

Seal Hunting Statistics for Greenland 1993 and 1994, According to a New System of Collecting Information, Compared to the Previous Lists-of-Game

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Abstract

In 1992 a new system of collecting hunting statistics for Greenland was introduced. The system is linked to renewal of hunting licences, and the individual hunters are obliged to fill out forms with their own results during the preceding year. Seal hunting results are now available for 1993 and 1994. For comparison a summary of previous catch statistics based on the so-called Lists-of-Game, and of seal skin purchase 1971–94, is added.

According to the new hunting statistics, the catch of harp seal was at a much higher level in 1993–94 than reported or estimated in the early-1980s. The catches of ringed and hooded seals were, however, not significantly different from the levels estimated previously. This might indicate that the increase in the catch of harp seal is real, but the reliability of the new system needs further investigation.

Key words: Catches, Greenland, seals, statistics

Commentary

Collection and Handling of Data

The new system of collecting hunting statistics in Greenland. In 1992 it was decided to introduce a new system of collecting hunting statistics in Greenland, and the system came into force from January 1993 (Anon., 1992, 1993a, 1993b). The system was linked to the issuing of hunting licences, of which two categories exist: one for full-time hunters, and another for part-time hunters. All Danish citizens (and foreigners having stayed more than two years in Greenland) can apply for a part-time licence and will get one if the conditions are met (paying the fee, and reporting), but for obtaining the status of full-time hunter the approval by the local municipal authorities is required. When the licence is issued, the hunter receives a small booklet for noting his catch results. It contains a form for each month, and a summary form for the whole year (a sample is shown in the Annex, form B). The list of species to be reported include marine mammals (except large whales), some terrestrial

mammals, and several game birds, altogether 21 species (see Annex).

Both full-time and part-time categories have to pay a small fee for renewal of the licence, and are obliged to report on their results during the preceding year. The licence year runs from October to September, and results are now available for the year 1993 and 1994. In 1993, about 9 500 licenses were issued (4 100 full-time and 5 400 part-time), and 7 671 reports were received (3 403 from full-time and 4 268 from part-time hunters). A number of licence holders reported "no catch", and in 1994 only about 7 200 licenses were issued (3 100 full-time and 4 100 part-time). For that year 6 293 reports (2 772 and 3 521, respectively) were received (by May 1995).

The old system: The 'Lists-of-Game'. Since the late 19th century hunting statistics have been collected in Greenland through the so-called Lists-of-Game. The principle in that system was that a person was appointed at each settlement to keep

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account of the hunting results of all the hunters at that settlement, and report to the central authorities on forms which were called 'Lists-of-Game', one for each individual engaged in hunting (Rosendahl, 1961; Kapel, 1975, 1986, MS 1991, MS 1993).

The Lists-of-Game never functioned completely satisfactorily for all settlements in Greenland. For shorter or longer periods reports were not received from a number of localities, or were clearly incomplete. For that reason, estimates of "non-reported catch" were given on a settlement-by-settlement basis, and added up by districts in the published summaries. These estimates constituted an increasing part of the estimated total catch during the 1970s and early-1980s, for which reason some users took the position that the statistics became increasingly unreliable, whereas others believed that the Lists-of-Game were still giving a picture of trends although they were not presenting exact but rather minimum figures (Kapel, MS 1991). The basis for the estimates of non-reported catch at a given settlement was the trade statistics mentioned below, various sources of local information, and comparison with reports from previous years and adjacent settlements in the same year.

In 1984 the responsibility for handling and publishing the summaries of the Lists-of-Game was transferred from the Ministry for Greenland to the Statistical Office of the Greenland Home Rule Authorities. The material for 1984 and 1985 was treated in the same way as in previous years (i.e. including estimates of non-reported catches), but never published. For 1986 and 1987 the material was still collected, but no estimate of non-reported catch was attempted. After that, the old system was discontinued and catch statistics for Greenland are not available for the years 1988 to 1992, when the above-mentioned new system was introduced.

The number of species reported through the Lists-of-Game has varied over time, but since 1971 they included all pinniped and cetacean species, polar bear and caribou, but not other land mammals or birds (see Annex).

Trade (purchase) statistics. Trade statistics have an even longer history in Greenland, dating back to the 18th Century. They contained information on a number of hunting products, including oil (blubber) and seal skin. Locally treated (washed but raw) seal skins were previously purchased by the local manager of the Royal Greenland Trade Department (KGH), sorted by species, quality and size category, and shipped to Denmark where they were either tanned or sold raw on annual auctions. There was no limitation in the number of skins that could be purchased locally, and the purchase statistics

could therefore be used for comparison with information from the catch statistics. The relation between the catch of seals and the purchase of skins varied from one locality to another, depending on the local use or interest in making an income from hunting, but the two sets of statistics often showed similar trends.

In recent years, however, most seal skins have been sent to South Greenland to be processed at the Home Rule owned tannery there, and due to market constraints and economical considerations the trading policy has changed, including suspension of the purchase of some seal skin categories (e.g. those of large harp seals). The present trade statistics for seal skins are thus no longer immediately comparable with the previous ones, or with the hunting statistics.

Reported or Estimated Catch of Seals in 1993 and 1994

The results of the new system of collecting hunting statistics in Greenland is shown for the three most important seal species in the following tables: Tables 1–6 present the information on the catch of harp, ringed and hooded seals by month and region or district (Fig. 1) for 1993. Table 7 (and Fig. 2) presents catch and purchase statistics for the periods 1971 to 1987 and 1971 to 1994, respectively, and Table 8 compares catch statistics for 1983 with 1993–94.

Harp seal. Tables 1, 3 and 5 give the data on the reported catch of harp seals in 1993 and 1994. According to this information 55 683 harp seals were caught in Greenland in 1993, of which just over 50% (28 290) were reported as young or immature seals ("blåsider", i.e. spotted animals: beaters and bedlamers). In 1994, the reported catch was 47 364 (23 746 spotted) harp seals. This catch level is the highest ever recorded for Greenland. Based on information from the Lists-of-Game and trends in purchase statistics, the catch of harp seals in 1992 was previously estimated to be of the order 25 000, the same level as in the late-1940s (Kapel, 1986, MS 1993), but the revised purchase figure for that year (24 000; Table 7) indicate that the catch may have been even higher.

The regional and seasonal distribution of the catches of harp seal (Tables 3 and 5) is in general agreement with previous data from the Lists-of-Game (Rosendahl, 1991; Kapel, 1975), and with recent information from tag recoveries (Kapel, 1996). It is worth noting that this most recent catch information indicates that quite a few harp seals spend the winter (December–March) in Greenland, these are not only immature animals but also many older seals ("sortsider", saddlebacks).

TABLE 1. Seal hunting statistics for Greenland, harp seal by month, region and age category^a.

Harp Seal 1993													
Region*		Month											
		I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII
N+NW	B	157	19	14	28	40	193	740	1 272	1 293	742	234	52
	S	101	49	6	23	136	270	804	985	1 263	864	454	59
	G	258	68	20	51	176	463	1 544	2 257	2 556	1 606	688	111
CWe	B	48	40	24	6	19	2 240	533	794	503	304	211	127
	S	150	29	15	16	86	788	675	517	393	348	376	248
	G	198	69	39	22	105	3 028	1 208	1 311	896	652	587	375
CWw	B	261	116	78	27	26	378	927	1 003	809	604	615	423
	S	359	151	43	23	72	691	727	582	623	539	636	561
	G	620	267	121	50	98	1 069	1 654	1 585	1 432	1 143	1 251	984
SW	B	764	1 623	1 003	453	409	769	1 221	1 234	1 066	682	643	611
	S	783	696	700	318	562	1 278	1 184	805	799	456	308	322
	G	1 547	2 319	1 703	771	971	2 047	2 405	2 039	1 865	1 138	951	933
S	B	234	192	227	157	163	243	299	207	174	138	94	76
	S	522	351	471	444	398	586	711	455	459	496	147	139
	G	756	543	698	601	561	829	1 010	662	633	634	241	215
E	B	4	2	8	5	15	20	176	226	109	78	40	25
	S	2	1	17	2	3	10	117	56	80	24	22	7
	G	6	3	25	7	18	30	293	282	189	102	62	32
TOTAL	B	1 468	1 992	1 354	676	672	3 843	3 896	4 736	3 954	2 548	1 837	1 314
	S	1 917	1 277	1 252	826	1 257	3 623	4 218	3 400	3 617	2 727	1 943	1 336
TOTAL	G	3 385	3 269	2 606	1 502	1 929	7 466	8 114	8 136	7 571	5 275	3 780	2 650

Harp Seal 1994													
Region		Month											
		I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII
N+NW	B	24	15	7	14	36	137	487	899	1 333	640	168	35
	S	35	23	8	10	15	130	504	643	893	656	291	39
	G	59	38	15	24	51	267	991	1 542	2 226	1 296	459	74
CWe	B	59	29	18	22	22	133	418	736	616	173	97	85
	S	155	39	20	15	37	381	495	428	326	221	191	140
	G	214	68	38	37	59	514	913	1 164	942	394	288	225
CWw	B	209	131	38	15	50	259	599	832	1 074	468	437	198
	S	382	133	56	17	60	380	524	477	640	364	437	414
	G	591	264	94	32	110	639	1 123	1 309	1 714	832	874	612
SW	B	924	961	618	393	362	782	1 218	1 505	1 539	642	524	440
	S	590	542	483	255	502	1 183	1 057	1 012	978	533	240	226
	G	1 514	1 503	1 101	648	864	1 965	2 275	2 517	2 517	1 175	764	666
S	B	186	150	160	315	230	391	455	361	243	148	109	74
	S	324	346	437	859	505	807	862	713	678	249	261	144
	G	510	496	597	1 174	735	1 198	1 317	1 074	921	397	370	218
E	B	5	3	3	1	4	4	100	114	107	73	52	9
	S	2	–	4	3	6	20	74	47	53	29	12	13
	G	7	3	7	4	10	24	174	161	160	102	64	22
TOTAL	B	1 407	1 289	844	760	704	1 706	3 277	4 447	4 912	2 144	1 387	841
	S	1 488	1 083	1 008	1 159	1 125	2 901	3 516	3 320	3 568	2 052	1 432	976
TOTAL	G	2 895	2 372	1 852	1 919	1 825	4 607	6 793	7 767	8 480	4 196	2 819	1 817

* See Fig. 1 for Region names.

^a Age category: B = beaters and bedlamers, S = saddlebacks, G = total.

TABLE 2. Seal hunting statistics for Greenland, hooded and ringed seals by month and region.

Region*	Month												Total
	I	II	III	VI	V	VI	VII	VIII	IX	X	XI	XII	
Hooded Seal 1993													
N+NW	22	5	13	13	32	17	57	129	114	101	29	8	540
CWe	24	14	12	17	78	17	22	28	42	14	1	5	274
CWw	20	15	17	64	135	35	20	40	31	14	8	7	406
SW	111	126	127	359	430	156	106	70	77	61	135	146	1 904
S	46	27	65	129	547	454	225	65	24	47	145	32	1 806
E	22	24	7	52	56	103	1 023	378	149	93	52	17	1 976
TOTAL	245	211	241	634	1 278	782	1 453	710	437	330	370	215	6 906
Ringed Seal 1993													
N+NW	5 780	3 586	2 961	3 717	5 508	2 945	1 735	2 036	3 427	2 146	1 792	1 750	37 283
CWe	526	419	567	980	967	333	131	142	152	188	279	289	4 973
CWw	2 071	3 078	2 790	2 840	3 250	262	111	62	192	206	516	701	16 079
SW	603	524	643	866	780	280	205	238	276	259	405	402	5 481
S	242	210	479	348	388	355	385	257	182	181	116	168	3 311
E	723	827	803	966	673	701	794	719	646	591	562	412	8 417
TOTAL	9 945	8 644	8 243	9 717	11 566	4 876	3 361	3 454	4 875	3 571	3 670	3 722	75 644
Hooded Seal 1994													
Region*	Month												Total
	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	
N+NW	9	–	–	2	129	35	328	185	195	159	9	4	1 055
CWe	6	6	4	17	48	27	16	56	44	13	1	2	240
CWw	15	3	10	61	163	50	39	36	39	9	4	5	434
SW	122	108	96	302	383	132	109	102	112	75	46	15	1 602
S	24	19	22	179	405	429	180	78	29	16	81	21	1 483
E	22	14	5	40	49	379	1 604	433	127	63	23	17	2 776
TOTAL	198	150	137	601	1 177	1 052	2 276	890	546	335	164	64	7 590
Ringed Seal 1994													
N+NW	5 104	3 892	2 446	3 507	5 949	2 477	1 387	1 087	1 949	1 932	1 207	1 187	32 124
CWe	588	497	588	767	935	274	69	91	114	94	142	195	4 354
CWw	1 994	2 531	2 155	2 493	2 405	256	43	38	66	99	143	249	12 472
SW	586	716	837	1 128	743	223	162	190	245	226	241	278	5 575
S	345	316	559	359	409	341	373	280	160	53	71	44	3 310
E	797	727	832	737	589	632	585	446	433	421	342	285	6 826
TOTAL	9 414	8 679	7 417	8 991	11 030	4 203	2 619	2 132	2 967	2 825	2 146	2 238	64 661

* See Fig. 1 for Region names.

TABLE 3. Seal hunting statistics for Greenland 1993, harp seal by month, district and age category¹.

District		Month												Total
		I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	
Thule	B	–	–	2	3	–	2	3	2	28	20	5	–	65
	S	5	–	–	–	–	3	10	44	76	77	3	–	218
	G	5	–	2	3	–	5	13	46	104	97	8	–	283
Upernavik	B	138	4	8	21	37	96	218	413	590	426	148	19	2 118
	S	73	42	3	23	133	127	272	451	888	686	411	34	3 143
	G	211	46	11	44	170	223	490	864	1 478	1 112	559	53	5 261
Uummannaq	B	19	15	4	4	3	95	519	857	675	296	81	33	2 601
	S	23	7	3	–	3	140	522	490	299	101	40	25	1 653
	G	42	22	7	4	6	235	1041	1 347	974	397	121	58	4 254
Ilulissat	B	25	30	24	6	18	2 166	451	670	359	216	117	90	4 172
	S	127	22	8	4	72	492	495	346	309	230	264	161	2 530
	G	152	52	32	10	90	2 658	946	1 016	668	446	381	251	6 702
Qasigiannnguit	B	23	10	–	–	1	74	82	124	144	88	94	37	677
	S	23	7	7	12	14	296	180	171	84	118	112	87	1 111
	G	46	17	7	12	15	370	262	295	228	206	206	124	1 788
Qeqertarsuaq	B	70	34	12	10	3	57	126	184	138	110	93	50	887
	S	147	55	8	–	8	102	170	158	126	119	66	64	1 023
	G	217	89	20	10	11	159	296	342	264	229	159	114	1 910
Aasiaat	B	38	1	6	5	8	253	594	603	456	211	187	145	2 507
	S	55	17	10	12	50	511	466	318	344	219	295	214	2 511
	G	93	18	16	17	58	764	1 060	921	800	430	482	359	5 018
Kangaatsiaq	B	153	81	60	12	15	68	207	216	215	283	335	228	1 873
	S	157	79	25	11	14	78	91	106	153	201	275	283	1 473
	G	310	160	85	23	29	146	298	322	368	484	610	511	3 346
Sisimiut	B	166	214	190	91	75	172	333	456	423	317	233	164	2 834
	S	139	129	86	31	91	338	313	205	147	119	83	80	1 761
	G	305	343	276	122	166	510	646	661	570	436	316	244	4 595
Maniitsoq	B	255	331	463	175	142	189	320	281	245	138	176	258	2 973
	S	189	246	281	118	98	278	253	174	163	78	73	79	2 030
	G	444	577	744	293	240	467	573	455	408	216	249	337	5 003
Nuuk	B	252	966	254	111	91	162	287	340	263	162	166	112	3 166
	S	250	141	109	73	214	297	237	145	196	87	54	50	1 853
	G	502	1107	363	184	305	459	524	485	459	249	220	162	5 019
Paamiut	B	91	112	96	76	101	246	281	157	135	65	68	77	1 505
	S	205	180	224	96	159	365	381	281	293	172	98	113	2 567
	G	296	292	320	172	260	611	662	438	428	237	166	190	4 072
Narsaq	B	19	28	31	16	22	71	89	57	37	26	19	15	430
	S	41	56	75	45	79	162	163	138	127	102	42	39	1 069
	G	60	84	106	61	101	233	252	195	164	128	61	54	1 499
Qaqortoq	B	92	89	93	91	103	132	165	124	93	70	40	39	1 131
	S	183	142	160	173	198	218	269	149	167	307	48	40	2 054
	G	275	231	253	264	301	350	434	273	260	377	88	79	3 185
Nanortalik	B	123	75	103	50	38	40	45	26	44	42	35	22	643
	S	298	153	236	226	121	206	279	168	165	87	57	60	2 056
	G	421	228	339	276	159	246	324	194	209	129	92	82	2 699
Ammassalik	B	4	2	8	4	15	20	176	226	107	78	40	25	705
	S	2	1	1	2	3	10	117	52	70	23	22	7	310
	G	6	3	9	6	18	30	293	278	177	101	62	32	1 015
Scoresbysund	B	–	–	–	1	–	–	–	–	2	–	–	–	3
	S	–	–	16	–	–	–	–	4	10	1	–	–	31
	G	–	–	16	1	–	–	–	4	12	1	–	–	34

¹ Age category: B = beaters and bedlamers, S = saddlebacks, G = total.

TABLE 4. Seal hunting statistics for Greenland 1993, hooded and ringed seals by month and district.

District	Month												Total
	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	
Hooded Seal													
Thule	–	–	–	–	–	–	1	2	6	3	–	–	12
Upernavik	10	3	11	9	26	10	46	79	62	53	10	–	319
Uummannaq	12	2	2	4	6	7	10	48	46	45	19	8	209
Ilulissat	23	12	10	14	49	9	16	24	18	11	–	4	190
Qasiangnguit	1	2	2	3	29	8	6	4	24	3	1	1	84
Qeqertarsuaq	14	10	11	19	35	8	3	7	3	–	1	1	112
Aasiaat	4	4	5	25	78	24	14	32	25	8	7	6	232
Kangaatsiaq	2	1	1	20	22	3	3	1	3	6	–	–	62
Sisimiut	13	8	41	91	119	26	30	21	17	30	52	8	456
Maniits	42	34	33	131	163	43	21	10	20	12	68	130	707
Nuuk	44	72	30	91	88	33	35	30	30	11	11	8	483
Paamiut	12	12	23	46	60	54	20	9	10	8	4	–	258
Narsaq	3	3	6	22	47	13	22	12	7	2	2	2	141
Qaqortoq	15	10	22	56	114	47	52	19	10	42	141	30	558
Nanortalik	28	14	37	51	386	394	151	34	7	3	2	–	1 107
Ammassalik	19	4	4	52	56	103	1 023	376	145	93	52	17	1 944
Scoresbysund	3	20	3	–	–	–	–	2	4	–	–	–	32
TOTAL	245	221	241	634	1278	782	1 453	710	437	330	370	215	6 906
Ringed Seal													
Thule	333	259	209	227	305	371	352	481	875	361	300	171	4 244
Upernavik	4 159	2 455	2 178	2 753	3 748	2 022	1 168	1 415	2 280	1 450	1 202	1 047	25 877
Uummannaq	1 288	872	574	737	1 455	552	215	140	272	335	290	532	7 262
Ilulissat	365	267	365	697	631	262	128	123	125	153	177	166	3 459
Qasigiannnguit	161	152	202	283	336	71	3	19	27	35	102	123	1 514
Qeqertarsuaq	405	349	399	508	1 400	123	10	19	24	44	138	140	3 559
Aasiaat	650	1 577	1 301	1 223	1 168	98	90	36	110	71	182	295	6 801
Kangaatsiaq	1 016	1 152	1 090	1 109	682	41	11	7	58	91	196	266	5 719
Sisimiut	171	165	201	318	226	43	16	23	46	88	113	76	1 486
Maniitsoq	156	125	168	230	221	43	21	16	40	47	156	195	1 418
Nuuk	136	109	117	134	127	65	48	70	76	29	40	48	999
Paamiut	140	125	157	184	206	129	120	129	114	95	96	83	1 578
Narsaq	29	21	27	48	36	22	39	36	39	24	10	18	349
Qaqortoq	53	38	41	52	126	123	110	35	37	54	27	17	713
Nanortalik	160	151	411	248	226	210	236	186	106	103	79	133	2 249
Ammassalik	592	584	593	788	570	591	626	590	530	433	461	348	6 706
Scoresbysund	131	243	210	178	103	110	168	129	116	158	101	64	1 711
TOTAL	9 945	8 644	8 243	9 717	11 566	4 876	3 361	3 454	4 875	3 571	3 670	3 722	75 644

TABLE 5. Seal hunting statistics for Greenland 1994, harp seal by month, district and age category¹.

District		Month												Total
		I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	
Thule	B	1	1	1	–	–	–	4	9	27	11	3	2	59
	S	1	–	–	2	–	2	7	11	65	27	3	–	118
	G	2	1	1	2	–	2	11	20	92	38	6	2	177
Upernavik	B	16	9	6	13	16	69	109	286	483	337	129	27	1 510
	S	8	8	8	6	8	43	110	290	516	554	255	34	1 840
	G	24	17	14	19	24	112	219	576	999	891	384	61	3 350
Uummannaq	B	7	5	–	1	20	68	374	604	823	292	36	6	2 246
	S	26	15	–	2	7	85	387	342	312	75	33	5	1 289
	G	33	20	–	3	27	153	761	946	1 135	367	69	11	3 535
Iluliassat	B	47	23	16	19	17	96	346	630	499	116	53	66	1 928
	S	103	28	19	14	27	245	376	313	245	145	140	87	1 742
	G	150	51	35	33	44	341	722	943	744	261	193	153	3 670
Qasigiannguit	B	12	6	2	3	5	37	72	106	117	57	44	19	480
	S	52	11	1	1	10	136	119	115	81	76	51	53	706
	G	64	17	3	4	15	173	191	221	198	133	95	72	1 186
Qeqertarsuaq	B	59	32	12	3	1	28	89	142	257	186	99	64	972
	S	132	59	10	11	4	34	97	132	192	144	67	69	951
	G	191	91	22	14	5	62	186	274	449	330	166	133	1 923
Aasiaat	B	10	8	5	4	44	160	367	456	484	124	109	63	1 834
	S	42	6	18	3	38	248	310	236	210	101	181	81	1 464
	G	52	14	23	7	82	408	677	692	694	225	290	144	3 298
Kangaatsiaq	B	140	91	21	8	5	71	143	234	333	158	229	71	1 504
	S	208	68	28	3	18	98	117	109	238	119	189	264	1 459
	G	348	159	49	11	23	169	260	343	571	277	418	335	2 963
Sisimiut	B	291	257	91	63	43	205	415	427	499	173	164	103	2 742
	S	189	135	63	34	65	285	291	234	219	121	79	63	1 778
	G	480	392	154	97	108	490	706	661	718	294	243	166	4 520
Maniitsoq	B	337	302	234	120	62	175	257	353	350	169	165	213	2 737
	S	146	177	192	34	66	241	147	120	152	73	52	71	1 471
	G	483	479	426	154	128	416	404	473	502	242	217	284	4 208
Nuuk	B	213	323	244	147	177	241	389	545	553	216	104	75	3 227
	S	113	103	97	75	126	293	299	250	268	208	43	26	1 901
	G	326	426	341	222	303	534	688	795	821	424	147	101	5 128
Paamiut	B	83	79	49	63	80	161	157	180	137	84	91	49	1 213
	S	142	127	131	112	245	364	320	408	339	131	66	66	2 451
	G	225	206	180	175	325	525	477	588	476	215	157	115	3 664
Narsaq	B	75	44	11	25	22	84	63	82	57	27	26	18	534
	S	44	84	74	63	94	195	154	178	193	81	73	39	1 272
	G	119	128	85	88	116	279	217	260	250	108	99	57	1 806
Qaqortoq	B	29	43	64	225	137	216	316	138	108	78	49	33	1 433
	S	125	101	144	588	204	407	486	307	324	115	130	64	2 995
	G	154	144	208	813	341	623	802	445	432	193	179	97	4 428
Nanortalik	B	82	63	85	65	71	91	76	141	78	43	34	23	852
	S	155	161	219	208	207	205	222	228	161	53	58	41	1 918
	G	237	224	304	273	278	296	298	369	239	96	92	64	2 770
Ammassalik	B	5	3	3	1	4	4	97	105	94	68	52	9	445
	S	2	–	4	3	6	20	69	41	25	20	12	13	215
	G	7	3	7	4	10	24	166	146	119	88	64	22	660
Scoresbysund	B	–	–	–	–	–	–	3	9	13	5	–	–	30
	S	–	–	–	–	–	–	5	6	28	9	–	–	48
	G	–	–	–	–	–	–	8	15	41	14	–	–	78

¹ Age category: B = beaters and bedlamers, S = saddlebacks, G = total

TABLE 6. Seal hunting statistics for Greenland 1994, hooded and ringed seals by month and district.

	Month												
District	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	Total
Hooded Seal													
Thule	–	–	–	–	60	15	265	77	30	10	3	1	461
Upernavik	–	–	–	–	64	17	33	69	114	125	5	–	427
Uummannaq	9	–	–	2	5	3	30	39	51	24	1	3	167
Ilulissat	6	6	3	11	33	25	15	50	36	11	1	2	199
Qasigiannguit	–	–	1	6	15	2	1	6	8	2	–	–	41
Qeqertarsuaq	8	1	–	15	41	15	8	4	2	5	1	2	102
Aasiaat	3	1	4	21	100	31	26	26	34	–	1	2	249
Kangaatsiaq	4	1	6	25	22	4	5	6	3	4	2	1	83
Sisimiut	33	36	20	79	120	34	20	29	30	10	2	2	415
Maniitsoq	60	26	25	90	95	20	23	6	15	11	29	4	404
Nuuk	24	39	44	96	124	45	51	52	39	49	8	5	576
Paamiut	5	7	7	37	44	33	15	15	28	5	7	4	207
Narsaq	2	4	1	12	30	10	17	12	6	3	3	1	101
Qaqortoq	19	9	13	73	54	71	46	42	16	10	43	17	413
Nanortalik	3	6	8	94	321	348	117	24	7	3	35	3	969
Ammassalik	22	14	5	40	49	378	1 604	407	123	63	23	17	2 745
Scoresbysund	–	–	–	–	–	1	–	26	4	–	–	–	31
TOTAL	198	150	137	601	1 177	1 052	2 276	890	546	335	164	64	7 590
Ringed Seal													
Thule	297	190	252	255	415	390	275	348	863	327	182	178	3 972
Upernavik	2 509	1 922	1 402	2 174	3 312	1 582	967	621	921	1 433	895	868	18 606
Uummannaq	2 298	1 780	792	1 078	2 222	505	145	118	165	172	130	141	9 546
Ilulissat	396	292	392	568	712	249	67	90	111	83	121	161	3 242
Qasigiannguit	192	205	196	199	223	25	2	1	3	11	21	34	1 112
Qeqertarsuaq	383	350	319	564	859	98	10	5	12	28	61	79	2 768
Aasiaat	695	1 087	935	991	906	102	26	22	14	38	37	76	4 929
Kanqaatsiaq	916	1 094	901	938	640	56	7	11	40	33	45	94	4 775
Sisimiut	129	170	206	353	183	31	9	22	29	31	59	42	1 264
Maniitsoq	160	161	197	273	205	46	23	13	40	62	85	102	1 367
Nuuk	147	224	202	247	189	70	44	60	71	70	31	47	1 402
Paamiut	150	161	232	255	166	76	86	95	105	63	66	87	1 542
Narsaq	20	14	36	33	11	22	24	35	24	5	2	5	231
Qaqortoq	49	43	59	83	74	104	78	88	53	20	14	4	669
Nanortalik	276	259	464	243	324	215	271	157	83	28	55	35	2 410
Ammassalik	633	520	658	598	448	542	538	333	316	290	274	230	5 380
Scoresbysund	164	207	174	139	141	90	47	113	117	131	68	55	1 446
TOTAL	9 414	8 679	7 417	8 991	11 030	4 203	2 619	2 132	2 967	2 825	2 146	2 238	64 661

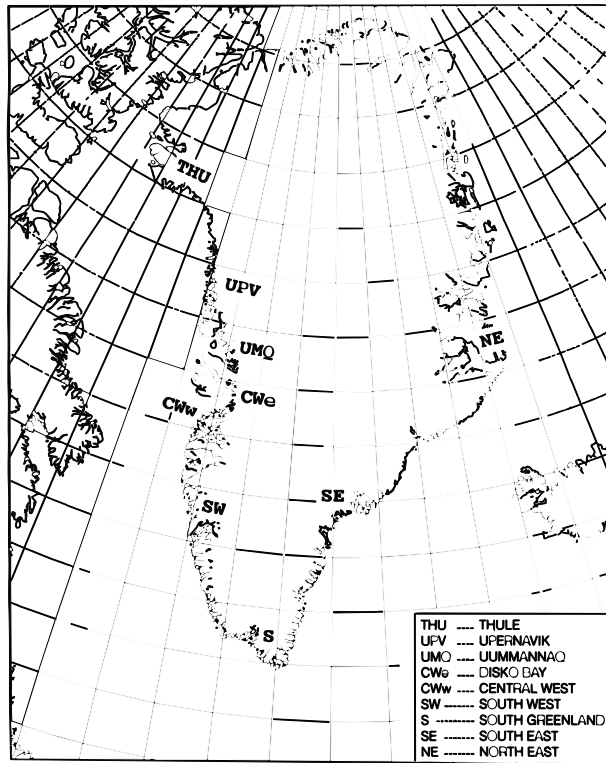


Fig. 1. Map showing the various regions for which statistic are reported.

Hooded seal. According to the new statistics, the catch of hooded seals was 6 906 in 1993 and 7 590 in 1994 (Tables 2 and 8). This level is slightly higher than the catches reported or estimated for the late-1970s and early-1987, but not significantly so (Table 7).

The regional and seasonal distribution of the hooded seal catches (Tables 4 and 6) agree fairly well with previous information (Rosendahl, 1961; Kapel, 1975), although the catch level in the southernmost part of West Greenland (South Greenland = Narsaq, Qaqortoq and Nanortalik districts) that used to be the "classical" area for hooded seal hunting in spring is now apparently not as dominant compared to the hunting in the region "South-west Greenland" (Paamiut-Sisimiut). A strange feature is the very large catch of hooded seal reported from Thule district in July (May–August) 1994; this contrasts previous information and inquiries to a number of local hunters suggest that errors were made in filling in the reporting forms.

As in the case of harp seal, the new statistical information also indicates that a fair number of hooded seals spend the winter months in Greenland waters.

Ringed seal. Tables 2, 4, 6 and 8 show that the catches of ringed seals reported for 1993 (75 644) and 1994 (64 661) were within the range of the total annual catch of ringed seals in Greenland reported or estimated during the period 1971 to 1985 (59 000–97 000; Table 7).

Comparison of the regional distribution of estimated ringed seal catches in 1983 with those in 1993 and 1994 (Table 8) indicates, however, significant differences: For Thule, Ammassalik and Scoresbysund the catch levels estimated for 1983 were significantly higher than those reported for 1993 and 1994, whereas the 1983 levels estimated for several other districts (particularly in Central West Greenland) were significantly lower than reported in 1993 and 1994.

Preliminary Comments on the New Catch Data

The results of the new system of collecting hunting statistics in Greenland have only very recently become available to the authors, so a thorough analysis and evaluation has not been possible. The following comments should, therefore, be considered preliminary.

When comparing the old and new system of collecting hunting statistics two features should be noted: the difference in approach and the reporting intensity.

The Lists-of-Game represented an "indirect" reporting procedure: One person reporting the hunting results of everyone at a given settlement. As long as the settlements were small, this old system was feasible, and it seemed to work well for a number of years at many localities. But when the size of a settlement increased (say, to more than 2–300 inhabitants) it became increasingly difficult for a single person to keep track of all hunting, and at the same time the interest in doing so faded for a number of reasons. It is obvious that the number of reports (Lists-of-Game) received in 1983 (2 226; Table 8) did not reflect the number of people actually engaged in hunting. This led to the procedure of trying to estimate non-reported catches. Only in few cases was it possible to check whether these estimates resulted in under-estimating or over-estimating the catch.

The new system, the reporting linked to renewal of hunting licences, is a "direct" approach: Each hunter shall report his own results, and this should be possible independent of the size of the settlement. A main problem may be that many hunters are not used to paper work, and do not see the advantage of making exact notes on the dates and number of hunting objects he is landing. Whether this could lead to under-reporting, over-reporting,

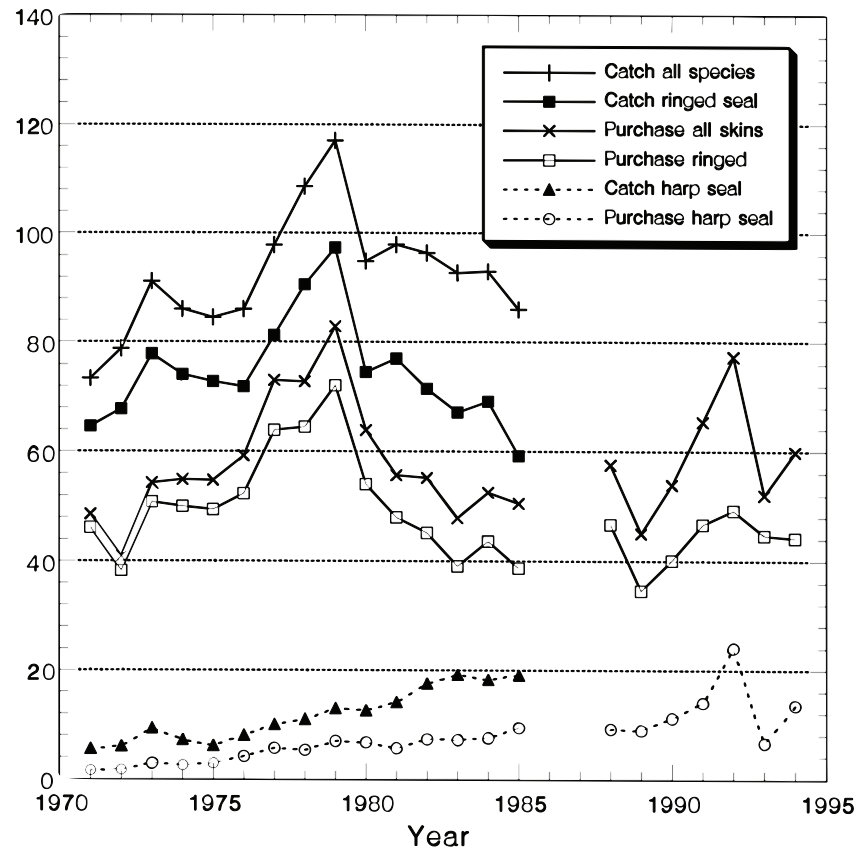


Fig. 2. Trends in catch of seals and purchase of seal skins in Greenland, 1971–94.

or just arbitrary reporting in order to have something on record when renewing the license, is not clear.

The first results of the new system, as presented in the tables of this paper, give rise for some consideration of ways of checking the efficiency and reliability of the new data sets. As mentioned above, the catches reported for ringed seal and hooded seals are within the range estimated on the basis of the previous reporting system. Most of the differences found in respect to seasonal and regional distribution of catches may well be explained by actual variation in catch results from one year to another, or as results of differences in the method of reporting and estimating catches.

The level of harp seal catches reported by the new system is, however, significantly different from that estimated previously. The largest differences were found in some of the districts in Central West and Southwest Greenland, where reporting in the old system was known to be incomplete (see Table 8). An important feature in the new system is the

special effort to register the catch by part-time hunters which were presumably not well reported by the old system; the number of part-time hunters is rather high at the larger settlements ("towns") in Southwest and Central West Greenland, and although most part-time hunters are only taking few seals, their accumulated total catch may be quite high. It is quite possible that previous estimates of non-reported catches of harp seals in these districts were too "conservative", so that total catches were under-estimated during this period. Further, catch and purchase statistics did indicate an increasing trend in harp seal catches since the mid-1970s (Kapel, 1986), and this trend may have continued to date. It is thus possible, that the present catch of harp seal in Greenland in fact is in the order of 45 000–55 000 annually, rather than the 20 000–25 000 previously suggested (Kapel, MS 1993).

There is, however, a need for a more close and detailed review of the results obtained from the new system of collecting information on hunting results in Greenland, in order to evaluate its efficiency and draw conclusions on the actual level of catches.

TABLE 8. Comparison of Greenland seal catch statistics for 1983 and 1993–94.

Harp Seal									
District	1983				1993		1994		
	Inhabitants	Lists	Reported	Estimated	Licenses	Harps	Inhabitants	Licenses	Harps
Thule	735	30	46	407	250	283	818	194	177
Upernavik	2 033	264	1 971	2 408	503	5 261	2 527	362	3 350
Uummannaq	2 237	312	3 680	4 165	511	4 254	2 514	440	3 535
Ilulissat	3 799	–	–	1 605	781	6 702	4 089	600	3 670
Qasigiannnguit	1 701	13	154	542	274	1 788	1 532	220	1 186
Qeqertarsuaq	926	135	831	1 421	291	1 910	1 105	228	1 923
Aasiaat	3 055	79	437	1 382	540	5 018	3 163	434	3 298
Kangaatsiaq	1 148	66	1 299	1 372	268	3 346	1 450	209	2 963
Sisimiut	3 798	27	60	562	640	4 595	4 527	542	4 520
Maniitsoq	3 521	293	915	935	580	5 003	3 631	560	4 208
Nuuk	7 142	133	736	778	1 107	5 019	9 671	994	5 128
Paamiut	2 464	62	890	1 471	415	4 072	2 220	325	3 664
Narsaq	1 717	32	264	291	233	1 499	1 861	183	1 806
Qaqortoq	2 647	93	714	779	332	3 185	3 110	314	4 428
Nanortalik	2 562	351	423	621	390	2 699	2 497	329	2 770
Ammassalik	2 445	296	218	357	381	1 015	2 701	258	660
Scoresbysund	457	40	33	57	54	34	470	41	78
Total	42 387	2 226	12 671	19 153	7 671	55 683	48 029	6 293	47 364

Ringed seal					Hooded seal			
District	1983		1993		1994		1983	
	Reported	Estimated	Reported	Reported	Reported	Estimated	Reported	Reported
Thule	2 456	6 392	4 244	3 972	16	79	12	461
Upernavik	12 855	19 797	25 877	18 606	319	440	319	427
Uummannaq	6 256	9 195	7 262	9 546	547	645	209	167
Ilulissat	–	1 477	3 459	3 242	–	44	190	199
Qasigiannnguit	65	356	1 514	1 112	2	33	84	41
Qeqertarsuaq	1 187	1 392	3 559	2 768	155	175	112	102
Aasiaat	604	1 624	6 801	4 929	66	98	232	249
Kangaatsiaq	3 618	5 186	5 719	4 775	5	32	62	83
Sisimiut	248	989	1 486	1 264	19	89	456	415
Maniitsoq	1 089	1 155	1 418	1 367	419	429	707	404
Nuuk	667	687	999	1 402	108	113	483	576
Paamiut	196	434	1 578	1 542	176	341	256	207
Narsaq	191	217	349	231	79	101	141	101
Qaqortoq	429	475	713	669	453	509	558	413
Nanortalik	1 364	1 957	2 249	2 410	892	1 027	1 107	969
Ammassalik	8 336	11 805	6 706	5 380	870	1 321	1 944	2 745
Scoresbysund	1 488	4 053	1 711	1 446	4	9	32	31
Total	41 049	67 182	75 644	64 661	4 130	5 485	6 906	7 590

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ANNEX 1. Forms Used for Collecting Hunting Statistics in Greenland

A. **Lists-of-Game**, form used by list-keepers for reporting the catch of individual hunters, until 1985.

B. **Hunting licenses**, form used by individual hunters when applying for licence renewal, since 1993.

Species account:

English	Latin	Lists-of-Game	Hunting licenses
Caribou	<i>Rangifer tarandus</i>	1. rener	Tuttu
Polar bear	<i>Ursus maritimus</i>	2. isbjørne	Nanoq
Musk ox	<i>Ovibos moschatus</i>	–	Umimmak
Polar hare	<i>Lepus arcticus</i>	–	Ukaleq
Arctic fox	<i>Alopex lagopus</i>	(trade figures)	Terianniaq
Minke whale	<i>Balaenoptera acutorostrata</i>	3. vågehvaler	–
Narwhal	<i>Monodon monoceros</i>	4. narhvaler	Qilalugaq qernertaq
White whale	<i>Delphinapterus leucas</i>	5. hvidhvaler	Qilalugaq qaqortaq
Pilot whale	<i>Globicephala melaena</i>	6. grinde	–
Harbour porpoise	<i>Phocoena phocoena</i>	7. marsvin	Niisa
Other cetaceans	...	8. andre hvaler (specif.)	–
Walrus	<i>Odobenus rosmarus</i>	9. hvalrosser	Aaveq
Ringed seal	<i>Phoca hispida</i>	10. netsider	Natseq
Harbour seal	<i>Phoca vitulina</i>	11. spraglede sæler	Qasigiaq
Bearded seal	<i>Erignathus barbatus</i>	12. remmesæler	Ussuk
Beater(harp <1yr)	<i>Phoca groenlandica</i>	13. blåsider højst 1 år	(incl. in :)
Bedlamer (spotted)	– " –	14. blåsider over 1 år	Allattoq
Saddleback (old)	– " –	15. sortsider	Aataaq
Hooded seal	<i>Cystophora cristata</i>	16. klapmydser	Natsersuaq
Guillemot	<i>Uria lomvia</i>	–	Appa
Eider	<i>Somateria mollissima</i>	–	Miteq
King eider	<i>Somateria spectabilis</i>	–	Qingalik
Ptarmigan	<i>Lagopus mutus</i>	–	Aqisseq
Goose	<i>Anser (albifrons)</i>	–	Nerleq
Kittiwake	<i>Rissa tridactyla</i>	–	Taateraq
Little auk	<i>Alle alle</i>	–	Appaliarsuk
Black guillemot	<i>Uria grylle</i>	–	Serfaq

A pissanik
titartaivik
Fangstliste

nannginêrdlune pissat (Personlig fangst)

pissanik
titartaivik
Fangstliste **A**

ukiox piniarfik:
(Fangstâr)

1/1 - 31/12 19...

igdloukarfik/nunaxarfik:
(By/bygd)

Kommune:

nannginêrdlune Uma pissat (Personlig fangst, foretaget af):

piniartox (Fanger):

CPR-normo: - - - - -

(inûssox (født den): .../... 19...)

piniartut tainexkartut nannginêrdlune pissat, Umassut sùssusfinut piniarneruvdlo kanga pineranut ingmikôrtiterdlugit. (Anførte fangers personlige fangst, fordelt på dyreart og fangstperiode).

piniagkat dyreart	uvdlut pissa- karfik fangst- periode	tugtut rener	nûnûl Isbjørne	tikâgugdlut vâghvaler	kilalugkat kernertat narhvaler	kilalugkat kakortat hvidhvaler	nûsarnat grinde	nûsarnat marvin	arferit avdlut andre hvaler	arfit hvalrosser	nataft netsider	kasigfissat sprægede søler	takâmûssat (ugssuit) rummûssolur	âtât, âtânguit blâsider, hûljet 1 år	âtât, agdlagtlut blâsider, over 1 år	âtât, âtârssuit sortsider	natserssuit klapnyuser	okautigiumessat (âma "arferit avdlut" kavsiunere sùnerilo, âma tainexardlune nunagissap avatâne erkaringsâne pini- artarfik). Bemærkninger (herunder antal og art af "andre hvaler" samt notering af fangstpladser uden for hjemstedet).
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
Jan.	1.- 15.																	
	16.- 31.																	
Febr.	1.- 15.																	
	16.- 29.																	
Marts	1.- 15.																	
	16.- 31.																	
April	1.- 15.																	
	16.- 30.																	
Maj	1.- 15.																	
	16.- 31.																	
Juni	1.- 15.																	
	16.- 30.																	
Juli	1.- 15.																	
	16.- 31.																	
Aug.	1.- 15.																	
	16.- 31.																	
Sept.	1.- 15.																	
	16.- 30.																	
Okt.	1.- 15.																	
	16.- 31.																	
Nov.	1.- 15.																	
	16.- 30.																	
Dec.	1.- 15.																	
	16.- 31.																	
katitdlugit (I alt)																		

pissanut titartaivik, 31. decemberip kingornatigut piârnerpâmik
tûniûnexâsaok

Fangstlisten afleveres snarest efter 31. december

titartaissup arka/Fangstlistefører

B

Pisanik nalunaarsuiffik - Fangstregistrering

Qaammatikkaartumik Immersuiffisaq - Månedsskema: 1. juni - 30. juni 1993

Amerlassusii nalunaakkut											
Angiv antal stk.											
Ullaq											Juni
Dato											løst
Tuttu											
Rensdyr											
Nanoq											
Isbjørn											
Umimmak											
Moskusokse											
Ukaloq											
Hare											
Tenanniaq											
Ræv											
Oilalugaq qernertaq											
Narhval											
Oilalugaq qaqorta											
Hvidhval											
Niisa											
Marsvin											
Aaveq											
Hvalros											
Natseq											
Netside											
Qasiglaq											
Spættet sæl											
Ussuk											
Rømmesæl											
Allattoq											
Blåside											
Aataaq											
Sortside											
Netsersuaq											
Klapmyds											
Appa											
Lomvie											
Mileq											
Ederfugl											
Qingalik											
Kongedderfugl											
Aqisseq											
Rype											
Nerleq											
Gås											
Taateraaq											
Ride											
Appallarsuk											
Sokonge											

Qaammammut pisat katinneri ukiup naanerani nalunaarutissamut nuunneqassapput.
Månedens samlede fangsttal noteres til højre. Dette tal overføres til årsskemaet.

AMERLASSUSII NALUNAAKKIT / ANGIV ANTAL STK.												
Qaammat / Måned	OKT	NOV	DEC	JAN	FEB	MAR	APR	MAJ	JUNI	JULI	AUG	SEP
Tuttu												Rensdyr
Nanoq												Isbjørn
Umimmak												Moskusokse
Ukaloq												Hare
Tenanniaq												Ræv
Oilalugaq qernertaq												Narhval
Oilalugaq qaqorta												Hvidhval
Niisa												Marsvin
Aaveq												Hvalros
Natseq												Netside
Natseq (qasiglaq)												Netside (qasiglaq)
Qasiglaq												Spættet sæl
Ussuk												Rømmesæl
Allattoq												Blåside
Aataaq												Sortside
Netsersuaq												Klapmyds
Appa												Lomvie
Mileq												Ederfugl
Qingalik												Kongedderfugl
Aqisseq												Rype
Nerleq												Gås
Taateraaq												Ride
Appallarsuk												Sokonge
Serlaq												Tejst

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Ukiuoorumik Immersuiffisaq - Årskema: 1. OKTOBER 1994 - 30. SEPTEMBER 1995