take of the short-tailed albatross.
- ◆ Fishing operations must cease pending reinstatement of the section 7 consultation.
- ◆ The impact of the actual short-tailed albatross takes on the world population (estimated at ~750 birds) is not known at this time.
- ◆ Besides short-tailed albatrosses, other seabirds are bycaught in the hook-and-line Alaskan groundfish fisheries.

### Fisheries and Areas Involved

Preliminary estimates of incidental mortality of seabirds in Alaskan groundfish fisheries between 1989 and 1993 indicates:

- ◆ 85% of seabird mortality occurs in the BSAI
- ◆ 88% of seabird mortality occurs in the hook-and-line fisheries

## ALTERNATIVES TO ADDRESS SEABIRD BYCATCH PROBLEM IN ALASKA

Alternative 1: Status quo, no action. Any measures intended to reduce the incidental mortality of seabirds would continue to be voluntary.

Alternative 2: Measures designed to reduce the incidental mortality of seabirds would be required in regulation.

Effective measures reduce incidental mortality of seabirds by:

- a) minimizing the seabirds' attraction to fishing vessels
- b) preventing seabirds from attempting to seize baited hooks

Required measures would include the following:

1. All hook-and-line fishing operations would be conducted in the following manner:
  - Baited hooks must sink as soon as possible --> weighted groundlines or thawed bait
  - Reduce vessel's lights at night
  - Offal discharge--> aft of where longlines set or hauled, or on the other side of the vessel
  - Birds brought aboard alive are released alive; hooks are removed without jeopardizing the life of the bird.
2. One or more of the following measures would be employed at all times when baited hooks are being set and birds are close enough to the vessel to take baited hooks:
  - Device towed behind the vessel at a distance appropriate to prevent birds from taking baited hooks,
  - A streamer line that effectively discourages birds from settling on baits during deployment of gear shall be towed, or;
  - Baited hooks shall be deployed under water, or;
  - With the approval of the Regional Administrator, other experimental seabird avoidance devices may be substituted for those listed above.

Option 1: The required measures only in hook-and-line gear in BSAI directed groundfish fisheries.

Option 2: The required measures in both the GOA and BSAI directed hook-and-line groundfish fisheries.

## WHAT YOU CAN DO TO AVOID SEABIRD BYCATCH

- Baited hooks should sink as soon as possible after they are put in the water. This could be accomplished by using:
  - well-weighted groundlines and/or
  - thawed bait
- When fishing at night, only the minimum vessel's lights necessary for safety should be used.
- Offal discharge should take place aft of the location on the vessel where longlines are set or hauled, or on the other side of the vessel.
- Every effort should be made to ensure that birds brought aboard alive are released alive and that wherever possible, hooks are removed without jeopardizing the life of the bird.

One or more of the following measures should be employed at all times when baited hooks are being set and birds are close enough to the vessel to take baited hooks:

- A buoy, board, stick, broom, or other like device should be towed behind the vessel at a distance appropriate to prevent birds from taking baited hooks. Multiple devices may be employed, or;
- A streamer line of specified construction that effectively discourages birds from settling on baits during deployment of gear, should be towed. Streamer lines known to be effective meet the following criteria:
  - the streamer line, attached to a pole off the stern, should be 4-5 m above the water's surface
  - minimum length of 150-175 m
  - 3 to 10 pairs of streamers made of a heavy, flexible material that will allow the streamers to flop unpredictably
  - streamers should just skim above the water's surface (over the baited hooks) on a calm day, or;
- Baited hooks should be deployed under water using a lining tube designed and manufactured for such a purpose.

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DESCRIPTION: This species has a wingspan of 6-7 feet. Adults are white-bodied, including white back and inner half of the wings; the outer wing is dark. Juvenile short-tailed albatrosses are more uniformly dark, but all have a distinctive heavy pink bill.

(THIS INFORMATION WAS PROVIDED TO 1740 H&L FISHERMEN, DEC. 1996)

EFFORTS TO REDUCE SEABIRD BYCATCH AROUND THE WORLD

Where	Year	Longline Fishery	Mitigation Methods&Devices (required (R) or voluntary (V))										Role of Observers		
	Problem 1st Noted		Education	Tori lines	Night-setting	Reduce night lights	Weighted hooks	Thawed bait	Bait-caster	Lining tube	Deflate bait	Offal discard		Haul back	
New Zealand	1987	tuna, ling, snapper	X	R	V		V	V	V						seabird data, m.methods data, gear set data (5% observer coverage)
Australia	1988/89	tuna	X	R				V	V						seabird data, educate fishermen, was tori line deployed & did it meet specs(0% obs. cov. in domestic, ~20% obs. cov. in foreign)
Antarctica United States	198?	Patagonia toothfish	X	R	R	R	X	R					R		collect biol. data, monitor compliance (obs. cov.--low)
Hawaii	199?	swordfish	X	V	V	V	V	V	V		V	V	V		seabird data, collect data on effectiveness of devices (5% obs. cov.)
Alaska	1993	Pacific cod, sablefish, halibut	X	V	V	V	V	V		V	V	V			seabird data (sightings of sensitive spp., bird/vessel interactions, gear-related mortality, use of deterrent devices, bird band information) (0% <60'; 30% 60-124'; 100% >124' obs. cov.)

# National Fisherman

JANUARY 1997 • VOLUME 77, NO. 9

## IN THIS ISSUE



**20 Cover story: For the birds**  
North Pacific longliners fight to protect an endangered albatross

### PACIFIC COAST WATCH

## Responsible predators

**By Brad Matsen**  
Pacific Editor

Clearly, conflicts exist between the commercial fishing fleets and animals that may be headed for extinction. It is equally apparent, however, that the men and women of the fleets take conservation of the marine ecosystem to heart.

As the new year begins, Steller sea lions continue their precipitous decline off Alaska; in the watersheds of California, coho salmon seem bound for extinction; and on the offshore grounds of the North Pacific, the short-tailed albatross struggles with long odds against its survival.

In none of these cases are contemporary fishermen to blame. In all of the cases, however, fishermen are the most likely targets for blame by environmental extremists who need scapegoats.

Fishermen are, in fact, doing more than anybody else to help. Sea lion populations began their decline in the 1960s, for reasons that the best available science still says are uncertain. Maybe hammering the herring in the early part of the century is to blame; maybe the herd is simply adjusting to a warming ocean trend or suffering increased predation by protected populations of killer whales.

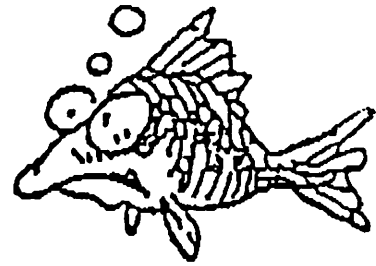
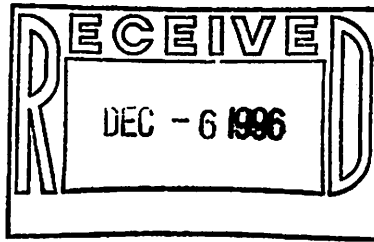
Whatever is happening to the sea lions, commercial fishermen have been doing their best to save them for the past decade. The fleets contributed cash to study them, conducted a major campaign to teach skippers to avoid them and have submitted honorably to time and area restrictions to protect their nursery islands.

Coho salmon, once a mainstay of the fishery in California and Oregon, have been trashed by coastal development and upland abuse by ranchers, farmers and the timber industry. Still, commercial fishermen have been sharply restricted to protect the few coho that are left, while the inland watershed destruction continues. And when the National Marine Fisheries Service was considering protecting the coho under the Endangered Species Act, fishermen were the extremists, urging the most severe listing under the act.

Finally, the longline fleets of the Bering Sea and Gulf of Alaska have performed a tour de force of environmental stewardship that, unfortunately, is likely to go unapplauded in the national media. To protect the extremely rare, endangered short-tailed albatross, the longliners have gone to the North Pacific Council and asked to be more closely regulated. In all likelihood, every one of the 4,000 or so boats that fish longline gear will have to deploy one of several bird-avoidance devices or be subject to sanctions for fishing illegally.

No fisherman welcomes a new and cumbersome piece of gear on his already crowded deck, but he will go to work from now on with bird bags,tori lines or lining pipes. Because fishermen really are responsible predators in the marine food web, we are environmentalists where it matters most — on the grounds.

North  
Pacific  
Longline  
Association



December 6, 1996

RECEIVED AFTER  
COMMENT DEADLINE

Mr. Steve Pennoyer, Director  
Regional Director  
National Marine Fisheries Service  
Juneau, AK

RE: Bird Mailing

Dear Steve:

I am writing to thank you for the "bird mailing" that your office sent out to all federally licensed longliners on November 27.

Most of the bird avoidance measures suggested in your memo are simple, but the tori lines and careful release of birds are new - it is great to get the information out. I am also glad to see the order form for Longline Fishing, Dollars and Sense in the package. The book is excellent. I am trying to raise some money so we can buy some and distribute them through the fleet.

Again I want to thank you and to compliment your staff, which has been most helpful in pursuing the bird issue. Kim Rivera and Andy Grossman have been particularly attentive. You and Ron can be proud of their work.

Sincerely,

Thorn Smith

cc: Rollie Schmitten  
Rick Lauber  
Jim Balsiger  
Ron Berg  
Kim Rivera  
Andy Grossman



# National Fisherman

JANUARY 1997 • VOLUME 77, NO. 9

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THE BIRDS  
IS HERE,  
DON'T  
CATCH 'EM!



NPLA

4209 21st Ave. W. #300  
Seattle, Washington 98199

**DRAFT PROPOSED LONGLINING REGULATIONS to appear at 50 CFR PART 679 -- GROUND FISH OF THE GULF OF ALASKA (GOA) and GROUND FISH OF THE BERING SEA AND ALEUTIAN ISLANDS AREA (BSAI):**

**Section \_\_\_\_ Gear Restrictions**

(a) Longline fishing or longline fishing research in the (GOA/BSAI) shall be conducted as follows:

(1) Fishing operations shall be conducted in such a way that the baited hooks sink as soon as possible after they are put in the water;

(2) During longline fishing at night only the minimum ship's lights necessary for safety shall be used;

(3) Offal discharge shall take place aft of the location on the vessel where longlines are hauled, or on the other side of the vessel. Distracting birds from baited hooks with bait or offal shall not be considered dumping of offal for purposes of this subsection; and

(4) Every effort shall be made to ensure that birds brought aboard alive during longlining are released alive and that wherever possible hooks are removed without jeopardizing the life of the bird concerned.

(b) One or more of the following procedures shall be employed at all times when baited hooks are being set and birds are close enough to the vessel to take baited hooks:

(1) A buoy shall be towed behind the vessel at a distance appropriate to prevent birds from taking baited hooks. Multiple buoys may be employed, or;

(2) A board, stick, broom or other device shall be towed behind the vessel at a distance appropriate to prevent birds from taking baited hooks. Multiple boards, sticks, or other devices may be employed, or;

(3) A streamer line or lines designed to discourage birds from settling on baits during deployment of longlines shall be towed. Suggested specification of the streamer line(s) is given in Figure \_\_\_\_ to Part \_\_\_\_ . Details of the construction relating to the number and placement of swivels, length of the streamer line, and height of attachment to vessel may be varied so long as streamers are above all baited hooks on the surface. Details of the device dragged in the water in order to create tension in the line may also be varied.

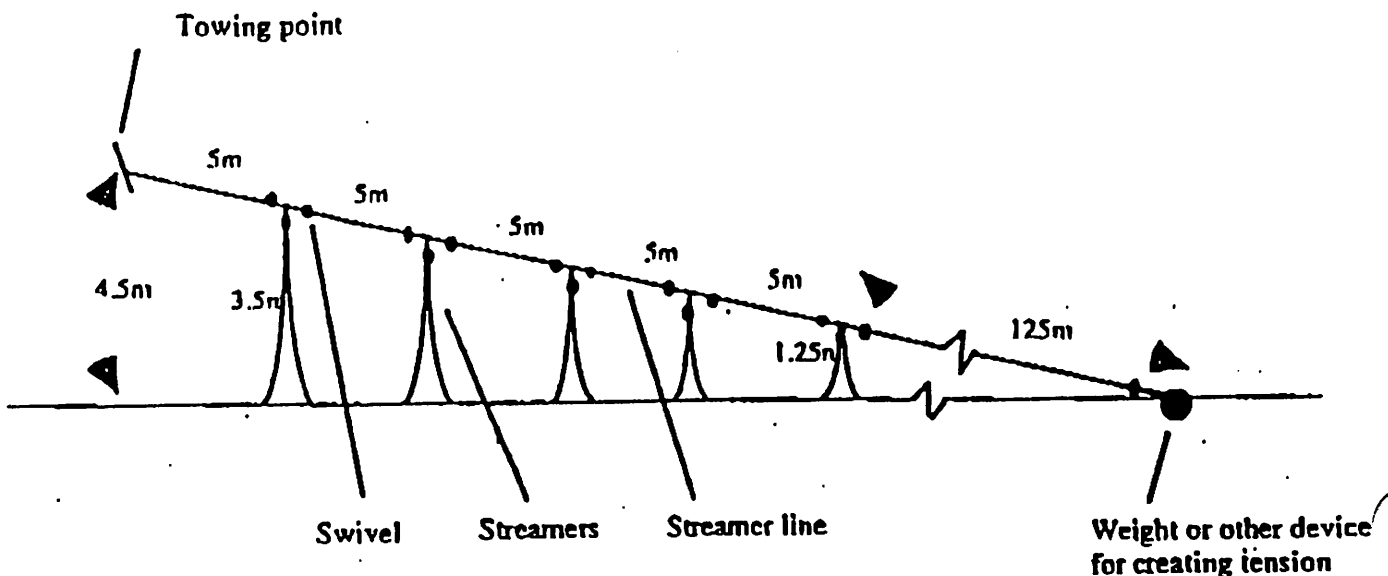
(i) The streamer line is to be suspended from the stern at an adequate height such that the line is above the point where the baits hit the water. This may require mounting on a pole.

(ii) The streamer line is to be approximately 3 mm in diameter, have a minimum length of 150 m and have a device at the end to create tension so that the main line streams directly behind the ship even in cross winds. These specifications may be varied to suit the needs of individual vessels.

(iii) At 5 m intervals commencing from the point of attachment to the vessel five branch streamers, each comprising two strands of approximately 3 mm cord should be attached. The length of the streamers should range between approximately 3.5 m nearest the vessel, to approximately 1.25 m for the fifth streamer. The streamer cords should be covered with red polyurethane tubing (inside diameter 5 mm). When the streamer line is deployed the branch streamers should reach the sea surface and periodically dip into it as the ship heaves. Swivels should be placed in the streamer line at the towing point, before and after each point of attachment of each branch streamer, and immediately before any weight placed at the end of the streamer line. Each branch streamer should have a swivel at its attachment to the streamer line. These specifications may be varied to meet the needs of individual vessels, or;

(4) Baited hooks shall be deployed under water through a lining tube at a depth sufficient to prevent birds from taking baits.

(c) With the approval of the Director, NMFS Alaska Region, other experimental bird avoidance techniques may be substituted for those listed at (b) above.





National Audubon Society



National Audubon Society  
Scully Science Center  
306 South Bay Ave.  
Islip, NY 11751  
ph: (516) 277-4289  
fax: (516) 581-5268

Agenda C-1

Nov. 18, 1996

Thorn Smith  
North Pacific Longline Assn.  
Seattle, WA

Dear Thorn,

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What a blast of fresh air. Thank you.

Sincerely,

Carl Safina, PhD  
Director



# Not-so-ancient mariners killing albatross with cruel, inefficient fishing methods

By CHARLES F. WURSTER

*With his cruel bow he laid full low  
The harmless Albatross*

— Samuel Taylor Coleridge

In Coleridge's poem "The Rime of the Ancient Mariner," the albatross was guardian of the sea and the seamen, and when this great bird was killed, the sailors were thereby doomed.

The Ancient Mariner killed only one albatross. Today they are dying by the tens of thousands, hooked and drowned on tuna, swordfish and groundfish line that are up to 80 miles long. These longlines carry thousands of baited hooks, and albatrosses, petrels and shearwaters go after the bait behind the boats before the hooks sink out of sight. About 180,000 of these oceanic birds of nearly 30 species are lost each year in longline fisheries operations worldwide.

The bird in the poem was probably a wandering albatross. Its wingspan of at least 100 feet is the greatest for any

bird, and using wind energy it can glide over many thousands of miles of ocean in a month. These birds can live as long as humans, and they mate for life. They begin reproducing when they are 10 years old and raise a single chick every other year. But when a breeding adult is lost at sea, its chick starves to death because the other parent cannot raise it alone, and two more years are lost while the widowed bird finds a new mate.

Most of us will never see an albatross. They are not found in zoos or aquariums. The 14 species of albatross and 61 shearwaters and petrels spend their lives at sea far from land, feeding and resting on the water and visiting oceanic islands only to breed. But if a huge and magnificent white bird with black trailing wing edges and a pink bill guides close by your ship almost touching the waves, you'll remember that you saw a wandering albatross.

These great oceanic birds are a visible signal of the health of the oceans, and many are in decline. World population of the wandering albatross has declined 41 percent, from 98,000 to 58,000, in 30 years, and is now believed to be dwindling by nearly 10 percent per year. Other species are threatened, and extinctions are likely unless the water on longlines is curtailed. Even the endangered short-tailed albatross, with only 700 birds in the world, is suffering mortality on longlines.

Commercial marine fisheries have encountered serious problems in recent years. Stocks of target fish species have been

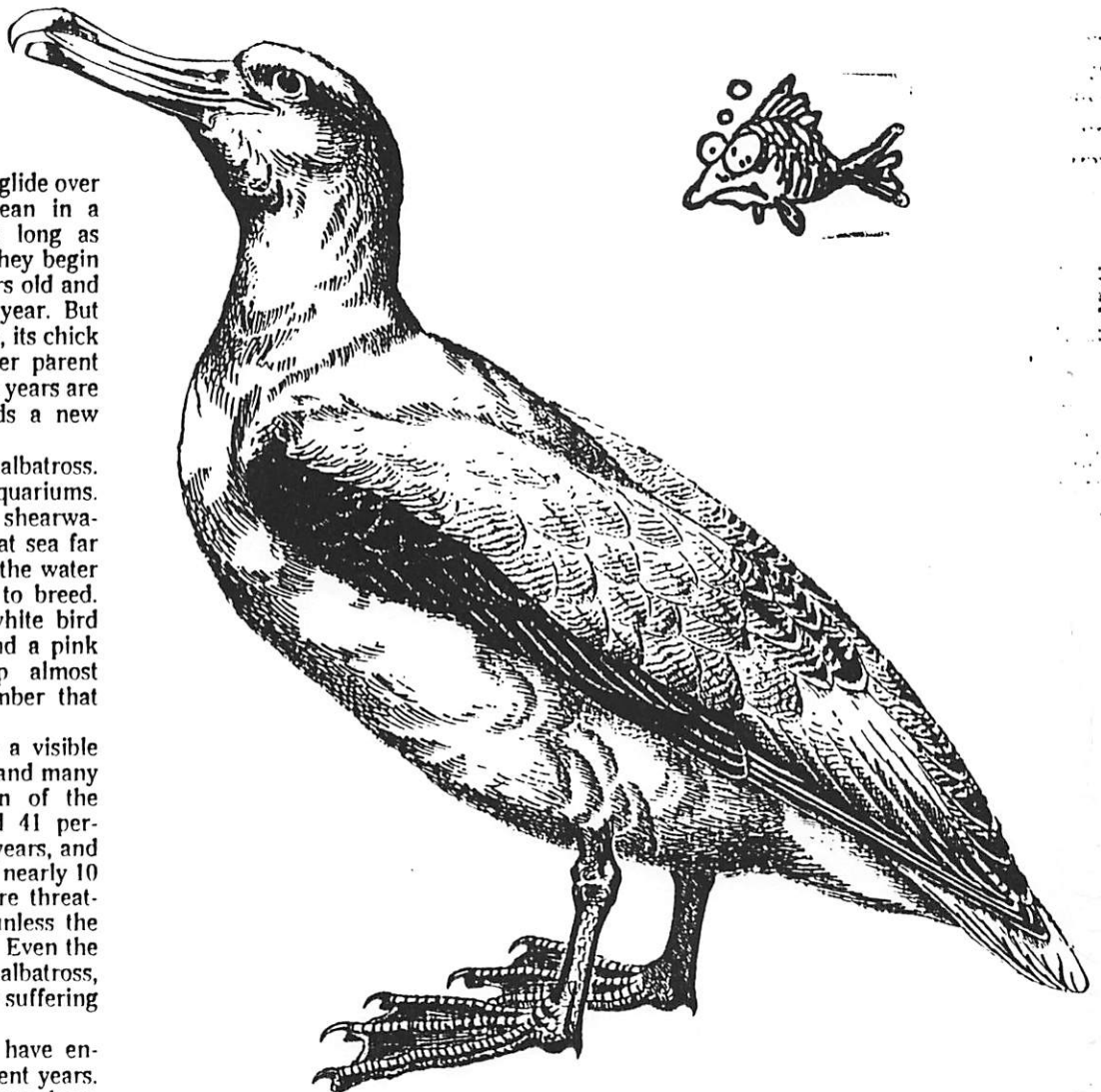
depleted by overfishing, while nontarget species have been damaged. The drowning of sea turtles within shrimp nets and dolphins in tuna nets, as well as killing various marine mammals, birds and nontarget fish within driftnets, have been widely publicized. International concern led to the UN moratorium on driftnetting in 1992. Less well known is the mortality of oceanic birds on longlines.

Fortunately, this slaughter is unintentional and preventable. Several measures could greatly reduce bird mortality, do no harm to fish harvesting and might actually increase fisheries' profits. Perhaps the best solution is releasing the lines under water, making the baited hooks inaccessible to the birds. Streamers flapping in the wind over the hooks scare away most birds, setting

hooks at night saves albatross (but not the petrels), and sinking the hooks more rapidly also helps.

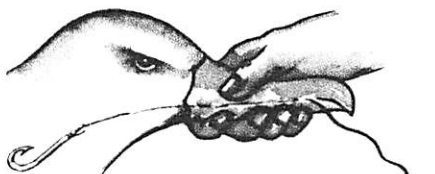
Implementing these solutions on countless ships of many nations in international waters is a daunting legal and diplomatic challenge. The Environmental Defense Fund and Defenders of Wildlife have been joined by a dozen other American and foreign environmental organizations in undertaking this task. But national and international agencies must act quickly if we are to save these birds and the health of the oceans on which they, and we, depend.

■ Charles F. Wurster is emeritus professor of environmental sciences at the Marine Sciences Research Center, State University of New York at Stony Brook.



## CHAPTER 12 GETTING LIVE BIRDS OFF THE HOOK

Often hooks may be easily removed from wings, legs or bill tips, but if the hook has been swallowed the bird may not survive long unless the hook is carefully removed. Always have a pair of pliers nearby which will cut hooks with ease. This may sometimes help in removing the hook. NEVER TRY TO EXTRACT A HOOK BACKWARDS as considerably more damage will be caused. The following procedure is recommended when the position of the hook can be determined.



Get the bird aboard as gently as possible and seize it by the bill immediately. Albatrosses are powerful and have very sharp bill edges.

Trata de subir el ave lo más gentilmente posible y agárralo del pico inmediatamente. Los Albatros son muy fuertes y los picos son muy afilados.

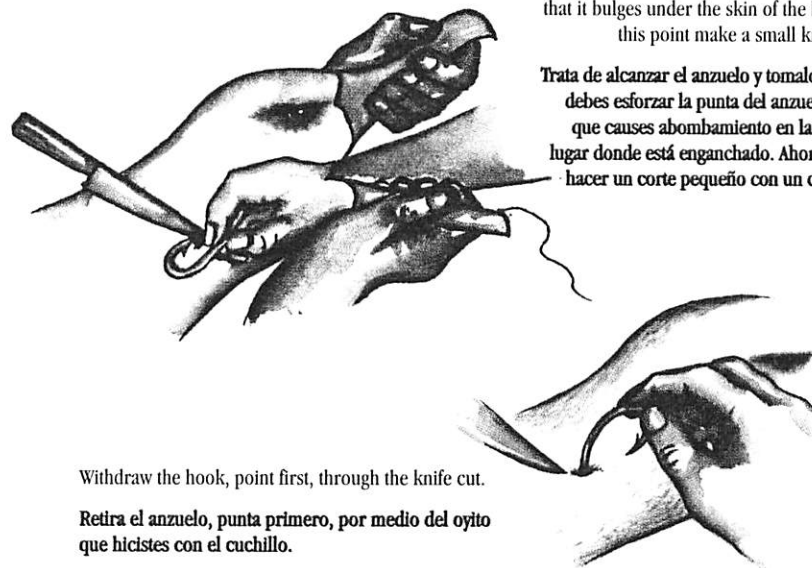


Restrain the bird (two hands for this). A second person can now determine the hook position externally by feeling along the neck, or internally by following the line to the hook.

Debes refrenar el ave (necesitas las dos manos para hacer esto). Ahora una segunda persona puede determinar la posición el anzuelo desde afuera al pasar una mano sobre el cuello, internamente al seguir la línea hasta el anzuelo.

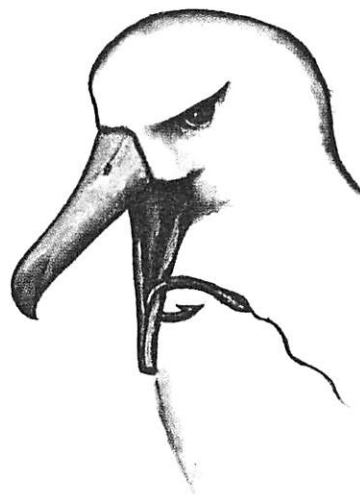
## CAPÍTULO 12 CÓMO SACAR UN ANZUELO DE UNA AVE VIVA

Con frecuencia es fácil remover el anzuelo de las alas, las patas o los picos de las aves, pero si el anzuelo ha sido tragado el ave no sobrevivirá a menos que el anzuelo sea removido con mucho cuidado. Siempre debes tener alicates que son buenos para cortar los anzuelos con facilidad. A veces cortar el anzuelo te puede ayudar a removerlo. NUNCA DEBES TRATAR DE SACAR UN ANZUELO HACIA ATRAS ya que causarás considerablemente más daño. Se recomienda seguir el siguiente procedimiento si has podido determinar la posición del anzuelo.



Withdraw the hook, point first, through the knife cut.

Retira el anzuelo, punta primero, por medio del oyito que hicistes con el cuchillo.



When birds come on board alive, the hooks are often in a position from which they are easily removed without causing much damage to the bird. Cut the line, then thread the hook out tip first.

Cuando subes una ave viva al buque, generalmente el anzuelo estará en una posición donde podría ser sacado sin causar demasiado daño. En este caso puedes cortar la línea y sacar el anzuelo (punta primero).

Indeed, longline fishing began in the Convention area in the 1988-89 fishing season and it was noted by CCAMLR then that such fisheries may experience substantial incidental mortality of seabirds (CCAMLR 1989, p. 5). CCAMLR VIII requested the Scientific Committee to evaluate, and provide advice on the ways to assess and minimise this mortality (CCAMLR 1989, p. 5). Moreover, in adopting Resolution 5/VIII, "the Commission reiterated its concern at the commencement of an unregulated fishery of a type known elsewhere to cause substantial incidental mortality of seabirds" (CCAMLR 1989, p. 28).

The Ninth Meeting of the Commission (CCAMLR IX) in 1990 saw the issue of incidental catches of albatross receive considerable attention. Australia presented a paper to the SC-CAMLR which described albatross mortality associated with longline tuna fisheries outside the Convention area; a conservative estimate of 44,000 albatross killed annually. Australian delegates also presented information on Australian-Japanese efforts to reduce incidental catch of albatross through use of 'bird poles' and streamers. The significant decline in 'catch rate' of 85 per cent using these devices was presented to the Committee along with the economic benefits of such devices.

Recommendations from SC-CAMLR in relation to the issue of incidental catch of albatross were then adopted by the Commission, including a series of measures. A major emphasis was to ensure that information on incidental catch was collected and that members provide the data required to determine the best method of reducing the incidental mortality of seabirds. It was agreed that steps should be taken to place observers on longline vessels to ensure verifiable data. Although some concern was expressed over the lack of data on the problem or the effectiveness of mitigation devices, CCAMLR agreed that prior to evaluation of data, modifications of longline fishing techniques within the Convention area be implemented. These modifications reflected the experiences of Australia, New Zealand and Japan in tackling the problem within the southern bluefin tuna fishery, and the development of the tori-pole concept and bait caster by Nigel Brothers, a Tasmanian scientist working on albatross by-catch. In short, the modifications included the deployment of tori poles and streamers; the requirement that fishing operations be conducted in such a way that baits sink immediately they are in the water;



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**ALBATROSS** 10-10-96 P.I.  
Fishers pro-actively address  
the problem of sea bird mortality

I am incensed that you published as misleading and destructive an article as

Charles Wurster's "Not-so-ancient mariners killing albatross with cruel, inefficient fishing methods" (Sept. 27). In the past year, the fishing industry in Seattle has been assaulted by two other hate campaigns based on groundless environmental allegations: Puget Sound gill netters survived Initiative 640 and the factory trawlers battle Greenpeace's trumped-up charges of overfishing. Now you have enabled the launching of a third hysterical campaign of slanderous half-truths, this time against longliners.

I fish for halibut and sablefish with longline gear. We do not overfish our stocks and never have. Wurster makes that charge as if we were all the myopic New England groundfish fleet, one that's never figured out that annual catch limits are necessary for fisheries resources. Sablefish stocks are healthy, as are most stocks in Alaska, and halibut stocks are at historic high levels, as is the salmon resource throughout Alaska. With the implementation of individual fisherman's quotas in 1995, our bycatch rate of nontarget species has dropped to negligible levels and our safety record has become the exemplar of the North Pacific.

We have pro-actively addressed the problem of sea bird mortality with the use of

scarecrow-like "bird bags" and other techniques for years. The endangered status of the short-tailed albatross, whose demise has nothing to do with commercial fishing, poses a special threat to us and we are making sure we deal with it. In fact, the albatrosses have been increasing since 1953.

Fishermen actually take part in managing our fishery on the basis of indefinitely sustaining the resources of a healthy ocean. Our record of the past 100 years speaks for itself. We know we have to solve problems. Wurster and his ilk are more interested in finding someone to blame.

Your publication of such inflammatory rhetoric helps no one, least of all the ocean.

**Mark S. Lundsten**  
Queen Anne Fisheries Inc.  
Seattle

# National Fisherman

JANUARY 1997 • VOLUME 77, NO. 9

## IN THIS ISSUE

- 20 **Cover story: For the birds**  
North Pacific longliners fight to protect an endangered albatross

### PACIFIC COAST WATCH

## Responsible predators

By **Brad Matsen**  
Pacific Editor

Clearly, conflicts exist between the commercial fishing fleets and animals that may be headed for extinction. It is equally apparent, however, that the men and women of the fleets take conservation of the marine ecosystem to heart.

As the new year begins, Steller sea lions continue their precipitous decline off Alaska; in the watersheds of California, coho salmon seem bound for extinction; and on the offshore grounds of the North Pacific, the short-tailed albatross struggles with long odds against its survival.

In none of these cases are contemporary fishermen to blame. In all of the cases, however, fishermen are the most likely targets for blame by environmental extremists who need scapegoats.

Fishermen are, in fact, doing more than anybody else to help. Sea lion populations began their decline in the 1960s, for reasons that the best available science still says are uncertain. Maybe hammering the herring in the early part of the century is to blame; maybe the herd is simply adjusting to a warming ocean trend or suffering increased predation by protected populations of killer whales.

Whatever is happening to the sea lions, commercial fishermen have been doing their best to save them for the past decade. The fleets contributed cash to study them, conducted a major campaign to teach skippers to avoid them and have submitted honorably to time and area restrictions to protect their nursery islands.

Coho salmon, once a mainstay of the fishery in California and Oregon, have been trashed by coastal development and upland abuse by ranchers, farmers and the timber industry. Still, commercial fishermen have been sharply restricted to protect the few coho that are left, while the inland watershed destruction continues. And when the National Marine Fisheries Service was considering protecting the coho under the Endangered Species Act, fishermen were the extremists, urging the most severe listing under the act.

Finally, the longline fleets of the Bering Sea and Gulf of Alaska have performed a tour de force of environmental stewardship that, unfortunately, is likely to go unapplauded in the national media. To protect the extremely rare, endangered short-tailed albatross, the longliners have gone to the North Pacific Council and asked to be more closely regulated. In all likelihood, every one of the 4,000 or so boats that fish longline gear will have to deploy one of several bird-avoidance devices or be subject to sanctions for fishing illegally.

No fisherman welcomes a new and cumbersome piece of gear on his already crowded deck, but he will go to work from now on with bird bags, tori lines or lining pipes. Because fishermen really are responsible predators in the marine food web, we are environmentalists where it matters most — on the grounds.

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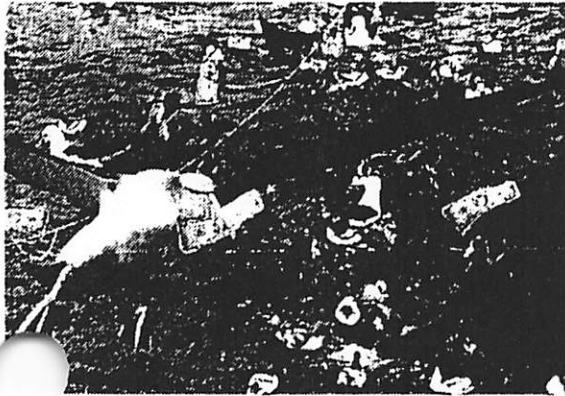
**LONGLINE FISHING  
DOLLARS AND SENSE**

**PESCA DE PALANGREROS LOS  
DOLARES Y EL SENTIDO COMUN**

Catching fish not birds using bottom set or mid water set longlines  
Stop throwing money away and take a look at these simple  
practical ideas which will improve your longline fishing

Capturando peces en vez de aves marinas usando palangreros de  
profundidad

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pero practicas, y mejoraras el esfuerzo de tu buque



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North  
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Longline  
Association



- FAX TRANSMISSION -

**DATE:** November 24, 1996  
**TO:** All Longliners  
**FROM:** NPLA - Thorn Smith  
**SUBJECT:** Where You Can Buy a "Tori," or Bird-Scaring Line  
**PAGES:** 1

Seattle Marine and Fishing Supply Co., 2121 West Commodore Way, Seattle, is manufacturing tori lines. Contact Jamie Eik at (206) 285-5010. He can design a line for your boat, or build one to your specifications. Suggest you carry at least two lines in case you lose one, and repair materials. They plan to price these things reasonably. Better have them on board when you leave for the 1997 season.

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NAT'L TOLL FREE 1-800-426-2783



JAMIE EIK  
SALES

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SEATTLE, WASHINGTON 98199







# The Evolution of the Bird

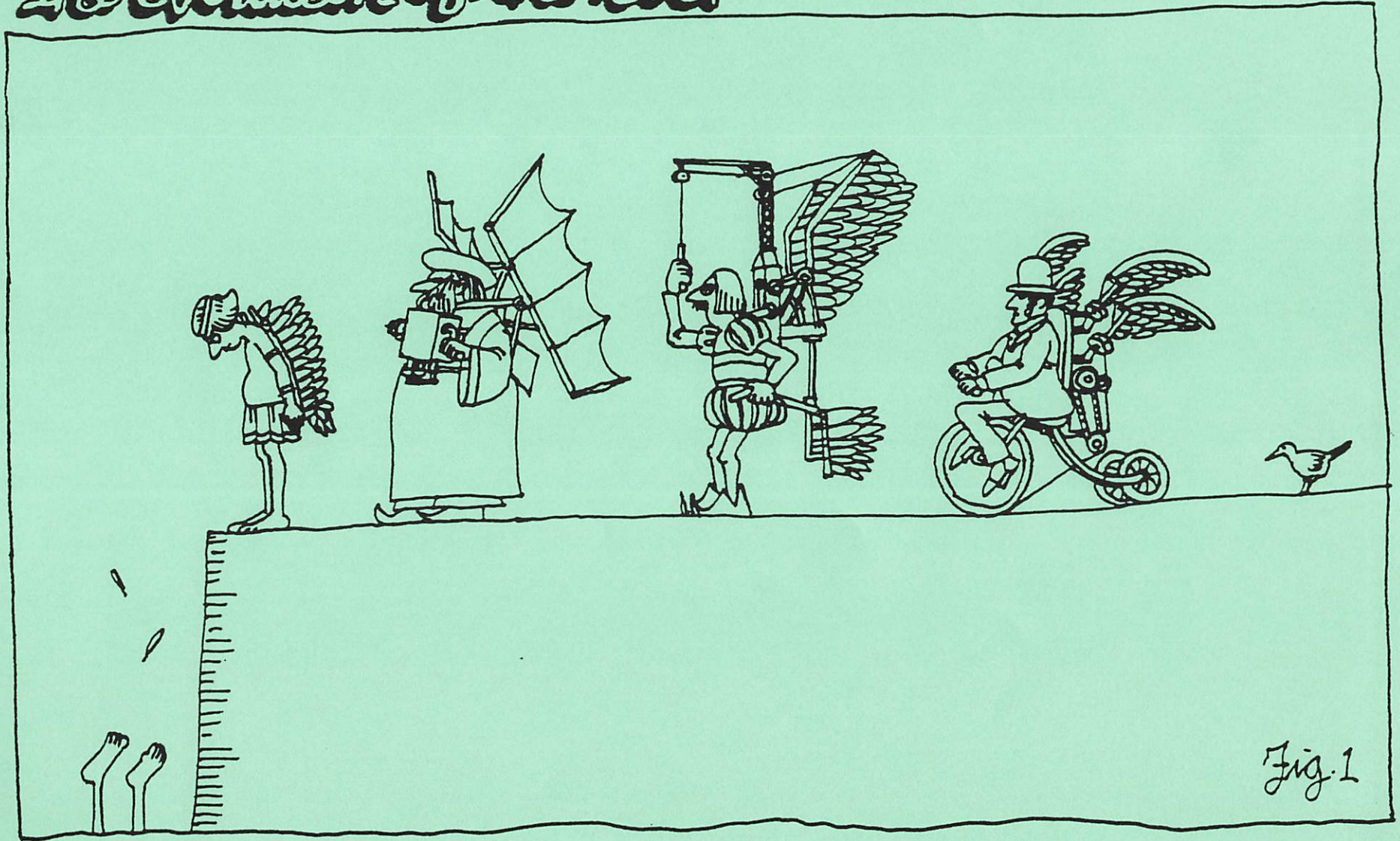


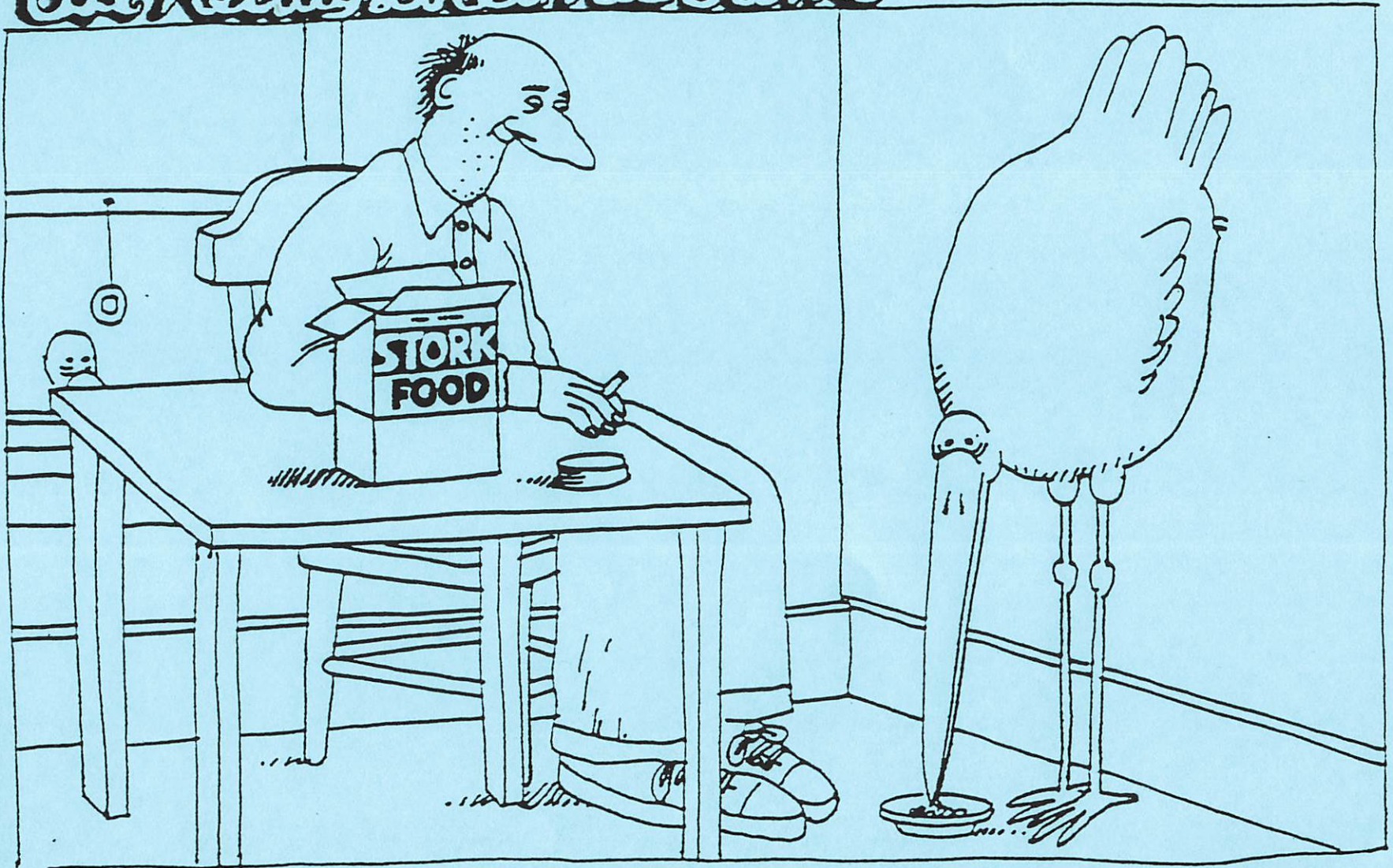
Fig. 1







# Ole Really Liked His Storks



WHOSOEVER LOVETH WISDOM IS RIGHTEOUS BUT HE THAT  
KEEPETH COMPANY WITH FOWL IS WIERD



OUT OF THE WAY, YOU SWINE!  
A LONGLINER IS COMING!

