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The Greenland Fishery for Northern Shrimp (*Pandalus borealis*) in NAFO Divisions 3M and 3L in 2002-2004

by

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Abstract

Greenland trawlers have participated in the fishery on Flemish Cap, Division 3M, since the fishery began in 1993, with a few exceptions in 2001 and 2004 (by mid-October). In 2000 a fishery on Grand Bank, Div. 3L was initiated and Greenland has participated in this fishery since, with one exceptions in 2001. This paper updates information on catch, catch rates and the geographical distribution for the Greenland fishery in Div. 3M and Div. 3L. No biological samples and no new information on by-catch and discard from the commercial shrimp fishery have been available since 2003.

Introduction

Based on weekly reporting to Greenland authorities by Greenland vessels the total catch on Flemish Cap in 2002 and 2003 amounted to 683 tons and 888 tons, respectively. No catches were reported from Flemish Cap in 2004 (by mid-October). On Grand Bank in 2002, 2003 and 2004 catches were reported to 11 tons, 672 tons and 294 tons, respectively.

Logbook records provided information on fleet performance to the Greenland Institute of Natural Resources.

Materials and Methods

Catch and effort data from individual fishing vessels as reported in vessels logs were analysed to show the distribution of catches, fishing effort and mean unstandardized catch rates. No biological samples and no new information on by-catch and discard from the commercial shrimp fishery have been available since 2003.

Results

Reported catches till October 2004

Nominal catches of shrimp and numbers of Greenland vessels participating in the Div. 3M and 3L fishery from 1993 to 2004 (up to mid-October) are:

	1993	1994	1995	1996	1997	1998	1999	2000		2002		2003		2004	
	3M	3M	3M	3M	3M	3M	3M	3M	3L	3M	3L	3M	3L	3M	3L
Catch (tons)	3778	2275	2400	1107	105	853	576	1636	34	683	11*	888	672	0	294
No. of vessels	12	9	6	6	2	2	1	6	2	2	1	2	2	0	1

* no logbooks

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 from 2000 to 2004 are:

3M

Year	Month Trawl	April		May		June		July		August		September		December		Total 1+2
		1	2*	1	2*	1	2*	1	2*	1	2*	1	2*	1	2*	
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	-	-	14	246	-	388	-	-	-	-	-	-	-	-	648
	Hours	-	-	21	890	-	1490	-	-	-	-	-	-	-	-	2401
	kg/hr	-	-	667	276	-	260	-	-	-	-	-	-	-	-	270
2003	Tons	-	-	-	-	-	29	7	466	-	320	-	-	-	15	837
	Hours	-	-	-	-	-	69	11	1337	-	1000	-	-	-	107	2524
	kg/hr	-	-	-	-	-	420	636	349	-	320	-	-	-	140	332

2* Effort in dobbeltrawl is corrected with a factor 2

3L

Year	Month Trawl	April		May		June		July		August		December		Total 1+2
		1	2*	1	2*	1	2*	1	2*	1	2*	1	2*	
2000	Tons	-	6	-	-	-	-	-	28	-	-	-	-	34
	Hours	-	3	-	-	-	-	-	27	-	-	-	-	27
	kg/hr	-	2000	-	-	-	-	-	1.037	-	-	-	-	1259
2003	Tons	-	-	-	-	-	-	262	31	-	-	23	356	672
	Hours	-	-	-	-	-	-	112	14	-	-	17	412	555
	kg/hr	-	-	-	-	-	-	2.339	2.214	-	-	1.353	864	1.211
2004	Tons	-	-	-	-	-	-	-	-	-	294	-	-	294
	Hours	-	-	-	-	-	-	-	-	-	185	-	-	185
	kg/hr	-	-	-	-	-	-	-	-	-	1589	-	-	1.589

2* Effort in dobbeltrawl is corrected with a factor 2

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 2003 are showed in Fig. 1. Overall catch rates decreased from 1993 until 1997, but increased again to record high value 2003.

Geographical distribution of the fishery

Figures 2 and 3 show the geographical distribution of total catches in 2002 and 2003, respectively, as recorded in vessel logs. In 2002 and 2003 the fishery was concentrated at the northern and northeastern part of the Flemish Cap, as in earlier years.

Conclusions

Unstandardized catch rates at Flemish Cap, NAFO Div. 3M have been increasing since 1999, and reached record high value in 2003. Unstandardized catch rates at Grand Bank, NAFO Div. 3L has been high all years compared with Div. 3M.

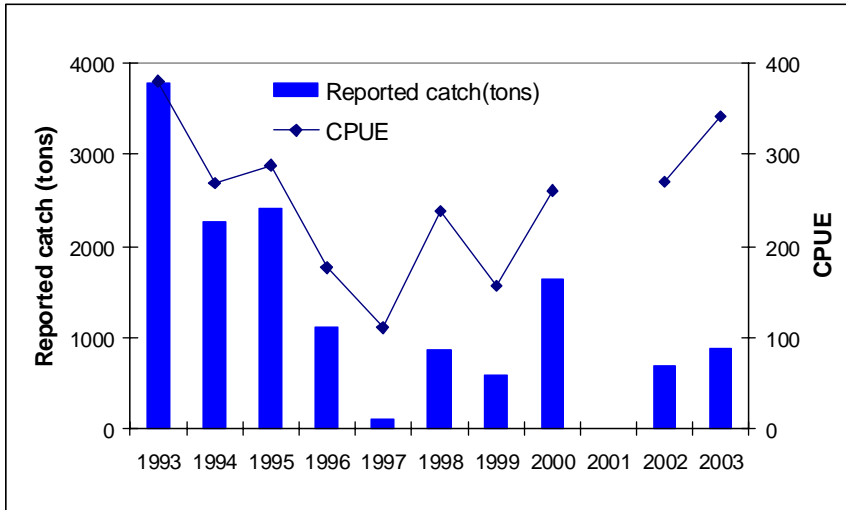


Fig. 1. Div. 3M: Total catch (tons) and CPUE (unstandardized kg/hour) from 1993-2003 (twin trawl is corrected with a factor 2).

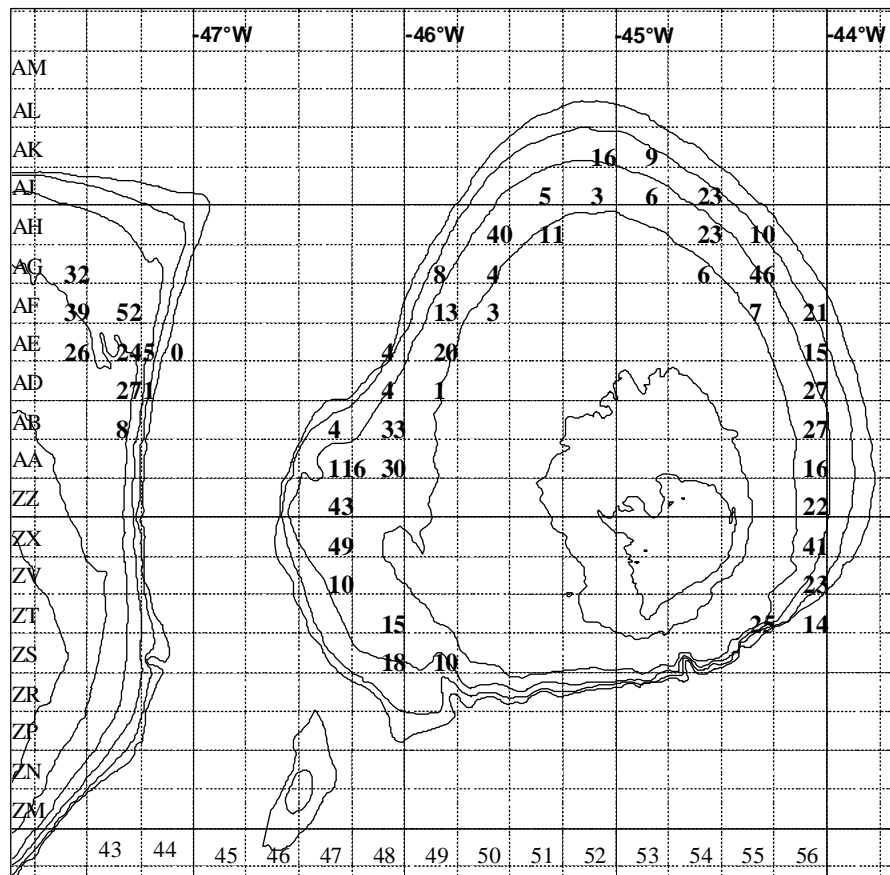


Fig. 2. Geographical distribution of shrimp catches (tons by statistical unit) in 2003 on Flemish Cap and Grand Bank.