
Alaska Groundfish Fisheries and Associated Investigations in 1988

*Prepared for the Thirtieth Annual Meeting
of the Technical Subcommittee
of the
Canada-U.S. Groundfish Committee*

June 6-8 Ladysmith, B.C., Canada



Regional Information Report No. 1J89-08

Alaska Department of Fish and Game
Division of Commercial Fisheries
Juneau, Alaska

June 1989

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Prepared by
Barry E. Bracken

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AGENDA ITEM VII. REVIEW OF GROUND FISH FISHERIES

Commercial Fisheries

Description Of The Area

The Alaska Department of Fish and Game (ADF&G) has exclusive management jurisdiction over all groundfish fisheries within the internal waters of the state and to three miles from shore along the outer coast. In addition, a provision in the federal Gulf of Alaska Groundfish Fishery Management Plan (GFMP) gives the State of Alaska limited management authority for demersal shelf rockfish in the federal waters east of 137° W longitude.

Beginning in 1984 the Dixon Entrance District was formed for state management of groundfish in the Dixon Entrance area. That district includes all waters between the "AB" line at 54°40' N latitude and the "equidistant line" which runs through the middle of Dixon Entrance and then seaward to the point where it intersects the "AB" line. The reason for the formation of the Dixon Entrance District as a separate management area is that the waters south of 54°40' N latitude are not included in the GFMP leaving that area void of management authority.

Most of the state-managed fisheries in Alaska occur in Southeast Alaska (east of 137° W longitude) and, with the exception of sablefish, virtually all trans-boundary groundfish stocks in Alaskan waters occur in that area. For that reason the information provided in this report will be restricted to Southeast Alaska.

The Southeast Alaska is separated into five districts for groundfish management (Figure 1). Each of these districts represents the geographical area utilized by discrete segments of the fleet from the various ports of landing.

Species Involved

State-managed groundfish fisheries in Southeast Alaska include target fisheries for sablefish, rockfish, lingcod, pacific cod, and flatfish in that order of economic importance. Rockfish are separated into three assemblages for management (Table 1). Demersal shelf rockfish are the most important component of the state-managed rockfish fisheries.

Gear

With the exception of the target fishery for flatfish which is conducted with trawl gear, hook and line gear is the primary means of harvest with set lines by far the most predominant gear type. Some fishing for sablefish is still conducted using pot gear in the southern southeast inside area, but that gear type is excluded from all other areas by regulation and pot catches are minimal compared to setline catches.

Harvest

The harvest by species from state-managed fisheries in Southeastern Alaska are shown in Table 2. The catch from the Dixon Entrance District is presented in a separate column so that the catch the U.S. fisheries conducted in that area is readily apparent. That is an important differentiation since vessels from both the U.S. and Canada fish the waters of that district and so the catches from both nations need to be combined to determine the total groundfish harvest from that area.

Recreational Fisheries

Estimates of recreational groundfish harvests are not yet available for 1988. The state-wide angler survey from 1987 indicated that 42,261 rockfish were landed by recreational anglers in Southeast Alaska during that year. That is up slightly from 41,568 reported from the same area during 1986, and considerably higher than the long-term average for the region. Assuming a five pound average for rockfish, these data indicate that approximately 95 t of rockfish were taken. Creel census data in Southeast ports indicates that discard of rockfish exceeds the retained portion of the catch suggesting that the total recreational rockfish harvest may have exceeded 200 t. There is currently no species composition data available from the recreational rockfish fishery.

The survey shows that a total of 53,650 other species were landed in Southeast Alaska during 1987 with 28,740 attributed to the marine boat fisheries and 22,522 fish attributed to the marine shoreline fishery. No species composition data is available at this time for the other groundfish category. It is assumed, however, that lingcod, Pacific cod, and flatfish are the predominant species taken. It should be noted that the discard rate on other groundfish also likely exceeds the retained portion of the total harvest.

The ADF&G is attempting to obtain better data on recreational fisheries and has requested funding to determine the landings from the steadily increasing charter boat fleet.

AGENDA ITEM VIII. REVIEW OF AGENCY GROUND FISH RESEARCH AND MANAGEMENT

Description Of The Program

During 1988 the Southeast Region commercial fisheries Groundfish Project was staffed with the project leader, an on-board observer, and a port sampler in Petersburg, an assistant project leader and a port sampler in Sitka, a full-time port sampler in Ketchikan, and part-time samplers in Craig and Yakutat.

The Southeast Region's groundfish project has responsibility for research and management of all commercial groundfish resources in state waters of the Eastern Gulf of Alaska. The project also cooperates with the federal government for management of the waters of the adjacent EEZ and the project leader participates as a member of the Gulf of Alaska Groundfish Plan Team.

Project activities center around fisheries monitoring and in-season management of the groundfish resources based on data collected from the fisheries and from resource assessment surveys. Primary tasks include fish ticket collection, editing, and data entry for both state and federal managed fisheries; dockside sampling of sablefish and rockfish; skipper interview and logbook collection and data entry; and biological studies of important commercial species. Three resource assessment surveys were completed during the year which will be described in more detail later in this report. Regulation development and review and information dissemination also require considerable staff time.

Groundfish Management

State groundfish fisheries are managed by the Department of Fish and Game under regulations set biennially by the Board of Fisheries. In addition to announcing open and closed fishing periods consistent with the established regulations, the department has authority to close fisheries for conservation reasons if resource problems are detected. The department also cooperates with the National Marine Fisheries Service (NMFS) for opening and closing fisheries which are under joint jurisdiction.

Fish tickets are required by regulation for each commercial landing from state-managed fisheries. The catch data from the fish tickets is used as the primary means of tracking the in-season harvest levels. Fish tickets are collected from as many as fifteen ports which accept groundfish within the region. The fish tickets are edited, batched, and entered on microcomputers in Petersburg and Sitka. Because of the intensity of many of the region's groundfish fisheries, a "soft data" accounting system using processor contacts is also utilized when necessary to track landings. State entry of fish tickets from the Exclusive Economic Zone (EEZ) off Alaska was continued through 1988 as the result of a renewed contract with NMFS to accomplish that task.

There is no specific independent management plan established for groundfish fisheries in the Dixon entrance District at this time. The portion of the area east of the longitude of the Cape Muzon Light is managed in conjunction with fisheries in the SSEI management area. The portion of the area west of that line is managed in conjunction with the SSEO management area. Vessels from both nations fish the waters of this district and increased coordination and cooperation should be considered to minimize conflicts on the fishing grounds between the fleets and to assure that the stocks in this area are not overutilized because of the combined fishing effort.

The following is a brief summary of the management strategy for each of the major state-managed groundfish fisheries within Southeast Alaska. Specific regulations can be obtained from the author of this report.

Sablefish

Sablefish fisheries in internal waters of the state are managed by season and guideline harvest ranges. The seasons are set by the Board of Fisheries based upon industry recommendations. In recent years the season framework allows for some flexibility to avoid conflicts with other fisheries and with periods of big tides which tend to concentrate the effort.

There are two separate internal water areas, the Northern Southeast Inside and Southern Southeast Inside areas, which each have separate seasons and guideline harvest ranges. An annual harvest objective is selected within the guideline harvest range for each area based upon the best available information on current stock condition. The season length is set according to the estimated time required by the existing fleet to capture the harvest objective. The seasons have been very short in recent years with five days allowed in the southern area and only one day (24 hours) allowed in the northern area the past three seasons.

Although both of these fisheries are under limited entry, the number of vessels participating in both areas exceeds the optimum level. This factor is compounded because there no control on vessel size or gear and the individual fishing power of the vessels has increased dramatically in recent years.

The offshore fishery (0-3 miles) is managed in conjunction with the federal-managed fishery in the EEZ. The state issues emergency orders to open and close the fishery consistent with field orders issued by NMFS.

Rockfish

The only component of the rockfish complex actively managed by the state at this time is the demersal shelf rockfish assemblage. Rockfish management for this group is also based upon a combination of seasons and guideline harvest ranges. The state has management authority for demersal shelf rockfish in both state and federal waters of Southeast Alaska.

Separate harvest ranges have been established for each of the five southeast management areas based upon the best available information on the condition of rockfish stocks in each area. The seasons open concurrently and the landings tracked for each area. The closure of a particular area is announced when it appears that the harvest objective for that area will be reached.

The state recognizes that bycatch of rockfish occurs routinely in fisheries for other species and has provided for this by allowing for retention of rockfish after the closure of the directed fishery. This practice serves two purposes. Because survival of rockfish is minimal after capture, retention of rockfish minimizes waste of an otherwise valuable product. In addition, allowing retention of rockfish provides the managers with a better understanding of actual bycatch rates.

Flatfish

Trawl fisheries for flatfish are allowed in the internal waters of Southeast Alaska only under the terms of a special permit issued by the department. The permits are generally issued for a month at a time and specify area and gear configuration. Mandatory logbooks are required and some areas cannot be fished without a department observer on board. This restrictive management is necessary because of reduced flatfish stocks and because of a history of very high bycatch rates of prohibited species, particularly crab and halibut, in internal waters. Beginning in the 1989-90 season the flatfish trawl fishery will be restricted to four areas with a guideline harvest range established for each area. As with the other fisheries, the department will set a harvest objective within the ranges annually for each area and will track the landings with information from fish tickets and logbooks.

Lingcod

Beginning in July 1989 lingcod fisheries will be managed with a 27-inch year round minimum size limit. This is the first commercial regulation for this species in the state and was in response to increased targeting on small fish by an expanding "dinglebar" fleet.

Other Species

There are no regulations in effect for other species of groundfish in state waters of Southeast Alaska at this time.

Recreational Fisheries

Beginning in mid-1989 bag limits will be implemented for rockfish within Southeast Alaska. The limits will be more restrictive on yelloweye rockfish (*Sebastes ruberrimus*) than on other rockfish species. Also, there are two areas of the region, Sitka Sound and the immediate Ketchikan area where the harvest limits are even more restrictive because of observed declines in the rockfish production in those areas. There are currently no other regulations for recreational groundfish fisheries. progressive

Groundfish Research

State of Alaska groundfish research is currently divided into two major components in Southeast Alaska. These are port sampling/skipper interviews and resource assessment. A third component, on-board observers was largely eliminated in 1988 because of funding cuts. One special observer component remains in conjunction with a lingcod life history study.

Port sampling provides biological information from the landed catch and in recent years has been restricted to landings of rockfish and lingcod only. This component provides information on species composition and length frequency of the landed catch by management area. It also provides an opportunity to collect age structures and sex and reproductive state from round deliveries of rockfish. During 1988 port sampling was conducted in Sitka, Ketchikan, and Petersburg, and Craig.

Skipper interviews are conducted for landings of the key groundfish species only. Interview effort concentrated on the state managed sablefish and rockfish fisheries during 1988. This program is designed to provide detailed location and effort information which, when coupled with the fish ticket data, provides an estimate of CPUE by management area for the landed catch.

Besides the port sampling program, research efforts during 1988 included sablefish stock assessment surveys in each of the two inside management areas and a second-year rockfish survey along the outer coast off Sitka. These surveys are designed to provide information on relative abundance of the target species and to furnish unbiased biological samples from the sablefish and rockfish populations in the southeastern area. Age structures taken during these surveys are sent to the ADF&G aging lab in Kodiak for age determination.

Data from these surveys is still being analyzed and will be used to redesign subsequent surveys in those areas. All three of these surveys are five-year study projects and no conclusive results are expected for several years. A summary of the methods used and cruise reports are available from the author of this report.

A preliminary study was begun during the winter of 1988 to determine lingcod nesting locations, spawn timing, and the timing and duration of lingcod nest-guarding in Southeast Alaska. This study is being accomplished using a two-stage approach. An on-board observer participated with cooperating local fishermen to obtain sex and size samples from the directed lingcod dinglebar fishery. In addition, dive transects were completed in diver depths in areas adjacent to known harvest locations to observe lingcod nesting areas. This project is in a very preliminary stage and will be reported on more fully in future documents.

REPORTS COMPLETED DURING 1988

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- O'Connell, V. M. 1988. Southeast Alaska Rockfish, an interim report to the Pacific Marine Fisheries Commission. AK. Dept. of Fish and Game Regional Information Report No. 1J88-31 ADF&G, Box 667, Petersburg, AK. 99833. 5p.
- O'Connell, V. M. and B. E. Bracken. 1988. Condition of demersal shelf rockfish stocks in the Eastern Gulf of Alaska as assessed in 1988. AK. Dept. of Fish and Game Regional Information Report No. 1J88-47 ADF&G, Box 667, Petersburg, AK. 99833. 15p.

Table 1. Assemblages of rockfish in the Gulf of Alaska in alphabetical order by common name.

Common Name	Scientific Name	Rockfish Management Group
Bocaccio	<i>Sebastes paucispinus</i>	Demersal Shelf
Canary Rockfish	<i>S. pinniger</i>	Demersal Shelf
China Rockfish	<i>S. nebulosus</i>	Demersal Shelf
Copper Rockfish	<i>S. caurinus</i>	Demersal Shelf
Quillback Rockfish	<i>S. maliger</i>	Demersal Shelf
Redstripe Rockfish	<i>S. proriger</i>	Demersal Shelf
Rosethorn Rockfish	<i>S. helvomaculatus</i>	Demersal Shelf
Rosethorn Rockfish	<i>S. brevispinus</i>	Demersal Shelf
Silvergray Rockfish	<i>S. brevispinus</i>	Demersal Shelf
Tiger Rockfish	<i>S. nigrocinctus</i>	Demersal Shelf
Yelloweye Rockfish	<i>S. ruberrimus</i>	Demersal Shelf
Black Rockfish	<i>Sebastes melanops</i>	Pelagic Shelf
Blue Rockfish	<i>S. mystinus</i>	Pelagic Shelf
Dusky Rockfish	<i>S. ciliatus</i>	Pelagic Shelf
Widow Rockfish	<i>S. entomelas</i>	Pelagic Shelf
Yellowtail Rockfish	<i>S. flavidus</i>	Pelagic Shelf
Aurora Rockfish	<i>Sebastes aurora</i>	Other Rockfish
Blackgill Rockfish	<i>S. melanostomus</i>	Other Rockfish
Chilipepper Rockfish	<i>S. goodei</i>	Other Rockfish
Darkblotched Rockfish	<i>S. crameri</i>	Other Rockfish
Greenstripe Rockfish	<i>S. elongatus</i>	Other Rockfish
Harlequin Rockfish	<i>S. varigatus</i>	Other Rockfish
Northern Rockfish	<i>Sebastes polyspinus</i>	Other Rockfish
Pacific Ocean Perch	<i>S. alutus</i>	Other Rockfish
Pygmy Rockfish	<i>S. wilsoni</i>	Other Rockfish
Redbanded Rockfish	<i>S. babcocki</i>	Other Rockfish
Rougheye Rockfish	<i>S. aleutianus</i>	Other Rockfish
Sharpchin Rockfish	<i>S. zacentrus</i>	Other Rockfish
Shortbelly Rockfish	<i>S. jordani</i>	Other Rockfish
Shortraker Rockfish	<i>S. borealis</i>	Other Rockfish
Splitnose Rockfish	<i>S. diploproa</i>	Other Rockfish
Stripetail Rockfish	<i>S. saxicola</i>	Other Rockfish
Vermillion Rockfish	<i>S. miniatus</i>	Other Rockfish
Yellowmouth Rockfish	<i>S. reedi</i>	Other Rockfish
Longspine Thornyhead	<i>Sebastolobus altivelis</i>	Thornyheads
Shortspine Thornyhead	<i>S. alaskanus</i>	Thornyheads

Table 2. Total groundfish landings (t) from State of Alaska managed fisheries in Southeast Alaska in 1988 by major species group and area.

Species	All of Southeast	Dixon Entrance District (DED)	Percent of total from DED
Sablefish	1,448	94	6.5%
Demersal shelf rockfish	927	58	6.3%
Flatfish	376	0	0%
Pacific Cod	186	1	0.2%
Lingcod	177	6	3.4%
Total	3,114	159	5.0%

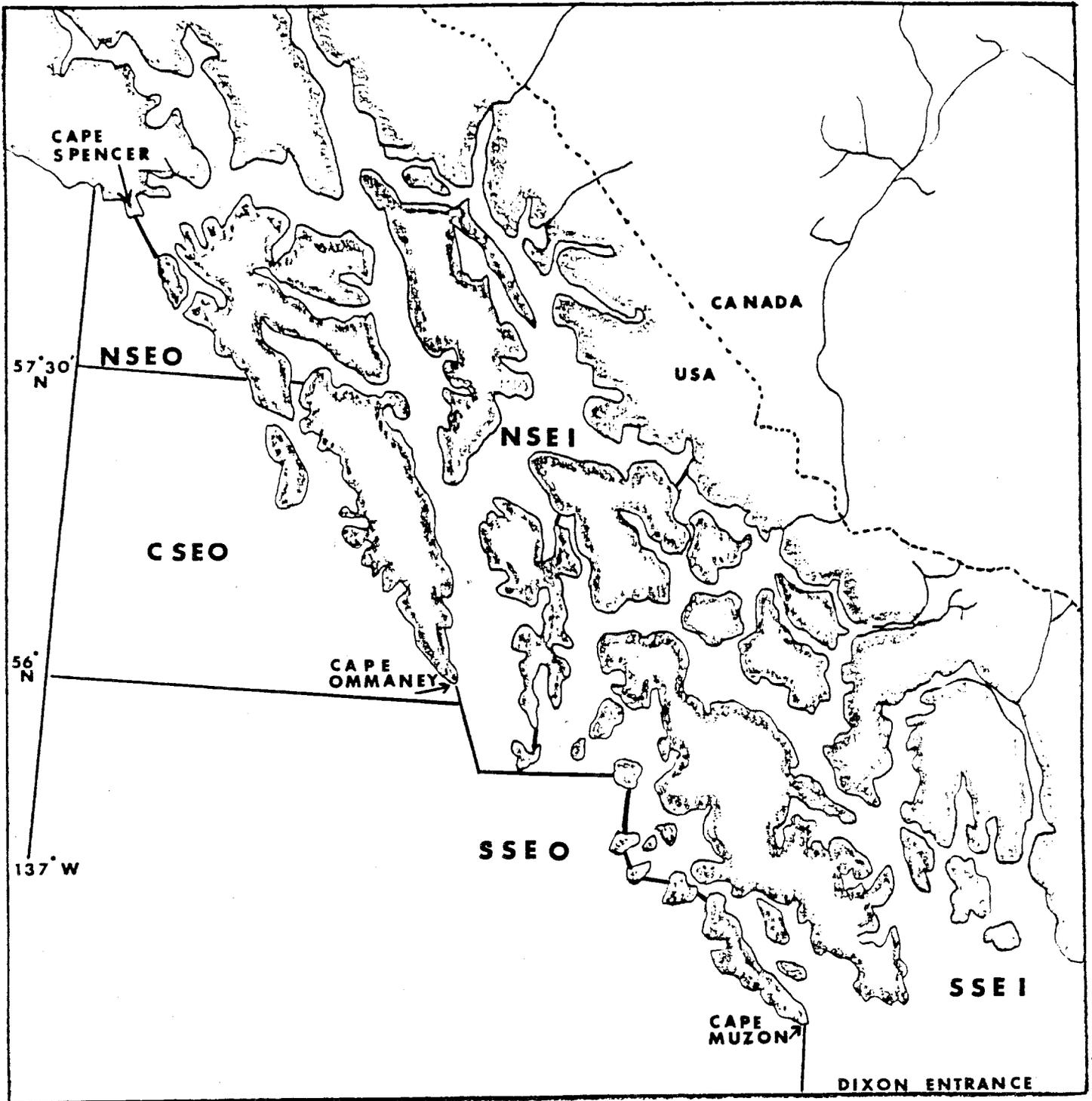


Figure 1. The Southeast Alaska coastline showing Alaska Department of Fish and Game groundfish management areas.

APPENDICES

APPENDIX I

**ALASKA DEPARTMENT OF FISH AND GAME
PERMANENT FULL-TIME GROUND FISH STAFF**

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