

Northwest Atlantic



Fisheries Organization

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**SCIENTIFIC COUNCIL MEETING – OCTOBER 2009**

**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 2009.

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	70	Y	?	400-1500 m	Y	Y	Y	Y	Y	Greenland	SCR 09/16
Greenland Shrimp Trawl	1A-F	Jul-Sep	Since 1988	Stratified Random bottom Trawl, Cosmos trawl	Shrimp Groundfish	252	N	?	50-600m (950 m)	Y	Y	Y	Y	Y	Greenland	SCR 09/20
Canada Deep Sea	0A	Oct-Nov	Since 1999 not annually	Stratified Random bottom Trawl, Alfredo trawl	Greenland halibut	86	Y	?	400-1500 m	Y	Y	Y	Y	Y	Canada	SCR 09/26

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 distribu- tion (%)	Depth range	Research data related to stock size estimates				Indiv- idual weights	Country	SCS/ SCR Doc. No.
										abun- dance	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	
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	Uummannaq	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-Aug	Since 1991	Stratified-random trawl	Shrimp	252	N	-	50-600m	Y	Y	Y	Y	Y	Greenland	09/20

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.
Greenland Deep Sea	ICD	Aug-Nov	Since 1997	Stratified Random Bottom Trawl	Greenland halibut, Roundnose grenadier	70	Y	?	400-1500m	Y	Y	N	Y	N	Greenland	SCR 09/16

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	50	N	?	0-400m	Y	Y	N	Y	Y	EU-Germany	SCR 09/11
Greenland – Deepsea	1C - 1D	Aug-Oct	since 1997	Stratified random bottom trawl	Greenland halibut, Roundnose Grenadier	70	Y	?	400-1500m	Y	Y	N	Y	N	Greenland	SCR 09/16
Greenland shrimp	1A - 1F	Jul-Aug	since 1991	Stratified random bottom trawl	Shrimp, groundfish	252	N	?	50-600m	Y	Y	N	Y	N	Greenland	SCR 09/20

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.
West Greenland groundfish	1B - 1F	Oct-Nov	since 1982	Stratified random bottom trawl	Cod, redfish Other finfish	50	N	?	0-400m	Y	Y	N	Y	U	EU-Germany	SCR 09/11
Greenland shrimp	1A - 1F	Jul-Aug	since 1992	Stratified random bottom trawl	Shrimp, finfish	252	N	?	50-600m	Y	Y	N	Y	N	Greenland	SCR 09/20

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	Jun-Jul	since 1988	Stratified random	all	167	N	100%	< 750 m (88-02) < 1400 m (03-08)	Y	Y	Y	Y	Y	EU	SCR 09/19
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 New-foundland	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.
EU Flemish Cap Survey	3M	Summer July	1988	Stratified random bottom trawl	Groundfish and shirmp	179	N	100%	127-1400m	Y	Y	Y	Y	Y	EU/ESP EU/PRT	09/19

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 distribu- tion (%)	Depth range	Research data related to stock size estimates				Indiv- idual weights	Country	SCS/ SCR Doc. No.
										abun- dance	bio- mass	ALK	LF			
EU – bottom Trawl	3M	Summer Jul	1988	Stratified-random bottom trawl	Groundfish and shrimp	179	N	100	127- 1400m	Y	Y	Y	Y	Y	EU- Spain EU- Portugal	09/19

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.
Groundfish	3NO	Apr-Jun	1972-08 (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	1990-08	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	1995-08	Stratified-random Bottom trawl	Multi-species	110	N	20	45-1480 m	Y	Y	N	Y	N	Spain	SCR 09/09

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.
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	Y Y	Y Y	Some-times	USSR USSR	86/66
USSR ground-fish	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	Some-times	USSR	86/66
					Groundfish	approx. 42-3N	Y	Unknown	to 732 m	Y	Y	Y	Y		USSR	
USSR acoustic	3LN	Apr-Jun	1987-91, 1993	Acoustic	Multi-species	unknown midwater sampl.	Y	Unknown	to 732 m	Y	Y			Some-times	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	Some-times	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 ground-fish	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)	1991-08	Stratified-random Bottom trawl	Multi-species Groundfish	126 in 3L 64in 3N	Y	Unknown	62-664 m in 3L 38-643 m in 3N	Y	Y	N	Y	Y	Canada	09/12
Canadian Groundfish (Spring)	3LN	Spring (May-Jun)	1991-08	Stratified-random Bottom trawl	Multi-species Groundfish	122 in 3L 71 in 3N	Y	Unknown	60-684 m in 3L 40-623 m in 3N	Y	Y	N	Y	Y	Canada	09/12 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.
Canadian spring	3LNO	Apr-Jun	1971-2008	Stratified random Campelen	Multispecies	273*	Y	95	to 704 m	Y	Y	Y	Y	Y	Canada	SCR 09/35
Canadian autumn	3LNO	Sep-Dec	1990-2008	Stratified random Campelen	Multispecies	126-3L 64-3N 66-3O	Y	100	to 664 m	Y	Y	Y	Y	Y	Canada	SCR 09/35
EU-Spain	3NO Reg. Area	Apr-Jun	1995-2008	Stratified random Campelen	Groundfish	122	N	11	to 1374 m	Y	Y	N	Y	N	Spain	SCR 09/8
EU – Spain	3L Reg. Area	July-Aug	2003-2008 (no 2005)	Stratified random Campelen	Groundfish	100	N	unknown	to 1455 m	Y	Y	N	Y	N	Spain	SCR 09/23
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.
Canadian Groundfish (Spring)	Div. 3LNO	Spring (Apr-Jun)	1971-2008	Stratified random - bottom trawl	Groundfish & shellfish	273	Y	100	60 to 704m	Y	Y	N	Y	Y	Canada	09/31
Canadian Groundfish (Autumn)	Div. 3LNO	Autumn (Oct-Dec)	1990-2008	Stratified-random - bottom trawl	Groundfish & shellfish	256	Y	100	38to 664m	Y	Y	N	Y	Y	Canada	09/31
Spanish Groundfish (Spring)	Div. 3NO Regulatory Area	Spring (Apr-May)	1995-2008	Stratified-random - bottom trawl	Groundfish & shellfish	122	N	unknown	38 to 1460m	Y	Y	N	Y	N	Spain	09/09

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)	1971-08	Stratified Random - Bottom trawl	Multispecies	273	Y	90	44 to 704 m	Y	Y	Pre v-ious to 1994	Y	Y	Canada	08/39
Canadian Groundfish (Autumn)	Div. 3LNO	Autumn (Oct-Dec)	1990-08	Stratified-Random - Bottom trawl	Multispecies	64-3N 66-3O	Y	100	48 to 664 m	Y	Y	"	Y	Y	Canada	08/39
Spanish Groundfish (Spring)	Div. 3NO Regulatory Area	Spring (Apr-May)	1995-2008	Stratified-Random - Bottom trawl	Groundfish	122	N	unknown	45 to 1374m	Y	Y	N	N	N	Spain	09/08

Stock name: Capelin 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 x10 <sup>9</sup>	bio-mass x10 <sup>3</sup> 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 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.
USSR ground-fish	3O	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	3O	Apr-Jun	1971-08 (except 2006)	Stratified-random Bottom trawl	Multi-species	30-39 in redfish depths	Y	Unknown	to 367m	Y	Y	Y	Y	N	Canada	n/a
Groundfish	3O	Oct-Dec series	1991-08	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.
Canadian Groundfish (Spring)	Div. 3LNOPs	Spring (Apr-Jul)	1971-2008	Stratified random - bottom trawl	Groundfish & shellfish	442	Y	100	44 to 719m	Y	Y	N	Y	Y	Canada	SCS 09/013 SCR 09/013
Canadian Groundfish (Autumn)	Div. 3LNO	Autumn (Oct-Dec)	1990-2008 (some sets in 2006)	Stratified-random - bottom trawl	Groundfish & shellfish	256	Y	100	48 to 1 424m	Y	Y	N	Y	Y	Canada	SCS 09/13 SCR 09/013
Spanish Groundfish (Spring)	Div. 3NO Regulatory Area	Spring (May-June)	1997-2008	Stratified-random - bottom trawl	Groundfish & shellfish	122	N	unknown	38 to 1 666m	Y	Y	N	Y	N	Spain	SCS 09/009 SCR 09/010
Spanish Groundfish	Div. 3L Regulatory Area	Summer (July-August)	2003-2008	Stratified-random - bottom trawl	Groundfish & shellfish	100	N	unknown	105 to 1455m	Y	Y	N	Y	N	Spain	SCS 09/009 SCR 09/024

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.
Canadian Groundfish (Spring)	Div.3NOPs	Spring (Apr-Jun)	1971-2008	Stratified random - bottom trawl	Groundfish & shellfish	320	Y	100	44 to 719m	Y	Y	N	Y	Y	Canada	SCS 09/013 SCR 09/012
Canadian Groundfish (Autumn)	Div. 3NO	Autumn (Oct-Dec)	1990-2008 (some sets in 2006)	Stratified-random - bottom trawl	Groundfish & shellfish	130	Y	100	48 to 1 419m	Y	Y	N	Y	Y	Canada	SCS 09/013 SCR 09/012
Spanish Groundfish (Spring)	Div. 3NO Regulatory Area	Spring (May-June)	2001-2008	Stratified-random - bottom trawl	Groundfish & shellfish	122	N	unknown	38 to 1666m	Y	Y	N	Y	N	Spain	SCS 09/009 SCR 09/010

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.
Canadian Autumn Survey	2GHJ 3MLNO	Oct-Dec	1978	Stratified random <= 1994 Engel >=1995 Campelen	Groundfish Shellfish	532 in 2008* covertures Problems	Yes		<1500	+	+			No	CAN	Don Power Pers. Com m. SCR 09/12
Canadian Spring Survey	3LNO	Spring May-July	1978-2006	Stratified random <=1995 Engel >= 1996 Campelen	Groundfish Shellfish	195 in 2006* coverture Problems	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	123 in 2008	No		<1500	+	+		+	+	EU-ESP	SCR 09/10
EU Flemish Cap Surveys	3M	July	1988	Stratified Random (Lofoten)	Groundfish Shrimp	176 in 2008	No	Flemish Cap	<1500	+	+	+	+	+	EU-ESP EU-PRT	SCR 09/19
Russian	3M	May/June	2001 and 2002	Stratified random bottom trawl	Groundfish	94	Yes	Flemish Cap	120-1280 m	+	+		+		RUS	SCR 03/09
EU Deepwater	3LMN	April-May	1996	Longline	Groundfish	64	Yes		700-3100m				+	+	EU-ESP EU-PRT	SCR 07/10 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.
Canadian autumn groundfish	2J,3K, 3L	Autumn	78-08 2J3K 84-08 3L	Stratified-random Engel trawl 1978-94 2J3K Yankee trawl 1981-82 3L Engel trawl 1984-94 3L Campelen Trawl all areas 1995-08	Multispecies (Cod, flounders, G. halibut, Redfish & shellfish)	333 in 2008	Y	This column not appropriate for this species given differences in depth coverage and areas covered in the surveys.	2J3K in 2008 125-1439m  3L in 2008 62-664 m	Y	Y	Prior to 1994	Y	Y	Canada	NA

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.
Canadian groundfish spring	3LNO	Apr-June	1995-2008	Stratified-random Campelen trawl	Groundfish	273 in 2008	Y		60-704 m	Y	Y	Y	Y	Y	Canada	09/33

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
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 09/59 07/18
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 09/59 07/18

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
EU-Bottom trawl Survey	3M	Jul	1988 to present	Stratified-random bottom trawl	All	179	No	100%	<750 m(88-02)	Y	Y	Y	Y	Y	EU	SCR 08/66
EU-Bottom trawl Survey	3M	Jul	1988 to present	Stratified-random bottom trawl	All	178	No	100%	<1400m (03-07) <1400m (03-09)	Y	Y	Y	Y	Y	EU	SCR 09/54

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				Indiv- idual weights	Country	SCS/ SCR Doc. No
										abun- dance	bio- mass	ALK	LF			
West Greenland Trawl Survey	SA 0+1(West Greenland Shelf) 2003	Jul-Aug	Since 1988)	Startified 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	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										
	2009			247/36/2 0		SCR 09/67										

<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.

[illegible]