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ベーリング海の日本底魚漁業の概況

Outline of the Japanese groundfish fishery in the  
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and 1985 January-July

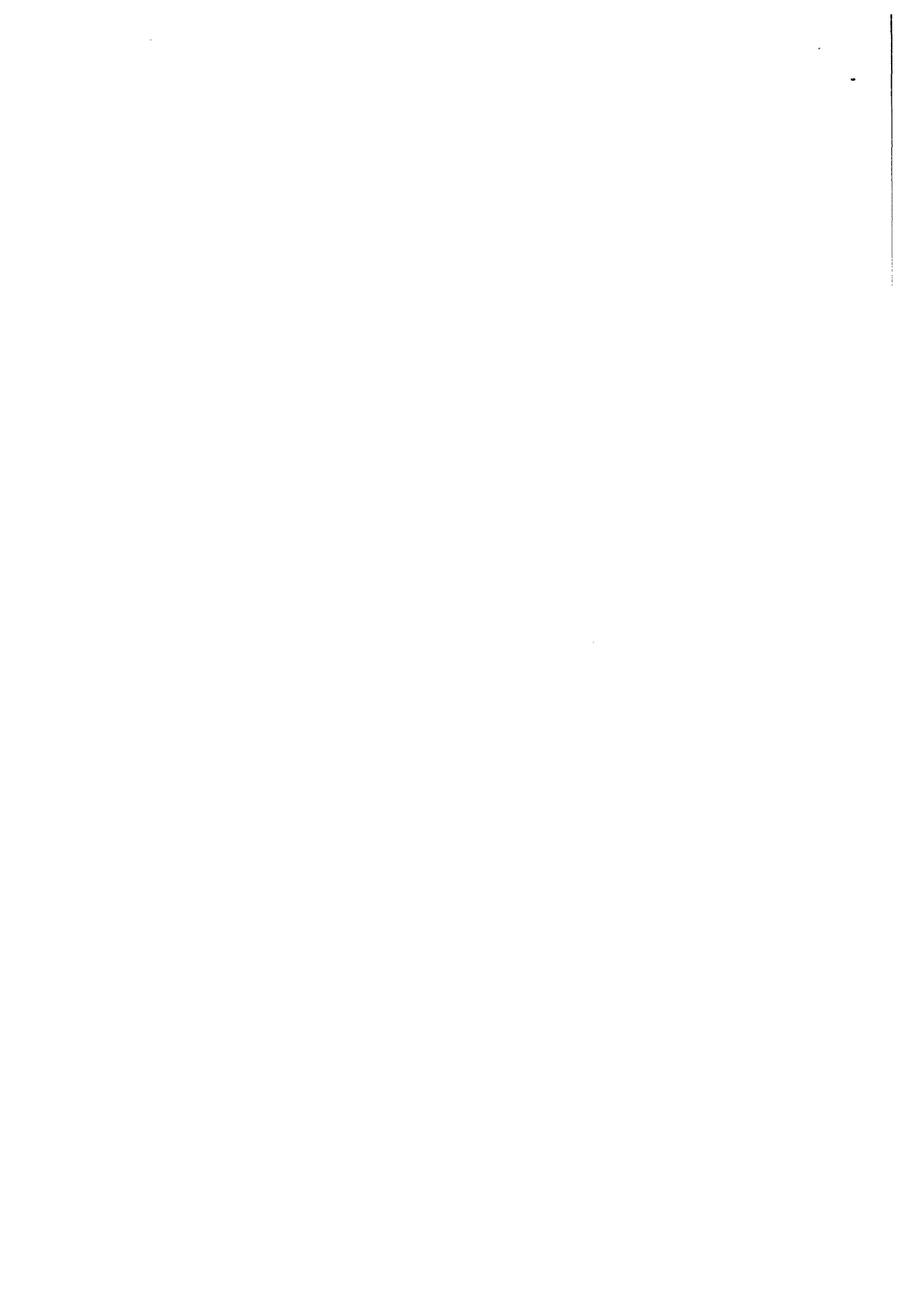
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水 産 庁

Fisheries Agency of Japan



# ベーリング海の日本底魚漁業の概況

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ベーリング・アリューシャン水域で操業する日本の底魚漁業は、1984年も1983年に引き続いてアメリカ合衆国の〔マグナソン漁業保存管理法〕による各種の規制を受けて推移した。1984年にベーリング・アリューシャン水域で操業した日本の底魚漁業は、母船式底びき網漁業、北方トロール漁業、北洋はえなわ・さし網漁業及び北転船漁業の四種類で1983年と変わりなかった。漁船数は母船6隻、その付属独航船77隻、トロール漁法で単船操業を行う北方トロール漁船49隻、はえなわ漁船22隻とトロール漁法で単船操業する北転船が69隻であった。

## 1. 1984年の日本の底魚漁業（1984年1月～12月）

### 1.1 母船式、北方トロール及び北洋はえなわ・さし網漁業

1984年のベーリング・アリューシャン水域における、母船式、北方トロール及び北洋はえ

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なわ・さし網漁業の実稼動隻数は表1に示されている。この表によると、1984年の稼動隻数は1983年に比較して母船に付属する独航船が3隻、トロール漁法で単船操業を行う北方トロール漁船が13隻減少した。はえなわ漁船は前年と同じ22隻が操業した(表1)。

#### 1.1.1. 漁業形態別漁獲量

1984年の母船式、北方トロール及び北洋はえなわ・さし網漁業の総漁獲量は800,330トンで、1983年の811,007トンより10,677トン(1.3%)減少した。総漁獲量の内、スケトウダラが80.0%を占めた。1984年の漁獲量を1983年と比較すると、コガネガレイ、マダラ及びその他のカレイ類の漁獲量はそれぞれ20,505トン(31.7%)、16,916トン(65.8%)、1,926トン(17.2%)増加したが、これら3種以外の漁獲量は減少した(表2)。

母船式底引き網漁業；1984年の漁獲量は425,246トンで、1983年より25,135トン(5.6%)減少した。主な漁獲物は、スケトウダラ377,471トン(88.8%)、コガネガレイ32,376トン(7.6%)であった。1983年と比較すると、すべての魚種の漁獲量が減少した(表3)。

北方トロール漁業；総計343,386トンが漁獲され、1983年より3,070トン(0.9%)減少した。主な漁獲物はスケトウダラ262,033トン(76.3%)、コガネガレイ52,830トン(15.4%)であった。1983年と比較すると、コガネガレイ及びその他のカレイ類を除くすべての魚種の漁獲量が減少した(表3)。

北洋はえなわ・さし網漁業；漁獲量は1983年より17,529トン(123.7%)増加し31,698トンであった。主な漁獲物はマダラ28,017トン(88.4%)、ギンダラ1,218トン(3.8%)及びカラスガレイ958トン(3.0%)であった。1983年より、マダラの漁獲量が著しい増加(23.7%増)を示した。

スケトウダラ及びコガネガレイ漁獲量の地理的分布；1984年のスケトウダラの漁獲量639,895トンの内、88.5%がINPFC海市Ⅱにおいて漁獲された(図1)。コガネガレイの主要漁場はベーリング海大陸棚上の南東水域にあり、INPFC海区Ⅰから全漁獲量の91.1%が漁獲された(図2)。

日本の底魚漁業による主要な魚種の漁業形態別漁法別漁獲量を表4に示した。

#### 1.1.2. 漁法別漁獲量、努力量及びC P U E

2 そうひき網漁法；1984年の努力量は1983年より5,780時間(23.9%)減少して18,354時間であった。1984年の漁獲量は1983年より7,929トン(2.6%)減少して298,384トンで、これは1984年の総漁獲量(800,328)の37.3%を占めた。C P U Eは1983年の12.69より増加して16.26であった(表5)。全努力量18,354時間の内、85.0%がINPFC海区Ⅱにおいて投入された(図3)。

1 そうひき網漁法；1984年の努力量は1983年の10,557回より3,220回(30.5%)

減少して7,337回であった。1984年の漁獲量は1983年より8,356トン(13.5%)減少して53,649トンとなった。これは総漁獲量の6.7%を占めた。1984年のCPUEは1983年の5.87より増加して7.31となった(表5)。全努力量の96.8%に当たる7,108回がINPFC海区Ⅱにおいて投入された(図4)。

トロール漁法；1984年の努力量は1983年から29,852時間(25.1%)減少して89,095時間となった。漁獲量は1983年より11,922トン(2.8%)減少し416,597トンであった。これは総漁獲量の52.1%を占めた。CPUEは1983年の3.60より増加して1984年には4.68となった(表5)。全努力量89,094時間の内、55.9%と37.1%がINPFC海区ⅠとⅡにそれぞれ投入された(図5)。

はえなわ漁法；1984年の努力量及び漁獲量は1983年より、ともに200,200鉢(43.8%)、17,529トン(127.3%)と増加し657,800鉢、31,698トンであった。総漁獲量に占める割合は4.0%であった。CPUEは1984年の0.030より増加して0.048となった(表5)。全努力量の76.0%がINPFC海区Ⅱに投入された(図6)。

## 1.2. 北転船漁業

1984年には、69隻のトロール漁船が北転船漁業として、170°W以西のベーリング・アリューシャン水域で操業した(表1)。

1984年の総漁獲量は1983年より67,198トン(92.7%)増加して139,718トンとなった。この内、スケトウダラが総漁獲量の78.0%を占めた。1983年と比較すると、スケトウダラの漁獲量が3.8倍の増加を示した(表6)。

## 2. 1985年の日本の底魚漁業(1985年1月～7月)

ベーリング海・アリューシャン水域において、1985年7月現在で、6隻の母船とそれに付属する65隻の独航船が母船式底びき網漁業として、31隻のトロール船が北方トロール漁業として、22隻のはえなわ船が北洋はえなわ・さし網漁業として、そして27隻のトロール船が北転船漁業として、それぞれ操業を実施している(表1)。

7月までの予備的な統計によれば、母船式底びき網、北方トロール、北洋はえなわ・さし網及び北転船漁業によるベーリング海・アリューシャン水域の総漁獲量は221,863.8トンで、1984年同期と比較すると58,903トン(21.0%)の減少を示した。魚種別内訳は、スケトウダラ168,427.2トン(75.9%)、コガネガレイ18,789.6トン(8.5%)、マダラ17,223.7トン(7.8%)などであった。1985年では、マダラを除くすべての魚種の漁獲量が1984年より減少した。INPFC海區別漁獲量の内訳は、海区Ⅰ；13.2%、海区Ⅱ；81.4%、海区Ⅴ；5.4%であった。

Table 1. Number of vessels in each of the Japanese groundfish fisheries actually operated in the Bering Sea during 1983 to 1985 calendar years.

Fishery	Type of processing/ gear	Calendar year		
		1983	1984	1985
Mothership (Mothership)	<u>Total</u>	<u>6</u>	<u>6</u>	<u>6</u>
	Fish meal	5	5	5
	Frozen fish	1	1	1
Mothership (Catcher boat)	<u>Total</u>	<u>80</u>	<u>77</u>	<u>65</u>
	Pair trawl	56	54	49
	Danish seine	14	13	9
	Stern trawl	10	10	7
North Pacific trawl	Stern Trawl	56	43	31
North Pacific longline-gillnet	Longline	22	22	22
Landbased	Stern trawl	70	69	27

Data for 1985 is preliminary .

Table 2. Annual catch(t) by species caught by Japanese groundfish fisheries (mothership, North Pacific trawl and North Pacific longline-gillnet) in the Bering Sea, 1983 and 1984 calendar years.

Species	1983	1984
<u>Total</u>	<u>811,007</u>	<u>800,330</u>
Yellowfin sole	64,702	85,207
Arrowtooth flounder	3,918	1,259
Greenland turbot	15,404	10,333
Other flatfish	11,179	13,105
Sablefish	2,734	1,302
Pacific cod	25,705	42,621
Pollock	673,088	639,895
Pacific ocean perch	716	225
Others	13,561	6,383

Table 3. Comparison of catch(t) by species caught by Japanese groundfish fisheries in the Bering Sea between 1983 and 1984 calendar years.

Fishery	Mothership					
	1984		1983		Difference	
	Catch	%	Catch	%	Catch	%
<u>Total</u>	<u>425,246</u>	<u>100.0</u>	<u>450,381</u>	<u>100.0</u>	<u>-25,135</u>	<u>- 5.6</u>
Yellowfin sole	32,376	7.6	36,647	8.1	- 4,271	-11.7
Arrowtooth fl.	465	0.1	2,366	0.5	- 1,901	-80.3
Greenland turb.	1,009	0.2	1,243	0.3	- 234	-18.8
Other flatfish	5,058	1.2	5,531	1.2	- 473	- 8.6
Sablefish	4	0.0	41	0.0	- 37	-90.2
Pacific cod	7,538	1.8	8,945	2.0	- 1,407	-15.7
Pollock	377,471	88.8	389,634	86.5	-12,163	- 3.1
POP	0	0.0	1	0.0	- 1	-100.0
Others	1,325	0.3	5,973	1.3	- 4,648	-77.8

Fishery	North Pacific trawl					
	1984		1983		Difference	
	Catch	%	Catch	%	Catch	%
<u>Total</u>	<u>343,386</u>	<u>100.0</u>	<u>346,456</u>	<u>100.0</u>	<u>- 3,070</u>	<u>- 0.9</u>
Yellowfin sole	52,830	15.4	25,056	7.2	+27,774	+110.8
Arrowtooth fl.	706	0.2	1,460	0.4	- 754	-51.6
Greenland turb.	8,366	2.4	11,823	3.4	- 3,457	-29.2
Other flatfish	8,048	2.3	5,649	1.6	+ 2,399	+42.5
Sablefish	76	0.0	252	0.1	- 176	-69.8
Pacific cod	7,066	2.1	8,288	2.4	- 1,222	-14.7
Pollock	262,033	76.3	283,300	81.8	-21,267	- 7.5
POP	217	0.1	705	0.2	- 488	-69.2
Others	4,044	1.2	9,923	2.9	- 5,879	-59.2

Fishery	North Pacific longline-gillnet					
	1984		1983		Difference	
	Catch	%	Catch	%	Catch	%
<u>Total</u>	<u>31,698</u>	<u>100.0</u>	<u>14,169</u>	<u>100.0</u>	<u>+17,529</u>	<u>+123.7</u>
Yellowfin sole	-	-	-	-	-	-
Arrowtooth fl.	88	0.3	93	0.6	- 5	- 5.4
Greenland turb.	958	3.0	2,338	16.5	-1,380	-59.0
Other flatfish	0	0	1	0.0	- 1	-100.0
Sablefish	1,218	3.8	2,441	17.2	-1,223	-50.1
Pacific cod	28,017	88.4	8,471	59.8	+19,546	+230.7
Pollock	392	1.2	154	1.1	+ 238	+154.5
POP	7	0.0	11	0.1	- 4	-36.4
Others	1,018	3.2	660	4.7	+ 358	+54.2

Table 4. Monthly catch (t) by major species by type of Japanese groundfish fisheries in the Bering Sea during 1984 calendar year.

	Fishery	Gear	Species	Total	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	
Mothership fishery	Surimi fleet	PT DS ST	Total	386,066	-	-	-	-	-	55,752	104,847	98,750	100,533	26,185	-	-	
			Yellowfin sole	655	-	-	-	-	-	120	52	353	129	1	-	-	
			Arrowtooth fl.	464	-	-	-	-	-	62	71	54	198	79	-	-	
			Greenland turb.	1,008	-	-	-	-	-	196	215	197	302	99	-	-	
			Sablefish	4	-	-	-	-	-	-	-	-	2	2	-	-	
			Pacific cod	6,030	-	-	-	-	-	1,261	1,485	1,268	1,540	479	-	-	
			Pollock	376,282	-	-	-	-	-	53,584	102,601	96,634	98,046	25,419	-	-	
			POP	-	-	-	-	-	-	-	-	-	-	-	-	-	-
			Others	1,623	-	-	-	-	-	529	423	244	316	106	-	-	
			Frozen-fish fleet	PT St	Total	39,178	-	-	-	-	-	1,577	9,421	9,256	8,395	7,942	2,648
	Yellowfin sole	31,721			-	-	-	-	-	1,394	8,299	7,990	6,415	5,705	1,918	-	
	Arrowtooth fl.	2			-	-	-	-	-	-	-	-	1	0	1	-	
	Greenland turb.	1			-	-	-	-	-	-	-	-	-	1	-	-	
	Sablefish	-			-	-	-	-	-	-	-	-	-	-	-	-	
	Pacific cod	1,507			-	-	-	-	-	42	226	278	383	439	140	-	
	Pollock	1,189			-	-	-	-	-	50	250	72	341	357	120	-	
	POP	-			-	-	-	-	-	-	-	-	-	-	-	-	
	Others	4,758			-	-	-	-	-	91	646	916	1,195	1,440	469	-	
	North Pacific longline-gill net fishery	LL	Total	31,698	524	2,405	1,186	1,934	372	1,757	59	1,016	602	3,556	7,843	10,445	
Yellowfin sole			0	-	-	-	-	-	9	-	-	-	-	-	0		
Arrowtooth fl.			88	1	4	2	3	2	9	0	9	2	10	16	31		
Greenland turb.			958	32	9	45	53	187	149	11	189	13	57	122	93		
Sablefish			1,218	12	26	89	169	32	36	2	56	43	121	172	459		
Pacific cod			28,017	462	2,297	983	1,616	128	1,468	43	730	517	3,182	7,260	9,331		
Pollock			392	4	17	25	5	1	6	0	3	5	56	88	180		
POP			7	-	-	-	-	-	2	-	0	-	1	1	3		
Others			1,018	13	52	42	87	22	87	3	29	22	129	184	348		
North Pacific fishery			Surimi factory	ST	Total	226,139	8,946	11,258	9,293	2,227	74	3,821	15,056	24,105	39,990	42,688	37,275
	Yellowfin sole	9			-	-	-	-	-	-	-	5	5	-	-	0	
	Arrowtooth fl.	174			9	1	0	-	-	2	14	46	26	26	21	30	
	Greenland turb.	93			2	1	1	-	-	4	7	11	20	28	12	7	
	Sablefish	19			0	-	-	-	-	-	1	1	4	6	4	4	
	Pacific cod	2,017			22	23	63	-	-	82	239	488	317	288	261	235	
	Pollock	222,343			8,877	11,216	9,213	2,227	74	3,710	14,742	23,434	39,216	41,964	36,712	30,960	
	POP	15			-	-	0	-	-	3	0	1	3	3	4	1	
	Others	1,469			36	17	16	-	-	20	48	119	404	373	261	170	
	Frozen-fish factory	ST			Total	117,246	8,385	18,198	17,120	3,603	1,986	2,318	6,320	9,719	11,620	12,566	13,152
			Yellowfin sole	52,821	800	1,376	3,146	1,904	1,349	602	4,019	6,260	6,393	9,288	9,687	7,996	
			Arrowtooth fl.	532	1	2	6	-	2	27	133	121	94	40	51	55	
			Greenland turb.	8,273	9	17	8	-	114	1,373	937	1,478	1,986	1,260	914	177	
			Sablefish	57	-	-	-	-	0	7	5	23	11	3	6	3	
			Pacific cod	5,049	70	294	359	127	102	107	609	583	890	514	619	775	
			Pollock	39,689	7,441	16,101	11,741	537	15	49	215	253	841	539	745	1,212	
			POP	202	-	-	0	-	7	47	3	117	5	1	1	22	
			Others	10,623	64	408	1,860	1,035	397	106	399	884	1,400	921	1,129	2,021	

DT: Danish seine, LL: Longline, PT: Pair trawl, ST: Stern trawl



Table 5. Catch-effort statistics (all species included) of each gear used by Japanese groundfish fisheries (mothership, North Pacific trawl and North Pacific longline-gillnet) in the Bering Sea, 1983 and 1984 calendar years.

Type of gear and standard unit of effort	1983			1984		
	Effort	Catch(t)	CPUE	Effort	Catch(t)	CPUE
Pair trawl (hours)	24,134	306,313	12.69	18,354	298,384	16.26
Daish seine (sets)	10,557	62,005	5.87	7,337	53,649	7.31
Stern trawl (hours)	118,947	428,519	3.60	89,095	416,597	4.68
Longline (Hachi)	457,600	14,169	0.030	657,800	31,698	0.048
<b>Total</b>		<b>811,006</b>			<b>800,328</b>	

Table 6. Annual catch (t) by species caught by Japanese landbased dragnet fishery in the Bering Sea during 1982 and 1984 calendar years.

Species	1982	1983	1984
<b>Total</b>	<b>95,965</b>	<b>72,520</b>	<b>139,718</b>
Yellowfin sole	727	214	5
Turbots*	24,053	24,428	20,480
Other flatfishes	11,688	5,064	1,539
Sablefish	230	142	189
Pacific cod	4,123	5,263	4,793
Pollock	37,865	28,703	108,935
Pacific ocean perch	529	79	333
Others	16,750	8,627	3,444

\*Turbots include arrowtooth flounder and Greenland turbot.

Table 7. Preliminary catch(t) data of Japanese groundfish fisheries by INPFC Areas in the Bering Sea during January through July in 1985. The data included catch by landbased dragnet fishery. Catch data for the same period in 1984 are shown in parentheses.

Species	Bering Sea			Aleutians	
	I	II	III	V	TOTAL
<b>Total</b>	<b>29,388.2</b> (38,154.3)	<b>180,595.1</b> (209,764.3)	<b>-</b> (-)	<b>11,880.6</b> (32,848.2)	<b>221,863.8</b> (280,766.8)
Pollock	1,943.2 (5,368.5)	154,644.7 (193,817.2)	- (-)	11,839.3 (31,351.4)	168,427.2 (230,537.1)
P. cod	3,266.9 (3,111.7)	13,956.8 (10,396.3)	- (-)	0.0 (434.3)	17,223.7 (13,942.3)
POP	5.4 (9.8)	8.1 (64.8)	- (-)	0.0 (67.6)	13.5 (142.2)
Yellowfin sole	18,786.3 (21,982.7)	3.3 (97.0)	- (-)	0.0 (1.3)	18,789.6 (22,081.0)
Other flatfish	3,282.6 (6,888.8)	433.5 (3,393.9)	- (-)	0.4 (762.2)	3,766.5 (11,044.9)
Sablefish	9.9 (190.5)	17.6 (86.2)	- (-)	9.1 (116.9)	36.6 (393.6)
Other fish	430.6 (593.1)	762.3 (1,241.0)	- (-)	0.7 (100.6)	1,193.6 (1,934.7)
Squid	10.4 (9.2)	664.5 (667.9)	- (-)	0.0 (13.9)	674.9 (691.0)

Fig. 1. Geographical distribution of annual catch of pollock (t) in 1984 calendar year.

Year	1983	1984
Total	673,088 ( % )	639,895 ( % )
Area I	390,991 (58.1)	53,903 ( 8.4)
Area II	271,010 (40.3)	566,179 (88.5)
Area III	222 ( 0.0)	10,359 ( 1.6)
Area IV	-	-
Area V	10,866 ( 1.6)	9,454 ( 1.5)

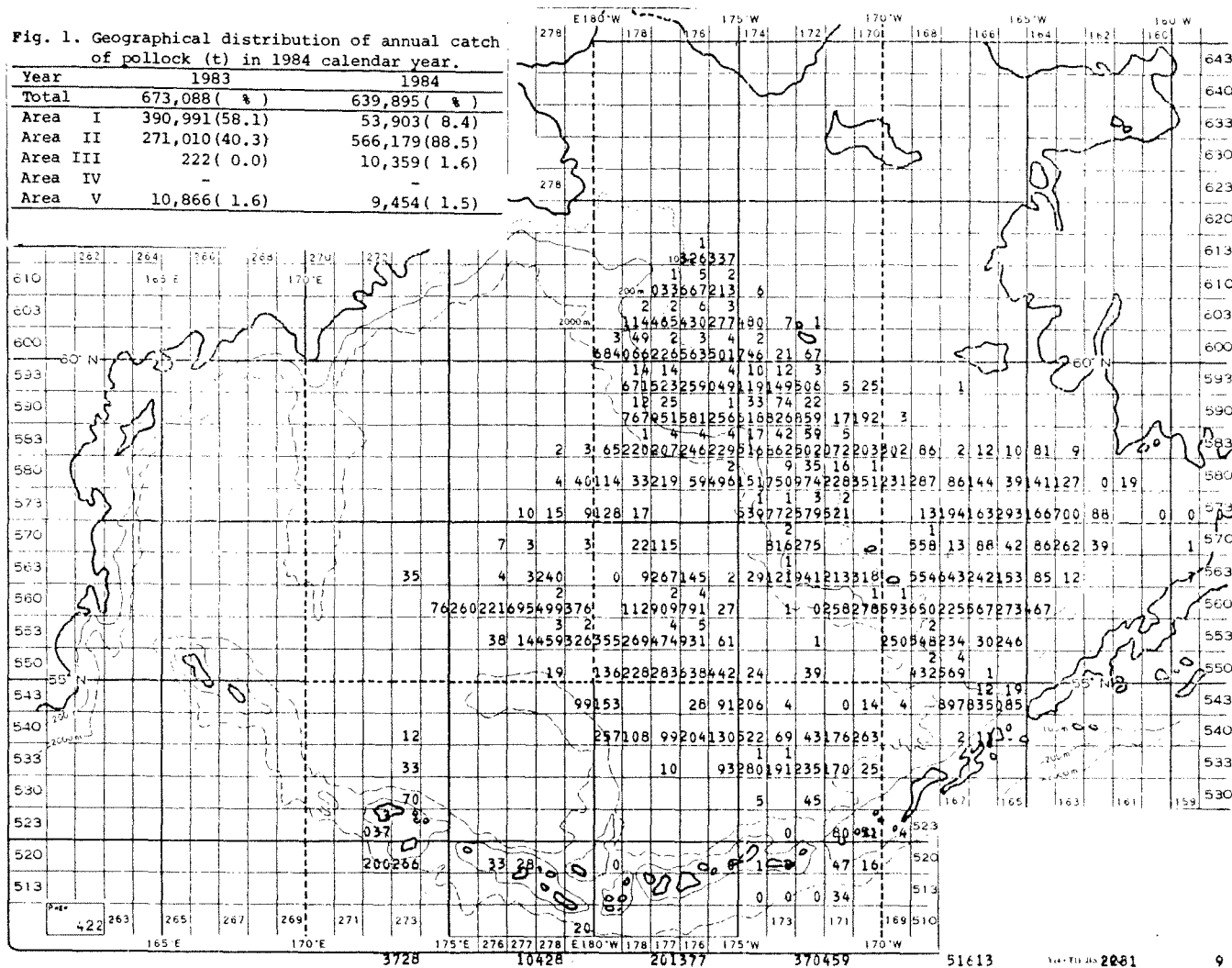


Fig. 2. Geographical distribution of annual catch of yellow sole (t) in 1984 calendar year.

Year	1983	1984
Total	64,702 ( % )	85,207 ( % )
Area I	64,238 (99.3)	77,626 (91.1)
Area II	433 ( 0.7)	7,581 ( 8.9)
Area III	-	-
Area IV	-	-
Area V	31 ( 0.0)	-

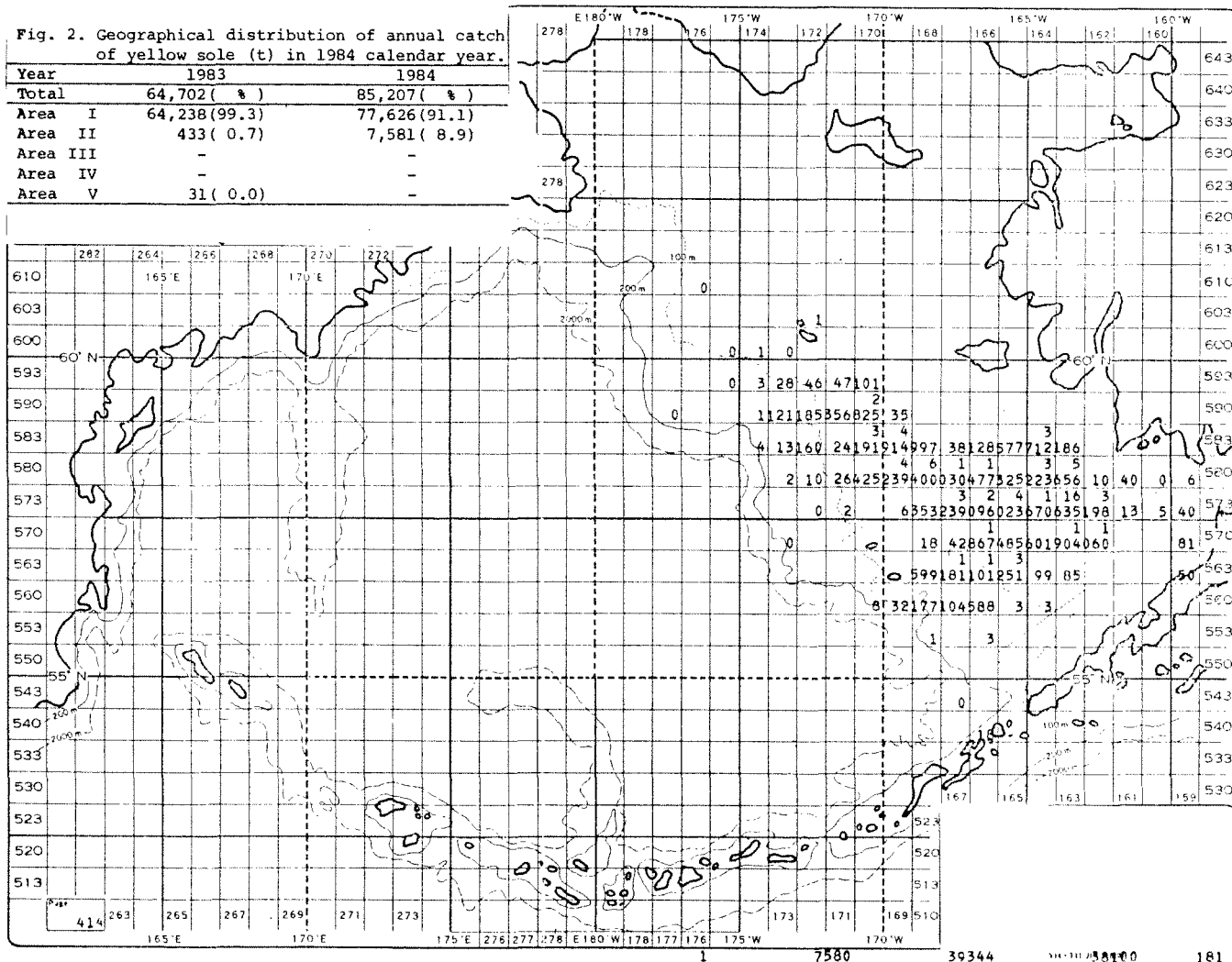


Fig. 3. Geographical distribution of annual effort of pair trawl (in hours) attached to the mothership in 1984 calendar year.

Year	1983	1984
Total	24,134 ( % )	18,354 ( % )
Area I	19,538 (81.0)	2,751 (15.0)
Area II	4,597 (19.0)	15,603 (85.0)
Area III	-	-
Area IV	-	-
Area V	-	-

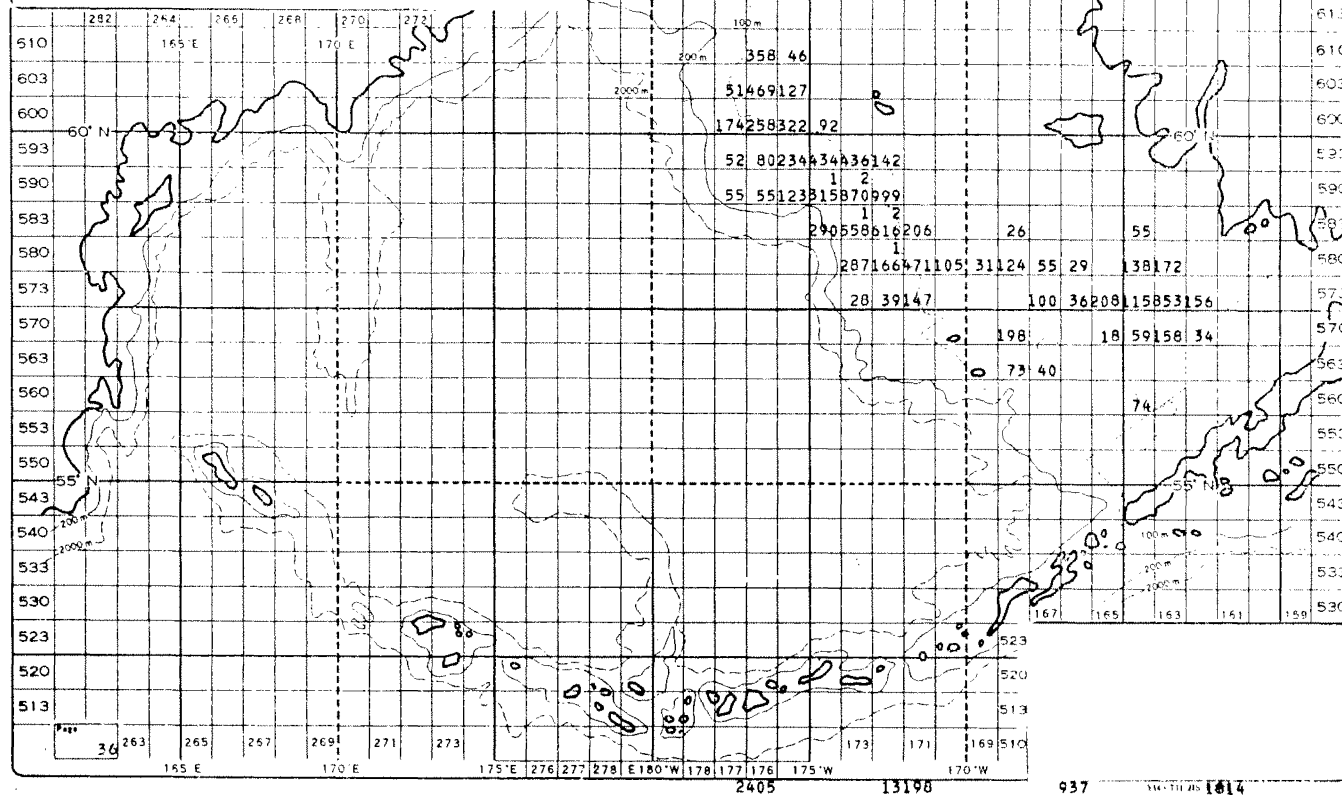




Fig. 5. Geographical distribution of annual effort of stern trawl (in hours) in 1984 calendar year.

Year	1983	1984
Total	118,948 ( % )	89,094 ( % )
Area I	79,558 (66.9)	49,814 (55.9)
Area II	31,217 (26.2)	33,044 (37.1)
Area III	136 ( 0.1)	4,007 ( 4.5)
Area IV	-	-
Area V	8,038 ( 6.8)	2,230 ( 2.5)

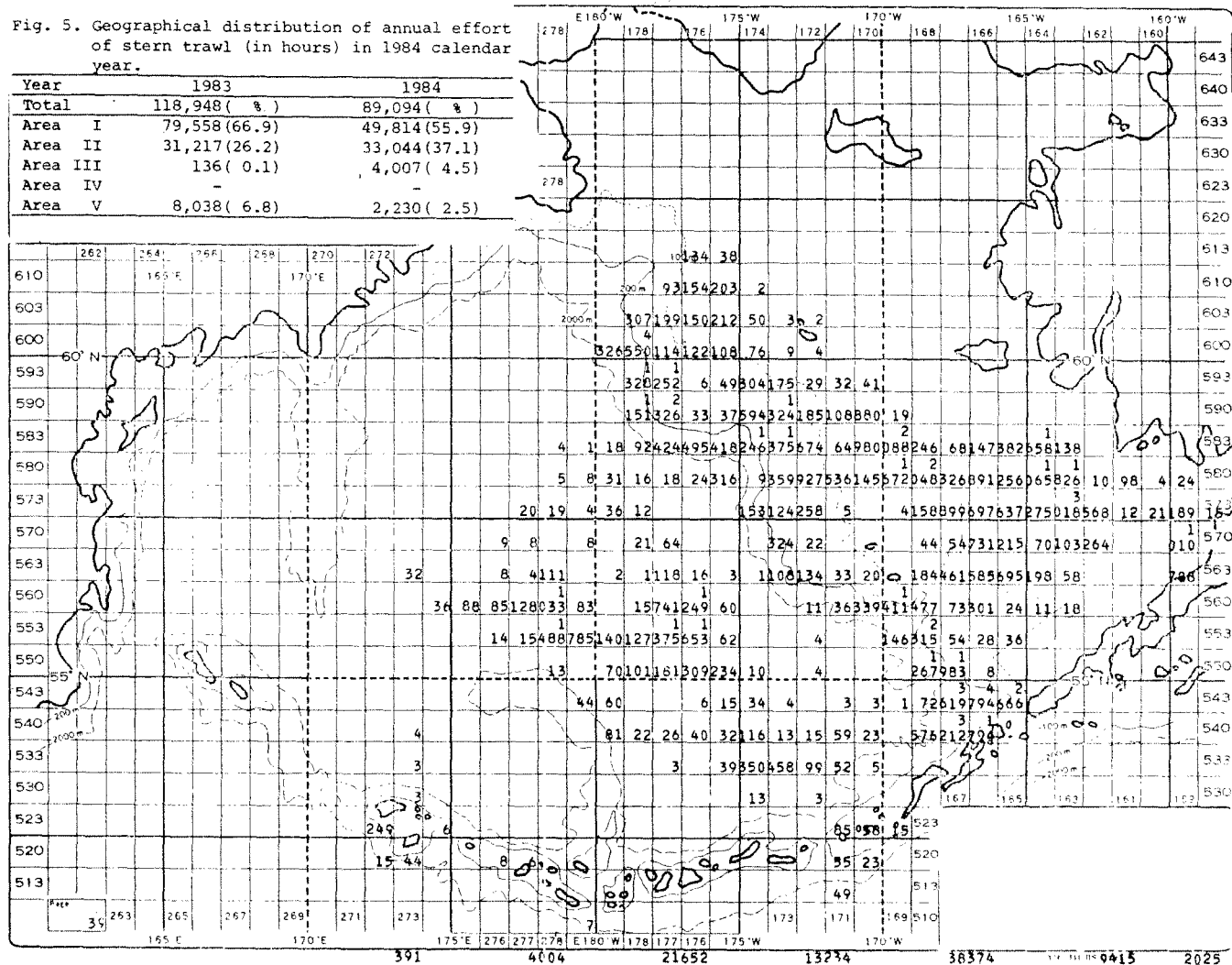
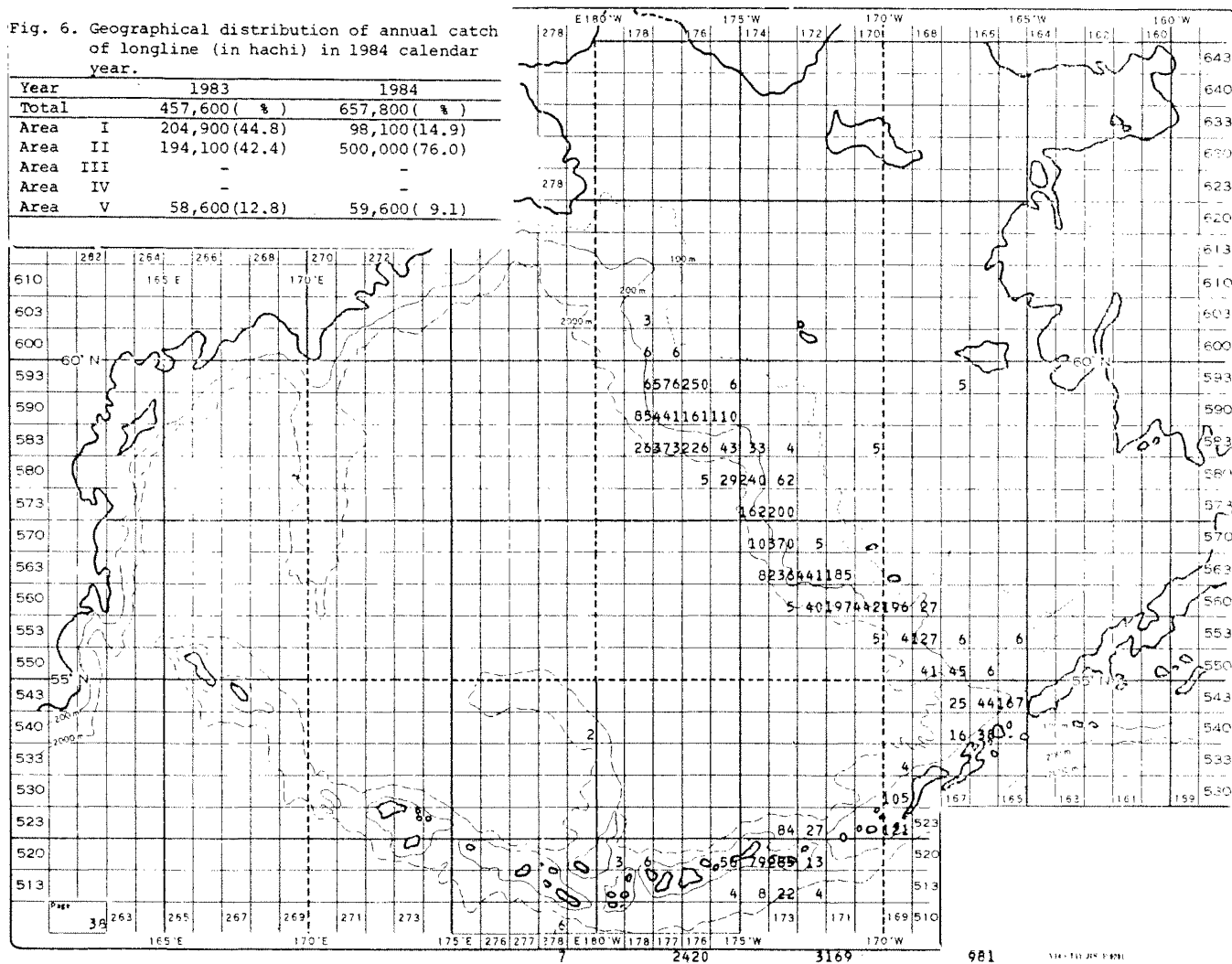


Fig. 6. Geographical distribution of annual catch of longline (in hachi) in 1984 calendar year.

Year	1983	1984
Total	457,600 ( % )	657,800 ( % )
Area I	204,900 (44.8)	98,100 (14.9)
Area II	194,100 (42.4)	500,000 (76.0)
Area III	-	-
Area IV	-	-
Area V	58,600 (12.8)	59,600 ( 9.1)







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TRANSLATION

OUTLINE OF THE JAPANESE GROUND FISH FISHERY IN THE BERING SEA  
IN 1984 JANUARY-DECEMBER AND 1985 JANUARY-JULY

Fisheries Agency of Japan

1985 September

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Agency of Japan, Tokyo, Japan 100.

The Japanese groundfish fisheries operating in the Bering Sea and Aleutian Islands region in 1984 were controlled by the enactment of the U.S. Fishery Conservation and Management Act of 1976 (Magnuson Act) and various regulations which continued to be applied for fishing activities in 1984. In 1984, as in 1983, the Japanese fisheries were of four types: the Mothership-type trawl, North Pacific trawl, North Pacific longline-gillnet, and landbased dragnet fisheries. The numbers of fishing vessels in 1984 were: six motherships with 77 catcher boats in the mothership trawl fishery, 43 vessels in the North Pacific trawl fishery, 22 vessels in the North Pacific longline-gillnet fishery, and 70 vessels in the landbased dragnet fishery.

1. The Japanese groundfish fisheries in 1984 (1984 January to December)

1.1 Mothership-type trawl, North Pacific trawl, and North Pacific longline-gillnet fisheries

The numbers of fishing vessels which actually operated in the Bering Sea and Aleutian Islands region in 1984 in the mothership-type trawl, North Pacific trawl, and North Pacific longline-gillnet fisheries are shown in Table 1. According to this table, changes in number of vessels in 1984 from 1983 were: three less catcher boats attached to the motherships and thirteen less North Pacific trawlers which conduct independent operations in the trawl fishery; the number of longliners was the same as in 1983.

1.1.1 Catch by fishery

The total catch by mothership type trawl, North Pacific trawl, and North Pacific longline-gillnet fisheries in 1984 was 800,330 t, a decrease of 1.3% or 10,677 t from the previous year (811,007 t). Of

the total catch taken in 1984, pollock accounted for 80.0%. Compared with catches in 1983, those of yellowfin sole, Pacific cod, and other flatfish increased by 31.7% (20,505 t), 65.8% (16,916 t), and 17.2% (1,926 t), respectively, but catch of all other species decreased (Table 2).

#### Mothership-type trawl fishery

The catch in 1984 was 425,246 t, a decrease of 5.6% (25,135 t) from 1983. The main catches were pollock, 88.8% (377,471 t) and yellowfin sole, 7.6% (32,376 t). Compared with catches in 1983, those of all species decreased (Table 3).

#### North Pacific trawl fishery

The total catch by the North Pacific trawl fishery in 1984 was 343,386 t, a decrease of 0.9% (3,070 t) from the previous year. The main catches were pollock, 76.3% (262,033 t) and yellowfin sole, 15.4% (52,830 t). Compared with 1983, catches of all species other than yellowfin sole and other flatfish decreased (Table 3).

#### North Pacific longline-gillnet fishery

The total catch by the North Pacific longline-gillnet fishery in 1984 was 31,698 t, an increase of 123.7% (17,529 t) from 1983. The main catches taken were Pacific cod (88.4% or 28,017 t), sablefish (3.8% or 1,218 t), and Greenland turbot (3.0% or 958 t). Compared with catches in 1983, the catch of Pacific cod showed a marked increase (230.7% increase).

#### Geographical distribution of catches of pollock and yellowfin sole

Of the catch of pollock in 1984 (639,895 t), 88.5% was caught in INPFC Area II (Fig. 1). The main fishing grounds for yellowfin sole were

the southeast grounds on the continental shelf in the Bering Sea and 91.1% of the yellowfin sole catch was taken from INPFC Area I (Fig. 2). Catches of the main species by fishery and by fishing method are shown in Table 4.

#### 1.1.2 Catch by fishing method, effort, and CPUE

##### Pair trawl fishery

Fishing effort with pair trawls in 1984 was 18,354 hours, a decrease of 23.9% (5,780 hours) from that in 1983. The catch with pair trawls in 1984 was 298,384 t, a decrease of 2.6% (7,929 t) from that in 1983, and accounted for 37.3% of the total catch (800,328 t) in 1984. CPUE of pair trawls (t/hr) in 1984 increased to 16.26 from 12.69 in 1983 (Table 5). Of the total fishing effort with pair trawls in 1984, 85.0% was expended in INPFC Area II (Fig. 3).

##### Danish seine fishery

Fishing effort with Danish seiners was 7,337 sets in 1984, a decrease of 30.5% (3,220 sets) from the 10,557 sets in 1983. Catch by Danish seiners in 1984 was 53,649 t, a decrease of 13.5% (8,356 t) from 1983 and constituted 6.7% of the overall catch. CPUE (catch per set) in 1984 was 7.31 and increased from that in 1983 (5.87) (Table 5). Of the effort of 7,108 sets, 96.8% was expended in INPFC Area II (Fig. 4).

##### Trawl fishery

Fishing effort by the stern trawl fishery in 1984 was 89,095 hours, a decrease of 25.1% or 29,852 hours from 1983. Catch by the trawl fishery in 1984 was 416,597 t, constituting 52.1% of the overall catch. That catch was a decrease of 2.8% (11,922 t) from that in 1983. CPUE in 1984 was 4.68 t/hr, an increase from that in 1983

(3.60 t/hr) (Table 5). Of the overall fishing effort (89,094 hours) in 1984, 55.9% and 37.1% were expended in INPFC Areas I and II, respectively (Fig. 5).

### Longline fishery

Longline fishing effort and catch in 1984 was 657,800 hachi and 31,698 t, an increase of 43.8% (200,200 hachi) and 127.3% (17,529 t), respectively. Longline catch constituted 4.0% of the total catch. CPUE (t/hachi) in 1984 was 0.048, an increase of 0.018 from the 0.030 in 1983 (Table 5). Of the overall fishing effort 76.0% was expended in INPFC Area II (Fig. 6).

#### 1.2 Landbased dragnet fishery

In 1984, a total of 70 trawlers operated in the Bering Sea and Aleutian Island region west of 170°W as a landbased dragnet fishery (Table 1). Total catch by this fishery in 1984 amounted to 139,718 t, an increase of 92.7% (67,198 t) from 1983. Pollock accounted for 78.0% of the total catch and catch of that species at 108,935 t was 3.8 times that in 1983 (Table 6).

#### 2. Japanese groundfish fisheries in 1985 (1985 January to July)

In 1985, as of the end of July, six motherships with 65 catcher boats operated in the Bering Sea and Aleutian Islands region as a mothership-type trawl fishery. Also fishing were 31 trawlers in the North Pacific trawl fishery, 22 longline-gillnetters in the North Pacific longline-gillnet fishery, and 27 trawlers in the landbased dragnet fishery (Table 1).

Preliminary catch statistics to the end of July showed total catch by these fisheries in the Bering Sea and Aleutian Islands region was 221,863.8 t. The 1985 catch decreased by 21.0% (58,903 t) from that

during the same period in 1984. Of the overall catch in 1985, pollock accounted for 75.9% (168,427.2 t), yellowfin sole, 8.5% (18,789.6 t), and Pacific cod, 7.8% (17,223.7 t). Catches of all species except Pacific cod decreased from those in 1984. Of the overall catch, 13.2% came from Area I, 81.4% from Area II, and 5.4% from Area V.

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TABLES 1 TO 7 AND FIGS. 1 TO 6 ARE IN ENGLISH IN THE JAPANESE DOCUMENT