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The Greenland Fishery for Northern Shrimp (*Pandalus borealis*) on Flemish Cap, NAFO Division 3M in 2002

by

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Abstract

Greenland trawlers have participated in the Flemish Cap fishery since the fishery began in 1993. Greenland catches has been decreasing since the beginning of the fishery, from about 3 800 tons in 1993 to 105 tons in 1997. Catches increased thereafter and amounted to 1 636 tons in 2000. In 2000 a fishery on Grand Bank was initiated and Greenland participated with small catches on 34 tons. No catches is reported from 2001. Two Greenland vessels participated the fishery on Flemish Cap in 2002 with reported catches at around 680 tons. This paper updates information on the geographical distribution and catches rates for the Greenland fishery in 2000 and 2002. In 2002 there is no biological samples from the commercial shrimp fishery in Div. 3M.

Introduction

In 2000 six Greenland trawlers participated in the Flemish Cap and Grand Bank fishery from May to September. There is no reported fishery from the Greenland fleet in 2001, but in 2002 (by mid-October) 2 Greenland trawler has reported to participated the fishery. Based on weekly reporting to Greenland authorities by Greenland vessels the total catch at in 2000 amounted to 1636 tons on Flemish Cap and 34 tons on Grand Bank. The total catch on Flemish Cap in 2002 until mid October is reported to 680 tons.

Logbook records provided information on fleet performance to the Greenland Institute of Natural Resources. Until mid-October logbook data covered 1361hours of trawling and a total catch 536 tons in 2002.

Materials and Methods

Based on compulsory weekly reporting to Greenland authorities total catches and numbers of vessels in the shrimp fishery in NAFO Div. 3M and Div. 3L was compiled from 1993 until mid October 2002.

Catch and effort data from individual fishing vessels as reported in vessels logs were analysed to show the monthly distribution of catches, fishing effort and mean unstandardized catch rates.

Results

Reported catches till October 2002

Nominal catches off shrimp and numbers of Greenland vessels participating in the Flemish Cap fishery from 1993 to 2002 (up to mid-October) are:

	1993	1994	1995	1996	1997	1998	1999	2000		2002
	<i>3M</i>	<i>3M</i>	<i>3M</i>	<i>3M</i>	<i>3M</i>	<i>3M</i>	<i>3M</i>	<i>3M</i>	<i>3L</i>	<i>3M</i>
Catch (tons)	3778	2275	2400	1107	105	853	576	1636	34	680
No. of vessels	12	9	6	6	2	2	1	6	2	2

Catch, effort and CPUE

Catch (tons), effort (hours) and catch rates in Div. 3M and Div. 3L divided in single trawl fishery (1) and twin trawl fishery (2) (effort in the twin trawl is corrected with a factor 2), as reported in vessel logs in 1999, 2000 and 2002 are:

3M

Year	Month Trawl	April		May		June		July		August		September		Total
		1	2*	1	2*	1	2*	1	2*	1	2*	1	2*	
1999	Tons	-	-	-	102	6	293	2	177	-	-	-	-	580
	Hours	-	-	-	796	16	1724	9	1156	-	-	-	-	3701
	kg/hr	-	-	-	128	375	170	222	153	-	-	-	-	157
2000	Tons	15	130	18	369	2	650	-	359	3	51	2	67	1666
	Hours	99	644	93	1582	6	1934	-	1184	41	354	22	428	6387
	kg/hr	152	202	194	233	333	336	-	303	73	144	91	157	261
2002	Tons	-	-	108	107	204	117	-	-	-	-	-	-	536
	Hours	-	-	214	342	429	376	-	-	-	-	-	-	1361
	kg/hr	-	-	505	313	476	311	-	-	-	-	-	-	394

2* Effort in dobbeltrawl is corrected with a factor 2

3L

Year	Month Trawl	April		May		June		July		August		Total 1+2
		1	2*	1	2*	1	2*	1	2*	1	2*	
2000	Tons	-	6	-	-	-	-	-	28	-	-	34
	Hours	-	3	-	-	-	-	-	27	-	-	27
	kg/hr	-	2000	-	-	-	-	-	1037	-	-	1259

Annual catch and unstandardized catch rates (effort in twin trawl corrected with a factor 2) from the Flemish Cap fishery in the period from 1993 to 2002 is shown in Fig. 1. Overall catch rates decreased from 1993 until 1997, but increased again to record high value 2002.

Shrimp Discard and By-catches

Total shrimp discard is reported in logbooks to 10.815 kilo and 1.778 kilo in 2000 and 2002, respectively, or less than 1% of the total shrimp catches.

The information on by-catches from 2002 is recorded as fin-fish only and amounted 6.015 kilo or less than 1% of total shrimp catches. No by-catches were reported for 2000.

Geographical Distribution of the Fishery

Figure 2 and 3 shows the geographical distribution of total catches in 2000 and 2002 respectively as recorded in vessel logs. In 2000 the fishery was concentrated at the northern and northeastern part of the Flemish Cap, as earlier years. The fishery in 2002 was conducted in more shallow water compared to other years.

Conclusions

Greenland catches has been decreasing since the beginning of the fishery, from about 3 800 tons in 1993 to 105 tons in 1997. Catches increased thereafter and amounted to 1 636 tons in 2000. No fishery was conducted in 2001 from the Greenland fleet, but in 2002 reported catches was 680 tons. Numbers of vessels that participated in the fishery decreased to only one vessel in 1999, but increased again in 2000 to 6 vessels. Only 2 vessels participated the fishery in 2002. Unstandardized catch rates have been increasing since 1999.

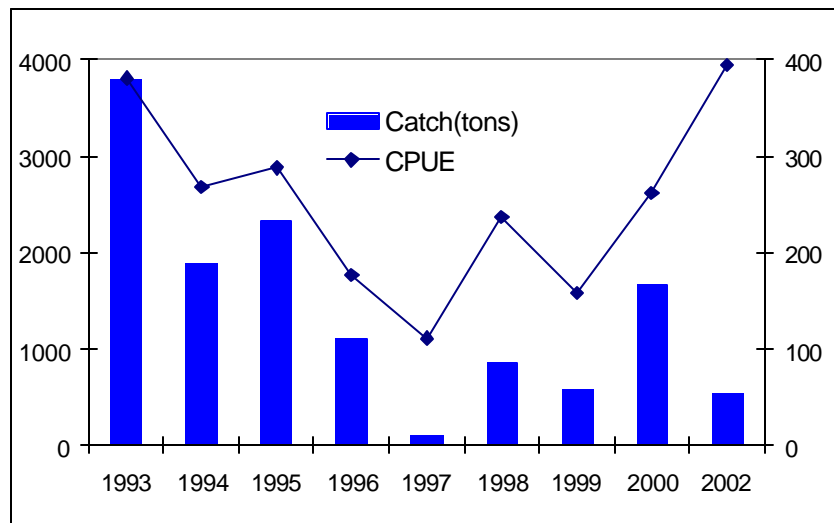


Fig. 1. Total catch (tons) and CPUE (unstandardized kg/hour) from 1993-2002 (twin trawl is corrected with a factor 2).

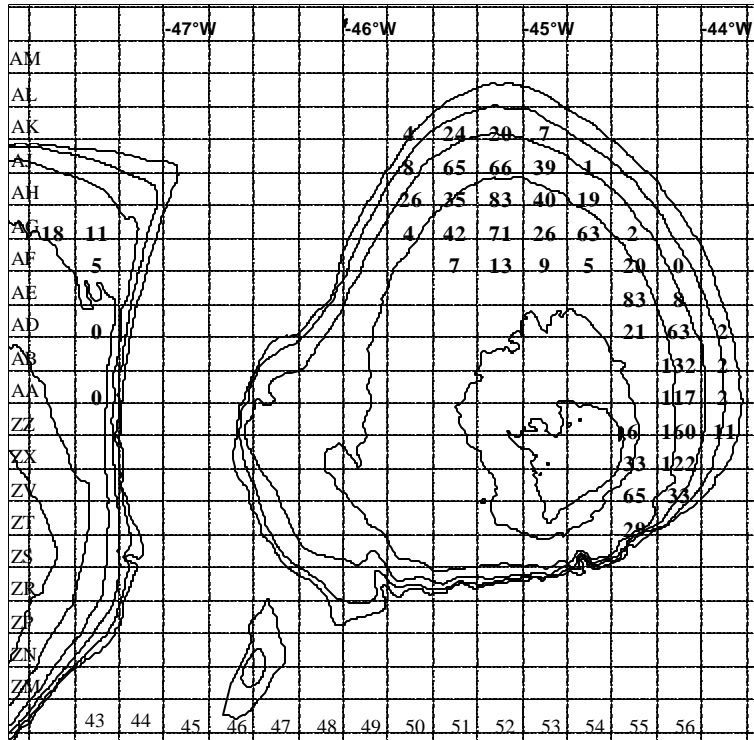


Fig. 2. Geographical distribution of shrimp catches in 2000 on Flemish Cap (tons by statistical unit).

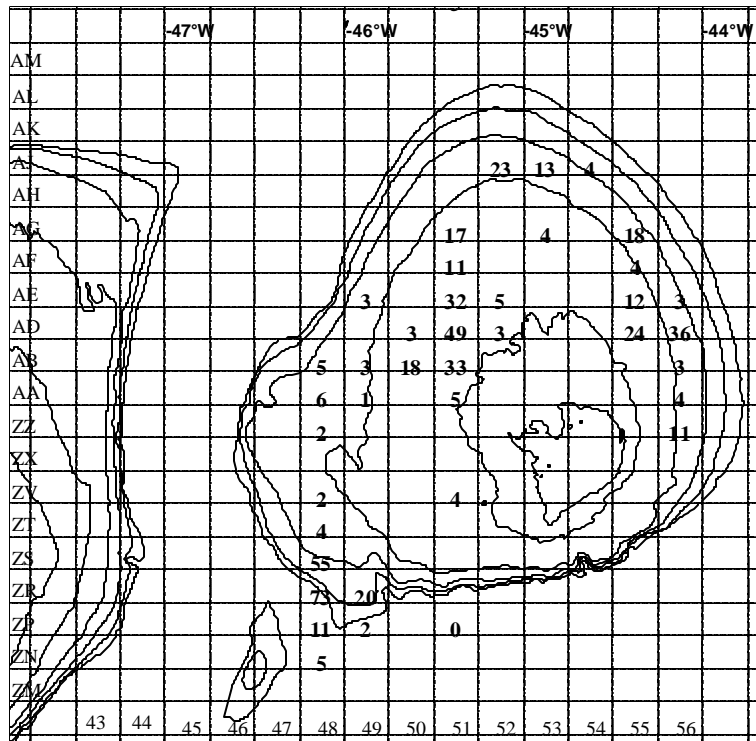


Fig. 3. Geographical distribution of shrimp catches in 2002 on Flemish Cap (tons by statistical unit).