

Data on German catches and effort for Greenland halibut (*Reinhardtius hippoglossoides*),
redfish (*Sebastes marinus* and deep sea *S. mentella*), and Atlantic cod (*Gadus morhua*)
in ICES Div. Va, Vb, VIa and XIV, 1995-2001

Hans-Joachim Rätz

Federal Research Centre for Fisheries
Institute for Sea Fisheries
Palmaille 9, D-22767 Hamburg, Federal Republic of Germany

Abstract

In 2001, the German fleet did not accomplished the Greenland halibut quota off East Greenland and the total catch weighed 2 800 t, almost exclusively caught in Division XIVb. The effort in hours fished of catches comprising Greenland halibut doubled in 1998 as compared to 1997 and remained at a high level since then. The CPUE decreased slightly and seem to have stabilised on a lower level with a pronounced seasonal effect of higher catch rates during the second and third quarters.

Since 1999, the German fleet did target redfish (*S. marinus* and deep sea *S. mentella*) in ICES Div. XIVb for the first time since 1992. In 2001, the German fleet reported a catch of 787 t taken within the Greenlandic EEZ and 841 t taken within ICES Div. Va, respectively.

After its termination in 1992 there was an experimental fishery for cod off East Greenland during the first quarter in 1998, which yielded 105 tons only. In 1999-2001, the total catch of cod in ICES Div. XIV amounted to only 13, 3 and 92 tons, respectively.

Introduction

The present paper provides information on catches, effort distribution and CPUE of the German fleet fishing Greenland halibut (*Reinhardtius hippoglossoides* Walbaum), redfish (*Sebastes marinus* and deep sea *S. mentella*), and Atlantic cod (*Gadus morhua*) in ICES Div. Va, Vb, VIa and XIV, 1995-2001. Due to changes in the structure of the official data base, the analyses cover the most recent period 1995-2001 only.

Material and Methods

The German fleet components catching Greenland halibut, redfish (*S. marinus* and deep sea *S. mentella*) and cod consisted mainly of freezer trawlers equipped with bottom trawls. For the period 1995-2001, data on commercial catches and effort (hauls and hours fished) and positions were derived from official logbook statistics. There were only data since 1998 for redfish (*S. marinus* and deep sea *S. mentella*) in ICES Div. XIVb due to the absence of the fleet in previous years. The data were aggregated by quarter, year, and ICES divisions. Unstandardized mean CPUE (kg/h) and accompanied standard deviations were calculated for Greenland halibut on a haul by haul basis. Since 1998, all hauls with Greenland halibut CPUE exceeding 100 kg/h were included in the calculation in order to disregard catches with other target species (redfish). The official data basis is unconfirmed by scientific or official observers.

Results

The geographical distribution pattern of the German trawl effort catching Greenland halibut is listed in Table 1 for the years 1995-2001 as a quarterly breakdown. Table 1 reveals, that around 75 % of the effort was applied to Division XIVb along the continental slope off East Greenland mainly as a directed fishery, whereas the few fishing hours in Division Va and Vb between Iceland and the Faeroes were directed towards redfish and comprised low amounts of by-catches only. In 2001, the German fleet did not accomplished the quota and the total catch weighed 2 806 t (68 % of the quota), almost exclusively caught in Division XIVb. The effort in hours fished of catches comprising Greenland halibut doubled in 1998 as compared to 1997 and remained at that high level since then (10 286 h in 2001) also due to the demersal redfish directed fisheries which were taken up again after their termination in 1992. Quarterly breakdowns of CPUE and accompanied standard deviations for Greenland halibut caught by the German fleet in ICES Division XIVb are listed in Table 2 and illustrated in Figure 1. The CPUE revealed a seasonal pattern with highest success during the second and third quarters. Since 1997, the CPUE decreased slightly and seem to have stabilised on a lower level. No biological data were recorded in 2001.

In 1998, the German fleet did target demersal redfish (*S. marinus* and deep sea *S. mentella*) in ICES Div. XIVb for the first time since 1992. In 1998, the total effort of catches comprising *S. marinus* and deep sea *S. mentella* amounted to 3 500 hours. The majority of this effort was directed towards Greenland halibut and redfish was mainly a by-catch. However, the German fleet reported a catch of 1 408 t taken within the Greenland EEZ and 284 t taken within the Icelandic EEZ, respectively (Tab. 3). In 2001, the total effort of catches comprising redfish increased to 5 600 hours while the catch decreased to 787 tons in the Greenland EEZ and 841 tons were taken in the ICES Div. Va. In 2001, biological sampling was not conducted on directed redfish catches.

Information about German cod catches in ICES Div. Va, Vb and XIVb is listed in Table 4. After its termination in 1992 there was an experimental fishery for cod off East Greenland (ICES Div. XIVb) during the first quarter in 1998, which yielded 105 tons only. The total catch in 1999-2001 was reported to amount to only 13, 3 and 92 tons, respectively. Catches in Va and Vb are minor and by-catches in fisheries directed towards other species.

Table 1 Greenland halibut catches and effort (hours fished) in ICES Div. Va, Vb and XIVb by year and quarter of the German fleet, 1995-2001.

Year	Quarter total	Catch (t) Total	Effort (h) Total	Catch (t) Va	Effort (h) Va	Catch (t) Vb	Effort (h) Vb	Catch (t) XIVb	Effort (h) XIVb
1995	1	1	60	0	0	0	0	1	60
1995	2	1	24	0	0	0	0	1	24
1995	3	747	2007	0	0	0	0	747	2007
1995	4	61	1042	2	427	1	275	58	341
1995		810	3133	2	427	1	275	807	2432
1996	1	6	471	0	0	6	471	0	0
1996	2	936	1608	0	0	6	266	930	1342
1996	3	2384	3391	1	90	0	0	2383	3301
1996	4	46	497	3	407	9	19	32	70
1996		3372	5968	4	497	21	756	3346	4713
1997	1	563	974	0	0	0	25	563	949
1997	2	1771	2081	0	0	0	4	1771	2077
1997	3	556	787	0	0	41	130	516	655
1997	4	451	652	0	0	0	0	451	652
1997		3341	4493	0	0	41	160	3300	4333
1998	1	519	1145	0	0	0	0	519	1145
1998	2	1764	3223	0	0	0	0	1764	3223
1998	3	448	1591	7	886	0	0	441	705
1998	4	676	2192	1	287	0	0	675	1905
1998		3407	8151	9	1173	0	0	3398	6978
1999	1	474	1794	0	0	0	0	474	1794
1999	2	948	1785	0	0	1	65	947	1720
1999	3	661	2584	10	868	20	627	631	1090
1999	4	998	3500	3	668	0	42	995	2790
1999		3081	9663	13	1536	21	734	3047	7394
2000	1	469	2016	0	0	0	0	469	2016
2000	2	1574	2657	0	0	0	0	1574	2657
2000	3	998	3798	17	1387	6	367	975	2044
2000	4	230	1399	5	777	0	33	225	589
2000		3271	9870	22	2164	6	400	3243	7306
2001	1	175	359	0	0	0	0	175	359
2001	2	1099	2350	0	0	3	296	1096	2054
2001	3	776	4597	46	2618	4	292	726	1687
2001	4	756	2980	3	660	0	0	753	2320
2001		2806	10286	49	3278	7	588	2750	6420

Table 2 Greenland halibut. Unstandardised mean CPUE and accompanied standard deviations by year and quarter of the German fleet in ICES Div. XIVb, 1995-2001. Only hauls with a CPUE ≥ 100 kg/h were included (99 % of the total catch) due to by-catches in the redfish fishery.

Year	Quarter	CPUE (kg/h)	Std.Dev. (kg/h)
1995	1		
1995	2		
1995	3	454.6	1078.6
1995	4	281.6	142.1
1996	1		
1996	2	751.3	841.3
1996	3	767.2	451.4
1996	4	456.4	211.3
1997	1	650.4	500.6
1997	2	957.4	682.0
1997	3	760.2	346.2
1997	4	780.6	430.3
1998	1	522.9	280.6
1998	2	621.6	312.9
1998	3	765.1	304.6
1998	4	618.5	472.5
1999	1	317.1	225.0
1999	2	649.0	378.2
1999	3	616.4	257.2
1999	4	462.8	249.9
2000	1	305.7	142
2000	2	608.8	288.9
2000	3	522.9	216.9
2000	4	367.4	193.9
2001	1	498.8	172.4
2001	2	535.7	231.8
2001	3	455.3	314.0
2001	4	433.3	262.4

Table 3 *Sebastes marinus* and deep sea *S. mentella* catches and effort (hours fished) in ICES Div. Va, Vb, VI and XIVb by year and quarter of the German fleet, 1998-2001.

Year	Quarter	Total		Va		Vb		VI		XIVb	
		Catch (t)	Effort (h)	Catch (t)	Effort (h)	Catch (t)	Effort (h)	Catch (t)	Effort (h)	Catch (t)	Effort (h)
1998	1	0	0	0	0	0	0	0	0	0	0
1998	2	290	629	0	0	0	0	0	15	290	614
1998	3	401	1202	226	945	0	0	0	0	175	260
1998	4	1001	1628	58	287	0	0	0	6	943	1335
1998		1693	3459	284	1232	0	0	1	21	1408	2206
1999	1	11	240	0	0	0	0	0	4	11	236
1999	2	139	513	0	0	7	113	0	0	132	400
1999	3	508	2460	284	1162	188	775	0	0	36	523
1999	4	783	1961	145	757	12	82	0	0	625	1123
1999		1441	5174	429	1919	207	970	0	4	804	2282
2000	1	542	872	0	0	0	0	0	0	542	872
2000	2	277	916	0	0	2	105	0	0	275	811
2000	3	521	2277	321	1448	73	401	0	24	127	404
2000	4	196	1249	192	1123	4	33	0	0	0	93
2000		1536	5314	513	2571	79	539	0	24	944	2180
2001	1	0	0	0	0	0	0	0	0	0	0
2001	2	30	497	0	0	29	448	1	49	0	0
2001	3	720	3093	661	2724	58	330	0	0	1	39
2001	4	967	2024	180	934	1	74	0	0	786	1016
2001		1717	5614	841	3658	88	852	1	49	787	1055

Table 4 *Gadus morhua* catches and effort (hauls and hours) in ICES Div. Va, Vb, XIVb by year and quarter of the German fleet, 1998-2001.

Year	Quarter	total	Total		Va		Vb		XIVb	
			Catch (t)	Effort (h)	Catch (t)	Effort (h)	Catch (t)	Effort (h)	Catch (t)	Effort (h)
1998	1		105	208	0	0			105	208
1998	2		2	236	0	0			2	236
1998	3		15	566	6	519			9	47
1998	4		15	390	3	287			12	103
1998			138	1400	9	806			128	594
1999	1		1	25	0	0	0	0	1	25
1999	2		1	50	0	0	0	0	1	50
1999	3		21	908	15	640	4	245	1	24
1999	4		17	1017	6	664	1	36	10	317
1999			40	2000	21	1304	5	281	13	416
2000	1		2	35	0	0	0	0	2	35
2000	2		1	58	0	0	1	58	0	0
2000	3		9	672	7	568	1	90	1	14
2000	4		7	689	7	662	0	27	0	0
2000			19	1454	14	1230	2	175	3	49
2001	1		0	0	0	0	0	0	0	0
2001	2		8	305	0	0	8	291	0	14
2001	3		7	762	7	726	0	36	0	0
2001	4		97	785	4	298	1	48	92	439
2001			112	1852	11	1024	9	375	92	453

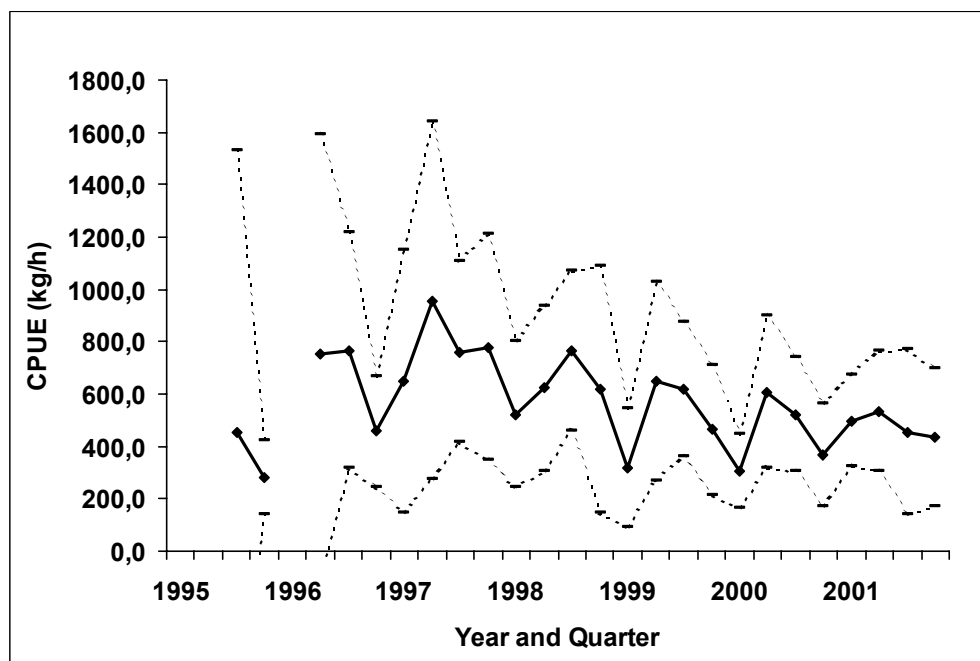


Fig. 1 Greenland halibut XIVb. Unstandardised and standardised mean CPUE (≥ 100 kg/h, vessel effects) of the German fleet by year and quarter, respective values being listed in Table 2.