

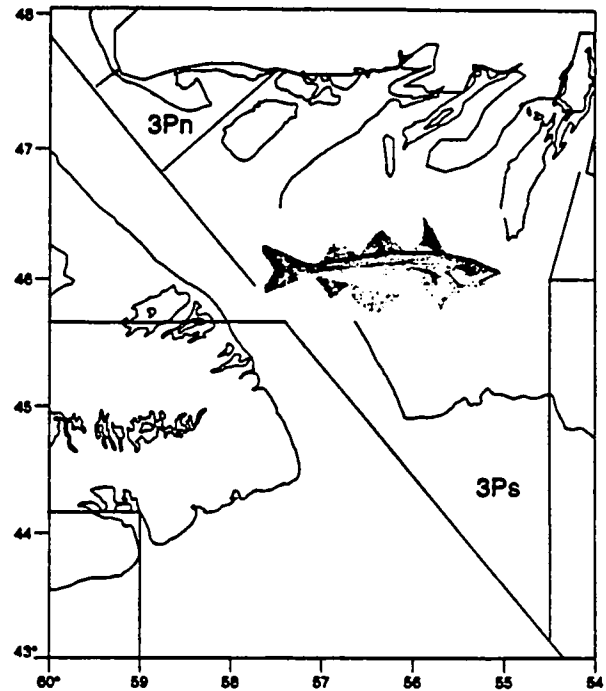
**SUBDIVISION 3Ps
HADDOCK**

Background

Haddock occurs on both sides of the North Atlantic. Along the North American coast it occurs from the Straits of Belle Isle south to Cape Hatteras being more abundant in its southern range.

Haddock are primarily bottom feeders and food varies with size. Those less than 50 cm (20 inches) eat crustaceans, in particular amphipods, pandalid shrimp and hermit crabs. Also a part of the diet are echinoderms (brittle stars, sea urchins and sand dollars), Mollusks, (snails and clams) and annelid worms. In haddock greater than 50 cm (20 inches) small fish make up about 30 percent of the diet with sand lance, capelin, silver hake, herring and argentines being consumed. When available, large numbers of herring and capelin eggs are eaten. Haddock larvae are pelagic, settling when just under 50 mm (2 inches). Males and females attain sexual maturity at ages 3-5; males usually at a slightly younger age than females. Growth rates vary and are generally slower in northern stocks.

The history of the haddock fishery in NAFO Subarea 3 is a relatively short one. Haddock were not known to exist in abundance on St. Pierre Bank before 1950. The appearance of the very abundant 1949 year-class lead to an increase in catches with a peak at 58,000 metric tons in 1955. The fishery of this era was characterized by high discard rates, 30 to 40% by weight and 50 to 70% by numbers. This was the result of 70 to 100 mm mesh size in codends and a requirement by plants for landed fish to be at least 45 cm.



The Fishery

Landings increased from 5,800 metric tons in 1953 to peak of 58,000 metric tons in 1955 then declined to 6,000 metric tons in 1957.

Landings (thousand metric tons)

Year	60-76 Avg.	77-90 Avg.	1992	1993 ¹	1994 ¹	1995 ¹	1996
TAC	-	-	3.2	.6 ²	.5 ²	.1 ²	.1 ²
Can.	.9	.8	.5	.1	+	+	
Others	1	.8	0	0	0	0	
Totals	10	2	5	1	+	+	

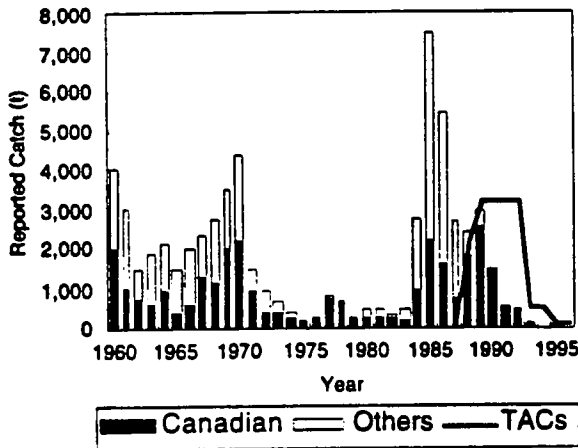
¹ Provisional

² By-catch Only

* Catch less than 500 metric tons

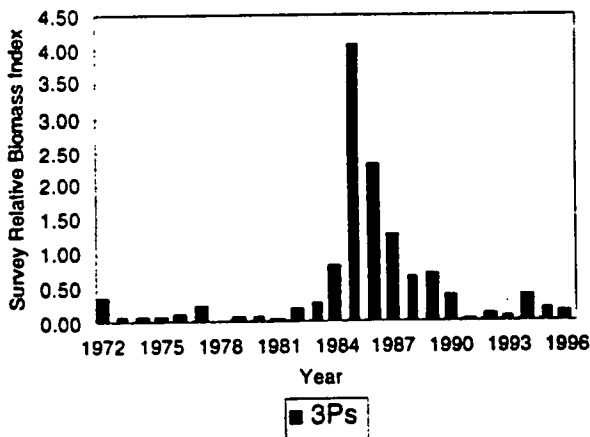
Catches since 1960 have been mainly in the 1,000 to 2,000 metric tons range, increasing to 7,500 metric tons in 1985 then falling below 1,000 metric tons after 1990. The increase in the mid-1980s was mainly due to increased effort by France. Provisional catch for 1995 is 42 metric tons which is the second lowest on record. This is partially due to the moratorium on cod established by Canada in 1993. Only 8

metric tons have been recorded to mid-August of 1996.



Resource Status

Research vessel surveys have been conducted by Canada since 1972. Abundance and biomass indices of haddock from these surveys were low from 1972 to 1982. Both indices peaked in 1985 due to the presence of the relatively strong 1981 year-class, but have since declined to low levels. The mean numbers and weights caught per tow were highest in 1985, but have since declined. Survey abundance at age indicate that recent year-classes are weak.



The level of fishing mortality for this stock is believed to have been high during the late 1980s. The moratorium on the cod fishery has reduced the by-catch of haddock.

Ecological Factors

Haddock in Newfoundland waters are thought to be at the northern extension of their range in the Northwest Atlantic. Cold waters throughout the area in recent years have probably been restrictive to their distribution, behaviour and early-stage survival. Temperatures appear to be moderating in 3Ps recently, and this may be favorable for haddock in the area.

Outlook

There have been no signs of improved recruitment in recent years and therefore is no prospect of the stock increasing in the near future.

Haddock in this area show considerable variation in recruitment but the mechanisms are not understood. The most recent good year-class (1981) was fished out before it reached spawning age.

For More Information

Research Document: Murphy, E.F. 1995. The Status of 2GH cod, 3LNO haddock, 3Ps haddock and 3Ps pollock. DFO Atl. Fish. Res. Doc. 95/33.

Contact: Eugene Murphy
Tel. (709) 772-5479
Fax. (709) 772-4188

e-mail: Murphye@athena.nwafc.nf.ca

