

Northwest Atlantic



Fisheries Organization

Serial No. N2434

NAFO SCS Doc. 94/18

SCIENTIFIC COUNCIL MEETING - JUNE 1994

A Compilation of Research Vessel Surveys on a Stock-by-Stock Basis

by

NAFO Secretariat

Discussions at the Scientific Council Meeting in June 1990 resulted in the compilation of information on research vessel surveys on a stock-by-stock basis (SCS Doc. 90/22, Serial No. N1820). This inventory was judged to be very helpful for the establishment of future inventories. It was agreed that the Designated Experts for the stocks be responsible for future compilations. The tabulations prepared at the June 1991 meeting were presented in SCS Doc. 91/18. In 1992, it was concluded (NAFO Sci. Coun. Rep., 1991, p. 114) that Designated Experts should update the information annually for review by STACFIS. The tabulations prepared at the June 1992 and June 1993 meetings were presented in SCS Doc. 92/22 and 93/18, respectively.

The following tabulations were presented at the June 1994 Meeting. The updated list, however, was compiled only during the course of the June 1994 Meeting, and was not available for review during the meeting. The Scientific Council in 1992 had recommended that *in the future, Designated Experts present this updated information at the time of preparation of the preliminary assessments*. The stocks are presented in the same sequence they were considered in the agenda.

See reverse side for guidelines to fill in columns

Name of survey	Location	Season month(s)	Years of survey from, to or since	Type of survey and gears	Target species	No. of sets	24 hr fishin g	Area of coverage in relation to stock distribution (%)	Depth range	Research data related to stock				Country	SCR Doc. No.
										abund- d- ance	bio- mass	ALK	LF		
Groundfish	2J3KL	10,11,12	1977-93	Stratified-random Bottom trawl	Groundfish		Y		100-1000 m	Y	Y	Y	Y	Canada	94/40
Juvenile cod	2J3KL	12,1(94)		Line			Y			N	Y	Y	N	Canada	94/40
Groundfish	3L	5,6	1971-93	Stratified-random Bottom trawl	Groundfish		Y		30-400 fm	Y	Y	Y	Y	Canada	94/40
Acoustics	3KL	5,6		Acoustic	Cod		Y			N	Y	Y	N	Canada	
Acoustics	3L	6,7		Acoustic	Cod		Y			N	Y	Y	N	Canada	
Juvenile flatfish	3L	8,9	1989-93	Stratified-random Bottom trawl	Groundfish		Y		30-150 fm	Y	Y	Y	N	Canada	
Juvenile cod-capelin	3KL	9,10		Line	Cod, capelin		Y			N	Y	Y	N	Canada	
Juvenile cod	3L	10,11		Line	Cod		Y			N	Y	Y	N	Canada	
Groundfish	3L	11,12	1981-93	Stratified-random Bottom trawl	Groundfish		Y			Y	Y	Y	Y	Canada	
Groundfish	3L	5,6		Stratified-random Bottom trawl	Groundfish	74	Y		30-400 fm	Y	Y	Y	Y	Russia	

Stock name: Cod, Divisions 2J+3KL

See reverse side for guidelines to fill in columns

Name of survey	Location	Season months(s)	Years of survey from, to or since	Type of survey and gears	Target species	No. of sets	24 hr fishing	Area of coverage in relation to stock distribution (%)	Depth range	Research data related to stock				Country	SCR Doc. No.
										abundance	bio-mass	ALK	LF		
EU bottom trawl	3M	July	1988	Bottom trawl	All	101	N	100	/400	Y	Y	Y	Y	EU	SCR 94/72
Russian trawl acoustic survey	3MLNO	4-7	1971-1993	Groundfish Acoustic	Cod Redfish Capelin American plaice Witch flounder	316	Fill	3M - 100 3L - 70 3N - 100 3O - 100	50-700 m	Y	Y	Y	Y	Russia	SCR 94/12, 13, 14

Stock name: Cod, Division 3M

See reverse side for guidelines to fill in columns

Stock name: Cod, Divisions 3NO

Name of survey	Location	Season months(s)	Years of survey from, to or since	Type of survey and gears	Target species	No. of sets	24 hr fishing	Area of coverage in relation to stock distribution (%)	Depth range	Research data related to stock				Country	SCR Doc. No.	
										abundance	bio-mass	ALK	LF			Stock size estimates
Canadian Groundfish	3NO	4,5	1972	Stratified-random Bottom trawl	Groundfish		Y	100	30-400 fm	Y	Y	Y	Y	Y	Canada	94/
Canadian Juvenile flatfish	3NO	8,9	1989-93	Stratified-random Bottom trawl	Groundfish		Y	100	30-150	Y	Y	Y	Y	Y	Canada	
Canadian Groundfish	3NO	10,11	1990-93	Stratified-random Bottom trawl	Groundfish		Y	100	30-400 fm	Y	Y	Y	Y	Y	Canada	
Canadian Groundfish	3NO	5		Stratified-random Bottom trawl	Groundfish	158	Y	100		Y	Y	Y	Y	Y	Canada	
Russian trawl acoustic survey	3MLNO	4-7	1971-93	Groundfish, acoustic	Cod, Redfish, Capelin, American Plaice, Witch Flounder	316	Fill	3M-100 3L-70 3N-100 3O-100	50-700 m	Y	Y	Y	Y	Y	Russia	SCR 94/12, 13, 14

See reverse side for guidelines to fill in columns

Stock name: Cod, Subarea 1

Name of survey	Location	Season months(s)	Years of survey from, to or since	Type of survey and gears	Target species	No. of sets	24 hr fishing	Area of coverage in relation to stock distribution (%)	Depth range	Research data related to stock				Country	SCR Doc. No.
										abundance	bio-mass	ALK	LF		
Young cod survey	1B-1F	June- July	1986 Forward	Gillnets	Cod	170	Y		0-20 m	Y	Y	Y	Y	Greenland (Denmark)	
Greenland Trawl Survey	1A-1F	July- September	Since 1988	Stratified-random Bottom Trawl	Cod	187	N	5%	0-600 m	Y	N	Y	Y	Greenland (Denmark)	SCR 94/9
													Y	Greenland (Denmark)	SCR 94/9

See reverse side for guidelines to fill in columns

Stock name: Redfish - Subarea 1, Other Finfish - Subarea 1

Name of survey	Location	Season months(s)	Years of survey from, to or since	Type of survey and gears	Target species	No. of sets	24 hr fishing	Area of coverage in relation to stock distribution (%)	Depth range	Research data related to stock				Country	SCR Doc No.
										abundance	bio-mass	ALK	LF		
West Greenland Groundfish Survey	1B-1F	October-November	Since 1982	Stratified-random Bottom Trawl	Cod, include valuable information on redfish, other finfish	60	N	90% for cod, other finfish unknown	0-400 m	Y	Y	Y	Y	EU, Germany	SCR 94/7 N2363
Greenland/Japan Joint B.T.S.	1B-1F	August/September	1982 onward	Stratified-random Bottom Trawl	Greenland halibut information on redfish	87	N	?	400-1500 m	Y	Y	N	Y	Greenland (Denmark)	SCR 94/31
Greenland Trawl Surveys	1A-1F	July/September	1988 Onward	Stratified-random Bottom Trawl	Strimp information on redfish	187	N	?	0-600 m	Y	Y	N	Y	Greenland (Denmark)	SCR 94/9

See reverse side for guidelines to fill in columns

Stock name: Redfish in Division 3M

Name of Survey	Location	Season month(s)	Years of survey from, to or since	Type of survey and gears	Target species	No. of sets	24 hr fishing	Area of coverage in relation to stock distribution (%)	Depth range	Research data related to stock				Country	SCR Doc. No.
										abundance	bio-mass	ALK	LF		
EU trawl survey	3M	Jun/Jul	since 1988	Stratified-random sampling	General groundfish	101	N	100	280-476	Y	Y	Y	Y	EEC-Spain	SCR 92/27
USSR bottom trawl survey		Apr-Jun	since 1983	Stratified-random sampling	Redfish	56	?	100	200-732	Y	Y	N	Y	Russia	SCR 92/12
USSR acoustics survey		Apr-Jun	since 1987	acoustic	Redfish	56	?	100	0-700	Y	Y	N	Y	Russia	SCR 92/12

Stock name: Redfish in Divisions 3LN										See reverse side for guidelines to fill in columns					
Name of survey	Location	Season month(s)	Years of survey from, to or since	Type of survey and gears	Target species	No. of sets	24 hr fishing	Area of coverage in relation to stock distribution (%)	Depth range	Research data related to stock estimates				Country	SCR Doc. No.
										abundance	bio-mass	ALK	LF		
USSR groundfish survey	3L, 3N	Apr-Jul (mostly)	1972-82	Fixed station Bottom trawl	Multi-species Groundfish	50-60 per Div.	Y	Unknown	1972-76: to 367m 1977-82: to 732 m	Y	Y	Y	Y	USSR	86/66
USSR groundfish survey	3L, 3N	Apr-Jun (mostly)	1983-91, 1993	Stratified-random Bottom trawl	Multi-species Groundfish	approx. 33-3L	Y	Unknown	to 732 m	Y	Y	Y	Y	USSR	86/66
USSR acoustic	3LN	Apr-Jun	1987-91, 1993	Acoustic	Groundfish	approx. 42-3N	Y	Unknown	to 732 m	Y	Y	Y	Y	USSR	88/74
Canadian groundfish survey (covering deep-water strata)	3L	various	1978-86	Stratified-random Bottom Trawl	Multi-species Groundfish	min. of 40 in depths >183m	Y	Unknown	to 732 m	Y	Y	Y	Y	Canada	NAFO Studies No. 2
Canada redfish survey	3L	Jan	1990	Stratified-random Bottom trawl	Redfish	55	Y	Unknown	183-732 m	Y	Y	Y	Y	Canada	NAFO Studies No. 2
Canada groundfish survey	3LN	Apr-Jun	1990-93	Stratified-random Bottom trawl	Multi-species Groundfish	90 in redfish depths	Y	Unknown	to 732 m	Y	Y	Y	Y	Canada	NAFO Studies No. 2
Canada redfish survey	3L, 3N (since 1990)	Aug	1990-91, 1993	Stratified-random Bottom trawl	Redfish	59-3L 47-3N	Y	Unknown	183-732 m	Y	Y	Y	Y	Canada	NAFO Studies No. 2
Canada groundfish survey	3L	Oct-Dec	1990-93	Stratified-random Bottom trawl	Multi-species Groundfish	99	Y	Unknown	to 732 m	Y	Y	Y	Y	Canada	NAFO Studies No. 2
Canada groundfish survey	3N	Oct-Dec	1991-93	Stratified-random Bottom trawl	Multi-species Groundfish	29 in redfish depths	Y	Unknown	to 732 m	Y	Y	Y	Y	Canada	NAFO Studies No. 2

See reverse side for guidelines to fill in columns

Name of survey	Location	Season months(s)	Years of survey from, to or since	Type of survey and gears	Target species	No. of sets	24 hr fishing	Area of coverage in relation to stock distribution (%)	Depth range	Research data related to stock				Country	SCR Doc. No.
										abundance	bio-mass	ALK	LF		
Scotia Fundy Summer Groundfish Survey	4VWX+5	July	1970 to present	Stratified-random Bottom Trawl	Groundfish	200	Y	100%	50-400 m	Y	Y	Y	Y	Canada	
Juvenile Silver Flake Survey	4WX	October/November	1981 to present (no 1982 survey)	Stratified-random IYCPT Trawl	0-group Silver Flake	96	N	60%	50-400 m	Y	N	N	N	Canada; 1993; 1994 USSR 1981-1991	

Stock name: American plaice in Division 3M										See reverse side for guidelines to fill in columns					
Name of survey	Location	Season months(s)	Years of survey from, to or since	Type of survey and gears	Target species	No. of sets	24 hr fishing	Area of coverage in relation to stock distribution (%)	Depth range	Research data related to stock				Country	SCR Doc. No.
										abundance	biomass	ALK	LF		
Russian trawl-acoustic survey	3M	July	1971	Bottom trawl + acoustic (1987)	All	80	Y	100	/400	Y	Y	N	N	Russia	SCR 94/12 SCS 94/3, Part II
EU bottom trawl	3M	July	1988	Bottom trawl	All	101	N	100	/400	Y	Y	Y	Y	EU	SCR 94/22

See reverse side for guidelines to fill in columns

Stock name: American plaice in Division 3L, 3N and 3O															
Name of survey	Location	Season months(s)	Years of survey from, to or since	Type of survey and gears	Target species	No. of sets	24 hr fishing	Area of coverage in relation to stock distribution (%)	Depth range	Research data related to stock				Country	SCR Doc. No.
										abund. data	bio-mass	ALK	LF		
Canadian Groundfish (Spring)	Div. 3LNO	Spring (Apr-May)	1971-94	Stratified-random Bottom trawl	Groundfish	350	Y	95	Bottom depths to 731m ²	Y	Y	Y	Y	Canada	94/55
Juvenile groundfish	Div. 3LNO	Autumn (Aug-Sep)	1985-93	Stratified-random Bottom trawl	American plaice & Yellowtail flounder	260	Y	90	Bottom depths to 273 ¹	Y	Y	Y	Y	Canada	94/56
Canadian Groundfish (Fall)	Div. 3LNO	Autumn (Oct-Nov)	1981-83 (3L) 1990-93 (3NO)	Stratified-random Bottom trawl	Groundfish	160	Y	95	Bottom depths to 731m ¹	Y	Y	Y	Y	Canada	94/55

¹ Depth range extended from 366 m to 731 m in 1990.
² Depth range gradually extended to 273 m since start of surveys.

Stock name: Witch flounder in Divisions 3NO										See reverse side for guidelines to fill in columns					
Name of survey	Location	Season months(s)	Years of survey from, to or since	Type of survey and gears	Target species	No. of sets	24 hr fishing	Area of coverage in relation to stock distribution (%)	Depth range	Research data related to stock				Country	SCR Doc. No.
										abundance	bio-mass	ALK	LF		
Spring, groundfish survey	3NO	April-June	since 1971	Stratified-random Bottom trawl	Groundfish Cod Flounder		Y	100	30-400*	Y	Y	Y	Y	Canada	94/49
Autumn, groundfish survey	3NO	November	since 1990	Stratified-random Bottom trawl	Groundfish Cod Flounder		Y	100	30-400 fms.	Y	Y	Y	Y	Canada	94/49

* Prior to 1991 the depth range covered was 30-200 fms.

Stock name: Yellowtail flounder in Division 3L, 3N and 3O										See reverse side for guidelines to fill in columns					
Name of survey	Location	Season months(s)	Years of survey from, to or since	Type of survey and gears	Target species	No. of sets	24 hr fishing	Area of coverage in relation to stock distribution (%)	Depth range	Research data related to stock				Country	SCR Doc. No.
										abund. data	bio-mass	ALK	LF		
Canadian Groundfish (Spring)	Div. 3LNO	Spring (Apr-Jun)	1971-94	Stratified random using bottom trawl	Groundfish	350	Y	100	Bottom depths to 731m ¹	Y	Y	Y	Y	Canada	94/44
Juvenile groundfish	Div. 3LNO	Autumn (Aug-Sep)	1985-93	Stratified-random using bottom trawl	Yellowtail flounder A. plaice	260	Y	100	Bottom depths to 273 ²	Y	Y	Y	Y	Canada	94/44
Canadian Groundfish (Fall)	Div. 3LNO	Autumn (Oct-Nov)	1981-93 (3L) 1990-93 (3NO)	Stratified-random using bottom trawl	Groundfish	160 160	Y	100	Bottom depths to 731m ¹	Y	Y	Y	Y	Canada	94/44

¹ Depth range extended from 360 m to 731 m in 1990.

² Depth range gradually extended to 273 m since start of surveys.

Stock name: Greenland halibut, Subarea 1															
Name of survey	Location	Season month(s)	Years of survey from, to or since	Type of survey and gears	Target species	No. of sets	24 hr fishing	Area of coverage in relation to stock distribution (%)	Depth range	Research data related to stock				Country	SCR Doc. No.
										abundance	bio-mass	ALK	IF		
Greenland Trawl Survey	1A-1F Disko Bay	July to September	1988 Forward	Stratified-random Bottom Trawl	Northern Shrimpr	187	N	5%	0-600 m	Y	Y	N	Y	Greenland (Denmark)	SCR 94/9
Greenland/Japan Joint B.T.S.	1B-1D	August/September	1987 Forward	Stratified-random Bottom Trawl	Greenland halibut	87	N	30	400-1500 m	Y	Y	Y	Y	Greenland (Denmark)	SCR 94/31
Longline Survey	1A (Inshore)	July/August	1993	Longline	Greenland halibut	52	Y	10	200-1100 m	Y	N	Y	Y	Greenland (Denmark)	
Longline Survey	1ABCD	May-August	1989, 1991 Forward	Longline	Greenland halibut	44	Y	30	400-1400 m	Y	N	Y	Y	Greenland (Denmark) /Norway	SCR 94/10

See reverse side for guidelines to fill in columns

Stock name: Greenland halibut in Subareas 2+3											See reverse side for guidelines to fill in columns					
Name of survey	Location	Season months(s)	Years of survey from, to or since	Type of survey and gears	Target species	No. of sets	24 hr fishing	Area of coverage in relation to stock distribution (%)	Depth range	Research data related to stock				Country	SCR Doc. No.	
										abundance	bio-mass	ALK	LF			
Canadian autumn groundfish survey	2J,3K,3L	Oct-Dec	since: 78-2J3K 81-3L	Stratified-random Bottom trawl	Groundfish Cod Flounder		Y	100	2J,3K: 100-1000 m 3L: 30-400 fms.	Y	Y	Y	Y	Y	Canada	
Canadian spring groundfish survey	3L	May-Jun	since 1971	Stratified-random Bottom trawl	Groundfish Cod Flounder		Y	100	31-440 fms.	Y	Y	Y	Y	Y	Canada	93/19
EU bottom trawl survey	3M	July	1988	Stratified-random Bottom trawl	All		N	100	0-732	Y	Y	Y	Y	Y	EU	SCR 94/53
Canadian deepwater survey	3KLMN	Feb-Mar	1994	Stratified-random Bottom trawl	Greenland halibut	131	Y	100	732-1000	Y	Y	Y	Y	Y	Canada	

Stock name: Roundnose Grenadier, Subareas 2+3										See reverse side for guidelines to fill in columns					
Name of survey	Location	Season month(s)	Years of survey from, to or since	Type of survey and gears	Target species	No. of sets	24 hr fishing	Area of coverage in relation to stock distribution (%)	Depth range	Research data related to stock			Country	SCR Doc. No.	
										abundance	bio-mass	Stock size estimates			
Canadian Deep-water	SA2+3KLM	August/September	1991	OTB - Engel	Mixed	228	Yes	?	750-1500 m	104 x 10 ⁶ t	36 x 10 ³ t	N	Y	Canada	
	3KLM									112 x 10 ⁶ t	31 x 10 ³ t	3KLM ONLY	Y	Canada	
Canadian Deep-water	3KLMI	February	1994	OTB - Engel	Mixed	133	Yes	?	750-1500 m			N			

Stock name: Capelin, Divisions 3NO															
Name of survey	Location	Season months(s)	Years of survey from, to or since	Type of survey and gears	Target species	No. of sets	24 hr fishing	Area of coverage in relation to stock distribution (%)	Depth range	Research data related to stock				Country	SCR Doc. No.
										abundance	bio-mass	ALK	LP		
Russia Groundfish Survey	3MLNO	4-7	1971-1993	Groundfish Capelin	Cod Redfish Capelin American plaice Witch flounder	316	Full	3M - 100 3L - 70 3N - 100 30 - 100	50-700 m	Y	Y	Y	Y	Russia	SCR 94/12 94/13 94/14

See reverse side for guidelines to fill in columns

Stock name: Squid Subarea 3+4															
Name of survey	Location	Season months(s)	Years of survey from, to or since	Type of survey and gears	Target species	No. of sets	24 hr fishing	Area of coverage in relation to stock distribution (%)	Depth range	Research data related to stock				Country	SCR Doc. No.
										abundance	bio-mass	ALK	LF		
No surveys conducted															

See reverse side for guidelines to fill in columns