TABLE 1: AVAILABLE DATA

COMMON NAME:	ATLANTIC COD	**SPECIES:**	*Gadus morhua*
AREA:	NORTHWEST ATLANTIC	**STOCK:**	EASTERN SCOTIAN SHELF (NAFO SUBDIV. 4VS+DIV. 4W)
CREATED BY:	ED TRIPPEL 2001-07-17	**UPDATED BY:**	ED TRIPPEL 2003-02-03

Data status									
Year	**Stock size**	**Stock composition**	**Age**	**Sex ratio**	**Maturity**	**Fecundity**	**Weight**	**Condition**	**Additional data**
2001	√	√	√	√	√		√	√	(√)
2000	√	√	√	√	√	√	√	√	(√)
1999	√	√	√	√	√	√	√	√	(√)
1998	√	√	√	√	√		√	√	(√)
1997	√	√	√	(√)	√		√	√	(√)
1996	√	√	√	(√)	√		√	√	(√)
1995	√	√	√	(√)	√		√	√	(√)
1994	√	√	√	(√)	√		√	√	(√)
1993	√	√	√	(√)	√		√	√	(√)
1992	√	√	√	(√)	√		√	√	(√)
1991	√	√	√	(√)	√		√	√	(√)
1990	√	√	√	(√)	√		√	√	(√)
1989	√	√	√	(√)	√		√	√	(√)
1988	√	√	√	(√)	√		√	√	(√)
1987	√	√	√	(√)	√		√	√	(√)
1986	√	√	√	(√)	√		√	√	(√)
1985	√	√	√	(√)	√		√	√	(√)
1984	√	√	√	(√)	√		√	√	(√)
1983	√	√	√	(√)	√		√	√	(√)
1982	√	√	√	(√)	√		√	√	(√)
1981	√	√	√	(√)	√		√	√	(√)
1980	√	√	√	(√)	√		√	√	(√)
1979	√	√	√	(√)	√		√	√	(√)
1978	√	√	√	(√)	√		√	√	(√)
1977	√	√	√	(√)	√		√	√	(√)
1976	√	√	√	(√)	√		√	√	(√)
1975	√	√	√	(√)	√		√	√	(√)
1974	√	√	√	(√)	√		√	√	(√)

Data status									
Year	**Stock size**	**Stock composition**	**Age**	**Sex ratio**	**Maturity**	**Fecundity**	**Weight**	**Condition**	**Additional data**
1973	√	√	√	(√)	√		√	√	(√)
1972	√	√	√	(√)	√		√	√	(√)
1971	√	√	√	(√)	√		√	√	(√)
1970	√	√	√	(√)	√		√	√	(√)
1969	√	√	√	(√)	√		√		
1968	√	√	√	(√)	√		√		
1967	√	√	√	(√)	√		√		
1966	√	√	√	(√)	√		√		
1965	√	√	√	(√)	√		√		
1964	√	√	√	(√)	√		√		
1963	√	√	√	(√)	√		√		
1962	√	√	√	(√)	√		√		
1961	√	√	√	(√)	√		√		
1960	√	√	√	(√)	√		√		
1959	√	√	√	(√)	√		√		
1958	√	√	√	(√)	√		√		

TABLE 2: DATA BASIS, FORMAT AND QUALITY

COMMON NAME:	ATLANTIC COD		
AREA:	NORTHWEST ATLANTIC		
STOCK:	EASTERN SCOTIAN SHELF (NAFO SUBDIV. 4VS+DIV. 4W)		
REPRODUCTIVE STRATEGY:	DETERMINATE SPAWNER	**REF. NO.:**	13
TIMING OF SPAWNING:	NOV-DEC/MAR-JUN	**REF. NO.:**	10,11,12
OPTIMAL TIME FOR MATURITY SAMPLING:	NOV-DEC AND MAR-APR	**REF. NO.:**	6,10

Data basis, format and quality

Variables	Year range	Data basis (A/L/W)	Data origin	Sampling frequency	Notes on data, methods and contents	Ref. No.
Stock size	1958-1981	A	CL,S	M,Q	SPA Estimates	1
	1970-2002	A	CL,S	M,Q	SPA Estimates	2,3,4
Stock composition	1958-1981	A,L,W	S,CL	Y,Q		1
	1970-2002	A,L,W	S,CL	JULY	July survey	2,4
	1979-2002	A,L,W	S,CL	MARCH	(March survey, excludes 1985)	2,4
						2,4
	1995-2002	A,L,W	S	FALL	Fixed gear survey (hook)	2,4
Age determination	1958-1981	A	S,CL	M,Q,Y		1
	1970-2002	A	S,CL	Y,Q		2,4
Sex ratio	1958-2002	A,L,W	S		Could be extracted from survey data bases	4
Maturity:						
A. Ogives (E)	1958-1979	A,L	S	JAN-SEP	Maturity ogives in 5 - year periods and percent mature by age (4Vn, 4Vs, 4W)	5
	1979-2002	A,L	S	MARCH	Proportion mature by age and length intervals by sex; including ogives. No maturity data available in fall (Nov-Dec spawners).	4,6
B. Skip of spawning						
C. Spawning probability						
D. Other						
Fecundity:						
A. Estimation	1999-2000	A,L, W	S		1999 (9 females) and 2000 (19 ovaries); 182 um mesh used to separate 1st from 2nd generation oocytes	15
B. First time vs. repeat spawners						

Data basis, format and quality						
Variables	**Year range**	**Data basis (A/L/W)**	**Data origin**	**Sampling frequency**	**Notes on data, methods and contents**	**Ref. No.**
C. Atresia						
D. Other						
Weight:						
A. Commercial fisheries data	1958-1981 1970-2002	A,L,W A,L,W	CL CL	M,Q,B,Y M,Q,B,Y		1 2,4
B. Survey data	1970-2002 1979-2002	A,L,W A,L,W	S S	JULY MARCH	Estimated means Estimated means	2,4 2,4
C. Other						
Condition:						
A. Fulton						
B. HSI						
C. Energy						
D. Other	1970-1994 1995-2002 1979-2002	L,W L,W L,W	S S S	JULY JULY MARCH	Predicted weights at 60 cm Condition data could be extracted from data bases Condition data could be extracted from data bases	7 4 4
Egg viability:						
A. Egg quality						
B. Fertilisation success	1995	L,W	EC	NOV NINE FEMALE AND SEVEN MALE	Spawning behaviour reported over nine weeks. Multiple paternity, fertilization success, size-based dominance, microsatellite DNA analysis	13
C. Egg mortality						
D. Other						
Larval viability:						
A. Hatching success						
B. Larvae quality						
C. Mortality						
D. Other						

Data basis, format and quality						
Variables	**Year range**	**Data basis (A/L/W)**	**Data origin**	**Sampling frequency**	**Notes on data, methods and contents**	**Ref. No.**
Spawning time	1920-1997	L,W	X		Fishermen's knowledge through interviews, includes spawning areas (present and lost)	8
	1979-1981		S	Sesaonal	Stage 1-3 cod eggs (SSIP)- Spawning from January-June (spring) and October-December (fall); in same locations	9,10,11
	1991-1993		S	Seasonal	Eggs and larvae of fall spawned production account for 90% of total indicating major loss of spring spawning component since SSIP study (1979-1981). 1991-1993 study conducted by OPEN, Dalhousie Univ.	7,12
Contamination						
Environmental key factors	1958-1994				Prior to 1980s a strong correlation between recruitment and St. Lawrence River discharge existed (mechanims unclear); correlation disappeared with addition of data from 1980s., though correlation re-appeared slightly with more recent data.	7,12
	1958-1994				Emerald Basin 200m water temperature correlates with recruitment	7
Other factors or parameters						

TABLE 3: STUDIES OF REPRODUCTIVE POTENTIAL

COMMON NAME:	ATLANTIC COD
AREA:	NORTHWEST ATLANTIC
STOCK:	EASTERN SCOTIAN SHELF (NAFO SUBDIV. 4VS+DIV. 4W)

Estimation of reproductive potential			
Subject	**Brief description**	**Year range**	**Ref. No.**
Potential or realised egg production			
Viable egg and larvae production	Spawning behaviour and associated fertilization success	1995	14
Critical life stages			
Environmental influences	St. Lawrence River discharge *vs* recruitment	1958-1994	7,12
	Emerald Basin 200m water temperature *vs* recruitment	1958-1994	7
Stock recruitment relations	Spawning stock biomass *vs* recruitment	1958-1994	2
Other studies			

TABLE 4: DATA SOURCES

COMMON NAME:	ATLANTIC COD
AREA:	NORTHWEST ATLANTIC
STOCK:	EASTERN SCOTIAN SHELF (NAFO SUBDIV. 4VS+DIV. 4W)

Data sources (literature reference or contact person)
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