

The 10th Norwegian-Russian Symposium on
Management Strategies for Commercial Marine
Species in Northern Ecosystems
Bergen-Norway, 27-29 August 2003

SEALS IN THE BARENTS SEA

Tore Haug¹ & Vladislav Svetochev²

¹Institute of Marine Research, Tromsø Branch,
PO Box 6404, N-9294 Tromsø, Norway

²SevPINRO, Uritskogo 17, RU-163002 Archangelsk, Russia





Locations of North Atlantic harp seal stocks. Green spots mark the whelping and moulting areas for the Barents Sea / White Sea (also called the East Ice) stock (the White Sea), the Greenland Sea or West Ice stock (West Ice), and the northwest Atlantic stock (Front and Gulf areas). Dark blue marks the entire distributional areas.

The Joint ICES/NAFO Working Group on Harp and Hooded Seals (WGHARP) met in the ICES headquarters, Copenhagen, Denmark, 2-6 October 2000 to assess the current status of the stock of Barents Sea / White Sea harp seals by modelling:

Pup production: 314 000 (283 000 – 346 000)

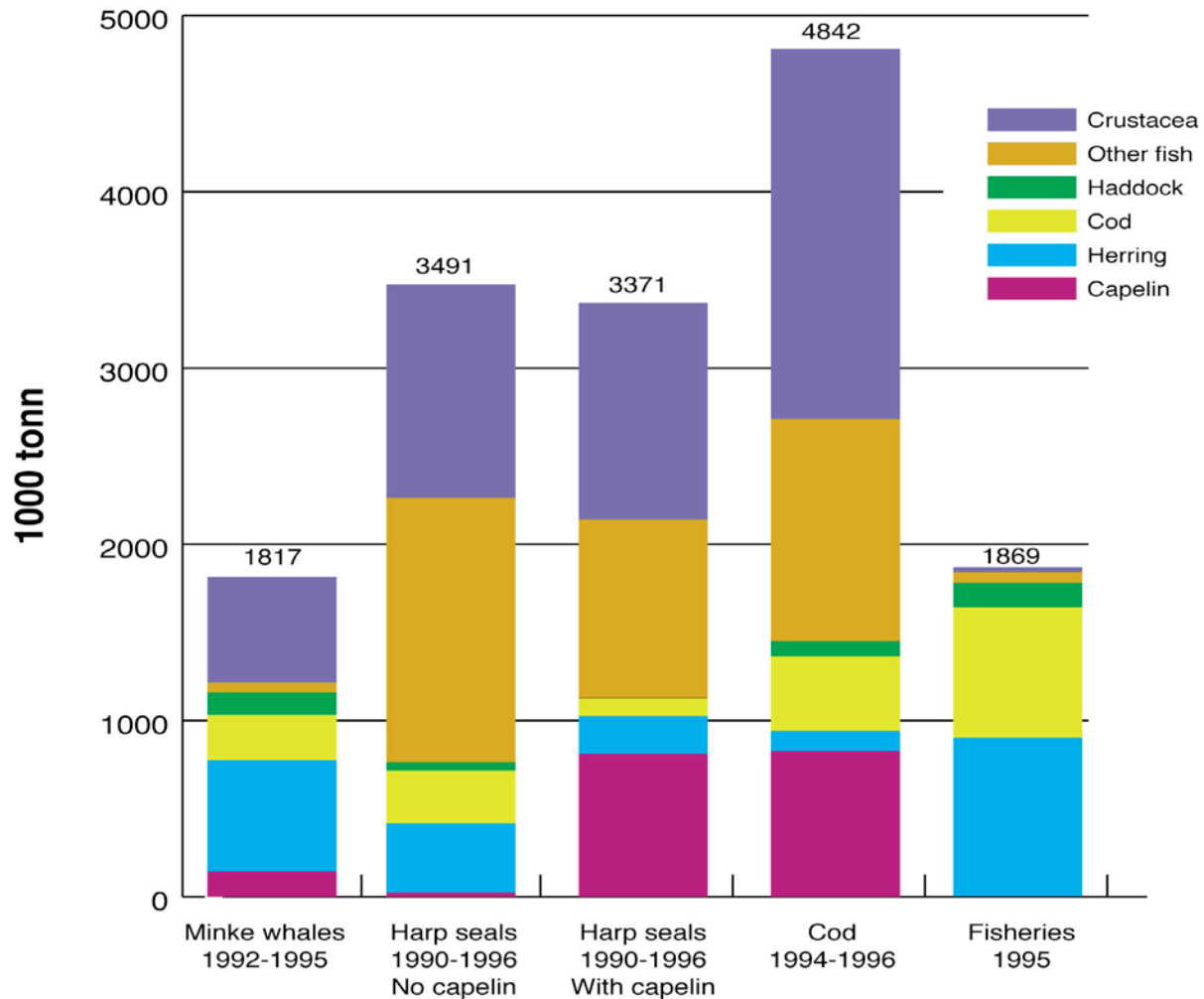
1+ population: 1 676 300 (1 500 000 – 1 850 000)

Important input parameteres:

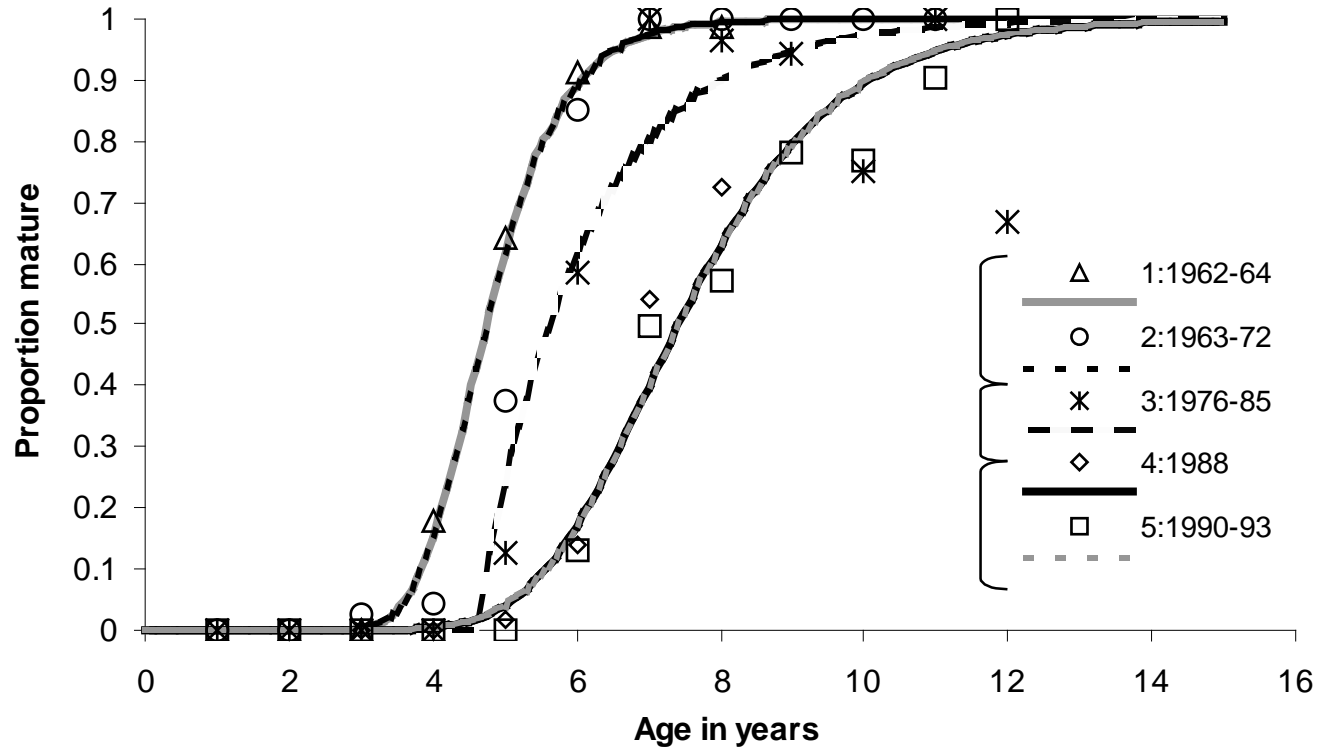
Result from aerial surveys of pup production, 1998, 2000.

Current advice (sustainable catches):

53 000 1+ animals (or an equivalent no. of pups, where 2.5 pups equals one 1+ animal)



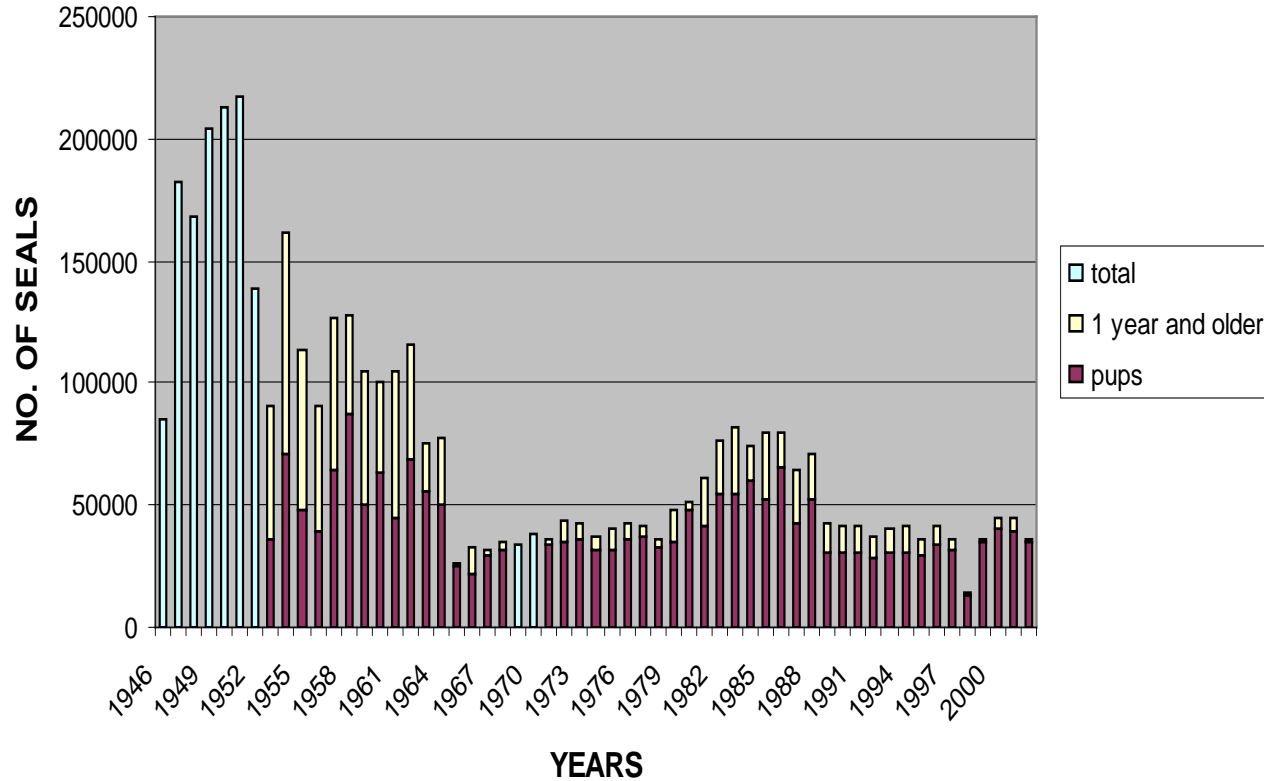
Calculated annual consumption by East Ice harp seals in the Barents Sea in the early 1990s. Scenarios with and without capelin are exhibited, and comparison is also made with the annual consumption by minke whales and cod, and with total fishery removals in 1995.



Ecosystem changes and density dependency

Changing age at sexual maturity in East Ice harp seals. An increase in mean age seems to have prevailed from 5.6 years in the two first periods (1962-64 and 1963-72) to 8.2 years in the last (1990-93) period.

HARP SEAL CATCHES - EAST ICE



Annual catches of East Ice harp seals after World War II (1946-2002). Whenever possible, the total catches are split in pups of the year and animals one year old and older.

HARP SEALS - MANAGEMENT HISTORY IN THE ICES SYSTEM

1984-1988: WG on Harp and Hooded Seals in the Greenland Sea

Copenhagen 1985 and 1987: Too little data, no advice.

1988-1989: WG on Harp and Hooded Seals

Bergen 1989: Too much uncertainty, no advice

1989 → Present: Joint ICES/NAFO Working Group on Harp and Hooded Seals (WGHARP)

First WGHARP meeting – Copenhagen 1991. Increased data availability, advice for Greenland Sea harp seals.

Workshop on methodology used in aerial surveys – Archangelsk 1992.

WGHARP 1993 in Copenhagen: new advice given on Greenland Sea harp seals.

WGHARP in Dartmouth, Nova Scotia, 1995: assessments of the northwest Atlantic stocks.

WGHARP in Copenhagen 1997: new data but no new advice.

WGHARP, at last in Tromsø, Norway in 1998: new advice on all northeast Atlantic stocks.

WGHARP in Copenhagen 2000: only northwest Atlantic hooded seals not updated

Next meeting: Archangelsk, Russia, September 2003.