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UPDATE OF MARK-RECAPTURE ESTIMATES OF HARP SEAL PUP PRODUCTION IN THE GREENLAND SEA

Nils Øien, Institute of Marine Research, P.O.Box 1870 Nordnes, N-5024 Bergen, Norway

The West Ice

Estimates of harp seal pup production in the Greenland Sea based on mark-recapture experiments have been presented at earlier meetings (*Øien and Øritsland 1991, 1992*). The following table is an update of these mark-recapture estimates based on all information as available up to now.

Cohort	Estimate	cv	Lower 95% c.l.	Upper 95% c.l.
1977	41,820	0.089	34,503	49,138
1978	53,442	0.118	41,111	65,773
1983	55,662	0.121	42,472	68,853
1984	105,267	0.182	67,671	142,863
1985	100,478	0.230	55,091	145,865
1987	47,452	0.094	38,726	56,178
1988	56,601	0.208	33,543	79,660
1989	115,344	0.094	94,058	136,630
1990	56,660	0.099	45,693	67,628
1991	57,815	0.101	46,375	69,255

With respect to the distributional aspects of harp seals marked in the West Ice, some new information has revealed: A five year old harp seal was caught at West Greenland in June 1992, and three young seals (born in 1989, 1990 and 1991) were caught in the southeastern Barents Sea during the catch operations there in April 1992.

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The East Ice

In recent years, several thousands of harp seal pups have been tagged in the whelping patches within the White Sea. There have been a few recaptures from these taggings in the Norwegian catches during the moulting season in the southeastern Barents Sea. From the 1990, 1991 and 1992 cohorts; totals of 2, 7 and 4 tags have been recaptured, respectively. So far we find it premature to calculate mark-recapture estimates from these data.

There are, however, distributional information from recaptures of harp seals tagged as pups in the White Sea. There are recoveries from the ordinary catch operations in the southeastern Barents Sea; one seal tagged in 1991 was recaptured during catch operations southwest of Spitsbergen in June 1993; there are some recoveries from scientific sealing in the northern Barents Sea; some have been taken accidentally during net fisheries along the Norwegian coast, and there have been several catches in the Ammasalik area of East Greenland and in Southwestern Greenland. The locations of these recaptures are presented as black dots in the attached Figure.

References

- Øien, N. and Øritsland, T. 1991. Recaptures of harp seals (*Phoca groenlandica*) tagged as pups in the Greenland Sea. Pup production and dispersion patterns. *WP SEA-33*.
- Øien, N. and Øritsland, T. 1992. Using mark-recapture methods to estimate pup production of harp seals (*Phoca groenlandica*) in the Greenland Sea. *ICES C.M.1992/N:10*.

