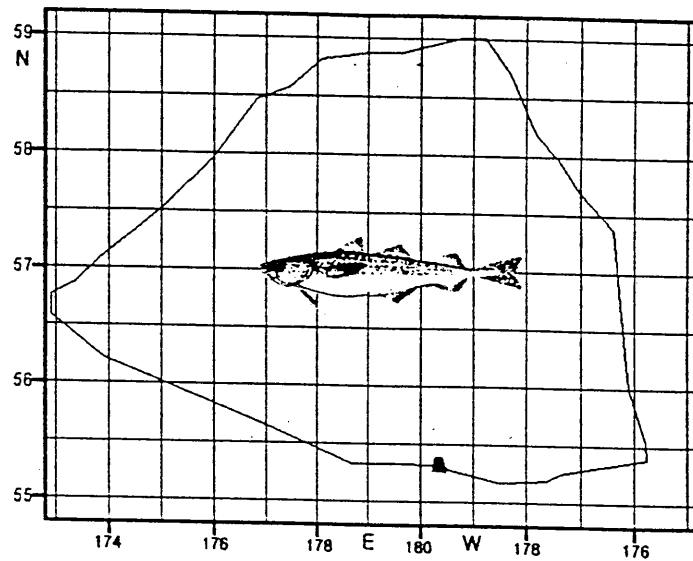


**Data Base of Pollock Fisheries by China
in the Donut Hole Area of the Central Bering Sea
during 1989-1990**



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Introduction

The main purpose of this project is to construct an electronic data base of walleye pollock (*Theragra chalcogramma*) fisheries by fishing vessels of the Peoples' Republic of China in the central Bering Sea during the developmental phase of the fisheries. Pollock fisheries were reportedly started in 1984 in the international waters of the central Bering Sea (Fig. 1) when foreign fishing opportunities for pollock fishing were considerably reduced in the exclusive economic zones of the United States and the Russian Federation. Reported catches of pollock by all nations built up rapidly in five years from 1984 to a peak in 1989; and collapsed just as fast in five years to near zero catches by 1994 (Table 1).

Table 1. Total Pollock catches from the international waters of the central Bering Sea

Year	Catch (mt)	Year	Catch (mt)
1983	0	1990	917,400
1984	181,200	1991	293,400
1985	363,400	1992	10,000
1986	1,039,800	1993	1,957
1987	1,326,300	1994	Trace
1988	1,395,900	1995	Trace
1989	1,447,600	1996 onwards	Trace

During the developmental phase of the fisheries, the fisheries were not regulated as they occurred outside the exclusive economic zones of the United States and the Russian Federation. A Convention for the Conservation and Management of Pollock Resources of the Central Bering Sea was signed on 16 June 1994 and entered into force on 8 December 1995. The Parties that signed this Convention were China, Japan, Korea, Poland, Russia and the United States.

The Parties to the Convention have agreed to construct the historical data base of catches, fishing effort, and other characteristics of the fishing during the developmental phase of the fisheries that essentially took place during 1984-1991. This is the report of the data retrieval project for the Chinese fisheries that took place in the central Bering Sea during that phase.

History of Catches

The data of Chinese pollock fisheries in the central Bering Sea have not been well compiled and kept. The catch statistics reported at previous meetings of the Convention show the following numbers (Table 2):

Table 2. Estimated pollock catches from the central Bering Sea reported by China at previous Convention meetings. No catch was taken after 1992.

Year	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Total
1985					1,600
1986					3,200
1987	0	0	34	16,495	16,529
1988	849	0	343	17,227	18,419
1989	1,138	0	16,991	13,010	31,139
1990	3,207	4,093	13,997	6,529	27,826
1991	132	4,978	10,540	1,003	16,653
1992	408	3,565	0	0	3,973

Fishing Vessels

China had six vessels that participated in the central Bering Sea pollock fisheries. The vessels Kai Chuang and Kai Tuo were owned by the Shanghai Marine Fisheries Company. The Liaoning Pelagic Fishing Company owned the Geng Hai and the Yun Hai. The China National Fisheries Corporation's Yantai Marine Fisheries owned the Yuan Yan #1 and the Yuan Yang #2. The vessel characteristics are summarized in Table 3 as follows:

Table 3. Characteristics of the six Chinese vessels that operated in the central Bering Sea pollock fisheries.

	Kai Chuang	Kai Tuo	Geng Hai	Yun Hai	Yuan Yan #1	Yuan Yang #2
Type	Factory Trawler	Factory Trawler	Factory Trawler	Factory Trawler	Factory Trawler	Factory Trawler
Length (m)	92.00	87.19	89.50	84.10	86.02	83.65
GRT	3180	1594	3576	3080	3597.0	2917.0

Data Search

In late 2002, Shanghai Fisheries University undertook a task to retrieve the logbooks of the fishing vessels that operated in the central Bering Sea. However, the logbooks have apparently all been lost. The fishing companies involved have gone through many phases of growth and reorganization during the past 10-18 years and the logbooks could not be found.

The only detailed records of catches of the vessels that have been found are for the years 1989 (Table 4) and 1990 (Table 5). These two years of records actually represented the highest two years of catches for China; and would be the most representative of the locations fished in the central Bering Sea.

Data Compilations and Plots

The data from Tables 4 and 5 were coded into large geographical blocks shown in Fig. 2 and Table 6 as defined in the reports of similar data compilations by Poland (Janusz, 2001), Korea (NFRDI, 2002), and Japan (HNFRI, 2002). The coded data are shown in Table 7.

Geographical plots of the pollock catches by monthly periods are shown in Fig. 3 for 1989 and Fig. 4 for 1990. The annual plots are shown in Fig. 5 and Table 8.

Literature Cited

HNFRI, 2002. Data base of the Japanese pollock fisheries in the International Waters Donut Hole area of the central Bering Sea during 1984-1991. Hokkaido National Fisheries Research Institute, Fishery Agency of Japan. 90pp.

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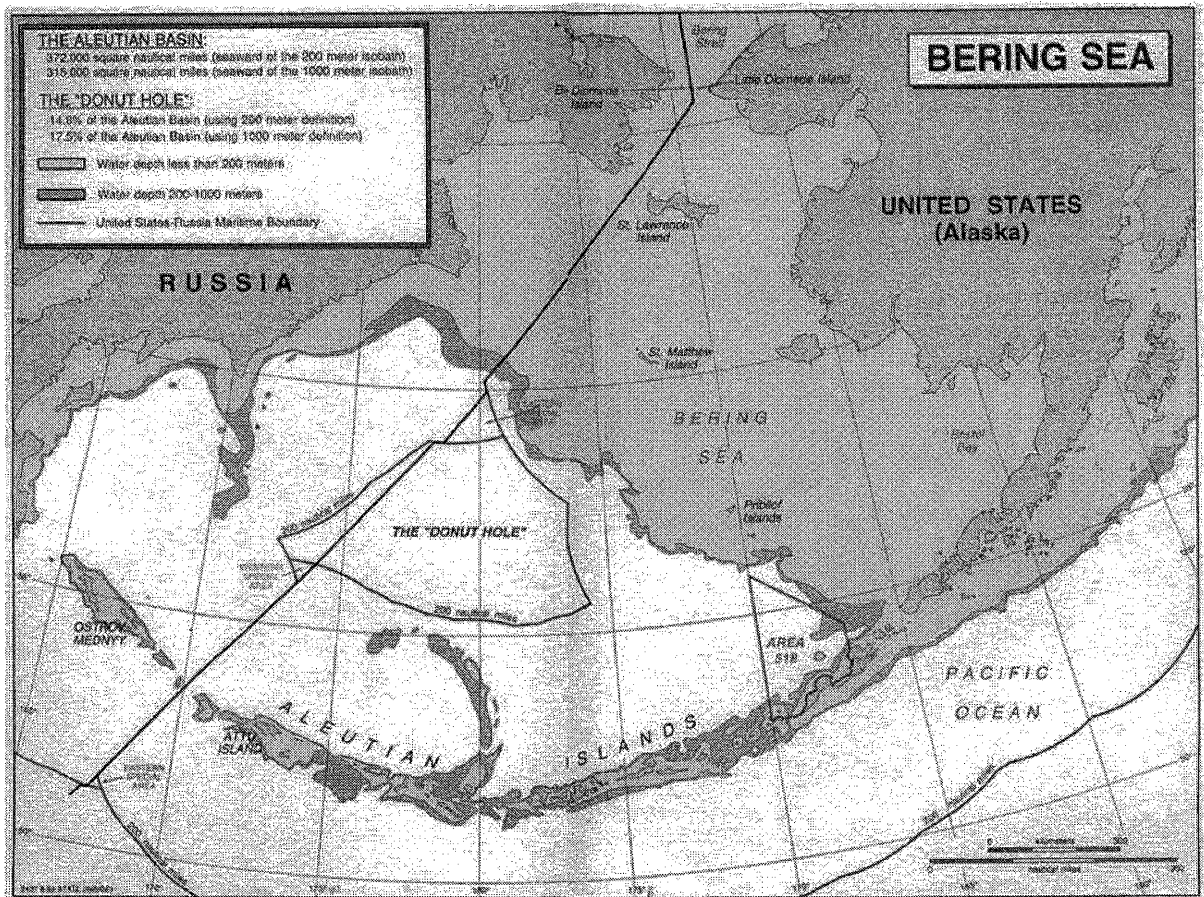


Figure 1. Map of the central Bering Sea Donut Hole Area

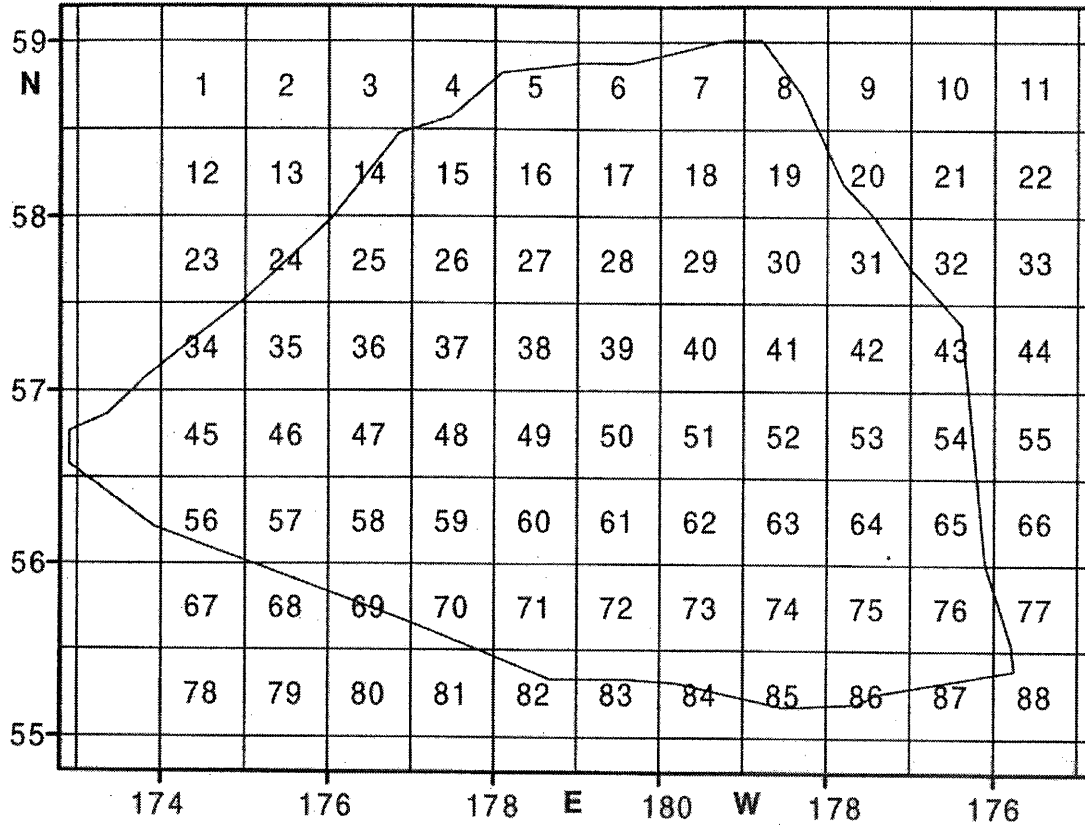


Fig. 2. Map of the central Bering Sea Donut Hole Area showing large statistical blocks of $\frac{1}{2}$ degree latitude by 1 degree longitude.

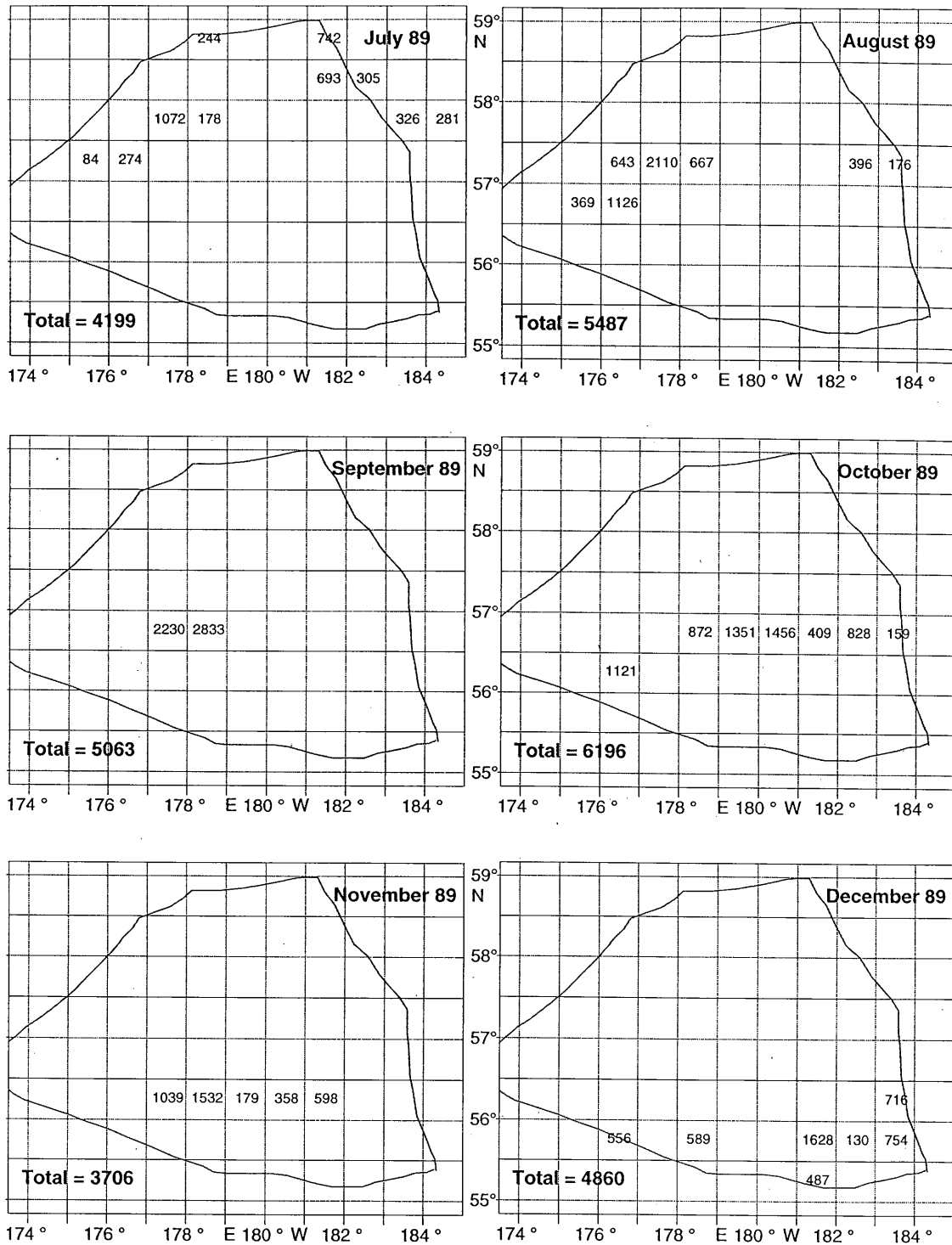


Fig. 3. Pollock catch (in metric tons) by China in the Donut Hole Area of the central Bering Sea by large statistical blocks (1 degree longitude by half degree latitude) by month in 1989 (Note: there was no catch from January-June).

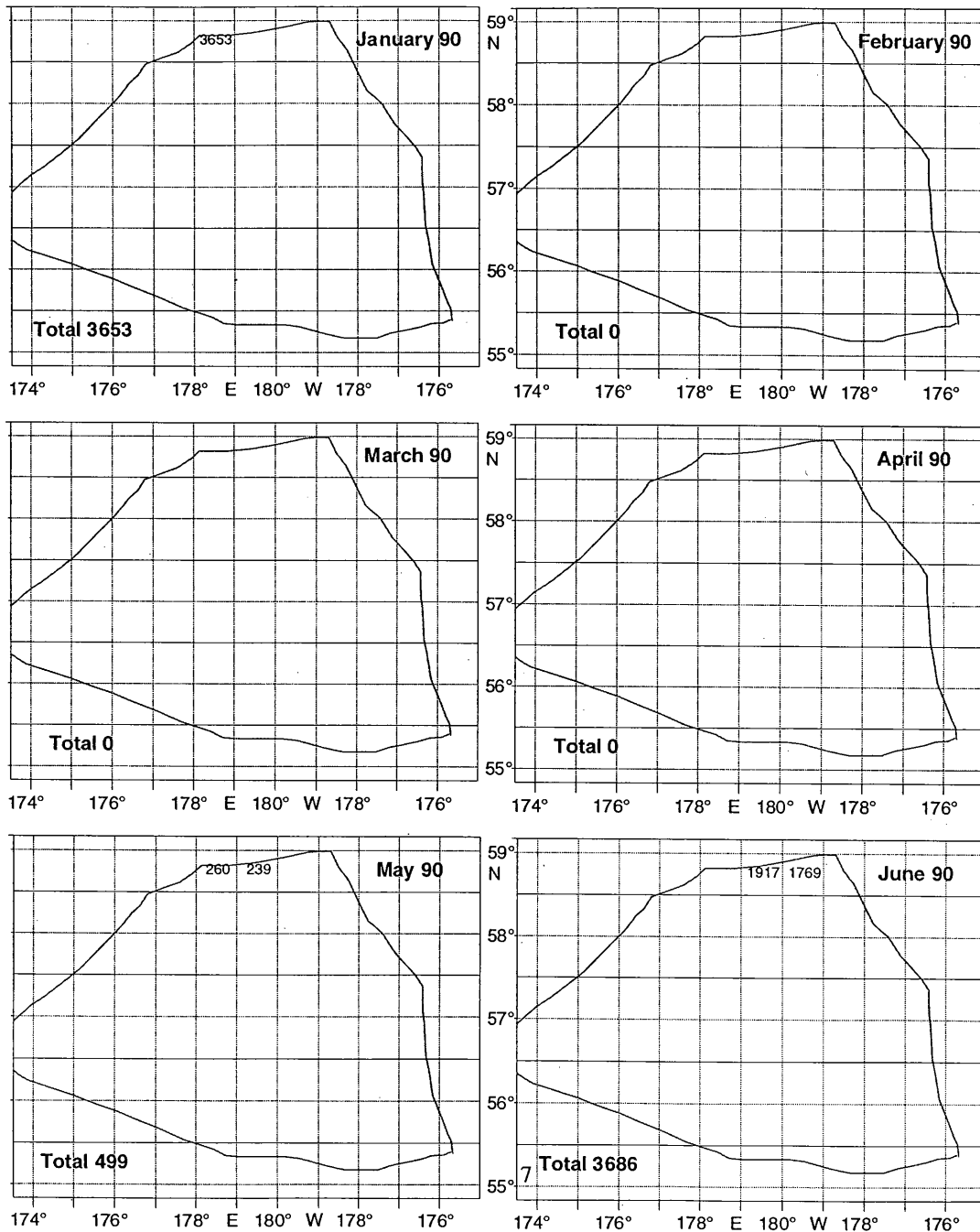


Fig. 4. Pollock catch (in metric tons) by China in the Donut Hole Area of the central Bering Sea by large statistical blocks (1 degree longitude by half degree latitude) by month in 1990.

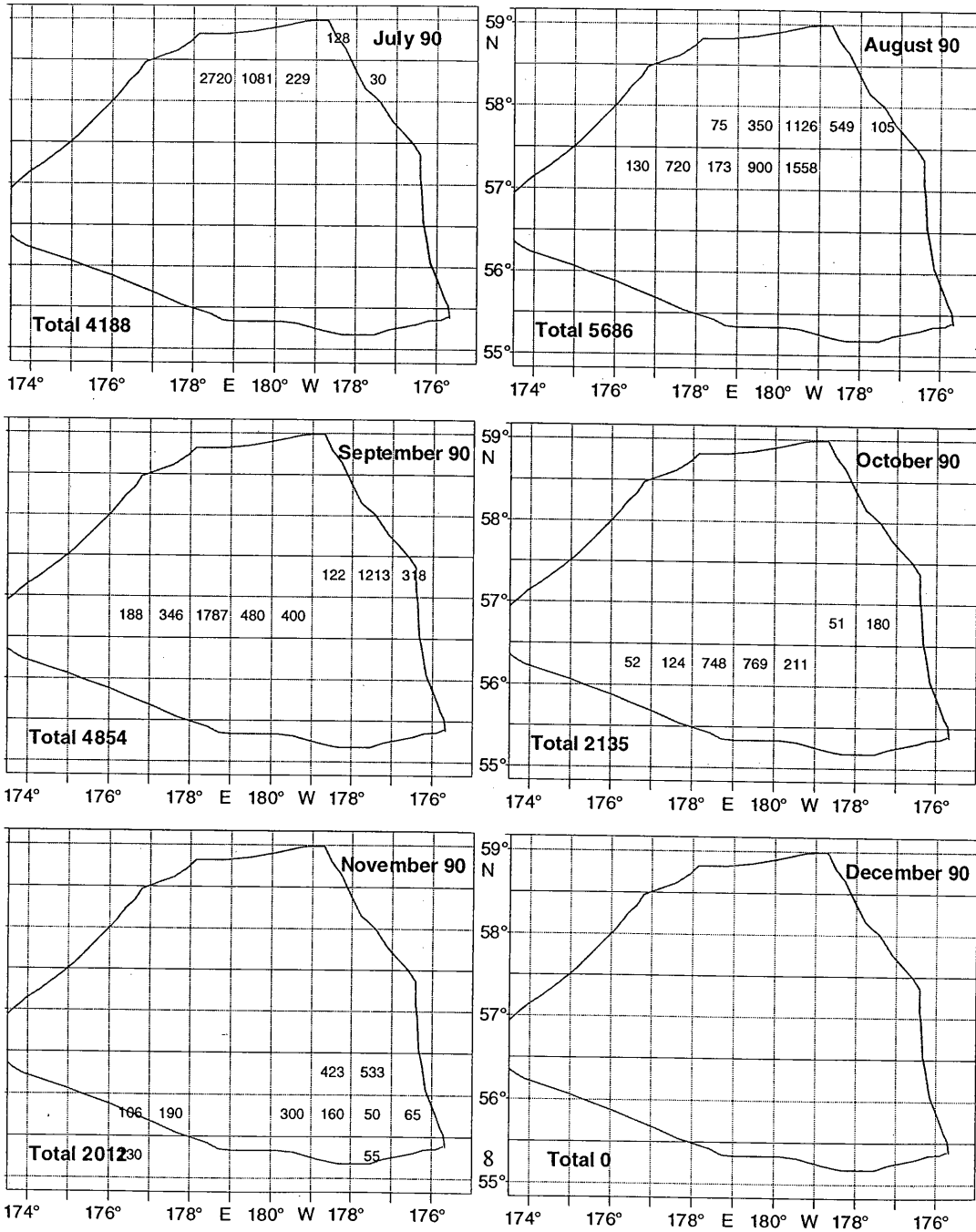


Fig. 4. Pollock catch (in metric tons) by China in the Donut Hole Area of the central Bering Sea by large statistical blocks (1 degree longitude by half degree latitude) by month in 1990 (contd.).

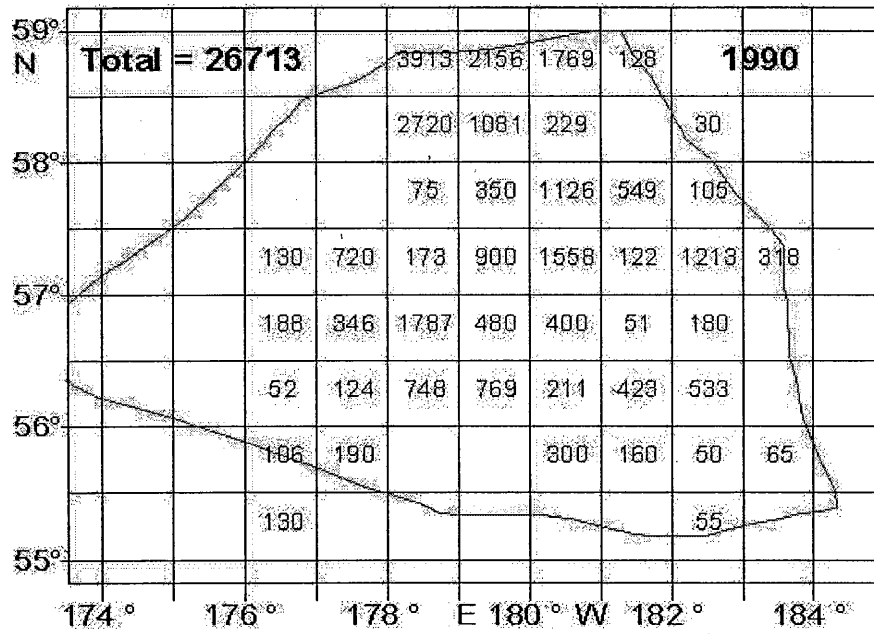
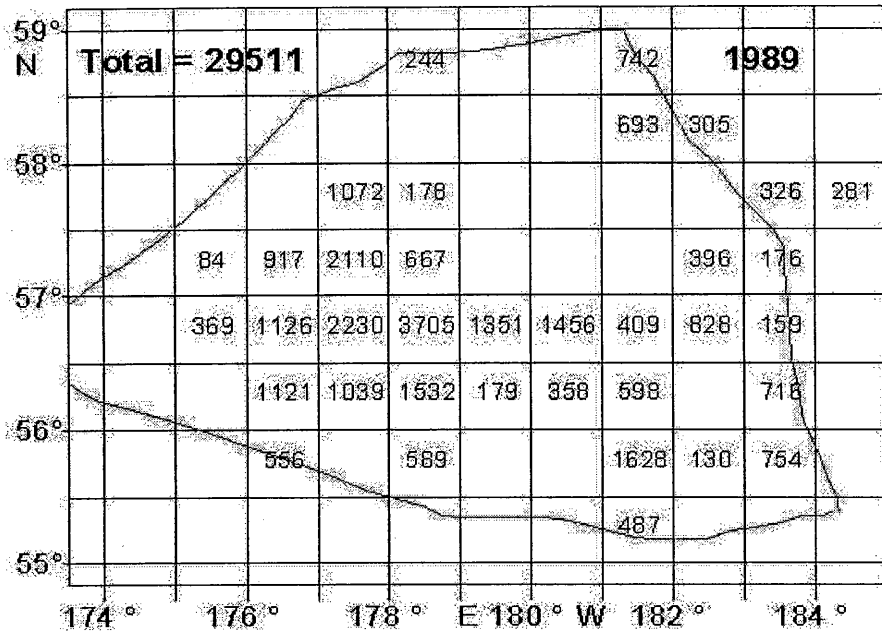


Fig. 5. Pollock catch (in metric tons) by China in the Donut Hole Area of the central Bering Sea by large statistical blocks (1 degree longitude by half degree latitude) in 1989 and 1990.

Table 4. Pollock fisheries Data of China by vessel in the central Bering Sea, 1989

Vessel Name	Year	Month	Week	Latitude	Longitude	Metric Tons	Tows (Number)	Hours (Number)
Kai Chuang	1989	7	2	58-45N	178-32E	32	5	48
Kai Chuang	1989	7	3	58-24N	178-23W	212	10	106
Kai Chuang	1989	7	4	57-34N	176-29W	313	11	133
Kai Chuang	1989	8	1	56-21N	178-07W	429	11	100
Kai Chuang	1989	8	2	56-50N	179-00E	370	11	92
Kai Chuang	1989	8	3	55-54N	178-51W	623	22	180
Kai Chuang	1989	8	4	56-44N	179-27W	305	10	75
Kai Chuang	1989	9	1	56-13N	176-42E	370	11	85
Kai Chuang	1989	10	3	55-40N	178-20W	5	1	5
Kai Chuang	1989	10	4	57-35N	176-48E	310	9	82
Kai Chuang	1989	11	1	57-22N	176-50E	387	12	81
Kai Chuang	1989	11	2	56-04N	177-59E	178	6	62
Kai Chuang	1989	11	3	57-15N	177-58E	326	12	123
Kai Chuang	1989	11	4	56-29N	179-19E	281	8	64
Kai Chuang	1989	12	1	56-52N	176-52E	84	10	93
Kai Chuang	1989	12	2	57-03N	178-42E	104	13	125
Kai Chuang	1989	12	3	56-33N	178-09E	170	7	50
Kai Chuang	1989	12	4	57-04N	178-34E	442	12	124
Kai Tuo	1989	7	1	58-40N	178-45W	2	6	53
Kai Tuo	1989	7	2	58-35N	178-35W	53	12	89
Kai Tuo	1989	7	3	57-33N	176-58W	146	12	112
Kai Tuo	1989	8	1	55-48N	176-43W	280	12	110
Kai Tuo	1989	8	2	56-57N	179-27W	266	10	78
Kai Tuo	1989	8	3	56-44N	178-11W	372	14	115
Kai Tuo	1989	8	4	56-16N	178-32W	577	21	175
Kai Tuo	1989	9	1	56-50N	179-49W	77	5	31
Kai Tuo	1989	9	2	56-46N	178-39E	26	3	28
Kai Tuo	1989	9	3	56-49N	180-00E	179	9	105
Kai Tuo	1989	9	4	57-50N	178-40E	169	8	94
Kai Tuo	1989	10	1	57-00N	177-10E	120	6	53
Kai Tuo	1989	10	2	59-11N	179-49E	44	4	29
Kai Tuo	1989	10	3	57-12N	176-00E	88	6	78
Kai Tuo	1989	10	4	57-19N	176-16E	163	5	34
Kai Tuo	1989	11	1	57-20N	176-25E	285	10	71
Kai Tuo	1989	11	2	56-30N	175-10E	131	5	47
Kai Tuo	1989	11	3	56-26N	177-04E	331	12	108
Kai Tuo	1989	11	4	56-30N	176-33E	65	3	23
Kai Tuo	1989	12	1	56-30N	176-33E	176	7	55
Kai Tuo	1989	12	2	57-08N	177-55E	369	12	119
Kai Tuo	1989	12	3	56-55N	178-13E	96	6	44
Kai Tuo	1989	12	4	57-05N	178-40E	414	13	129

Table 4. Pollock fisheries Data of China by vessel in the central Bering Sea, 1989 (contd.)

Vessel Name	Year	Month	Week	Latitude	Longitude	Metric Tons	Tows (Number)	Hours (Number)
Geng Hai	1989	7	1	58-27N	178-39W	46	8	72
Geng Hai	1989	7	2	55-36N	178-26W	330	12	110
Geng Hai	1989	7	3	56-30N	177-30W	240	11	90
Geng Hai	1989	7	4	56-09N	176-26W	290	13	104
Geng Hai	1989	8	1	56-24N	178-46W	210	9	110
Geng Hai	1989	8	2	56-29N	177-09W	360	12	120
Geng Hai	1989	8	3	56-59N	179-16W	300	11	110
Geng Hai	1989	8	4	56-09N	179-06W	620	16	128
Geng Hai	1989	9	1	55-36N	178-26W	450	7	66
Geng Hai	1989	9	2	56-46N	178-49E	300	9	72
Geng Hai	1989	9	3	57-06N	177-46E	320	10	8
Geng Hai	1989	9	4	56-41N	178-19E	279	11	95
Geng Hai	1989	10	1	56-25N	178-41E	161	6	45
Geng Hai	1989	10	2	56-20N	178-40E	27	3	24
Geng Hai	1989	10	3	57-09N	177-29E	154	7	60
Geng Hai	1989	10	4	56-26N	177-36E	12	2	16
Geng Hai	1989	11	1	57-30N	175-59E	48	3	30
Geng Hai	1989	11	3	56-30N	177-08E	339	11	105
Geng Hai	1989	11	4	56-19N	176-09E	218	7	70
Geng Hai	1989	12	1	56-39N	177-29E	435	9	81
Geng Hai	1989	12	2	56-30N	178-36E	540	12	126
Geng Hai	1989	12	3	56-40N	178-20E	180	7	70
Geng Hai	1989	12	4	56-40N	178-40E	400	11	110
Yun Hai	1989	7	2	55-59N	176-26W	45	5	45
Yun Hai	1989	7	3	55-35N	176-28W	247	11	100
Yun Hai	1989	7	4	56-14N	177-27W	342	14	140
Yun Hai	1989	8	1	55-50N	176-30W	275	11	120
Yun Hai	1989	8	2	55-50N	178-34W	347	11	110
Yun Hai	1989	8	3	55-50N	178-30W	387	14	130
Yun Hai	1989	8	4	56-40N	178-30W	372	12	96
Yun Hai	1989	9	1	56-10N	179-09W	914	25	186
Yun Hai	1989	9	2	57-00N	178-00E	170	5	35
Yun Hai	1989	9	3	57-15N	177-30E	135	7	56
Yun Hai	1989	9	4	56-30N	178-30E	274	13	78
Yun Hai	1989	10	1	56-24N	178-24E	174	15	30
Yun Hai	1989	10	2	57-30N	177-25E	58	3	18
Yun Hai	1989	10	3	57-30N	177-50E	137	7	70
Yun Hai	1989	10	4	57-00N	177-30E	136	6	40
Yun Hai	1989	11	1	56-30N	177-30E	323	15	120
Yun Hai	1989	11	2	57-05N	176-30E	159	8	50
Yun Hai	1989	11	3	56-30N	176-50E	354	11	88
Yun Hai	1989	11	4	56-10N	177-02E	158	7	60
Yun Hai	1989	12	1	56-47N	178-20E	282	12	90
Yun Hai	1989	12	2	56-50N	178-08E	327	12	100
Yun Hai	1989	12	3	56-50N	178-11E	94	8	80
Yun Hai	1989	12	4	56-50N	179-00E	264	13	72

Table 4. Pollock fisheries Data of China by vessel in the central Bering Sea, 1989 (contd.)

Vessel Name	Year	Month	Week	Latitude	Longitude	Metric Tons	Tows (Number)	Hours (Number)
Yan Yuan No. 1	1989	7	1	58-27N	176-50W	66	7	65
Yan Yuan No. 1	1989	7	2	56-32N	176-17W	282	11	116
Yan Yuan No. 1	1989	7	3	57-06N	177-50W	154	12	133
Yan Yuan No. 1	1989	8	1	56-41N	177-45W	179	11	107
Yan Yuan No. 1	1989	8	2	55-51N	178-26W	365	11	105
Yan Yuan No. 1	1989	8	3	55-36N	178-09W	288	12	118
Yan Yuan No. 1	1989	8	4	56-37N	177-57W	545	22	183
Yan Yuan No. 1	1989	9	1	55-46N	178-17W	224	9	88
Yan Yuan No. 1	1989	9	2	56-40N	179-40E	110	7	64
Yan Yuan No. 1	1989	9	3	57-31N	177-24E	179	10	109
Yan Yuan No. 1	1989	9	4	57-15N	177-34E	132	8	78
Yan Yuan No. 1	1989	10	2	56-40N	176-06E	19	1	10
Yan Yuan No. 1	1989	10	3	57-21N	177-56E	122	8	100
Yan Yuan No. 1	1989	10	4	56-10N	178-18E	85	5	59
Yan Yuan No. 1	1989	12	1	56-18N	178-50E	76	8	74
Yan Yuan No. 1	1989	12	2	56-55N	178-50E	276	11	112
Yan Yuan No. 1	1989	12	3	56-33N	179-42E	70	7	72
Yan Yuan No. 1	1989	12	4	56-58N	178-15E	117	11	82
Yan Yuan No. 2	1989	7	1	56-44N	177-58W	59	2	25
Yan Yuan No. 2	1989	8	1	56-47N	178-44W	214	10	112
Yan Yuan No. 2	1989	8	2	56-01N	178-57W	201	8	102
Yan Yuan No. 2	1989	8	3	55-30N	178-30W	301	11	93
Yan Yuan No. 2	1989	8	4	56-36N	178-18W	556	22	180
Yan Yuan No. 2	1989	9	1	56-20N	178-30W	374	10	92
Yan Yuan No. 2	1989	9	2	56-58N	177-40W	215	8	84
Yan Yuan No. 2	1989	9	3	57-20N	177-20W	234	10	102
Yan Yuan No. 2	1989	9	4	57-20N	177-20W	260	11	115
Yan Yuan No. 2	1989	10	1	56-30N	178-30E	135	6	60
Yan Yuan No. 2	1989	10	2	57-16N	176-34E	60	3	32
Yan Yuan No. 2	1989	10	3	57-10N	177-30E	135	7	74
Yan Yuan No. 2	1989	10	4	57-46N	177-25E	179	7	73
Yan Yuan No. 2	1989	11	1	57-14N	176-10E	290	7	56
Yan Yuan No. 2	1989	11	2	56-40N	176-40E	335	11	82
Yan Yuan No. 2	1989	11	3	55-40N	178-20E	130	6	61
Yan Yuan No. 2	1989	11	4	56-26N	177-05E	352	14	120
Yan Yuan No. 2	1989	12	1	57-05N	178-28E	192	9	90
Yan Yuan No. 2	1989	12	2	56-56N	177-39E	210	7	54
Yan Yuan No. 2	1989	12	3	56-56N	177-39E	97	6	47
Yan Yuan No. 2	1989	12	4	56-44N	178-24E	390	15	102

Table 5. Pollock fisheries Data of China by vessel in the central Bering Sea, 1990

Vessel Name	Year	Month	Week	Latitude	Longitude	Metric Tons	Tows	Hours
Kai Chuang	1990	1	1	56-29N	178-05E	339	15	139
Kai Chuang	1990	1	2	56-33N	178-51E	83	8	66
Kai Chuang	1990	1	3	56-20N	179-53E	6	3	17
Kai Chuang	1990	6	4	56-35N	177-50W	476	12	124
Kai Chuang	1990	7	1	56-44N	177-38W	424	9	90
Kai Chuang	1990	7	2	57-30N	179-15W	174	8	86
Kai Chuang	1990	7	3	58-47N	178-37E	280	9	91
Kai Chuang	1990	7	4	57-45N	177-45W	242	10	83
Kai Chuang	1990	8	1	57-38N	179-30W	702	22	164
Kai Chuang	1990	8	2	57-16N	179-46W	263	10	95
Kai Chuang	1990	8	3	57-00N	179-06W	218	8	81
Kai Chuang	1990	8	4	56-10N	179-13W	319	12	104
Kai Chuang	1990	9	1	56-56N	179-54W	127	7	57
Kai Chuang	1990	9	2	58-39N	179-30W	260	10	90
Kai Chuang	1990	9	3	59-04N	179-48E	239	10	105
Kai Chuang	1990	9	4	59-16N	179-42E	264	9	86
Kai Chuang	1990	10	1	59-22N	179-20E	79	5	37
Kai Chuang	1990	10	2	58-14N	179-06E	215	9	99
Kai Chuang	1990	10	3	59-07N	179-55E	337	12	112
Kai Chuang	1990	10	4	59-09N	179-08E	288	15	123
Kai Chuang	1990	11	1	58-16W	179-55E	325	13	108
Kai Chuang	1990	11	2	58-58W	179-59W	292	13	114
Kai Chuang	1990	11	3	58-49W	178-30E	117	9	74
Kai Tuo	1990	1	1	56-53N	178-00E	238	13	115
Kai Tuo	1990	1	2	56-40N	178-27E	48	9	94
Kai Tuo	1990	6	2	57-19N	176-42W	205	7	80
Kai Tuo	1990	6	3	57-20N	176-36W	414	12	116
Kai Tuo	1990	6	4	57-15N	177-11W	253	9	103
Kai Tuo	1990	7	1	56-01N	177-07W	292	10	98
Kai Tuo	1990	7	2	56-51N	177-30W	144	7	94
Kai Tuo	1990	7	3	58-26N	179-09W	175	8	83
Kai Tuo	1990	7	4	57-53N	178-31W	128	7	87
Kai Tuo	1990	8	1	56-55N	178-33E	477	20	185
Kai Tuo	1990	8	2	57-08N	179-22E	198	12	112
Kai Tuo	1990	8	3	56-26N	179-14E	334	12	114
Kai Tuo	1990	8	4	55-42N	179-09W	407	13	129
Kai Tuo	1990	9	1	56-38N	179-26W	163	10	103
Kai Tuo	1990	9	2	58-09N	179-54W	104	5	47
Kai Tuo	1990	9	3	59-10N	178-45E	201	12	124
Kai Tuo	1990	9	4	59-19N	179-42E	426	12	118
Kai Tuo	1990	10	1	59-26N	179-51E	266	12	126
Kai Tuo	1990	10	2	58-49N	179-41E	144	11	108
Kai Tuo	1990	10	3	59-22N	179-46E	311	12	131
Kai Tuo	1990	10	4	59-13N	179-40E	290	13	134
Kai Tuo	1990	11	1	57-14N	179-56W	187	8	97
Kai Tuo	1990	11	2	57-28N	179-58W	195	12	121
Kai Tuo	1990	11	3	58-53N	179-46E	98	7	65

Table 5. Pollock fisheries Data of China by vessel in the central Bering Sea, 1990

Vessel Name	Year	Month	Week	Latitude	Longitude	Metric Tons	Tows	Hours
Geng Hai	1990	1	1	56-30N	178-30E	229	12	120
Geng Hai	1990	1	2	56-30N	177-56W	30	5	50
Geng Hai	1990	5	3	57-36N	179-09E	75	7	90
Geng Hai	1990	5	4	57-12N	179-40W	350	9	80
Geng Hai	1990	6	1	57-13N	179-37W	352	12	150
Geng Hai	1990	6	2	56-30N	178-00W	358	10	120
Geng Hai	1990	6	3	57-10N	177-05W	416	12	120
Geng Hai	1990	6	4	57-00N	177-00W	262	9	100
Geng Hai	1990	7	1	56-00N	177-10W	287	10	120
Geng Hai	1990	7	2	57-00N	177-00W	105	7	80
Geng Hai	1990	7	3	58-00N	177-40W	130	7	80
Geng Hai	1990	7	4	57-00N	177-50W	150	7	70
Geng Hai	1990	8	1	56-25N	179-25E	570	18	180
Geng Hai	1990	8	2	57-00N	179-00W	173	8	100
Geng Hai	1990	8	3	57-00N	177-30W	250	13	150
Geng Hai	1990	8	4	56-00N	178-00W	320	19	190
Geng Hai	1990	9	1	58-30N	179-00E	150	10	100
Geng Hai	1990	9	2	59-00N	180-00W	180	10	100
Geng Hai	1990	9	3	59-00N	179-00E	320	10	100
Geng Hai	1990	9	4	58-00N	179-30E	175	10	100
Geng Hai	1990	10	1	57-00N	179-06E	146	8	90
Geng Hai	1990	10	2	58-10N	178-45E	275	9	90
Geng Hai	1990	10	3	57-30N	177-30E	286	10	100
Geng Hai	1990	10	4	58-10N	179-50W	136	7	70
Geng Hai	1990	11	1	57-30N	179-40W	220	9	100
Geng Hai	1990	11	2	58-36N	178-42E	122	8	80

Table 5. Pollock fisheries Data of China by vessel in the central Bering Sea, 1990 (contd.)

Vessel Name	Year	Month	Week	Latitude	Longitude	Metric Tons	Tows	Hours
Yun Hai	1990	1	1	56-40N	178-30E	231	13	130
Yun Hai	1990	1	2	56-25N	178-00E	50	7	70
Yun Hai	1990	6	1	56-25N	177-43W	159	13	98
Yun Hai	1990	6	2	56-42N	176-50W	208	9	113
Yun Hai	1990	6	3	56-56N	176-44W	272	13	112
Yun Hai	1990	6	4	55-45N	177-18W	293	11	132
Yun Hai	1990	7	1	56-32N	178-01W	318	11	106
Yun Hai	1990	7	2	56-50N	177-20W	140	6	92
Yun Hai	1990	7	3	57-50N	178-40W	48	4	45
Yun Hai	1990	7	4	57-04N	178-05W	87	5	50
Yun Hai	1990	8	1	55-49N	176-46W	259	9	118
Yun Hai	1990	8	2	56-10N	179-10E	671	23	203
Yun Hai	1990	8	3	55-39N	179-29E	237	12	108
Yun Hai	1990	8	4	56-28N	178-22W	297	15	96
Yun Hai	1990	9	1	56-08N	179-10W	52	8	62
Yun Hai	1990	9	2	58-09N	179-09E	139	10	79
Yun Hai	1990	9	3	59-04N	178-34E	154	10	107
Yun Hai	1990	9	4	59-05N	178-58E	237	13	145
Yun Hai	1990	10	1	58-23N	178-33E	302	20	226
Yun Hai	1990	10	2	59-02N	178-40E	178	11	112
Yun Hai	1990	10	3	56-39N	179-19W	70	4	36
Yun Hai	1990	10	4	56-50N	179-49W	130	8	78
Yun Hai	1990	11	1	56-26N	179-31E	89	10	111
Yun Hai	1990	11	2	58-26N	178-50E	56	9	75

Table 5. Pollock fisheries Data of China by vessel in the central Bering Sea, 1990 (contd.)

Vessel Name	Year	Month	Week	Latitude	Longitude	Metric Tons	Tows	Hours
Yan Yuan No.1	1990	1	1	56-46N	177-57E	55	8	79
Yan Yuan No.1	1990	1	2	56-39N	178-10E	20	7	83
Yan Yuan No.1	1990	7	1	56-38N	177-39W	31	5	41
Yan Yuan No.1	1990	7	2	57-17N	177-25W	42	9	99
Yan Yuan No.1	1990	7	3	56-23N	178-56E	48	7	92
Yan Yuan No.1	1990	7	4	57-13N	178-15W	33	8	90
Yan Yuan No.1	1990	8	1	55-55N	176-56W	57	7	81
Yan Yuan No.1	1990	9	1	55-52N	178-58W	52	8	81
Yan Yuan No.1	1990	9	2	58-29N	179-06E	124	8	80
Yan Yuan No.1	1990	9	3	58-58N	178-40E	120	10	105
Yan Yuan No.1	1990	9	4	59-02N	178-55E	221	12	112
Yan Yuan No.1	1990	10	1	58-34N	178-47E	150	9	100
Yan Yuan No.1	1990	10	2	58-20N	179-08E	81	8	84
Yan Yuan No.1	1990	10	3	58-56N	178-26E	176	10	105
Yan Yuan No.1	1990	10	4	58-56N	178-26E	134	11	112
Yan Yuan No.1	1990	11	1	56-57N	179-54E	92	6	70
Yan Yuan No.1	1990	11	2	58-35N	178-20E	110	10	113
Yan Yuan No.1	1990	11	3	56-06N	176-58E	62	7	65
Yan Yuan No.2	1990	1	1	56-46N	178-29E	290	15	89
Yan Yuan No.2	1990	1	2	56-37N	178-23E	81	6	57
Yan Yuan No.2	1990	7	3	56-29N	179-53E	41	6	70
Yan Yuan No.2	1990	7	4	57-52N	178-35W	170	16	213
Yan Yuan No.2	1990	8	1	56-04N	179-23E	200	11	94
Yan Yuan No.2	1990	8	2	57-00N	179-34W	123	12	104
Yan Yuan No.2	1990	8	3	56-22N	177-37W	100	10	108
Yan Yuan No.2	1990	8	4	56-21N	178-22W	155	11	119
Yan Yuan No.2	1990	9	1	56-30N	179-29W	79	7	75
Yan Yuan No.2	1990	9	2	58-30N	178-30E	110	11	95
Yan Yuan No.2	1990	9	3	58-57N	178-55E	106	10	115
Yan Yuan No.2	1990	9	4	59-01N	179-01E	190	10	117
Yan Yuan No.2	1990	10	1	58-15N	178-20E	210	11	118
Yan Yuan No.2	1990	10	2	58-29N	179-09W	90	8	81
Yan Yuan No.2	1990	10	3	59-00N	178-39E	160	12	117
Yan Yuan No.2	1990	10	4	57-15N	177-10E	50	4	40
Yan Yuan No.2	1990	11	1	57-12N	179-56W	65	6	63
Yan Yuan No.2	1990	11	2	56-33N	179-48E	130	9	98
Yan Yuan No.2	1990	11	3	58-10N	178-30E	55	8	74

Table 6. Geographical positions of large statistical blocks (lower left corner of the one-degree longitude by half-degree latitude block) of the central Bering Sea

Block No	Latitude	Longitude	Block No	Latitude	Longitude
1	58° 30' N	174° 00' E	45	56° 30' N	174° 00' E
2	58° 30' N	175° 00' E	46	56° 30' N	175° 00' E
3	58° 30' N	176° 00' E	47	56° 30' N	176° 00' E
4	58° 30' N	177° 00' E	48	56° 30' N	177° 00' E
5	58° 30' N	178° 00' E	49	56° 30' N	178° 00' E
6	58° 30' N	179° 00' E	50	56° 30' N	179° 00' E
7	58° 30' N	180° 00' E	51	56° 30' N	180° 00' E
8	58° 30' N	179° 00' W	52	56° 30' N	179° 00' W
9	58° 30' N	178° 00' W	53	56° 30' N	178° 00' W
10	58° 30' N	177° 00' W	54	56° 30' N	177° 00' W
11	58° 30' N	176° 00' W	55	56° 30' N	176° 00' W
12	58° 00' N	174° 00' E	56	56° 00' N	174° 00' E
13	58° 00' N	175° 00' E	57	56° 00' N	175° 00' E
14	58° 00' N	176° 00' E	58	56° 00' N	176° 00' E
15	58° 00' N	177° 00' E	59	56° 00' N	177° 00' E
16	58° 00' N	178° 00' E	60	56° 00' N	178° 00' E
17	58° 00' N	179° 00' E	61	56° 00' N	179° 00' E
18	58° 00' N	180° 00' E	62	56° 00' N	180° 00' E
19	58° 00' N	179° 00' W	63	56° 00' N	179° 00' W
20	58° 00' N	178° 00' W	64	56° 00' N	178° 00' W
21	58° 00' N	177° 00' W	65	56° 00' N	177° 00' W
22	58° 00' N	176° 00' W	66	56° 00' N	176° 00' W
23	57° 30' N	174° 00' E	67	55° 30' N	174° 00' E
24	57° 30' N	175° 00' E	68	55° 30' N	175° 00' E
25	57° 30' N	176° 00' E	69	55° 30' N	176° 00' E
26	57° 30' N	177° 00' E	70	55° 30' N	177° 00' E
27	57° 30' N	178° 00' E	71	55° 30' N	178° 00' E
28	57° 30' N	179° 00' E	72	55° 30' N	179° 00' E
29	57° 30' N	180° 00' E	73	55° 30' N	180° 00' E
30	57° 30' N	179° 00' W	74	55° 30' N	179° 00' W
31	57° 30' N	178° 00' W	75	55° 30' N	178° 00' W
32	57° 30' N	177° 00' W	76	55° 30' N	177° 00' W
33	57° 30' N	176° 00' W	77	55° 30' N	176° 00' W
34	57° 00' N	174° 00' E	78	55° 00' N	174° 00' E
35	57° 00' N	175° 00' E	79	55° 00' N	175° 00' E
36	57° 00' N	176° 00' E	80	55° 00' N	176° 00' E
37	57° 00' N	177° 00' E	81	55° 00' N	177° 00' E
38	57° 00' N	178° 00' E	82	55° 00' N	178° 00' E
39	57° 00' N	179° 00' E	83	55° 00' N	179° 00' E
40	57° 00' N	180° 00' E	84	55° 00' N	180° 00' E
41	57° 00' N	179° 00' W	85	55° 00' N	179° 00' W
42	57° 00' N	178° 00' W	86	55° 00' N	178° 00' W
43	57° 00' N	177° 00' W	87	55° 00' N	177° 00' W
44	57° 00' N	176° 00' W	88	55° 00' N	176° 00' W

Table 7. Data on pollock fisheries by China in the Donut Hole area of the central Bering Sea by major statistical blocks, 1989-90

Year	Month	Major Block #	Latitude	Longitude	Metric Tons	Tows (Number)	Hours (Number)
1989	7	5	58° 30' N	178° 00' E	244	15	154
1989	7	8	58° 30' N	179° 00' W	742	22	233
1989	7	19	58° 00' N	179° 00' W	693	33	272
1989	7	20	58° 00' N	178° 00' W	305	10	75
1989	7	26	57° 30' N	177° 00' E	1072	33	253
1989	7	27	57° 30' N	178° 00' E	178	6	62
1989	7	32	57° 30' N	177° 00' W	326	12	123
1989	7	33	57° 30' N	176° 00' W	281	8	64
1989	7	35	57° 00' N	175° 00' E	84	10	93
1989	7	36	57° 00' N	176° 00' E	274	20	175
1989	8	36	57° 00' N	176° 00' E	643	42	378
1989	8	37	57° 00' N	177° 00' E	2110	92	818
1989	8	38	57° 00' N	178° 00' E	667	26	230
1989	8	42	57° 00' N	178° 00' W	396	15	131
1989	8	43	57° 00' N	177° 00' W	176	7	55
1989	8	46	56° 30' N	175° 00' E	369	12	119
1989	8	47	56° 30' N	176° 00' E	1126	50	445
1989	9	48	56° 30' N	177° 00' E	2230	78	638
1989	9	49	56° 30' N	178° 00' E	2833	90	732
1989	10	49	56° 30' N	178° 00' E	872	34	325
1989	10	50	56° 30' N	179° 00' E	1351	50	500
1989	10	51	56° 30' N	180° 00' E	1456	42	217
1989	10	52	56° 30' N	179° 00' W	409	20	134
1989	10	53	56° 30' N	178° 00' W	828	46	278
1989	10	54	56° 30' N	177° 00' W	159	8	50
1989	10	58	56° 00' N	176° 00' E	1121	42	338
1989	11	59	56° 00' N	177° 00' E	1039	62	573
1989	11	60	56° 00' N	178° 00' E	1532	61	558
1989	11	61	56° 00' N	179° 00' E	179	10	109
1989	11	62	56° 00' N	180° 00' E	358	22	247
1989	11	63	56° 00' N	179° 00' W	598	39	365
1989	12	65	56° 00' N	177° 00' W	716	29	307
1989	12	69	55° 30' N	176° 00' E	556	22	180
1989	12	71	55° 30' N	178° 00' E	589	18	176
1989	12	74	55° 30' N	179° 00' W	1628	62	594
1989	12	75	55° 30' N	178° 00' W	130	6	61
1989	12	76	55° 30' N	177° 00' W	754	30	264
1989	12	85	55° 00' N	179° 00' W	487	21	149

Table 7 (contd.). Data on pollock fisheries by China in the Donut Hole area of the central Bering Sea by major statistical blocks, 1989-90.

Year	Month	Major Block #	Latitude	Longitude	Metric Tons	Tows (Number)	Hours (Number)
1990	1	5	58° 30' N	178° 00' E	3653	133	1197
1990	5	5	58° 30' N	178° 00' E	260	10	90
1990	5	6	58° 30' N	179° 00' E	239	10	105
1990	6	6	58° 30' N	179° 00' E	1917	85	753
1990	6	7	58° 30' N	180° 00' E	1769	75	783
1990	7	8	58° 30' N	179° 00' W	128	7	87
1990	7	16	58° 00' N	178° 00' E	2720	119	1166
1990	7	17	58° 00' N	179° 00' E	1081	52	548
1990	7	18	58° 00' N	180° 00' E	229	12	120
1990	7	20	58° 00' N	178° 00' W	30	5	50
1990	8	27	57° 30' N	178° 00' E	75	7	90
1990	8	28	57° 30' N	179° 00' E	350	9	80
1990	8	29	57° 30' N	180° 00' E	1126	34	390
1990	8	30	57° 30' N	179° 00' W	549	19	220
1990	8	31	57° 30' N	178° 00' W	105	7	80
1990	8	36	57° 00' N	176° 00' E	130	7	80
1990	8	37	57° 00' N	177° 00' E	720	25	250
1990	8	38	57° 00' N	178° 00' E	173	8	100
1990	8	39	57° 00' N	179° 00' E	900	52	540
1990	8	40	57° 00' N	180° 00' E	1558	63	650
1990	9	41	57° 00' N	179° 00' W	122	8	80
1990	9	42	57° 00' N	178° 00' W	1213	66	655
1990	9	43	57° 00' N	177° 00' W	318	11	106
1990	9	47	56° 30' N	176° 00' E	188	10	137
1990	9	48	56° 30' N	177° 00' E	346	14	168
1990	9	49	56° 30' N	178° 00' E	1787	91	800
1990	9	50	56° 30' N	179° 00' E	480	31	338
1990	9	51	56° 30' N	180° 00' E	400	39	379
1990	10	52	56° 30' N	179° 00' W	51	12	124
1990	10	53	56° 30' N	178° 00' W	180	31	362
1990	10	58	56° 00' N	176° 00' E	52	8	81
1990	10	59	56° 00' N	177° 00' E	124	8	80
1990	10	60	56° 00' N	178° 00' E	748	49	506
1990	10	61	56° 00' N	179° 00' E	769	55	506
1990	10	62	56° 00' N	180° 00' E	211	22	283
1990	11	63	56° 00' N	179° 00' W	423	33	306
1990	11	64	56° 00' N	178° 00' W	533	47	459
1990	11	69	55° 30' N	176° 00' E	106	10	115
1990	11	70	55° 30' N	177° 00' E	190	10	117
1990	11	73	55° 30' N	180° 00' E	300	19	199
1990	11	74	55° 30' N	179° 00' W	160	12	117
1990	11	75	55° 30' N	178° 00' W	50	4	40
1990	11	76	55° 30' N	177° 00' W	65	6	63
1990	11	80	55° 00' N	176° 00' E	130	9	98
1990	11	86	55° 00' N	178° 00' W	55	8	74

