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The Greenland Fishery for Northern Shrimp (*Pandalus borealis*) in NAFO Divisions 3M and 3L 2003-2006.

by

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Abstract

Greenland trawlers have participated in the fishery on Flemish Cap, Div. 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 bycatch 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 from 2005 and 2006 amounted to 10 tons and 995 tons (by mid-October), respectively. On Grand Bank in 2004, 2005 and 2006 catches were reported to 296 tons, 302 tons and 324 tons (by mid-October), 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 bycatch and discard from the commercial shrimp fishery have been available since 2003.

Results

Reported catches till October 2006

Nominal catches of shrimp and numbers of Greenland vessels participating in the Div. 3M and 3L fishery from 1993 to 2006 (up to mid-October) are:

	1993	1994	1995	1996	1997	1998	1.999	2000		2002		2003		2004		2005		2006	
	3M	3M	3M	3M	3M	3M	3M	3M	3L	3M	3L	3M	3L	3M	3L	3M	3L	3M	3L
Catch (tons)	3778	2275	2400	1107	105	853	576	1636	34	683	11*	888	672	0	296	10	302	995	324
No. of vessels	12	9	6	6	2	2	1	6	2	2	1	2	2	0	1	1	1	2	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 2002 to 2006 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*	
2002	Tons	-	-	14	246	-	388	-	-	-	-	-	-	-	-	648
	Hours	-	-	21	890	-	1.490	-	-	-	-	-	-	-	-	2.401
	kg/hr	-	-	667	276	-	260	-	-	-	-	-	-	-	-	270
2003	Tons	-	-	-	-	-	29	7	466	-	320	-	-	-	15	837
	Hours	-	-	-	-	-	69	11	1.337	-	1.000	-	-	-	107	2.524
	kg/hr	-	-	-	-	-	420	636	349	-	320	-	-	-	140	332
2005	Tons	-	-	-	-	-	-	-	10	-	-	-	-	-	-	10
	Hours	-	-	-	-	-	-	-	35	-	-	-	-	-	-	35
	kg/hr	-	-	-	-	-	-	-	286	-	-	-	-	-	-	286
2006	Tons	-	-	-	-	-	621	-	93	-	-	-	-	-	-	714
	Hours	-	-	-	-	-	1.520	-	219	-	-	-	-	-	-	1.739
	kg/hr	-	-	-	-	-	409	-	425	-	-	-	-	-	-	411

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*	
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	-	-	-	-	-	-	-	-	9	287	-	-	296
	Hours	-	-	-	-	-	-	-	-	5	175	-	-	180
	kg/hr	-	-	-	-	-	-	-	-	1.800	1.640	-	-	1.644
2005	Tons	-	-	-	-	-	-	-	292	-	-	-	-	292
	Hours	-	-	-	-	-	-	-	162	-	-	-	-	162
	kg/hr	-	-	-	-	-	-	-	1.802	-	-	-	-	1.802
2006	Tons	-	-	-	-	-	-	-	324	-	-	-	-	324
	Hours	-	-	-	-	-	-	-	152	-	-	-	-	152
	kg/hr	-	-	-	-	-	-	-	2.132	-	-	-	-	2.132

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 2006 are shown in Fig. 1. Overall catch rates decreased from 1993 until 1997, but increased again to record high value 2006. Unstandardized catch rates from Grand Bank has been high all years compared to Flemish Cap.

Geographical distribution of the fishery

Figures 2 and 3 show the geographical distribution of total catches in 2005 and 2006, respectively, as recorded in vessel logs. The fishery on Grand Bank has been conducted in the same area in the last two years.

Conclusions

Unstandardized catch rates at Flemish Cap, NAFO Div. 3M have been increasing since 1999, and reached record high value in 2006. Despite of relatively high catch rates at 3M very little attention has been paid by the Greenland fleet in recent years. One explanation is that the Greenland fleet has favourable fishing conditions in home water. Also, unstandardized catch rates at Grand Bank, NAFO Div. 3L has been very high all years compared with Div. 3M.

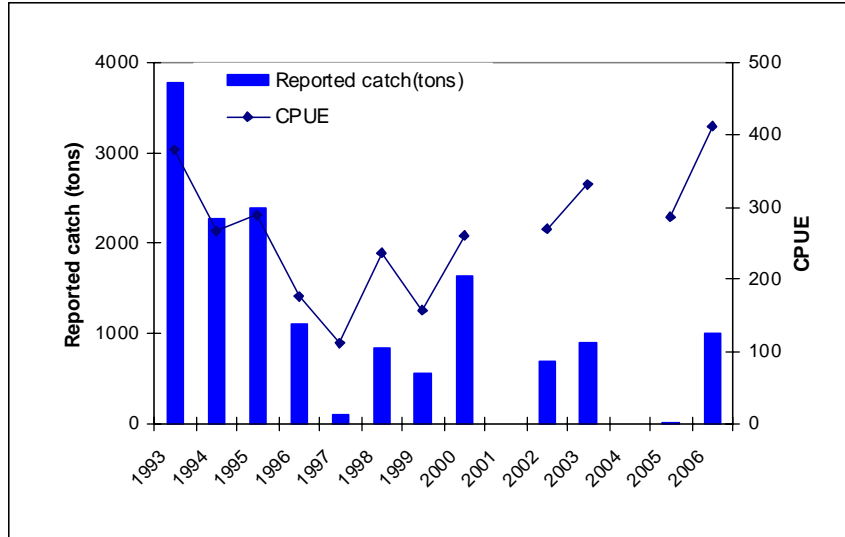


Fig. 1. Division 3M: Total catch (tons) and CPUE (unstandardized kg/hour) from 1993-2006 (twin trawl is corrected with a factor 2).

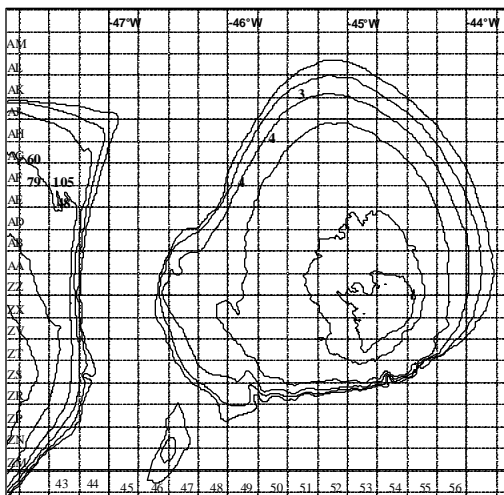


Fig. 2. Geographical distribution of shrimp catches (tons by statistical unit) in 2005 on Flemish Cap and Grand Bank.

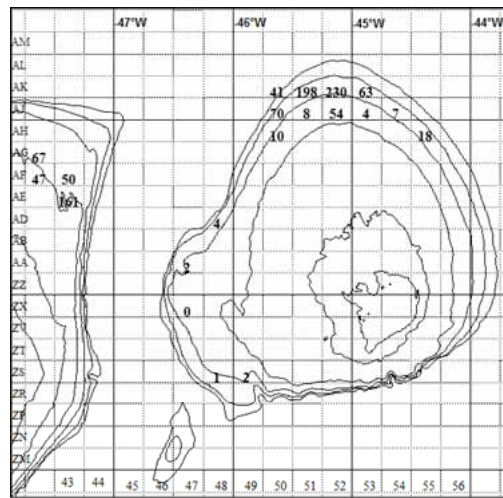


Fig. 3. Geographical distribution of shrimp catches (tons by statistical unit) in 2006 on Flemish Cap and Grand Bank.