

Northwest Atlantic



Fisheries Organization

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**SCIENTIFIC COUNCIL MEETING – OCTOBER 2008**

**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 and that Designated Experts should update the information annually for review by STACFIS (*NAFO Sci. Coun. Rep.*, 1991, p. 114). The following tabulations were received at the Secretariat from the Designated Experts during the year 2008.

Stock name: Greenland halibut in Subarea 0, Division 1A offshore and Divisions 1B-F																
Name of survey	Location (Div.)	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 size estimates				Individual weights	Country	SCS/ SCR Doc. No
										abundance	bio-mass	ALK	LF			
Greenland Deep Sea	1CD	Sep-Nov	Since 1997	Stratified Random bottom Trawl, Alfredo trawl	Greenland halibut Roundnose grenadier	50	Y	?	400-1500 m	Y	Y	Y	Y	Y	Greenland	SCR 08/17
Greenland Shrimp Trawl	1A-F	Jul-Sep	Since 1988	Stratified Random bottom Trawl, Cosmos trawl	Shrimp Groundfish	254	N	?	50-600m (800 m)	Y	Y	Y	Y	Y	Greenland	SCR 08/28

1 excluding additional hauls at some stations for gear comparison and calibration.

Stock name: Greenland halibut in Division 1A inshore																
Name of survey	Location (Div.)	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 size estimates				Individual weights	Country	SCS/ SCR Doc. No.
										abundance	bio-mass	ALK	LF			
Inshore juvenile GRL	Disko Bay	July	since 2001	Gillnet mesh (mm) 46, 55, 60, 70	Greenland Halibut	30	Y	-	200-700m	N	N	Y	Y	Y	Greenland	08/38
Inshore juvenile GHL	Disko Bay	July	Since 2001	Gillnet & longline calibration	Greenland Halibut	0	Y	-	200-700m	N	N	Y	Y	Y	Greenland	05/57
Inshore longline	Disko Bay	July	Since 1993	Fixed station Longline	Greenland Halibut	0	Y	-	200-700m	N	N	Y	Y	Y	Greenland	98/44 00/29, 00/47, 01/68, 08/38
Inshore longline	Uummanaq	August	Since 1993	Fixed station Longline	Greenland Halibut	21	Y	-	200-900m	N	N	Y	Y	Y	Greenland	98/44, 00/29, 00/47, 01/68, 08/38
Shrimp	1A-F	Jul-Sep	Since 1991	Stratified-random trawl	Shrimp	254	N	-	50-600m	Y	Y	N	Y	Y	Greenland	08/28

Stock name: Roundnose Grenadier in Subareas 0+1																
Name of survey	Location (Div.)	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 size estimates				Individual weights	Country	SCS/ SCR Doc. No.
										abundance	bio-mass	ALK	LF			
Greenland Deep Sea	1CD	Aug-Nov	Since 1997	Stratified Random Bottom Trawl	Greenland halibut, Roundnose grenadier	501	Y	?	400-1500m	Y	Y	N	Y	N	Greenland	SCR 08/17

Stock name: Redfish in Subarea 1																
Name of survey	Location (Div.)	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 size estimates				Individual weights	Country	SCS/ SCR Doc. No.
										abundance	bio-mass	ALK	LF			
West Greenland Groundfish	1B - 1F	Oct-Nov	since 1982	Stratified random bottom trawl	Cod, redfish, other finfish	47	N	?	0-400m	Y	Y	N	Y	Y	EU-Germany	SCR 08/16
Greenland – Deepsea	1C - 1D	Aug-Nov	since 1997	Stratified random bottom trawl	Greenland halibut, Roundnose Grenadier	50	Y	?	400-1500m	Y	Y	N	Y	N	Greenland	SCR 08/17
Greenland shrimp	1A - 1F	Jul-Aug	since 1992	Stratified random bottom trawl	Shrimp, groundfish	254	N	?	50-600m	Y	Y	N	Y	N	Greenland	SCR 08/28

Stock name: Other Finfish in Subarea 1																
Name of survey	Location (Div.)	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 size estimates				Individual weights	Country	SCS/ SCR Doc. No.
										abundance	bio-mass	ALK	LF			
West Greenland groundfish	1B - 1F	Oct-Nov	since 1982	Stratified random bottom trawl	Cod, redfish Other finfish	47	N	?	0-400m	Y	Y	N	Y	U	EU-Germany	SCS 08/16
Greenland shrimp	1A - 1F	Jul-Aug	since 1992	Stratified random bottom trawl	Shrimp, finfish	254	N	?	50-600m	Y	Y	N	Y	N	Greenland	SCR 08/28

Stock name: Cod in Division 3M																
Name of survey	Location (Div.)	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 size estimates				Individual weights	Country	SCS/ SCR Doc. No.
										abundance	bio-mass	ALK	LF			
EU- bottom trawl survey	3M	Jul	since 1988	Stratified random	all	174	N	100%	< 750 m (88-02) < 1400 m (03- )	Y	Y	Y	Y	Y	EU	SCR 08/34
Russian trawl survey	3M	May-June	1983-1993 1995-1996 2001-2002	Stratified Random (and acoustic survey 1987-93)	all	94	Y	100%	< 1280 m	Y	Y	N	N	N	Russia	SCS 03/9
Canadian groundfish survey	3M	Sept/Oct	1996	Stratified random	all	68	Y	100%	< 730 m	Y	Y	N	N	N	Canada Newfoundland	SCR 97/42

Stock name: Redfish in Division 3M																
Name of survey	Location (Div.)	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 size estimates				Individual weights	Country	SCS/ SCR Doc. No.
										abundance	bio-mass	ALK	LF			
EU Flemish Cap Survey	3M	Summer July	1988	Stratified random bottom trawl	Groundfish and shirmp	174	N	100%	127-1400m	Y	Y	Y	Y	Y	EU/ESP EU/PRT	08/34



Stock name: American plaice in Division 3M																
Name of survey	Location (Div.)	Season months(s)	Years of survey 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 size estimates				Individual weights	Country	SCS/ SCR Doc. No.
										abundance	bio-mass	ALK	LF			
EU – bottom Trawl	3M	Summer Jul	1988	Stratified-random bottom trawl	Groundfish and shrimp	174	N	100	127-1400m	Y	Y	Y	Y	Y	EU-Spain EU-Portugal	08/34

Stock name: Cod in Divisions 3NO																
Name of survey	Location (Div.)	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 size estimates				Individual weights	Country	SCS/ SCR Doc. No.
										abundance	bio-mass	ALK	LF			
Groundfish	3NO	Apr-Jun	1972-07 (except 1983, 2006)	Stratified-random Bottom trawl	Multi-species	164	Y	100	45-719 m	Y	Y	Y	Y	Y	Canada	n/a
Juvenile flatfish	3NO	Sep	1989-94	Stratified-random Bottom trawl	Groundfish		Y	100	30-150	Y	Y	Y	Y	Y	Canada	SCR 96/80
Groundfish	3NO	Oct-Dec	1990-07	Stratified-random Bottom trawl	Multi-species	198	Y	100	42-1445 m	Y	Y	Y	Y	Y	Canada	n/a
EU-Spain	3NO Reg. Area	Jun	1995-07	Stratified-random Bottom trawl	Multi-species	110	N	20	45-1480 m	Y	Y	N	Y	N	Spain	SCR 08/08

Stock name: Redfish in Divisions 3LN																
Name of survey	Location (Div.)	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 size estimates				Individual weights	Country	SCS/ SCR Doc. No.
										abundance	bio-mass	ALK	LF			
USSR groundfish	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	Sometimes	USSR USSR	86/66
USSR groundfish	3L, 3N	Apr-Jun (mostly)	1983-91, 1993, 1994	Stratified-random Bottom trawl	Multi-species Groundfish	approx. 48-3L	Y	Unknown	to 732 m	Y	Y	Y	Y	Sometimes	USSR	86/66
USSR acoustic	3LN	Apr-Jun	1987-91, 1993	Acoustic	Multi-species	unknown midwater sampl.	Y	Unknown	to 732 m	Y	Y			Sometimes	USSR	88/24
Canadian groundfish (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	Sometimes	Canada	NAFO Studies No. 2
Canada redfish	3L	Jan	1990	Stratified-random Bottom trawl	Redfish	55	Y	Unknown	183-732 m	Y	Y	Y	Y	N	Canada	NAFO Studies No. 2
Canada groundfish	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	Y	Canada	NAFO Studies No. 2
Canada redfish	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	Y	Canada	NAFO Studies No. 2
Canadian Groundfish (Autumn)	3LN	Autumn (Oct-Dec)	1991-07	Stratified-random Bottom trawl	Multi-species Groundfish	168 in 3L 94 in 3N	Y	Unknown	61-1401 in 3L 46-650 in 3N	Y	Y	N	Y	Y	Canada	08/32 and pers. com.
Canadian Groundfish (Spring)	3LN	Spring (May-Jun)	1991-07	Stratified-random Bottom trawl	Multi-species Groundfish	137 in 3L 79 in 3N	Y	Unknown	60-701 in 3L 46-77 in 3N	Y	Y	N	Y	Y	Canada	08/32 and pers. com.

Stock name: American plaice in Divisions 3LNO																
Name of survey	Location (Div.)	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 estimates				Individual weights	Country	SCS/ SCR Doc. No.
										abundance	bio-mass	ALK	LF			
Canadian spring	3LNO	Apr-Jun	1971-2007	Stratified random Campelen	Multispecies	295*	Y	95	to 719 m	Y	Y	N	Y	Y	Canada	SCR 07/56
Canadian autumn	3LNO	Sep-Dec	1990-2007	Stratified random Campelen	Multispecies	168-3L 94-3N 99-3O	Y	100	to 1424 m	Y	Y	Y	Y	Y	Canada	SCR 07/56
EU-Spain	3NO Reg. Area	Apr-Jun	1995-2007	Stratified random Campelen	Groundfish	110	N	11	to 1374 m	Y	Y	N	Y	N	Spain	SCR 08/7
Canadian DFO-Industry Co-operative	3NO expanded to 3L in 2000	July-Aug Quarterly in 1997-98	1996-2004	Grid survey with commercial Engel trawl (unlined)	Yellowtail (by-catches of cod, A. plaice)	61 (July) 80 (Aug)	Y	22	45-90 m	N	N	N	N	N	Canada	SCR 05/9

\* of 3LNO only

Stock name: Yellowtail flounder in Divisions 3L, 3N and 3O																
Name of survey	Location (Div.)	Season months(s)	Years of survey from, to or since	Type of survey and gears	Target Species	No. of Sets (2005)	24 hr fishing	Area of coverage in relation to stock distribution (%)	Depth range	Research data related to stock size estimates				Individual weights	Country	SCS/ SCR Doc. No.
										abundance	bio-mass	ALK	LF			
Canadian Groundfish (Spring)	Div. 3LNO	Spring (Apr-Jun)	1971-2007	Stratified random - bottom trawl	Groundfish & shellfish	295	Y	100	44 to 719m	Y	Y	N	Y	Y	Canada	08/44
Canadian Groundfish (Autumn)	Div. 3LNO	Autumn (Oct-Dec)	1990-2007	Stratified-random - bottom trawl	Groundfish & shellfish	361	Y	100	48to 1 424m	Y	Y	N	Y	Y	Canada	06/44
Spanish Groundfish (Spring)	Div. 3NO Regulatory Area	Spring (Apr-May)	1995-2007	Stratified-random - bottom trawl	Groundfish & shellfish	110	N	unknown	45 to 1374m	Y	Y	N	N	N	Spain	08/008

Stock name: Witch flounder in Divisions 3N and 3O																
Name of survey	Location (Div.)	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 size estimates				Individual weights	Country	SCS/ SCR Doc. No.
										abundance	bio-mass	ALK	LF			
Canadian Groundfish (Spring)	Div. 3LNO	Spring (Apr-Jun)	1971-07	Stratified Random - Bottom trawl	Multispecies	295	Y	90	44 to 719m	Y	Y	Previous to 1994	Y	Y	Canada	08/39
Canadian Groundfish (Autumn)	Div. 3LNO	Autumn (Oct-Dec)	1990-07	Stratified-Random - Bottom trawl	Multispecies	168-3L 94-3N 99-3O	Y	100	48 to 1424m	Y	Y	"	Y	Y	Canada	08/39
Spanish Groundfish (Spring)	Div. 3NO Regulatory Area	Spring (Apr-May)	1995-2007	Stratified-Random - Bottom trawl	Groundfish	110	N	unknown	45 to 1374m	Y	Y	N	N	N	Spain	00/46

Stock name: Capelin 3NO																
Name of survey	Location (Div.)	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 size estimates				Individual weights	Country	SCS/ SCR Doc. No.
										Abundance x109	bio-mass x103 t	ALK	LF			
Multi-species bottom trawl survey	3NO	6	1977-2006	Stratified-random, Campelen 1800	Demersal fishes	54	+	50	45-105m	0.8	9.6	N	Y	Y	CAN	SCR 07/12

Stock name: Redfish in Divisions 30																
Name of survey	Location (Div.)	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 size estimates				Individual weights	Country	SCS/ SCR Doc. No.
										abundance	bio-mass	ALK	LF			
USSR groundfish	30	Apr-Jun (mostly)	1983-91, 1993, 1994	Stratified-random Bottom trawl	Multi-species Groundfish	75-100	Y	Unknown	to 732 m	Y	Y	Y	Y	Sometimes	Russia	86/66
Groundfish	30	Apr-Jun	1971-07 (except 2006)	Stratified-random Bottom trawl	Multi-species	30-36 in redfish depths	Y	Unknown	to 367m	Y	Y	Y	Y	N	Canada	n/a
Groundfish	30	Oct-Dec series	1991-07	Stratified-random Bottom trawl	Multi-species	30-36 in redfish depths	Y	Unknown	93-1410 m	Y	Y	Y	Y	Some Surveys	Canada	n/a



Stock name: Thorny skate in Divisions 3L, 3N, 3O, and 3Ps																
Name of survey	Location (Div.)	Season months(s)	Years of survey from, to or since	Type of survey and gears	Target Species	No. of Sets (2007)	24 hr fishing	Area of coverage in relation to stock distribution (%)	Depth range	Research data related to stock size estimates				Individual weights	Country	SCS/ SCR Doc. No.
										abundance	bio-mass	ALK	LF			
Canadian Groundfish (Spring)	Div. 3LNOPs	Spring (Apr-Jul)	1971-2007	Stratified random - bottom trawl	Groundfish & shellfish	355	Y	100	44 to 719m	Y	Y	N	Y	Y	Canada	SCR 08/43
Canadian Groundfish (Autumn)	Div. 3LN0	Autumn (Oct-Dec)	1990-2007 (some sets in 2006)	Stratified-random - bottom trawl	Groundfish & shellfish	361	Y	100	48 to 1 424m	Y	Y	N	Y	Y	Canada	SCR 08/43
Spanish Groundfish (Spring)	Div. 3NO Regulatory Area	Spring (May-June)	2001-2007	Stratified-random - bottom trawl	Groundfish & shellfish	111	N	unknown	44 to 1 450m	Y	Y	N	Y	N	Spain	SCS 08/07
Spanish Groundfish	Div. 3L Regulatory Area	Summer (July-August)	2003-2007	Stratified-random - bottom trawl	Groundfish & shellfish	94	N	unknown	44 to 1463m	Y	Y	N	Y	N	Spain	SCS 08/07

Stock name: White hake in Divisions 3N, 3O, and 3Ps																
Name of survey	Location (Div.)	Season months(s)	Years of survey from, to or since	Type of survey and gears	Target Species	No. of Sets (2007)	24 hr fishing	Area of coverage in relation to stock distribution (%)	Depth range	Research data related to stock size estimates				Individual weights	Country	SCS/ SCR Doc. No.
										abundance	bio-mass	ALK	LF			
Canadian Groundfish (Spring)	Div.3NOPs	Spring (Apr-Jun)	1971-2007	Stratified random - bottom trawl	Groundfish & shellfish	218	Y	100	44 to 719m	Y	Y	N	Y	Y	Canada	SCS 08/12
Canadian Groundfish (Autumn)	Div. 3NO	Autumn (Oct-Dec)	1990-2007 (some sets in 2006)	Stratified-random - bottom trawl	Groundfish & shellfish	193	Y	100	48 to 1 419m	Y	Y	N	Y	Y	Canada	SCS 08/12
Spanish Groundfish (Spring)	Div. 3NO Regulatory Area	Spring (May-June)	2001-2007	Stratified-random - bottom trawl	Groundfish & shellfish	111	N	unknown	44 to 1 450m	Y	Y	N	Y	N	Spain	SCS 08/07

Stock name: Roughhead Grenadier in Subareas 2 and 3																
Name of survey	Location (Div.)	Season Months(s)	Years of Survey 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 size estimates				Individual weights	Country	SCR Doc. No.
										abundance	bio-mass	ALK	LF			
Canadian Autumn Survey	2GHJ 3MLNO	Oct-Dec	1978	Stratified random <= 1994 Engel >=1995 Campelen	Groundfish Shellfish	631 in 2007	Yes		<1500	+	+			No	CAN	Dow Power Pers. Com m.
Canadian Spring Survey	3LNO	Spring May-July	1978- 2006	Stratified random <=1995 Engel >= 1996 Campelen	Groundfish Shellfish	195 in 2006* coverture Problem s	Yes		<730 m		+			No	CAN	SCR 07/18
Canadian deepwater	3MLN	August February Spring	1991 1994 1995	Bottom trawl	Groundfish				<1500	+	+		+	No	CAN	SCR 95/51
Spanish Surveys in Div. 3NO	3NO	May-June	1995	Stratified Random <=2001 Pedreira >=2001 Campelen	Groundfish	111 in 2007	No		<1500	+	+		+	+	EU-ESP	SCR 08/09
EU Flemish Cap Surveys	3M	July	1988	Stratified Random (Lofoten)	Groundfish Shrimp	178 in 2007	No	Flemish Cap	<1500	+	+	+	+	+	EU-ESP EU-PRT	SCR 08/27 SCR 08/34
Russian	3M	May/June	2001 and 2002	Stratified random bottom trawl	Groundfish	94	Yes	Flemish Cap	120- 1280 m	+	+		+		RUS	SCR 03/09 SCR 07/10
EU Deepwater	3LMN	April-May	1996	Longline	Groundfish	64	Yes		700- 3100m				+	+	EU-ESP EU-PRT	SCR 96/34, 97/19, 97/20

Stock name: Witch flounder in Div. 2J+3KL																
Name of survey	Location (Div.)	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 size estimates				Individual weights	Country	SCR Doc. No.
										abundance	bio-mass	ALK	LF			
Canadian autumn groundfish	2J,3K, 3L	Autumn	78-07 2J3K 84-07 3L	Stratified-random Engel trawl 1978-94 2J3K Yankee trawl 1981-82 3L Engel trawl 1984-94 3L Campelen Trawl all areas 1995-07	Multispecies (Cod, flounders, G. halibut, Redfish & shellfish)	412 in 2007	Y	This column not appropriate for this species given differences in depth coverage and areas covered in the surveys.	2J3K in 2007 127-1494m  3L in 2007 61-1424m	Y	Y	Prior to 1994	Y	Canada	n/a	

Stock name: Greenland halibut in Subareas 2+3KLMNO																
Name of survey	Location (Div.)	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 size estimates				Individual weights	Country	SCR Doc. No.
										abundance	bio-mass	ALK	LF			
Canadian Groundfish Spring	3LNO	Apr-Jun	1995-2007	Stratified-random Campelen trawl	Groundfish	295 in 2007	Y		46-731 m	Y	Y	Y	Y	Y	Canada	08/32
Canadian autumn groundfish	2J,3K, 3L	Fall	1978-2007 2J3K 1981-2007 3L	Stratified-random Engel trawl 1978-94 2J3K Yankee trawl 1981-82 3L Engel trawl 1984-94 3L Campelen Trawl all areas 1995-2007	Groundfish (Cod, flounders, G. halibut, Redfish & shellfish)	412 in 2007	Y	This column not appropriate for this species given differences in depth coverage and areas covered in the surveys.	2J3K in 2007 127-1494 m 3L in 2006 81-1424 m	Y	Y	Y	Y	Y	Canada	08/32
EU bottom trawl	3M	Jul	1988-2007	Stratified-random Bottom trawl	Groundfish & shrimp	174 in 2007	N		128-1460 m	Y	Y	Y	Y	Y	EU	08/43
EU-Spain bottom trawl	Reg. Area 3LNO	Apr-May	3NO1995-2007 3L 2003, 2004, 2006, 2007	Stratified-random Bottom trawl	Groundfish	204 in 2007	N		56-1464 m in recent years	Y	Y	Y	Y	Y	Spain	08/07 08/20
Canadian groundfish	2GH	Sep-Oct	occasion since 1978	Stratified-random Campelen in 1996-2006	Groundfish & shellfish	81 in 2H in 2006	Y		107-1437 m in 2006	Y	Y	Y	Y	Y	Canada	08/32
Canadian groundfish	3MNO	Sep-Dec	3NO 1990-2007 3M* 1996-2003, 2006-07	Stratified-random Campelen	Groundfish	26-3M 94-3N 99-3O in 2007	Y	3M * full coverage 1996; since 1997 only in deepwater Sackville Spur, Flem. Pass	768-1404 m 3M 48-1419 m 3N 64-1410 m 3O in 2007	Y	Y	Y	Y	Y	Canada	08/32

Russian	3M	May	1987-96	Stratified-random Bottom trawl	Groundfish	90	Y	Flemish Cap	914 m in 1996	Y	Y	Y	Y	N	Russia	98/13
	3LM Fl. Pass	Feb Apr-May	1995-96 2000	Stratified-random Bottom trawl	Groundfish	94	Y		732-1280 m	Y		Y	Y	N	Russia	01/10
	3M	May-June	2001-02	Stratified-random Bottom trawl	Groundfish		Y		127-1280	Y	Y	Y	Y	N	Russia	03/09

Stock name: Short-finned Squid in Subareas 3 and 4																
Name of survey	Location (Div.)	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 size estimates				Individual weights	Country	SCS/ SCR Doc. No
										abundance	bio-mass	ALK	LF			
July multispecies bottom trawl	SA 4	July	Since 1970	Stratified random bottom trawl	Multi-species	~ 190	Y	Unknown	20-366 m	Y	Y	N	Y	N	Canada	06/46
Autumn multispecies bottom trawl	4T	Sept.	Since 1971	Stratified random bottom trawl	Multi-species		Y, after 1986	Unknown, likely < 20%		Y	Y	N	Unknown	N	Canada	06/46
EU Flemish Cap multispecies bottom trawl	3M	July	Since 1988	Stratified random bottom trawl	Multi-species	101-121	N, 0600-2200	Unknown, likely < 10%	127-730 m, up to 1,400 m in 2005	Y	Y	N	Y	N	EU (Spain)	06/46, 06/16
Spring multispecies bottom trawl	3LNOP	April-June	Since 1996	Stratified random bottom trawl	Multi-species	470-597	Y	Unknown	20-870 m, but inconsistent inshore	Y	Y	N	Y	N	Canada	06/45, 06/46
Autumn multispecies bottom trawl	3KLNO	Mainly Sept-Dec, but extends through Jan in some years	Since 1995	Stratified random bottom trawl	Multi-species	608-840	Y	Unknown	30-1,500 m, but inconsistent inshore and > 730 m	Y	Y	N	Y	N	Canada	06/45, 06/46

Stock name: Northern Shrimp in Divisions 3LNO																
Name of survey	Location (Div.)	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 size estimates				Individual weights	Country	SCS/ SCR Doc. No
										abundance	bio-mass	ALK	LF			
Multi-species Spring Survey	3LNO 3Ps	May to June	1999 to present	Stratified-random bottom trawl	Groundfish Shellfish (crab, shrimp)/ capelin	~350	Yes	100% of area covered	30-732 m	Y	Y	N	Y	N	Canada	SCR 06/73
Multi-species Autumn Survey	2J 3KLNO	October to December	1995 to present	Stratified-random bottom trawl	Groundfish Shellfish (crab, shrimp)/ capelin	(~370 sets done in Div. 3LNO)	Yes	100% of area covered	30-1500 m	Y	Y	N	Y	N	Canada	SCR 06/73



Stock name: Northern Shrimp in Divisions 3M																
Name of survey	Location (Div.)	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 size estimates				Individual weights	Country	SCS/ SCR Doc. No
										abundance	bio-mass	ALK	LF			
EU-Bottom trawl Survey	3M	Jul	1988 to present	Stratified-random bottom trawl	All	179	No	100%	<750 m(88-02) <1400m (03-07)	Y	Y	Y	Y	Y	EU	SCR 08/66

Stock name: Shrimp in Subareas 0+1																
Name of survey	Location (Div.)	Season months(s)	Years of survey from, to or since	Type of survey and gears	Target species	No. of sets <sup>1</sup>	24 hr fishing	Area of coverage in relation to stock distribution (%)	Depth range	Research data related to stock size estimates				Individual weights	Country	SCS/ SCR Doc. No
										abundance	bio-mass	ALK	LF			
West Greenland Trawl Survey	SA 0+1(West Greenland Shelf) 2003	Jul-Aug	Since 1988)	Stratified semi-systematic; trawl; Skjervøy 3000 w/bobbins	Northern shrimp; Groundfish	172/31	No	95	150-600 m	Y	Y	N/A <sup>2</sup>	Y	GRL	SCR 03/71	
	2004					187/21									SCR 04/72	
	2005					194/24									SCR 05/74	
	2006			221/28/12		SCR 06/58										
	2007			212/48/8		SCR 07/71										
	2008			205/54/9		SCR 08/71										

<sup>1</sup> First number is number of stations trawled at depths between 150 and 600 m targeting shrimp; second number is number of stations in water shallower than 150 m targeting principally Atlantic cod; Third number is number of stations in water deeper than 600 m targeting principally Greenland halibut.

<sup>2</sup> Lack of satisfactory method of ageing shrimp precludes generating age-length keys.

