

Northwest Atlantic



Fisheries Organization

Serial No. N6396

NAFO SCS Doc. 14/22

SCIENTIFIC COUNCIL MEETING –2014

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 2014.

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	biomass	ALK	LF			
Greenland Deep Sea	1CD	Sep-Nov	Since 1997	Stratified Random bottom Trawl, Alfredo trawl	Greenland halibut Roundnose grenadier	27	Y	?	400-1500 m	Y	Y	N	Y	Y	Greenland	SCR 14/02
Greenland Shrimp Trawl	1A-F	Jul-Sep	Since 1988	Stratified Random bottom Trawl, Cosmos trawl	Shrimp Groundfish	211	N	?	50-600m	Y	Y	N	Y	Y	Greenland	SCR 14/03
Canada Deep Sea	0B	Oct-Nov	2000 2001 2011 2103	Stratified Random bottom Trawl, Alfredo trawl	Greenland halibut	84	Y	?	400-1500 m	Y	Y	N	Y	Y	Canada	SCR 14/20

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 weight s	Country	SCS/ SCR Doc. No
										Abun- dance	Bio- mass	ALK	LF			
Disko bay Inshore	Disko Bay	July	2001-08, 2010-13	Gillnet mesh (mm) 46, 55, 60, 70	Greenland halibut	27	Y	-	200-700m	N	N	Y	Y	Y	Greenland	14/38
Inshore juvenile GHL	Disko Bay	July	2001	Gillnet & Longline calibration	Greenland halibut		Y	-	200-700m	N	N	Y	Y	Y	Greenland	05/57
Inshore longline	Disko Bay	July	1993-01	Fixed station Longline	Greenland halibut		Y	-	200-700m	N	N	Y	Y	Y	Greenland	02/55
Uummannaq Inshore	Uummanna q	August	1993-07, 2011-13	Longline Gillnet	Greenland halibut	287	Y	-	200-900m	N	N	Y	Y	Y	Greenland	14/38
Upernavik Inshore	Upernavik	August	1998-01, 2010-13	Longline Gillnet	Greenland halibut	1619	Y	-	200-900m	Y	N	N	Y	Y	Greenland	14/38
Greenland Shrimp and Fish survey	Disko bay + (1A-1F)	Jul-Sep	1991-13	Stratified- random trawl	Shrimp & fish	17 of (211)	N	-	50-600m	Y	Y	Y	Y	Y	Greenland	14/03

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 distribu- tion (%)	Depth range	Research data related to stock size estimates				Indiv- idual weight s	Country	SCS/ SCR Doc. No
										Abun- dance	Bio- mass	ALK	LF			
Greenland Deep Sea	1CD	Sep-Nov	Since 1997	Stratified Random Bottom Trawl	Greenland halibut, Roundnose grenadier	27	Y	?	400-1500m	Y	Y	N	Y	N	Greenland	SCR 14/02

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	58	N	?	0-400m	Y	Y	N	Y	Y	EU-Germany	SCR 14/28
Greenland – Deepsea	1C - 1D	Aug-Nov	since 1997	Stratified random bottom trawl	Greenland halibut, Roundnose Grenadier	27	Y	?	400-1500m	Y	Y	N	Y	N	Greenland	SCR 14/02
Greenland shrimp	1A - 1F	Jul-Aug	since 1992	Stratified random bottom trawl	Shrimp, groundfish	211	N	?	50-600m	Y	Y	N	Y	N	Greenland	SCR 14/03

Stock name: Wolffish in SA1 and American plaice in SA 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				Indiv- idual weights	Country	SCS/ SCR Doc. No
										Abun- dance	Bio- mass	ALK	LF			
West Greenland groundfish	1B - 1F	Oct-Nov	since 1982	Stratified random bottom trawl	Cod, redfish Other finfish	28	N	?	0-400m	Y	Y	N	Y	Y	EU- Germany	SCR 14/28
Greenland shrimp	1A - 1F	Jul-Aug	since 1992	Stratified random bottom trawl	Shrimp, finfish	211	N	?	50-600m	Y	Y	N	Y	N	Green- land	SCR 14/03

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	181	N	100%	<750 m (88-03) <1400m (04-12)	Y	Y	Y	Y	Y	EU	SCR 14/17
Canadian Flemish Cap survey	3M	Jan-Feb	1978-1995	Stratified random	All	132	Y	100%	<730 m	Y	Y	Y	Y	Y	Canada Newfoundland	SCR 92/76
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 shrimp	181	N	100	127-1400m	Y	Y	Y	Y	Y	EU/ESP EU/PRT	14/17

Stock name: American plaice 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 shrimp	181	N	100%	127-1460m	Y	Y	Y	Y	Y	EU/ESP EU/PRT	14/17

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			
Canadian Spring Bottom Trawl Survey	3NO	Apr-Jun	1972-2013 (except 1983, 2006)	Stratified-random Bottom trawl	Multi-species	158	Y	100	38-666 m	Y	Y	Y	Y	Y	Canada	SCR 13/44
Juvenile flatfish	3NO	Sep	1989-94	Stratified-random Bottom trawl	Groundfish		Y	100	30-150 m	Y	Y	Y	Y	Y	Canada	SCR 96/80
Canadian Autumn Bottom Trawl Survey	3NO	Oct-Dec	1990-2013	Stratified-random Bottom trawl	Multi-species	145	Y	100	39-641 m	Y	Y	Y	Y	Y	Canada	SCR 13/44
EU-Spain	3NO - NRA	Jun	1995-2013	Stratified-random Bottom trawl	Multi-species	122	N	20	44-1450 m	Y	Y	N	Y	N	Spain	SCR 14/05

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 367 m 1977-82: to 732 m	Y	Y	Y	Y	Sometimes	USSR	86/66
USSR groundfish	3L, 3N	Apr-Jun (mostly)	1983-91, 1993, 1994	Stratified-random Bottom trawl	Multi-species Groundfish	approx. 48-3L approx. 42-3N	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	N	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)	1991-13	Stratified-random Bottom trawl	Multi-species Groundfish	51 in 3L 47 in 3N	Y	Unknown	65-725 in 3L 39-641 in 3N	Y	Y	Y	Y	Y	Canada	08/32 and pers. comm
Canadian Groundfish (Spring)	3LN	Spring (May-Jun)	1991-13	Stratified-random Bottom trawl	Multi-species Groundfish	51 in 3L 30 in 3N	Y	Unknown	60-723 in 3L 38-666 in 3N	Y	Y	Y	Y	Y	Canada	08/32 and pers. comm
Spanish Groundfish (Spring)	3N	Spring (Jun)	1995-13	Stratified-random Bottom trawl	Multi-species Groundfish	122	Y	Unknown	44-1450	Y	Y	Y	Y	Y	Spain	14/05 and pers. comm

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 size estimates				Individual weights	Country	SCS/ SCR Doc. No
										Abundance	Bio-mass	ALK	LF			
Canadian spring	3LNO	Apr-Jun	1971-2013	Stratified random Campelen	Multispecies	292	Y	95	40-684 m	Y	Y	Y	Y	Y	Canada	14/31
Canadian autumn	3LNO	Sep-Dec	1990-2013	Stratified random Campelen	Multispecies	293	Y	100	42-681 m	Y	Y	Y	Y	Y	Canada	14/31
EU-Spain	3NO Reg. Area	Jun	1995-2013	Stratified random Campelen	Groundfish	122	N	11	44-1420 m	Y	Y	N	Y	N	Spain	14/5
EU-Spain	3L Reg. Area	Jul-Aug	2003-2013 (no 2005)	Stratified random Campelen	Groundfish	100	N	unknown	117-1420 m	Y	Y	N	Y	N	Spain	14/12
Canadian DFO-Industry Co-operative	3NO – expanded to 3L in 2000	Jul-Aug (quarterly in 1997-98)	1996-2004	Grid survey with commercial Engel trawl (unlined)	Yellowtail (bycatches of cod, A. plaice)	61 - Jul 80 - Aug	Y	22	45-90	N	N	N	N	N	Canada	05/9

Stock name: Yellowtail flounder 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			
Canadian Groundfish (Spring)	Div. 3LNO	Apr-Jun	Since 1971	Stratified Random Campelen Trawl	Groundfish and Shellfish	262	Y	100	40-684 m	Y	Y	N	Y	Y	Canada	-
Canadian Groundfish (Autumn)	Div. 3LNO	Sep-Dec	Since 1989	Stratified Random Campelen Trawl	Groundfish and Shellfish	293	Y	100	42-681 m	Y	Y	N	Y	Y	Canada	-
Spanish Groundfish (Spring)	Div. 3NO Reg. Area	Jun	Since 1995	Stratified Random Campelen Trawl	Groundfish and Shellfish	122	N		44-1450 m	Y	Y	N	Y	N	Spain	14/06

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 Multispecies (Spring)	Div. 3NO	Spring (Apr-Jun)	1971-2013	Stratified Random - Bottom trawl	Multispecies	78-3N 79-3O	Y	80-90	40 - 731 m	Y	Y	Previous, until 1994	Y	Y	Canada	14/29
Canadian Multispecies (Autumn)	Div. 3NO	Autumn (Oct-Dec)	1990-2013	Stratified Random - Bottom trawl	Multispecies	70-3N 75-3O	Y	80-90	39 - 731 m	Y	Y	"	Y	Y	Canada	14/29
Spanish Groundfish (Spring)	Div. 3NO Reg. Area	Spring (Apr-May)	1995-2013	Stratified Random - Bottom trawl	Groundfish	122	N	unknown	44 to 1450m	Y	Y	N	Y	N	Spain	14/06

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	Bio-mass	ALK	LF			
Multi-species bottom rawl survey	3NO	6	1977-2006	Stratified-random, Campelen 1800	Demersal fishes	54	+	50	45-105 m	Y	Y	N	Y	Y	Canada	07/12

Stock name: Redfish in Division 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			
USSR groundfish	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
Canada groundfish	3O	Apr-Jun	1971-90	Stratified-random Bottom trawl	Multi-species Groundfish	30-36 in Redfish depths	Y	unknown	to 367 m	Y	Y	Y	Y	N	Canada	NAFO Studies No. 2
EU-Spain	3O	Jun	1995-2013	Stratified-random Bottom trawl	Multi-species Groundfish	6-23	N	unknown	93-1 410 m	Y	Y	N	Y	Some surveys	Spain	SCR 14/06
Canada groundfish	3O	Oct-Dec series + Apr-May series	1991-2013	Stratified-random Bottom trawl	Multi-species Groundfish	24-40 + 37-51 in Redfish depths	Y	unknown	to 1 464 m to 732 m	Y	Y	N	Y	Y	Canada	SCR 12/19

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	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 (Mar-Jun)	1971-2013	Stratified random - bottom trawl	Groundfish & shellfish	471	Y	100	40 to 684m	Y	Y	N	Y	Y	Canada	SCR 14/39
Canadian Groundfish (Autumn)	Div. 3LNO	Autumn (Sep-Nov)	1990-2013	Stratified-random - bottom trawl	Groundfish & shellfish	293	Y	100 (of 3LNO)	42 to 681 m	Y	Y	N	Y	Y	Canada	SCR 14/39
EU-Spain Groundfish	Div. 3NO Reg. Area	Spring (May-Jun)	1997-2013	Stratified-random - bottom trawl	Groundfish & shellfish	122	N	unknown	44 to 1 450m	Y	Y	N	Y	N	Spain	SCR 14/07
EU-Spain Groundfish	Div. 3L Reg. Area	Summer (Jul-Aug)	2003-2013	Stratified-random - bottom trawl	Groundfish & shellfish	100	N	unknown	117 to 1 420m	Y	Y	N	Y	N	Spain	SCR 14/16

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	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 (Mar-May)	1971-2013	Stratified random - bottom trawl	Groundfish & shellfish	337	Y	100	40 to 684 m	Y	Y	N	Y	Y	Canada	SCR 14/39
Canadian Groundfish (Autumn)	Div. 3NO	Autumn (Sep-Oct)	1990-2013	Stratified-random - bottom trawl	Groundfish & shellfish	145	Y	100 (of 3NO)	42 to 681 m	Y	Y	N	Y	Y	Canada	SCR 14/39
EU-Spain Groundfish (Spring)	Div. 3NO Reg. Area	Spring (May-Jun)	1997-2013	Stratified-random - bottom trawl	Groundfish & shellfish	122	N	unknown	44 to 1450m	Y	Y	N	N	N	Spain	SCR 14/07

Stock name: Roughhead Grenadier in Subareas 2 and 3																
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 Autumn Survey	2GHJ 3MLNO	Oct-Dec	1978	Stratified random <= 1994 Engel >=1995 Campelen	Groundfish Shellfish	624 in 2013	Yes		<1500	+	+		+	No	CAN	Don Power Pers. Com.
Canadian Spring Survey	3LNO	May-Jul	1978	Stratified random <=1995 Engel >= 1996 Campelen	Groundfish Shellfish	291 in 2013	Y		<730 m		+			No	CAN	Don Power Pers. Com.
Canadian deepwater	3MLN	Aug Feb Spring	1991 1994 1995	Bottom trawl	Groundfish		N	Low	<1500	+	+		+	+	CAN	SCR 95/51
Spanish Surveys in Div. 3NO	3NO	May-Jun	1995	Stratified Random <=2001 Pedreira >=2001 Campelen	Groundfish	122 in 2013	No	Low	<1500	+	+		+	+	EU-ESP	SCR 14/07
Spanish Surveys in Div. 3L	3L	Aug	2003	Stratified Random Campelen	Groundfish	107 in 2013	No	Low	<1500	+	+		+	+	CAN	SCR 14/16
EU Flemish Cap Surveys	3M	Jul	1988	Stratified Random (Lofoten)	Groundfish Shrimp	183 in 2013	No	Flemish Cap	<1500	+	+	+	+	+	EU-ESP	SCR 14/17
Russian	3M	May/Jun	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	Apr-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				Indiv- idual weights	Country	SCS/ SCR Doc. No
										Abun- dance	Bio- mass	ALK	LF			
Canadian autumn groundfish	2J,3K, 3L	Autumn	2J3K - 1978- 2013, 3L - 1984- 2013	Stratified Random Campelen Trawl	Multispecies (Cod, flounder, G. halibut, redfish & shellfish)	411	Y		2J3K in 2013 99-1445 3L in 2013 57-657	Y	Y	N	Y	Y	Canada	-

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				Indiv- idual weights	Country	SCS/ SCR Doc. No
										Abun- dance	Bio- mass	ALK	LF			
Canadian groundfish spring	3LNO	Apr-June	1995-2013	Stratified-random Campelen trawl	Multi-species survey	292	Y		40-723 m	Y	Y	Y	Y	Y	Canada	14/39
Canadian autumn groundfish	2J,3K, 3L	Autumn	1978-2013 2J3K 1981-2013 3L	Stratified-random Engel trawl 1978-94 2J3K Yankee trawl 1981-82 3L Engel trawl 1984-94 3L Campelen Trawl all areas 1995-2012	Multi-species survey	2J -116 3K -147 3L - 148	Y	This column not appropriate for this species given differences in depth coverage and areas covered in the surveys	2J 114-1425 m 3K 133-1435 m 3L 65-725 m	Y	Y	Y	Y	Y	Canada	14/39

EU bottom trawl	3M	Jun-Jul	1988-2013	Stratified-random Lofoten trawl	Groundfish & shrimp	181	N		128-1460 m	Y	Y	Y	Y	Y	EU	14/17
EU-Spain bottom trawl	Reg. Area 3LNO	Apr-May	3NO 1995-2012 3L 2003-12; Ex.2005 & 2008	Stratified-random Bottom trawl	Groundfish	3NO - 122 3L - 98	N		3NO 44-1450m 3L 112-1478 m	Y	Y	N	Y	Y	Spain	14/05 14/12
Canadian groundfish	2GH	Sep-Oct	2G no longer covered; 2H bi-annually	Stratified-random Campelen in 1996-2013	Multi-species survey	83-2H	Y		99-1435m 2H	Y	Y	Y	Y	Y	Canada	14/39
Canadian groundfish	3MNO	Sep-Dec	3NO 1990-2013 3M 1996-2003, 2006-07	Stratified-random Campelen	Multi-species survey	0-3M 70-3N 75-3O	Y		3N 39-641 m 3O 62-631 m	Y	Y	Y	Y	Y	Canada	14/39
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
Russian	3LM Flemish Pass	Feb Apr-May	1995-96 2000	Stratified-random Bottom trawl	Groundfish	84	Y		732-1280 m	Y	Y	Y	Y	N	Russia	01/10
Russian	3M	May-Jun	2001-02	Stratified-random Bottom trawl	Groundfish		Y		127-1280m	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	SCR1 3/31
CA Autumn multispecies bottom trawl	4T	Sep	Since 1971	Stratified random bottom trawl	Multi-species		Y, after 1986	Unknown, likely < 20%		Y	Y	N	Unknown	N	Canada	SCR 13/31
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)	SCR 14/17
CA 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	SCR 13/31
CA 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	SCR 13/31

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 14/484
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	CSAS 2014/ 21
EU Bottom Trawl Survey	3NO	May June	1995 - present	Stratified-random bottom trawl	Groundfish Shellfish (crab, shrimp)/ capelin	95	No		60-1500	Y	Y				EU-Spain	SCR 14/47
EU Bottom Trawl Survey	3L	August	2003 - present	Stratified-random bottom trawl	Groundfish Shellfish (crab, shrimp)/ capelin	97	No		60-1500	Y	Y		Y	Y	Spain	SCR 14/47

Stock name: : Northern Shrimp 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	Jul	1988 to present	Stratified-random bottom trawl	All	181	N	100%	<750m (88-02) <1400m (03-10)	Y	Y	Y	Y	Y	EU	14/49

Stock name: : Northern 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 ¹	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 ²	LF			
West Greenland Trawl Survey (West Greenland Shelf)	SA 0+1	Jun-Jul	Since 1988	Stratified semi-systematic; trawl; Cosmos 2000 w/rockhop per	Northern shrimp and groundfish	193/37/4	N	95	150-600m	Y	Y	N/A	Y	Y	GRL	14/58 S

¹ 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.

² Lack of satisfactory method of ageing shrimp precludes generating age-length keys.

Stock name: : Northern Shrimp in Denmark Strait																
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			
East Greenland Trawl Survey	ICES XIV	Aug	Since 2008	Stratified semi-systematic; trawl; Cosmos 2000 w/rockhopper	Northern shrimp Groundfish	107	N	unknown	0-600m	Y	Y	N	Y	Y	Greenland	14/62