REPORT OF THE

TECHNICAL SUB-COMMITTEE

OF THE

INTERNATIONAL GROUNDFISH COMMITTEE

Appointed by

The Second Conference On Coordination

Of Fisheries Regulations Between

CANADA

and the

UNITED STATES

Sixteenth Annual Meeting

June 25-27, 1975

Vancouver, B. C., Canada

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REPORT OF THE TECHNICAL SUB-COMMITTEE OF THE INTERNATIONAL GROUNDFISH COMMITTEE APPOINTED BY THE SECOND CONFERENCE ON COORDINATION OF FISHERIES REGULATIONS BETWEEN CANADA AND THE UNITED STATES

Date: June 25-27, 1975

Place: Vancouver, British Columbia

Participants:

CANADA

Fisheries and Marine Service Department of the Environment	C. R. Forrester J. E. Smith R. G. McIndoe (observer) S. J. Westrheim (observer)

UNITED STATES

California Department of Fish & Game	T. Jow
Fish Commission of Oregon	R. L. Demory J. G. Robinson
Washington Department of Fisheries	G. S. DiDonato, Chairman D. R. Gunderson M. G. Pedersen
Alaska Department of Fish & Game	J. Lechner
National Marine Fisheries Service	T. A. Dark
Pacific Marine Fisheries Commission	J. P. Harville (observer)
International Pacific Halibut Commission	S. H. Hoag (observer)

I. CALL TO ORDER

The 16th annual meeting of the Technical Sub-Committee was called to order at 0900 on June 25 by Chairman G. S. DiDonato under instructions set forth by the Parent Committee in 1959. The business of the meeting was conducted according to the agenda shown in Appendix A.

II. APPOINTMENT OF SECRETARY

J. Smith of Canada was appointed to act as recording secretary for the meeting.

III. APPROVAL OF AGENDA

The proposed agenda circulated by Chairman G. DiDonato was adopted after amendment to include "terms of reference."

IV. TERMS OF REFERENCE

The Sub-Committee reviewed its terms of reference as described in the first meeting of the Technical Sub-Committee (1961) and amended at the 13th meeting of the International Groundfish Committee (1971). These were noted to be:

1) to review proposed changes in groundfish regulations affecting fisheries of common interest before they are implemented;
2) to review the effectiveness of existing regulations;
3) to exchange information on the status of groundfish stocks of mutual concern and to coordinate, wherever possible, programs of research;
4) to recommend the continuance and further development of research programs in order to provide a basis for future management of the groundfish fishery.

V. STATUS OF STOCKS

A. DOVER SOLE

Pacific coast Dover sole landings in 1974 totalled 27.8 million lb. This was a decrease of 7% from the 1973 total but still remained 33% above the mean for the previous 10 years. International Statistical Areas 1B, 1C, 2A, and 2B were the leading areas of production.

1. Canada

Dover sole landings in 1974 were 1.8 million lb; about the same as in 1973 but 30% below the mean for 1970-73. CPUE of Dover sole (based on all catches of Dover sole by vessels landing catches from Area 5D) was 1026 lb/hr, slightly higher than the mean for the previous 4 years (the period in which there has been a purposeful Dover sole fishery).

2. United States

a. Washington

Trawl landings of Dover sole amounted to 1.3 million lb in 1974, about the same level as those for 1971-73. Catch and CPUE in Area 3B were substantially below 1973 levels, but landings from Area 3A and 3C were higher (up 238% and 96% respectively from 1973).

b. Oregon

The 1974 trawl catch of 5.6 million lb showed an increase (27%) over the 1973 level of 4.4 million lb. This total was also 18% above the mean for the previous 10 years. The increase was due to increased fishing effort spurred by dock limits on other species of flatfish (particularly English sole). Vessels also increased effort on deepwater stocks in Areas 2B and 2A and utilized more efficient roller equipped and high-opening gear. CPUE for Areas 2B-3A increased to 496 lb/hr in 1974 from 391 lb/hr in 1973.

c. California

Trawl landings of Dover sole totalled 19.1 million lb in 1974. This was 15% less than the record 1973 landing of 22.1 million lb but it exceeded the 10-year mean landing of 13.3 million lb by 44%. Area 1B landings were 8.5 million lb and Area 1C landings were 9.3 million lb.

B. ENGLISH SOLE

Canadian and United States English sole landings in 1974 were 9.4 million lb, a slight decrease from 1973 landings and 13% below the 10-year average catch of 10.8 million lb. Catches from Areas 1B, 1C, 4A and 5D exceeded 1 million lb in 1974 as they did in 1973.

1. Canada

Landings of English sole in 1974 at 1.5 million lb were slightly less (6%) than in 1973. The bulk of the landings (69%) was taken from grounds in northern Hecate Strait (Area 5D). CPUE for 1974 was 1271 lb/hr, 40% above that for 1973. The increase in CPUE follows the expectation that production of good year-classes in northern Hecate Strait and subsequent improvements in recruitment require low (less than 6 C) February water temperatures, the circumstance during 4 of 5 years between 1968 and 1972.

2. United States

a. Washington

English sole landings in 1974 were 2.4 million lb, a decrease of 10% from 1973. Sixty percent of the total catch came from Area 4A. Coastal landings were 1.1 million lb, virtually the same as in 1973. Area 3B continued to be the most significant coastal fishing area, providing 73% of the coastal landings. Both catch and CPUE were below the 1964-73 mean, and 1973 levels for this area.

b. Oregon

English sole landings in 1974 were 1.7 million lb, down 26% from the 1973 total and 18% below the 10-year mean. CPUE for Areas 2B-3A of 281 lb/hr in 1974 was 17% above the 1973 level of 240 lb/hr. Market problems limited English sole landings.

c. California

A continuation of the upward trend in English sole landings from the recent low of 3.0 million lb in 1971 occurred in 1974 when 3.8 million lb were caught. While this landing was 19% above the 1973 level, it was still 10% less than the mean for 1964-73. Landings from all areas except Area 1A increased from 1973 levels.

C. PETRALE SOLE

The Canadian and United States landings of petrale sole in 1974 at 10.6 million lb were 28% above the 1973 level and 36% above the 10-year mean of 7.8 million lb.

1. Canada

Catch/Effort

i) Southern stock. Canadian catch of petrale sole from the stock off the southwest coast of Vancouver Island in 1974 was 1.3 million lb, an increase of 48% from 1973 and more than twice the mean for the past 10 years. CPUE at 344 lb/hr showed an increase of 14% from the previous year. However, average length of fish landed was greater than in immediately preceding years suggesting some reduction in strength of incoming recruitment.

ii) Northern stocks. Canadian landings from the northern stock (Areas 3D, 5A-5D) were 217,000 lb, 25% above that of 1973 but still less than one-half the mean for the 1964-73 period. In 1973 the weighted CPUE was 76 lb/hr, a level indicating the continued low abundance of the species in northern areas.

Winter Fishery

There was no purposeful winter fishery for petrale sole by Canadian fishermen in 1974-75.

2. United States

a. Washington

Washington trawl landings of petrale sole in 1974 totalled 3.0 million lb. This represented a 36% increase from 1973, and was 65% above the 1964-73 mean.

Catch/Effort

i) Southern stock. Landings of petrale sole from the southern stocks totalled over 2.1 million lb. This was a 48% increase over last year and double the previous 10-year average. CPUE continued to be above average in all areas but, as also noted in Canadian data, average length of fish increased over immediately preceding years.

ii) Northern stocks. Trawl landings of petrale sole from the northern stocks totalled 868,000 lb. This represented a 12% increase over 1973 production and was 15% above the mean for 1964-73. Even though CPUE was up about 32% from last year in Areas 5A and 5B, catch rates for all areas were still below the 10-year mean. Recruitment of the strong 1967 and 1968 year-classes was believed responsible for the improved fishery during the past 2 years.

Winter Fishery

The 1974-75 winter spawning ground fisheries produced an estimated 874,000 lb of petrale sole. Production from the two major grounds, Esteban Deep and Cape Flattery Spit Deep, was about 5% above the previous season, and 36% above the previous 8-year average. Production from the latter ground was the highest since 1962 (64% above the 8-year mean). Production from Esteban Deep was about average, but CPUE was down 34% from the previous season.

b. Oregon

The 1974 petrale sole landings of 2.7 million lb were 23% above those for 1973 and 37% above the 10-year mean. CPUE for Areas 2B-3A was 390 lb/hr, 13% above that for 1973.

Winter Fishery

Oregon reported that increased effort on winter concentrations of petrale sole, especially in Areas 2B-2A boosted catch rates in 1974.

c. California

California petrale sole landings in 1974 were 3.4 million lb, a 19% increase over 1973 landings and a 13% increase over the 10-year mean. The most productive area for petrale sole, as in past years, was Area 1B where catches totalled 1.8 million lb.

Winter Fishery

Petrale sole catches during the winter of 1973-74 were 1.2 million lb. Winter catches for November 1974-January 1975 are estimated to be the same as catches during the previous winter.

D. PACIFIC COD

Canadian and United States landings of Pacific cod in 1974 were 29.0 million lb, up 18% from landings in 1973 and 25% above the mean for 1964-73.

1. Canada

Pacific cod continued to be the dominant species in Canadian trawl landings. Total landings of 19.4 million lb in 1974 were 18% higher than in 1973 and represented 50% of total trawl landings. The bulk of the landings (84%) came from grounds off the southwest coast of Vancouver Island and in Hecate Strait. Landings from Area 3C were 5.8 million lb, slightly above the level for 1973. Landings from Areas 5C and 5D at 10.5 million lb were 19% higher than in 1973.

In Area 3C, the region of most recent concern to Washington State and Canada, the fishery during the spawning season of February-March 1975 took4.2 million lb of Pacific cod, i.e., 10% greater than in the same period in 1974 and 20% less than in 1973. Canada's share of production was about 70%. Catches rose from low levels in late January and early February to a peak during February and dropped thereafter. There was a marked drop in catch and catch/effort in late season culminating in termination of the fishery about March 19. The effects, if any, of the intensive exploitation of some portion (?) of the spawning stocks in 1973 will not be apparent until the 1973 year-class makes its appearance on the grounds in mid-1975. Even then it may be difficult to separate effects of the spawning ground fishery from those caused by changes in the environment in influencing the strength of the 1973 year-class.

2. United States

a. Washington

Washington trawl landings of Pacific cod totalled 8.9 million lb in 1973. This was an increase of 15% from 1973 levels and 29% above the mean for 1964-73.

b. Oregon

Oregon Pacific cod landings showed an increase of 51% to a total of 685,000 lb. Catches taken by the Oregon fleet apparently mirror fluctuations in abundance of stocks originating in the 3B-3C area.

c. California

No Pacific cod were caught off California in 1974.

E. LINGCOD

Trawl-caught Canadian and United States landings of lingcod totalled 11.0 million lb in 1974, about 16% higher than the 1973 landings of 9.5 million lb and 11% higher than the 1964-73 mean. Landings continued to be above average in California and Oregon. The downward trend evident in Washington landings during 1968-73 was reversed slightly in 1974. Canadian landings were slightly above those of 1972 and 1973 but still 10% below 1964-73 mean landings.

1. Canada

Total Canadian trawl landings of lingcod in 1974 at 3.3 million lb were up 25% from that in 1973 but still 11% below the mean for the preceding 10 years. Approximately 63% of the trawl catch was taken from Area 3C and landings of 2.1 million lb were 22% greater than in 1973 and 40% above the mean for 1964-73. CPUE of lingcod in Area 3C at 784 lb/hr was slightly below the level observed in 1973. The trawl fishery continues to take about 60% of the total lingcod catch, with the balance taken by line vessels. Preliminary estimates of rate of growth of lingcod in Area 3C (based on results from a 1964 Canadian tagging) suggest that growth is at least as rapid and may be slightly faster than for Strait of Georgia lingcod.

2. United States

a. Washington

Trawl-caught lingcod landings at 2.5 million lb were 17% higher than the 1973 catch but still 30% below the mean annual landings for the previous 10 years. Catch and CPUE of lingcod in Area 3C continued to decline (17% and 10% respectively, from 1973 levels). However, there are indications that Washington effort for lingcod in recent years in Area 3C has declined and measures of catch/effort may no longer be reliable indicators of abundance.

b. Oregon

The lingcod catch in Oregon was 1.9 million lb, 3% less than in 1973 but 64% above the mean for 1964-73.

c. California

Trawl landings of lingcod at 3.2 million lb in 1974 were slightly higher than in 1973 and about 2-1/2 times the level of the 1964-73 landings. Catches increased in Area 1B but declined in other areas off California. Some decline in overall catches is anticipated in 1975.

F. SABLEFISH

Canadian and United States trawl landings of sablefish in 1974 were 6.5 million lb, a 21% decrease from the 8.2 million lb landed in 1973 but 76% greater than the 10-year mean landing of 3.7 million lb. Both Oregon and California report 1974 sablefish landings which were lower than in 1973, while Washington and Canada recorded increases. Only in Canada were landings less than the 10-year mean. About 90% of the 1974 landings was caught in Areas 1B, 1C, 2A and 2B.

California, Oregon, Washington and Canada reported sablefish landings of 6.5, 0.05, 0.9 and 0.8 million lb, respectively, which were caught by gear other than trawl.

1. Canada

The trawl fishery for sablefish continued at a fairly low level in 1974. Landings increased 46% from 1973, but still totalled only 268,000 lb. Landings of sablefish by other gear amounted to 841,000 lb in 1974 (a decrease of 57% from 1973) with 86% taken by traps and the balance by line gear.

2. United States

a. Washington

Washington landings of sablefish in 1974 totalled 1.1 million lb. Washington trawlers landed about 167,000 lb of sablefish during 1974. This

represented a 78% increase from the 1973 landings and was approximately equal to the 10-year mean. Gear other than trawl took 932,000 lb (49% by trap and 36% by longline).

b. Oregon

Total 1974 Oregon landings of sablefish were 594,000 lb. Trawl landings of sablefish in 1974 were 547,000 lb, a 35% decrease from 1973, but 145% above the 10-year mean. Another 44,000 lb was landed by shrimp trawlers and 3,000 lb were taken by trap.

c. California

California trawl landings of sablefish in 1974 were 5.5 million lb, a 22% decline from the 7.1 million lb landed in 1973 but still 92% above the 10-year mean. Landings from all statistical areas were lower than in 1973. Area 1B, as in past years, was the most productive.

A developing trap fishery in the Monterey Bay area resulted in significantly increased sablefish landings in 1974. Line and trap landings together were estimated to be over 6.5 million lb in 1974.

d. Alaska

Alaska landings of sablefish in 1974 were approximately 1.7 million lb as compared to 1.9 million lb in 1973. Half of the catch was taken by trap and half by longline gear. Landings came primarily from waters in Southeast Alaska.

G. PACIFIC OCEAN PERCH

Landings of Pacific ocean perch in 1974 by United States and Canada were 9.6 million lb, virtually the same as in 1973, but 48% below the 1964-73 mean. Total landings declined from 1973 levels in the INPFC Charlotte and Vancouver Areas, but increased 42% in the Columbia Area. Trends in the

1973-74 CPUE followed the same pattern, decreasing 23-25% in the Charlotte Area, and 12% in the Vancouver Area, but increasing 53% in the Columbia Area. Much of the increase in catch and CPUE observed in the Columbia Area may be a statistical artifact, due to an increase in the availability of "other rockfish" species incorrectly recorded as Pacific ocean perch.

1. Canada

Landings of Pacific ocean perch in 1974 were 3.4 million lb, about 10% greater than in 1973. Ninety-eight percent of the catch was taken from Queen Charlotte Sound (Areas 5A and 5B). CPUE in 1974 for Queen Charlotte Sound was 2119 lb/hr, a decrease of 23% from 1973. During the past 2 years the greater part of the Pacific ocean perch catch has been taken from the Mitchell's Gully region on the northwest side of the Goose Island Bank. There, CPUE is now higher than in the gully south of the bank.

2. United States

a. Washington

The 1974 trawl landings of Pacific ocean perch were only 5.3 million lb. This represented a decline of 53% from the 1964-73 mean, and 8% from the 1973 landings. Catch and CPUE in all major areas of production continued to decline and were at the lowest levels observed during 1964-74.

b. Oregon

Landings of Pacific ocean perch increased 54% from 1973 to 831,000 lb in 1974. However this was still 77% below the 10-year mean. CPUE for Areas 2B-3A was 548 lb/hr compared to 359 lb/hr in 1973.

c. California

The 1974 landings of Pacific ocean perch in California of 123,000 lb were almost equal to that landed in 1973. Most of the catch, 95,000 lb, came from Area 1C.

H. OTHER ROCKFISH

Canadian and United States trawl landings of other rockfish were 28.9 million lb in 1974, down 20% from the 36.0 million lb of 1973, but up 15% over the 10-year mean of 25.1 million lb. Leading areas of production were 1B, 5A, and 5B.

1. Canada

Landings of other rockfish by Canadian trawlers decreased 25% to 2.0 million lb but remained approximately 50% above the mean for the 1964-73 period. The bulk of the catch was taken in Queen Charlotte Sound, and consisted mainly of S. flavidus and S. reedi.

2. United States

a. Washington trawlers landed 8.4 million lb of other rockfish in 1974, down 31% from 1973, and 15% from the 1964-73 mean. The major areas of production were Queen Charlotte Sound and the northern coast of Vancouver Island. Landings of S. flavidus were 3.1 million lb, down 55% from 1973. The "other rockfish" catch also included significant quantities of S. pinniger, S. brevispinis, and S. paucispinis.

b. Oregon

Landings of other rockfish totalled 2.5 million lb, down 29% from the 3.6 million lb landed in 1973 and 38% below the 1964-73 mean. The 1974 CPUE of 298 lb/hr was 29% below the 1973 estimate of 417 lb/hr.

c. California

California trawlers landed 15.9 million lb of other rockfish in 1974, down 9% from 1973, but 68% greater than the 1964-73 mean. Catches in Area 1B declined, but this area remained the leading area of production. S. paucispinis and S. goodei remained the leading species in Areas 1A and 1B, and Sebastolobus alascanus was the leading species in catches from Area 1C.

Rockfish catches in 1974 by line and gillnet gear, fished mainly in shallow water, were approximately 6 million lb.

VI. REVIEW OF THE NORTH AMERICAN FISHERY

The 1974 Canadian and United States trawl landings from the Northeast Pacific Ocean were 156.6 million lb, down slightly (2%) from 1973 (Table 1). Total fishing effort in 1974 was 171,300 hr, an increase of 3% over the 1973 level.

Canadian trawl landings of 38.5 million lb were virtually the same magnitude as reported for 1973. Groundfish landings (excluding halibut) in British Columbia by gear other than trawl totalled an additional 5.3 million lb.

The United States trawl catch was 118.2 million lb in 1974 compared to 120.9 million lb landed in 1973. Information on United States groundfish landings by gear other than trawls was incomplete at the time of reporting.

Pacific cod, "other rockfish" and Dover sole were the major species contributing to the Canadian and United States trawl landings in 1974, together accounting for 55% of the total landings. Pacific cod landings were 29.0 million lb (up 18% from 1973), "other rockfish" landings were 28.9 million lb (down 20% from 1973) and Dover sole landings were 27.8 million lb (down 7% from 1973).

Canada

The most important aspects of the 1974 fisheries were: (1) the dominance of Pacific cod which at 19.4 million lb constituted 50% of the total landings; (2) the increased catch of petrale sole which at 1.5 million lb was almost 50% greater than 1973; and (3) a marked decrease in dogfish landings, down 84% for all gears combined.

Table 1. Otter trawl landings (1000 lb) from the northeastern Pacific by Canadian and United States vessels in 1973, 1974, and mean for 1964-73.

Species	1973					1974					Mean
	B.C.	Wash.	Ore.	Calif.	Total	B.C.	Wash.	Ore.	Calif.	Total	1964-73
English sole	1,630	2,683	2,371	3,209	9,893	1,461	2,414	1,747	3,802	9,424	10,772
Rock sole	1,789	844	tr	8	2,641	2,083	832	4	18	2,937	5,391
Petrale sole	1,044	2,222	2,191	2,876	8,333	1,508	3,012	2,692	3,426	10,638	7,826
Dover sole	1,830	1,254	4,416	22,485	29,985	1,813	1,314	5,604	19,081	27,812	20,876
Rex sole	317	168	1,256	1,583	3,324	301	364	1,300	1,381	3,346	3,070
Starry flounder	136	836	339	638	1,949	135	1,425	408	438	2,406	1,986
Other flatfish	1,221	527	657	1,498	3,903	817	507	581	1,524	3,429	2,429
Pacific cod	16,453	7,740	453	-	24,646	19,417	8,872	685	-	28,974	23,122
Lingcod	2,655	1,736	1,999	3,111	9,501	3,322	2,529	1,937	3,249	11,037	9,823
Sablefish	183	94	838	7,058	8,173	268	165	547	5,486	6,466	3,744
Pacific ocean perch	3,082	5,756	540	125	9,503	3,370	5,314	831	123	9,638	18,461
Other rockfish	2,681	12,246	3,558	17,544	36,029	2,016	8,444	2,545	15,937	28,942	25,100
Misc. species	421	184	63	604	1,272	301	486	59	334	1,180	526
Dogfish	4,332	-	tr	2	4,334	705	-	12	-	717	580
Animal food	655	1,061	603	323	2,642	383	2,554	708	65	3,710	11,515
Reduction	153	3,215	-	-	3,368	603	5,369	-	-	5,972	9,329
Total	38,582	40,566	19,284	61,064	159,496	38,503	43,601	19,660	54,864	156,628	154,550
Percent of total	24.2	25.4	12.1	38.3	100.0	24.6	27.8	12.6	35.0	100.0	-
Total hours	23,699	37,431	28,243	76,740	166,113	23,808	44,978	27,258	75,278	171,322	158,251
Catch/effort (lb/hr) (excludes dogfish)	1,445	1,084	683	796	934	1,588	969	721	729	914	973

Alaska

A slump in markets and prices prevented the potential development of a significant trawl fishery for groundfish species in Alaska during 1974. The total catch of groundfish by all gears was approximately 3.1 million lb of which the trawl fishery contributed 894,000 lb.

Washington

Trawl landings equalled 43.6 million lb, an increase of 8% over 1973 but still 18% below the 1964-73 mean. The foodfish portion of the landings was down slightly from 1973 due mainly to a very substantial drop in rockfish catches. This decline was partially offset by substantial increases in landings of petrale sole, starry flounder, Pacific cod, and lingcod. Non-foodfish species, principally hake and dogfish, also showed substantial increases.

Oregon

Trawl landings in Oregon in 1974 totalled 19.7 million lb, about equal to 1973 landings, but 16% less than the 1964-73 mean. Foodfish landings accounted for 96% of the catch. Flatfish were the most important foodfish species group of which Dover sole at 5.6 million lb was the most important species. Other major species were English sole, petrale sole, rex sole, other rockfish and lingcod.

California

The 1974 California trawl landings of 54.9 million lb were 10% less than the 1973 record of 61 million lb. The relative importance of groundfish species remained the same as in past years. Dover sole was the leading species. The other rockfish category was second; sablefish, English sole, petrale sole and lingcod followed in order of pounds landed. The animal food fishery reached an all-time low when the last plant processing whole fish for animal food closed in 1974. Processing of fish frames is continuing.

VII. INTERNATIONAL MATTERS

A. STATUS OF FOREIGN TRAWL FISHERIES OFF THE WEST COAST OF CANADA AND THE UNITED STATES

1. Canada

a. Soviet

The 1974 fishery began in mid July. At the peak of July activity there were a maximum of 14 trawlers operating off the lower west coast of Vancouver Island. In late August segments of the fleet again moved north toward the La Perouse Bank area and continued operations at varying levels, peaking at 30 vessels by September 23.

By early October the fleet had dispersed and several vessels moved to Tasu to join others in cargo transfer operations which had commenced on October 5. Only 14 vessels entered Tasu in 1974 as compared to 58 in 1973 and 35 in 1972.

Research trawlers visited Vancouver on three occasions. There were two minor infractions of the trawl ban in the La Perouse Bank Agreement Area.

There has been no Soviet activity off the British Columbia coast to date in 1975. One research vessel called at Vancouver in February and another trawler engaged in navigation and fishery training, as well as some scientific sampling work, made a 5-day visit in early June.

b. Japanese

Up to 7 trawlers and 3 longliners fished for blackcod, Pacific ocean perch and rockfish at various times throughout 1974 along the British Columbia coast. Four trawlers conducted a fishery for Pacific ocean perch in early July southwest and west of Cape Flattery.

To date in 1975 a total of 12 longliners and 6 trawlers have fished at various times off British Columbia for the same species as

mentioned above. Activity has been mainly concentrated in the Triangle Island to Cape St. James area. However, some scattered fisheries occurred to the south off the west coast of Vancouver Island.

c. Republic of Korea

There were a total of 7 Republic of Korea longliners reported off the British Columbia coast in 1974. The first arrived in February and departed immediately. Other vessels continued to arrive throughout the year -- one in May, another in late October, a fourth in late November, and three additional vessels commenced fishing in December. By year-end all operations were terminated and several of the vessels moved south to fish off the United States coast. Several of these vessels were warned for violation of Canadian waters and in December the DONG WON 707 was arrested and a total penalty of $22,500 assessed for fishing inside the Queen Charlotte Sound closing line.

In 1975 there have been 4 Republic of Korea longliners reported off this coast but of these only 2 mounted a fishery, the others appeared to be scouting or surveying.

d. Other

No other nations fished off the British Columbia coast, however several enquiries were made regarding entry of foreign vessels to B.C. ports.

2. United States

a. Soviet

i) Gulf of Alaska (Oct. 1973-Sept. 1974)

In October-November 1973, 5-12 trawlers fished primarily for pollock and flounder in the Kodiak area. The fleet size increased through the winter and reached a peak of 45 vessels in mid-March. The number of trawlers decreased during the summer as the fleet ranged from the Yakutat

grounds to the Shumagin Islands. It is estimated that the Soviet catch was 55,000-65,000 m.t. with Pacific ocean perch being the primary incidental species.

ii) Washington, Oregon, California (April 1974-May 1975)

During the spring and early summer of 1974, Soviet fishing off California was the heaviest on record with 42 trawlers fishing 20-30 miles off San Francisco; part of the fleet stayed throughout the summer fishing for hake between Pt. Reyes and Crescent City. By May, 53 trawlers were reported fishing off Oregon. Most of the fleet remained in the vicinity of Heceta and Stonewall Banks and the normal shift of major effort to the Washington coast did not occur. For the second year no fishing occurred on La Perouse Bank. The hake catch appeared to be similar to the 1973 harvest of about 150,000 m.t.

The 1975 Soviet hake fishery began in earnest in March when 50 trawlers were observed fishing off San Francisco. This is about a month earlier than the fishery began in previous years. As of May, the fleet had grown to 71 trawlers and was still concentrated off central California. It appears that for a second year fishing effort will be centered south of the traditional fishing areas off Oregon-British Columbia.

b. Japanese

i) Gulf of Alaska (1973-74)

The same number of trawlers (42) and longline gillnetters (22) were licensed to fish in the North Pacific region in 1973-74 as in recent years. Domestic regulations were imposed in both years limiting the catch of Pacific ocean perch and sablefish. The total 1973 catch was 149,246 m.t., an increase of 16% from the previous year. Increases occurred in rockfish other than Pacific ocean perch, flatfish, and hake catches. Preliminary 1974 statistics

indicate that the catch in the Gulf of Alaska is down 1261 m.t. from the catch in the same period in 1973. There were increased catches of pollock, rock and yellowfin sole and decreases in other flounders, blackcod, Pacific ocean perch, Pacific cod, and other rockfish.

ii) Washington, Oregon, California (June 1974-June 1975)

Japanese trawl effort increased somewhat in 1974 when as many as 7 stern trawlers fished off central California and Cape Flattery, Washington. Rockfish were observed in the catches. Three longliners operated off Washington and Oregon from November 1974 to February 1975. In 1975, only one trawler off California and another off Oregon have been observed.

c. Other (June 1974-June 1975)

As many as four Republic of Korea trawlers and five longliners fished in the Gulf of Alaska in 1974. Most fishing occurred between Yakutat and the Shumagin Islands. It is estimated that the trawl fishery took about 500 metric tons of mainly perch and pollock, and longliners caught 1000-1500 m.t. of sablefish. As many as five longliners fished longlines and traps for sablefish off Oregon-Washington. In 1975, three longliners were observed off Washington-Oregon.

In 1975, two West German trawlers have been surveying hake and rockfish resources along the California-Washington coasts in cooperation with Mexican researchers.

During 1974, a maximum of eight Polish trawlers worked off the coast, primarily off Oregon. In 1975, a single trawler was observed in February and the number of vessels has been increasing each month. In May, 13 stern trawlers and 3 support vessels (one was a chartered vessel of Dutch registry) were observed off central California. The target species is hake, but rockfish are taken incidentally.

B. RECENT DEVELOPMENTS IN FISHERIES AGREEMENTS

1. Canada

The Canada-USA reciprocal fishing agreement which expired in April 1975 was extended to April 24, 1976 without modification.

The Canada-USSR agreement was extended to February 1976 after amendment. The amendment changed permissible ports of call for scientific vessels from Vancouver and Nanaimo to Vancouver and Port Alberni.

The Canada-USSR scientific meeting held in the USSR in November-December 1974 is summarized as follows:

Catch statistics and information on stocks of mutual interest were exchanged. USSR catch statistics were submitted in much greater detail than in previous years and areas of reporting were those of INPFC.

Discussions involved blackcod, hake, various rockfishes and other species. The effects of changes in hydrological conditions on distribution of hake off British Columbia in 1973 were noted. With respect to blackcod, USSR scientists documented their belief that stocks in the Northeast Pacific (Gulf of Alaska) were beginning to show effects of the intensive Japanese fisheries. Soviet scientists agreed that stocks of Pacific ocean perch off British Columbia were in need of further protection from exploitation. USSR exploratory activities suggested that stocks and feeding areas of herring had expanded considerably in the open ocean off the coasts of Vancouver Island and northern Washington. An expansion of the range and increased abundance of pollock in waters adjacent to the Canadian coast was also noted. Both Canada and USSR agreed on the need for comparison of methods used by the two countries for estimating biomass of rockfishes. This could be accomplished by (a) exchange of scientists aboard research vessels of the two countries, and (b) operation of these vessels together on grounds occupied by quantities of hake, rockfish or other species. The next scientific meeting is scheduled for December 1975 in Canada.

2. United States

During November-December 1974, the USA-Japan fishery agreement was renegotiated for the 1975-76 biennium. Reductions in Japanese crab, pollock, herring, blackcod and other groundfish catches in the Bering Sea and blackcod and rockfish catches in the northeastern Pacific were agreed upon. In addition, many area-time restrictions on Japanese trawling were instituted to reduce gear conflicts and to protect halibut and other threatened species.

The USA-USSR bilateral agreement negotiated in 1972 was to be renegotiated in January 1975. The 1972 agreement was extended, however, when USA and Soviet representatives could not resolve differences of opinion with regard to management of fisheries and validity of fishery statistics. A second meeting is scheduled for July 1975.

The USA-Canada agreement which expired in April 1975 was extended for another year without modification.

In May 1975, the USA and Poland signed a short-term fishery agreement effective from June 15-December 31, relating to the fisheries of the North Pacific area extending from California to Alaska. Highlights of the agreement are: (1) Poland will take no more hake in 1975 than in 1974 (44,000 m.t.), (2) no more than 15 Polish vessels will be licensed to fish the North Pacific area, of which no more than 11 vessels will fish at any one time, (3) the 11 vessels will be dispersed in such a manner so as to avoid a concentration of effort in one locality, (4) Poland will refrain from fishing salmon and halibut and will conduct no specialized fisheries for rockfish, blackcod, flounders, soles, anchovy, Pacific mackerel and shrimp. Furthermore, Poland agreed not to fish in areas off California, Washington and Kodiak Island where U.S. fishermen use fixed gear. No port privileges were granted, but loading zones within the contiguous fishery zone were provided.

Scientific meetings were held with the USSR and the Republic of Korea.

U.S. and Soviet scientists discussed the status of hake, rockfish, herring, blackcod, pollock, flounder, crab and shrimp stocks. Both parties agreed that in general Pacific ocean perch stocks throughout the Gulf of Alaska are in poor condition and that, in particular, stocks in the Oregon-Vancouver Island area still require stringent protective measures. Soviet scientists on the basis of hydroacoustic surveys recommended a 67% increase in their Pacific hake catch to 250,000 m.t. Future studies and cooperative research were also discussed.

U.S. and R.O.K. deliberations included implementation and enforcement of the agreement, exchange of catch statistics, exchange of views on status of stocks of mutual concern and plans for future and cooperative research.

VIII. REVIEW OF DATA EXCHANGE PROCEDURES

Data exchange among agencies was discussed. It was noted that status reports from all agencies have not been exchanged at least one month before the meeting as has been the objective. A recommendation concerning timeliness of reporting was adopted and appears under Agenda Item XV.

California agreed to distribute amended copies of their groundfish line and trap gear data for 1973.

Mr. Dark distributed (a) USSR 1973 groundfish catch statistics, (b) a report entitled "All nation removal of groundfish and herring from the Eastern Bering Sea and Northeastern Pacific Ocean, 1967-73," by H. A. Larkins, (c) a report on activities of the Polish fishing fleet in the Northeast Pacific, (d) a summary of the USA-Japan fisheries agreement, and (e) a copy of a Ph.D. thesis on Pacific hake, by Yu. K. Yermakov (USSR).

Mr. Forrester reported that the INPFC historical bulletin has been completed and publication will await availability of INPFC funds for such purpose.

Washington and Oregon are continuing exchange of rockfish age and growth information.

IX. REVIEW OF AGENCY PROGRESS

A. CURRENT AND PROPOSED RESEARCH

1. Canada

Groundfish staff at the Pacific Biological Station at Nanaimo in 1974 was reduced by transfer of a scientist and a technician to the Strait of Georgia program. At time of reporting, staff consisted of 1 scientist, 6 technicians, and 1 clerk. Two of the technical staff continued in their main duties of interviewing and collecting samples from the commercial trawling operations.

Groundfish cruises were conducted during May, June, and September, 1974. May cruises were concerned with stocks in the Strait of Georgia (primarily hake and pollock). The June cruise was a continuation of examination of previously unexplored grounds in Queen Charlotte Sound. The September cruise to Queen Charlotte Sound was for biomass estimates of Pacific ocean perch. Reports were published on all cruises and on other aspects of the investigation.

Future activities

In April 1975, the first cruise directed towards the intensified investigation of Pacific cod was carried out. Fishing was conducted on all regular known Pacific cod fishing grounds. Main emphasis in the investigation is expected to continue on Pacific cod.

2. United States

a. Alaska

At the present time the State of Alaska has no biological staff assigned solely to a groundfish research or management program but the legislature has approved a position for a groundfish biologist. During 1974 Alaska participated with the NMFS in the Bering Sea observer program aboard Japanese groundfish trawlers.

b. Washington

The groundfish staff under direction of the senior biologist consists of 3 biologists full-time, 1 biologist half-time, and 3 scientific aides. One scientific aide position employed by PMFC is located at the Seattle office and is involved in coastal groundfish age reading work. Groundfish studies during the past year were carried out under three projects.

i) Trawl Fishery Monitoring Project (3 scientific aides). Daily coverage of the major Puget Sound landing ports is accomplished by two port samplers. During 1974 significant trawl landings occurred at Blaine, Bellingham, Anacortes, Everett, Seattle, LaConner and Westport on Grays Harbor. Biological samples collected during 1974 totalled 203 compared to 136 in 1973.

A computer oriented data storage and retrieval system is handling the fishermen interview and biological sample data. Major improvements were made to facilitate retrieval and storage of large blocks of interview data.

ii) Coastal Groundfish Studies (3 biologists + 1 PMFC scientific aide). Major emphasis this year was on Pacific ocean perch, and petrale sole analysis. A preliminary report on growth, mortality, sexual

maturation, fecundity, and stock assessment of Pacific ocean perch in Queen Charlotte Sound and off Washington-Southwest Vancouver Island is currently in preparation.

Analysis of petrale sole tagging has been completed and a report on petrale sole stock assessment is currently being prepared.

Age analysis of Pacific ocean perch, petrale sole, and Puget Sound hake continued during 1974. Members of the age analysis unit will begin reading S. flavidus otoliths on a production basis.

iii) Puget Sound Groundfish Studies (1 biologist half-time). Work activity centered on (a) analysis of Pacific cod tagging studies, (b) implementation of a reduction fishery for dogfish to test the feasibility of utilizing dogfish meal as a component of hatchery-reared salmon pellets, and (c) conducting on board sampling in Hood Canal to determine the magnitude and species composition of discards in commercial trawl operations. Manuscripts and progress reports are being prepared for all activities.

c. Oregon

The Oregon groundfish staff consisted of 8 biologists, 3 technicians, 1 part-time biologist student, and 2-3 temporary assistants.

i) Tagging. On March 6, 1975, 161 Dover sole were tagged off Cape Arago (220-270 fathoms). The tagging, conducted during a regular fishing trip of the commercial trawler, Betty A, completed planned tagging in the area.

ii) Biological studies. A September-October 1975 cruise will be made off Washington between the Columbia River and Cape Flattery in depths from 10 to 400 fathoms. Methods and techniques developed for the 1971-74 surveys off Oregon (which will be discontinued) will be used. The cruise will be a cooperative venture with Washington State and NMFS.

iii) Sampling program. Landings of Dover sole, English sole, petrale sole, rockfish and animal food were sampled (121 samples) at Brookings, Charleston, Winchester Bay, Newport, and Astoria.

d) California

Groundfish work is conducted by geographical units of the Department located at key ports along the California coast. Activities of surveillance and monitoring of the fishery are facilitated by biologists at major groundfish ports.

i) Biological studies. Assessment of San Francisco Bay and the nearshore waters of the Gulf of Farallones as environments for young English sole was initiated in 1975. Analyses of completed field studies on nearshore rockfish, Dover sole, and flatfish tagging experiments are underway and completion and reporting for some studies are scheduled for 1975 and 1976. Ageing of flatfish samples continued.

ii) Groundfish sampling program. A total of 536 samples were taken from various groundfish species for age and size composition and species composition.

e) National Marine Fisheries Service

The groundfish assessment staff has remained the same except for the transfer of a biologist from the Kodiak base to the NWFC (Seattle) to manage research in the northeastern Gulf of Alaska which is being conducted under contract for the Bureau of Land Management (BLM). Under the guidelines of the Environmental Protection Act, BLM must provide environmental impact statements prior to the issuance of leases to offshore sites for oil explorations. BLM-funded work is designed to provide the necessary basic data for those statements.

i) Bering Sea Resources. An extensive trawl survey will be conducted in the eastern Bering Sea in 1975. The objectives are to: (1) describe the composition and distribution of demersal fish, shellfish and epibenthic invertebrate resources in the eastern Bering Sea by season, area and depth; (2) estimate the standing stock, growth rate, and potential yields of selected species; and (3) compare information from the 1975 baseline period with historical information available in the literature and existing data sources.

ii) Gulf of Alaska Resources. A MARMAP survey will occur in an area east of the Kodiak Islands to Cape Cleare to determine the distribution and abundance of groundfish species by area and depth, with pollock being the species of primary interest.

A second survey will be conducted under contract for BLM between Cape Cleare and Yakutat Bay. Objectives are: (1) to describe the temporal and areal distribution of demersal fish and shellfish in the offshore waters (10-250 fathoms) of the northeastern Gulf of Alaska which are of present or potential commercial importance, and (2) to estimate the standing stock of these species.

iii) Pacific Northwest Resources. In 1975, a trawl-hydroacoustic survey of juvenile hake in California waters was completed. This was the second in a series of surveys designed to determine the feasibility of establishing a prerecruit-recruit relationship so that the magnitude of recruitment to the fishery might be forecast 1-2 years in advance. This work will be followed by a synoptic hake survey during September-October 1975 that will extend from central Vancouver Island to San Diego. Two vessels will conduct all trawling and a third will accomplish all hydroacoustic work. A part of the hydroacoustic effort will be coordinated

with the Oregon Fish Commission's trawl survey off Washington as outlined in proposal no. 2 adopted by the IGC, October 11, 1974.

NMFS continues to tag sablefish as the opportunity occurs during resource assessment surveys. In the past year 611 sablefish were tagged by NMFS off California, Oregon and Washington. Tagging equipment was furnished to the Republic of Korea and the USSR as participants in a cooperative program.

iv) Other activities. The deployment of U.S. observers aboard Japanese groundfish fleets in the eastern Bering Sea began in 1973 and continues through 1975 at the same level of effort. In addition, 5 observer trips, 3 in the Gulf of Alaska and 2 in the eastern Bering Sea, aboard Soviet BMRT trawlers were completed between November 1974 and April 1975. Additional trips will occur this year. In both programs the primary objective is to gather information on the magnitude of the incidental catch of halibut and crab.

f) International Pacific Halibut Commission

Mr. Hoag described studies by IPHC directed towards the reduction of incidental capture of halibut by domestic trawlers. He also reported on the recruitment studies on halibut in the Eastern Bering Sea.

B. REPORTS COMPLETED OR IN PROGRESS

Each agency distributed, with status reports, a list of reports completed or in progress.

X. PROGRESS ON 1974 RECOMMENDATIONS OF THE TECHNICAL SUB-COMMITTEE

A. FUTURE WORK

1. Statistics on groundfish line and trap fisheries

Each agency reported that intensified effort was being directed towards achieving more complete statistics of catch and effort in their fisheries for groundfish with gear other than trawl.

2. Standardization of statistics on round weights

All agencies reported that their groundfish landing statistics are now produced in round weights.

3. Species composition of "other rockfish" landings

Each agency reported on the active progress being made to acquire more detailed information on the species composition of "other rockfish" landings. The Technical Sub-Committee noted that considerable progress had been made along these lines and recommended that these studies continue to have a high priority.

4. Pacific ocean perch management program

(a) It was the view of the Technical Sub-Committee that discards of Pacific ocean perch in the domestic fishery were not of sufficient magnitude at this time to warrant special study. However, the Committee agreed that monitoring should continue not only on the domestic Pacific ocean perch fisheries but also on Pacific ocean perch fisheries of other nations where possible. Monitoring should be intensified during years of heavy recruitment.

(b) The Technical Sub-Committee suggested that a joint comparison be undertaken to determine the validity of the Canadian and United States techniques for estimating rockfish biomass. Southern Queen Charlotte Sound is the recommended site for this study.

5. Trawl mesh studies

In view of 4(a) above, the Technical Sub-Committee considered that no further action was necessary with respect to particular mesh studies on Pacific ocean perch. However, the Committee suggested preparation, for information of fishermen, of a circular describing effects of various mesh sizes on capture of different species. Canada agreed to evaluate the feasibility of preparing such a circular.

Oregon distributed, with their status report a manuscript entitled "Utilization of flatfish caught by Oregon trawlers in 1974." The report dealt with discarded and retained portions of catches for five species of flatfish.

B. PARENT COMMITTEE

1. Research proposals

The following progress was reported on the two research proposals presented at the 1974 Technical Sub-Committee meeting. Neither proposal was approved for funding in its entirety. However agencies reported that work was proceeding on projects within the framework of both.

(a) Pacific cod, lingcod, and shelf rockfish assessment studies off B.C., Washington, Oregon, and California.

All agencies are working toward achievement of a compatible data base for trawl statistics necessary for adequate stock assessments. Washington reported on shelf rockfish studies underway. Oregon and California reported on activities concerning rockfish and lingcod. Canada reported on intensification of Pacific cod and other rockfish studies.

(b) Washington coast groundfish study

Oregon reported on the proposed cruises (in cooperation with NMFS) to be conducted off the Washington coast. The cruises will include

assessments through use of both trawling operations and hydroacoustic methods.

2. Pacific ocean perch status report

The Pacific ocean perch working group suggested preparation of updated tabular material for the Pacific ocean perch status report for submission to INPFC in 1975. The group also suggested preparation of a report containing detailed considerations of Pacific ocean perch stocks and status of stocks for presentation at the 1976 Technical Sub-Committee meeting. A recommendation to these effects appears under Agenda Item XV.

3. Groundfish statistics

The Technical Sub-Committee is pleased to note that all agencies are now reporting trawl catches in round weights and made a further recommendation on timeliness of reporting.

XI. 1974 RECOMMENDATIONS OF THE INTERNATIONAL GROUNDFISH COMMITTEE

A. COASTWIDE TRAWL FISHERY DATA COMPATIBILITY

Washington, Oregon and California reported that work is actively proceeding toward achievement of a compatible collection and notation system for trawl fishery data.

B. INCIDENTAL TRAWL CATCHES OF DUNGENESS CRAB

All agencies agreed to collect available information on the magnitude of incidental trawl catches of Dungeness crab and to monitor such catches when possible.

XII. GROUNDFISH REGULATION CHANGES

A. TRAWL FISHERY

Agencies reported no change in groundfish trawl regulations.

B. NON-TRAWL FISHERY

Agencies reported on various regulations pertaining to groundfish taken with gear other than trawl.

Regulations from each agency, for both trawl and non-trawl fisheries for groundfish are shown in Appendix B.

XIII. RECOMMENDATIONS FOR COOPERATIVE PROGRAMS

Considerable discussion revolved around the question of extent and character of discards in the trawl fishery. No particular recommendation was made, but all agencies agreed to collect data on discards as they became available.

All agencies agreed on the need for an updated bibliography of groundfish literature on the Pacific coast. The Technical Sub-Committee sought Parent Committee support for such a compilation (recommendation under Agenda Item XV).

XIV. OTHER BUSINESS

Discussion of the form and sometimes inadquate nature of reports submitted under Agenda Item "Status of stocks" resulted in a recommendation to Technical Sub-Committee members (Agenda Item XV).

XV. RECOMMENDATIONS

A. FUTURE WORK

1. Appendix of coastal groundfish regulations

The Technical Sub-Committee recommends that each agency compile a summary of coastal groundfish regulations for all gears (not including inside waters) in effect July 1, 1975 for inclusion in the 1975 Technical Sub-Committee Report (Appendix B).

2. Species composition of "other rockfish" landings

The Technical Sub-Committee reviewed the progress made by each agency in determining the species composition of their "other rockfish" landings and recommends that continued high priority be placed on this work during the next year.

3. Pacific ocean perch management program

(a) The Technical Sub-Committee recommends that the Pacific ocean perch working group under the chairmanship of Don Gunderson provide a simple update of their 1972 status report by submission of 1973 catch and effort data as an INPFC document by August 15, 1975.

(b) The Technical Sub-Committee recommends that the Pacific ocean perch working group prepare a detailed status report on Pacific ocean perch by May 1, 1976 for consideration of the Technical Sub-Committee.

4. State of knowledge report on "other rockfish"

The Technical Sub-Committee recommends that a working group under the chairmanship of J. Westrheim summarize the state of knowledge on "other rockfish" of the Northeast Pacific by review and assembly of all available historical information and current work. This effort is to be restricted to species having current or potential current value.

5. "Other rockfish" catch, effort, and CPUE time-series

The Technical Sub-Committee recommends that a designated working group under the chairmanship of Don Gunderson prepare a report using existing available species composition, catch and effort data on "other rockfish" for submission to INPFC as a document by August 15, 1975.

6. Timeliness of groundfish statistics

The Technical Sub-Committee noted that some progress was made during the past year regarding the problems encountered in obtaining timely groundfish statistics for consideration at the annual Technical Sub-Committee meeting. The Technical Sub-Committee recommends that members continue their efforts within each agency to further improve the priority assigned to groundfish statistics.

7. Reports on status of stocks

It was agreed by all agencies that reports submitted under Agenda Item "Status of Stocks" would be expanded to include in addition to catch and effort data, biological information and other data to aid in determining status of stocks.

8. Mesh size information

The Technical Sub-Committee recommends that Canada evaluate the feasibility and desirability of preparing an informational leaflet on mesh size selection by species for distribution to fishermen.

B. PARENT COMMITTEE

1. Groundfish bibliography

The Technical Sub-Committee recommends to the Parent Committee that it explore potential avenues of support for the compilation of a comprehensive bibliography of scientific literature on groundfish resources of the Northeast Pacific Ocean and Bering Sea.

2. "Other rockfish" document

The Technical Sub-Committee requests of the Parent Committee approval of a joint U.S.-Canada submission of a historical document on other rockfish species composition, catch, effort, and CPUE trends for use at the 1975 annual meeting of INPFC.

Note: Parent Committee approved this recommendation on June 27, 1975 (see Appendix C).

3. Research proposal 1

The Technical Sub-Committee recommends that the Parent Committee continue its efforts to seek funding support for the "Pacific cod, lingcod, and shelf-rockfish assessment studies" project (Appendix C of the 1974 Technical Sub-Committee Report) in order that this high priority work may be fully implemented by all agencies included in the proposal.

4. Research proposal 2

The Technical Sub-Committee recommends that the Parent Committee communicate its support of the extended cooperative groundfish biomass survey off the Washington coast this fall to the respective Directors of the NMFS-Northwest Fisheries Center and the Oregon Fish Commission.

XVI. SCHEDULE OF MEETINGS

1. International Groundfish Committee Meeting

The Committee meeting is scheduled for Friday, November 14, 1975 in conjunction with the PMFC annual meeting, November 11-13, in San Diego, California.

2. Seventeenth Annual Meeting of the Technical Sub-Committee

The 17th annual meeting is tentatively scheduled for the third or fourth week in June, 1976, in Oregon.

XVII. ELECTION OF CHAIRMAN

Mr. G. S. DiDonato was elected chairman for 1976-77.

XVIII. ADJOURNMENT

The meeting was adjourned at 1130 hr, June 27, 1975.

APPENDIX A

AGENDA

TECHNICAL SUB-COMMITTEE OF THE
INTERNATIONAL GROUNDFISH COMMITTEE
VANCOUVER, B.C., JUNE 1975

16th ANNUAL MEETING

I. CALL TO ORDER

II. APPOINTMENT OF SECRETARY

III. APPROVAL OF AGENDA

IV. TERMS OF REFERENCE

V. STATUS OF STOCKS REPORTS

1. Dover sole	(FCO)	5. Lingcod	(CDE)
2. English sole	(CDF&G)	6. Sablefish	(NMFS)
3. Petrale sole	(CDF&G)	7. Pacific ocean perch	(WDF)
4. Pacific cod	(CDE)	8. Other rockfish	(WDF)

VI. REVIEW OF THE NORTH AMERICAN FISHERY (Chairman)

VII. INTERNATIONAL MATTERS

1. Status of foreign trawl fisheries off the west coast of Canada and the United States
2. Recent developments in fisheries agreements

VIII. REVIEW OF DATA EXCHANGE PROCEDURES

IX. REVIEW OF AGENCY PROGRESS

1. Current and proposed research
2. Reports completed or in progress

X. PROGRESS ON 1974 RECOMMENDATIONS OF THE TECHNICAL SUB-COMMITTEE

A. FUTURE WORK FOR TSC

1. Statistics on groundfish line and trap fisheries
2. Standardization of statistics on round weight units
3. Species composition of other rockfish
4. Pacific ocean perch management program
5. Trawl mesh size studies

B. PARENT COMMITTEE

1. Research proposals
   a. Pacific cod, lingcod and shelf-rockfish stock assessment
   b. Washington coast groundfish study
2. Pacific ocean perch status report
3. Groundfish statistics

XI. 1974 RECOMMENDATIONS OF THE INTERNATIONAL GROUNDFISH COMMITTEE

1. Coastwide trawl fishery data compatability efforts
2. Incidental trawl catches of Dungeness crab

XII. GROUNDFISH REGULATION CHANGES

1. Trawl fishery
2. Non-trawl fisheries

XIII. RECOMMENDATIONS FOR COOPERATIVE PROGRAMS

XIV. OTHER BUSINESS

XV. RECOMMENDATIONS

1. Future work
2. Parent committee

XVI. SCHEDULE OF MEETINGS

1. International Groundfish Committee meeting
2. 17th annual meeting of Technical Sub-Committee

XVII. ELECTION OF CHAIRMAN

XVIII. ADJOURNMENT

APPENDIX B

SUMMARY OF COASTAL GROUNDFISH REGULATIONS (EXCLUDING INSIDE WATERS AND PACIFIC HALIBUT REGULATIONS) IN EFFECT JULY 1, 1975

I. OTTER TRAWL

A. TYPE OF REGULATION

1. Closure of fishing by season

California

In the California halibut (Paralichthys californicus) trawl grounds, south and east of a line due west (270°T) from Point Arguello and north and west of a line due south (180°T) from Point Mugu (PMFC Area 1A) in waters not more than 25 fm deep and not less than 1 nautical mile from shore, the period March 15 through June 15 is closed to trawling.

Oregon

There is no closed season for taking of ocean food fish for commercial purposes.

Washington

No closed periods for ocean trawl fishing.

Canada

During period December 20 to April 15 inclusive no brill (petrale sole) may be taken except for incidental catch not exceeding 3,000 lb per boat trip for a maximum of two boat trips per month.

2. Closure of fishing by area

California

Use of trawl nets prohibited in waters less than 3 nautical miles from nearest point of land on mainland shore, including certain named bays except in the following two areas:

(a) In the California halibut trawl grounds, south and east of a line due west (270° true) from Point Arguello and north and west of line due south (180° true) from Point Mugu (PMFC Area 1A) in waters not more than 25 fm deep and not less than 1 nautical mile from shore, trawls with codends at least 29 meshes long and 47 meshes in circumference and codend mesh of 7 1/2 in in length may be used during the open season June 16 through March 14 (PMFC Area 1A).

The Director may close to trawling all or part of the halibut trawl grounds or further restrict nets if he determines that the California halibut resource or existing fishing operations are in danger of irreparable injury.

(b) Trawl nets, except midwater trawls, may be used between Yankee Point and Point Sur in waters that are one mile or more from shore (PMFC Area 1B).

Oregon

Otter trawl fishing limited to waters of the Pacific Ocean.

Washington

No closed areas for ocean trawl fishing.

Canada

Chief Supervisor may prohibit all trawl fishing in any area at any time when deemed necessary to prevent adverse effect on populations.

3. Definition of legal gear

California

Paranzella nets, beam trawls, otter trawls, shrimp trawls and midwater trawls are defined as trawl nets. Also see section B of this Appendix.

Oregon

Trawl net means a bag-shaped net composed of wings, body, intermediate and codend sections, held open by trawl doors or a fixed beam frame ("beam trawl"). The codend section is the last 50 meshes of a trawl net. The intermediate section is the next 50 meshes forward of the codend section.

Washington

Otter-trawl gear shall be defined as a tapered, funnel-shaped net consisting of a forward, intermediate and codend section with floats along the upper edge of the mouth (headrope) and a weighted line (footrope) forming the lower edge thereof. Otter doors or boards are used to spread the mouth of the net horizontally as it is towed. Roller and bobbin gear on a rope attached to the footrope may be used as aids to fishing rocky grounds. Telemetry gear consists of a precision net depth indicating device attached to the door or footrope of the net giving a continuous indication of the position of the net in relation to the bottom or surface.

Double layer codends shall be tied together in such a manner that the knots and meshes coincide the full length of the double layer. Meshes of hog-ring and rope-type chafing gear shall measure not less than 7 in. Chafing gear made of hides or canvas shall be of a size not greater than one-half the circumference of the codend.

Beam trawl shall be defined as a bag-shaped trawl net not utilizing weighted otter frames or other doors when operated with minimum mesh size 4 1/2 in in a food fishery.

Canada

"Trawl" means an otter or beam trawl used for catching fish other than shrimp. See section B of this appendix.

Alaska[1]

Trawls are legal for bottom fish.

4. Minimum size limits

California

No California halibut which weighs less than 4 lb in the round, or less than 3 1/2 lb dressed head on, or less than 3 lb dressed head off, may be taken, possessed or sold. The holder of a commercial fishing license may possess during one day for non-commercial use not more than 30 lb of California halibut of less than such minimum weight if taken incidentally in commercial fishing except in the California halibut trawl grounds when no California halibut less than 4 lb round weight may be possessed aboard trawl vessels.

Oregon

It is unlawful for the skipper or operator of a commercial fishing boat to take during any fishing trip and retain on board the boat a catch of ocean food fish which includes a combined total of more than 250 Dover, English or petrale sole less than 11 in in length, if the boat has aboard a trawl net with a single wall intermediate and/or codend of mesh less than 5 in or a single wall codend with liner where both meshes are less than 5 in or a hog-ring type codend of mesh less than 6 in between hog-rings.

It is unlawful to take sturgeon commercially less than 4 ft or more than 6 ft in length and to remove the head or tail of any sturgeon commercially caught prior to being received at the premises of a wholesale fish dealer or canner.

Washington

No size limits on any groundfish species.

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[1]1975 groundfish regulations not available. Those cited in this summary were in effect in 1971.

Canada

Minimum size of 12 in tip of snout to tip of tail for lemon (English) sole, rock sole, brill (petrale sole) and starry flounder.

Minimum size of 2 1/2 lb dressed head off for sablefish (blackcod).

Minimum size of 23 in tip of snout to tip of tail, and minimum weight of 3 lb dressed head off for lingcod.

Alaska

No restrictions.

5. Regulation of utilization (food and non-food use)

California

It is unlawful to cause or permit any deterioration or waste of fish.

Within the California halibut trawl grounds (section A.1. of this appendix) not more than 500 lb of fish other than California halibut may be possessed.

It is unlawful to take or possess more than 500 lb of crab (Cancer magister) on a vessel carrying or using a trawl net.

Oregon

No limitation on utilization of groundfish.

Washington

It is lawful to use groundfish species for any utilization purpose.

Canada

No limitation on utilization of legally caught bottom fish.

Alaska

No restrictions.

6. Miscellaneous regulations

California

Otter or beam trawl operators must keep a daily logbook and render the information to the Department. The required recording includes:

(a) Time and place of each haul, each trip.

(b) Duration of haul and approximate composition of catch for each haul.

Oregon

The skipper of each licensed trawl boat must maintain a logbook and upon request, permit examination and transcription of information therein. Such information is confidential.

Every licensed wholesale fish dealer, fish bait dealer, or food fish canner whose licensed premises include a receiving or docking facility for unloading the catch shall be considered as the fish receiver, and shall weigh the catch and report it, paying poundage fees on such catch.

(a) A report (Individual Fisherman Landing Report = Fish ticket) must be submitted by the receiver to the State Department of Fish and Wildlife weekly. It shall contain:

1. Fish Dealers name - address - buying station.
2. Date of receipt of foodfish or shellfish.
3. Name and commercial fishing license number of fishermen and boat plate of the vessel.
4. Fishing gear used.
5. Quantity in pounds of each species received.

(b) Monthly report showing total pounds in the round of each species received including poundage fees to be sent to Department of Fish and Wildlife.

B. SUMMARY OF LAWS AND REGULATIONS RELATING TO DEFINITION AND MEASUREMENT OF TRAWL NET MESH SIZES ON THE PACIFIC COAST

1. Legal definition of minimum mesh size

California

No natural or synthetic webbing less than 4 1/2 in (except for mesh actually covering floats) may be possessed on boat. (See section A.2. of this appendix for areas requiring 7 1/2 in minimum codend mesh size.)

Hog-ring bags or codends shall have minimum mesh measurement not less than 6 in when wet.

Double bags or codends shall have individual meshes, coinciding knot for knot in each layer, not less than 4 1/2 in in length.

Chafing gear allowed that shall not cover more than the last 120 meshes in length of net and bag combined and not more than the bottom one-half of the circumference of the net and bag. Not more than eight riblines may be attached to any type bag or codend.

Oregon

Chafing gear of a single or double wall codend section shall not cover more than the bottom half of the codend.

Hog-ring type codend sections shall not have material greater than 3/8 inch diameter.

A double wall codend section or liner, when hung or tied, shall have the knots of each layer coincide, knot for knot, the full length of the double layer.

Minimum mesh of 2 1/2 in when fishing for hake.

Washington

It shall be unlawful to use, operate or carry aboard any fishing vessel, bottom fish otter-trawl gear having meshes measuring less than 3 in, except that:

It shall be lawful to use otter-trawl nets . . . having a minimum mesh size of two and one-half (2 1/2) in for Pacific hake in the Pacific Ocean and coastal waters.

Canada

"Mesh size" means the distance between the inside of diagonally opposite knots of any mesh as determined after the net has been immersed in water.

Minimum mesh size in trawl is 3 1/2 in.

It is not permissible to use a double layer of mesh in the codend of a trawl unless the layers are tied or knitted together in such a manner that the size of any mesh is not reduced by the layer attached to that mesh.

Operating vessel shall have a scupper opening not less than 36 in wide or multiple openings not less than 12 in each.

Alaska

No minimum mesh size.

2. Legal definition of methods of measurement

California

"By taking at least four meshes and measuring them inside the knots while they are simultaneously drawn closely together."

Hog-rings - "By taking at least four meshes and measuring them inside the wire hog-rings while they are simultaneously drawn closely together," and "measured when wet between proximal wires, rings, etc."

Oregon

Mesh size measurement shall be the average mesh size of not less than five consecutive meshes, measured to the nearest 1/4 in by stretching the meshes taut and measuring the distance between the inside of one knot to the inside of the opposite vertical knot of one mesh. Tension = 10 lb.

Washington

The size of a mesh of any net shall be defined as the distance between the inside of one knot to the outside of the opposite vertical knot of one mesh when the mesh is stretched vertically, while wet, by using a tension of ten (10) lb on any three (3) consecutive meshes, then measuring the middle mesh of the three while under tension; provided that when measuring mesh used in otter trawl nets the size of a mesh shall be defined as the distance between the inside of one knot to the inside of the opposite vertical knot.

Canada

All regulations for British Columbia specify "extension measure." This is not defined, other than "the distance between the inside of diagonally opposite knots of any mesh, as determined after the net has been immersed in water."

Alaska

All mesh is measured from one knot to include the next knot.

3. Methods of measurement used by enforcement officers

California

As described above.

Oregon

Generally by stretching web and measuring single meshes with ruler or flexible tape.

Washington

Web is stretched under tension, usually by hanging a 10 lb weight and measurement is made using a ruler or flexible tape.

Canada

Officers measure when the net is wet by grasping diagonally opposite knots and applying tension so as to close the mesh. Measurement is made from the inside of one knot to the inside of the knot diagonally opposite.

Alaska

Nil.

4. Devices used or capable of use for measurement

California

No special devices.

Oregon

No special devices. Prototype I.C.E.S. gauge is available - not used for enforcement.

Washington

No special devices.

Canada

No special devices. An official I.C.E.S. gauge is available - not used for enforcement.

Alaska

Nil.

II. LINE

California

Troll or handlines having not more than two hooks (plugs excepted) may be used.

Set lines may be used in ocean waters.

Set lines or any line with more than five hooks prohibited in District 15 (a small area under 10 fm off Santa Cruz, PMFC Area 1B).

Oregon

Longline means a fishing line with a series of barbed hooks on short, separate but attached lines. It may be anchored or left drifting. Longlines are permitted in the ocean.

Troll is fishing with line or lines etc. originating from a fixed receptacle or storage spool fastened to the boat. It is permitted in the ocean from April 15 of any year to March 31 of the following year.

It is lawful to take ocean food fish for commercial purposes by handline, pole-and-line, or pole-reel-and-line with not less than four separate hooks attached.

Washington

Troll line when relating to its use for commercial purposes shall be defined as a fishing line used to drag a lure or lures behind a moving vessel and shall permit the use by any one vessel of not more than six (6) lines.

Set line shall be defined as a line with baited hooks attached thereto, laid on the bottom or held in suspension, either anchored or tied to shore, and attached to a marker buoy to which shall be affixed the license number under which the gear is operated.

Canada

Handline, troll, and longline gear are not officially defined and there are no restrictions for the groundfish fishery.

Alaska

Sablefish may be taken by longline and pot gear from May 1 through November 30 in all outside waters and inside fishing districts 1 through 8, and September 15 through November 15 in inside districts 9 through 15.

III. NETS

California

Drift gillnets may be used between the Oregon-California border and the San Mateo-Santa Cruz County border (approximately at Ano Nuevo 37°N lat., PMFC areas 1C and part of 1B).

Set gillnets may be used between Point Reyes and the San Mateo-Santa Cruz County border (Area 1B).

In that part of Monterey Bay lying north and west of a line drawn from the light on the end of the Monterey Breakwater due east to the shoreline, drift and set gill nets may be used except to take rockfish or lingcod; however, loads or lots of fish taken in these areas may contain 200 lb or less of rockfish and lingcod, in combination, but never more than 100 lb of rockfish.

From San Mateo-Santa Cruz County border south to California-Mexico border (Areas 1B and 1A) drift and set gill nets may be used except in Santa Monica Bay, Los Angeles Harbor area, and the north, east and south sides of Santa Catalina Island, and except for the taking of rockfish and lingcod

between a line running due west magnetic from the south steam plant stack at Moss Landing (36°48'N lat.) and a line running due west magnetic from the Point Pinos lighthouse in waters between 40 and 60 fm from sunset Thursday to sunset Sunday and except between a line running due west magnetic from the south steam plant stack at Moss Landing and a line due west from Hurricane Point (36°21.5'N lat.) in waters less than 40 fm except that loads or lots of fish taken in these areas may contain 200 lb or less of rockfish and lingcod, in combination, but never more than 100 lb of rockfish.

Trammel nets includes entangling nets constructed of more than one wall of mesh. Between the Mendocino-Sonoma County line (38°46'N lat.) and the California-Mexico border, trammel nets with at least 8 in mesh may be used. They cannot be used between Yankee Point, Monterey County and the Santa Barbara-Ventura County line within 1 mile of a pier or jetty nor can they be used or possessed in Santa Monica Bay.

Canada

Gillnet means a floating gillnet that is neither anchored nor staked, but floats freely with the tide or current. There are various limitations on use of gillnets for dogfish.

IV. TRAPS

California

Traps may be used for taking groundfish under an annual, revocable, non-transferable permit from the Department in all ocean waters except those specified by the Department.

Washington

Bottom fish pot shall be defined as a portable trap with one or more gates or entrance ways, with line or lines attached to a surface buoy to which shall be affixed the license number under which the gear is operated and used for the purpose of taking any species of bottom fish. A section of

one vertical wall must be constructed of cotton fiber or one of the walls of synthetic fiber must be attached to the frame with cotton hangings to permit escapement of fish if the bottom fish pot is lost.

Oregon

It is lawful to take ocean food fish for commercial purposes by pots.

APPENDIX C

The International Groundfish Committee on June 27, 1975, authorized the Technical Sub-Committee to prepare a historical review paper on "other rockfish" species composition, catch, effort and CPUE trends for joint Canada and United States submission to the International North Pacific Fisheries Commission prior to August 15, 1975. The Sub-Committee was requested to provide copies to the International Groundfish Committee for review in advance of submission to INPFC.

DISTRIBUTION OF THE REPORT OF THE TECHNICAL SUB-COMMITTEE

TECHNICAL SUB-COMMITTEE		TOTAL
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