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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 2011.

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	66	Y	?	400-1500 m	Y	Y	Y	Y	Y	Greenland	SCR 11/09
Greenland Shrimp Trawl	1A-F	Jul-Sep	Since 1988	Stratified Random bottom Trawl, Cosmos trawl	Shrimp Groundfish	299	N	?	50-600m	Y	Y	Y	Y	Y	Greenland	SCR 11/24
Canada Deep Sea	0A	Oct-Nov	Since 1999 not annually Not in 2009	Stratified Random bottom Trawl, Alfredo trawl	Greenland halibut	120	Y	?	400-1500 m	Y	Y	Y	Y	Y	Canada	SCR 11/17
Greenland Deep Sea , Baffin Bay	1A	Sep-Oct	2001, 2004, 2010	Stratified Random bottom Trawl, Alfredo trawl	Greenland halibut	97	Y	?	400-1500m	Y	Y	Y	Y	Y	Greenland	SCR 11/10

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.
Inshore juvenile GRL	Disko Bay	July	2001-2008, 2010	Gillnet mesh (mm) 46, 55, 60, 70	Greenland Halibut	48	Y	-	200-700m	N	N	Y	Y	Y	Greenland	08/38 10/43
Inshore juvenile GHL	Disko Bay	July	2001	Gillnet & longline calibration	Greenland Halibut	0	Y	-	200-700m	N	N	Y	Y	Y	Greenland	05/57
Inshore longline	Disko Bay	July	Since 1993-2001	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	1993-2007	Fixed station Longline	Greenland Halibut	0	Y	-	200-900m	N	N	Y	Y	Y	Greenland	98/44, 00/29, 00/47, 01/68, 08/38 10/43
Inshore Longline	Upernavik	August	1998-2001, 2010	Fixed station Longline	Greenland Halibut	17	Y	-	200-900m	Y	N	N	Y	Y	Greenland	-
Greenland Shrimp Fish	1A	Jul-Sep	Since 1991	Stratified-random trawl	Shrimp	25	N	-	50-600m	Y	Y	N	Y	Y	Greenland	11/24,

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	1CD	Sep-Nov	Since 1997	Stratified Random Bottom Trawl	Greenland halibut, Roundnose grenadier	66	Y	?	400-1500m	Y	Y	N	Y	N	Greenland	SCR 11/10

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	57	N	?	0-400m	Y	Y	N	Y	Y	EU-Germany	SCR 11/04
Greenland – Deepsea	1C - 1D	Aug-Nov	since 1997	Stratified random bottom trawl	Greenland halibut, Roundnose Grenadier	66	Y	?	400-1500m	Y	Y	N	Y	N	Greenland	SCR 11/09
Greenland shrimp	1A - 1F	Jul-Aug	since 1992	Stratified random bottom trawl	Shrimp, groundfish	289	N	?	50-600m	Y	Y	N	Y	N	Greenland	SCR 11/24

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	57	N	?	0-400m	Y	Y	N	Y	U	EU-Germany	SCS 11/04
Greenland shrimp	1A - 1F	Jul-Aug	since 1992	Stratified random bottom trawl	Shrimp, finfish	289	N	?	50-600m	Y	Y	N	Y	N	Greenland	SCR 11/24

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	158	N	100%	< 750 m (88-03) < 1400 m (04-11)	Y	Y	Y	Y	Y	EU	SCR 11/21
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	153	N	100%	127-1400m	Y	Y	Y	Y	Y	EU/ESP EU/PRT	11/021

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.
EU – bottom Trawl	3M	Summer Jul	1988	Stratified-random bottom trawl	Groundfish and shrimp	153	N	100	127-1460m	Y	Y	Y	Y	Y	EU-Spain EU-Portugal	11/21

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.
Spring Bottom Trawl Survey	3NO	Apr-Jun	1972-2010 (except 1983, 2006)	Stratified-random Bottom trawl	Multi-species	54-158	Y	100	42-732 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
Autumn Bottom Trawl Survey	3NO	Oct-Dec	1990-2010	Stratified-random Bottom trawl	Multi-species	125-193	Y	100	42-1445 m	Y	Y	Y	Y	Y	Canada	n/a
EU-Spain	3NO Reg. Area	Jun	1995-2010	Stratified-random Bottom trawl	Multi-species	95-128	N	20	36-1666 m	Y	Y	N	Y	N	Spain	SCR 2010/06

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	86/66
USSR groundfish	3L, 3N	Apr-Jun (mostly)	1983-91, 1993, 1994	Stratified-random Bottom trawl	Multi-species	approx. 48-3L	Y	Unknown	to 732 m	Y	Y	Y	Y	Sometimes	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			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)	1991-10	Stratified-random Bottom trawl	Multi-species Groundfish	196 in 3L 72 in 3N	Y	Unknown	58-1448 in 3L 40-1219 in 3N	Y	Y	N	Y	Y	Canada	<i>pers. com.</i>
Canadian Groundfish (Spring)	3LN	Spring (May-Jun)	1991-10	Stratified-random Bottom trawl	Multi-species Groundfish	130 in 3L 78 in 3N	Y	Unknown	59-715 in 3L 39-714 in 3N	Y	Y	N	Y	Y	Canada	<i>pers. com.</i>

Stock name: American plaice in Divisions 3LNO 2010																
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	1971-2010	Stratified random Campelen	Multispecies	288*	Y	95	39-715 m	Y	Y	Y	Y	Y	Canada	SCR 11/32
Canadian autumn	3LNO	Sep-Dec	1990-2010	Stratified random Campelen	Multispecies	343	Y	100	58-1448 m	Y	Y	Y	Y	Y	Canada	SCR 11/32
EU-Spain	3NO Reg. Area	Apr-Jun	1995-2010	Stratified random Campelen	Groundfish	95	N	11	45-1374 m	Y	Y	N	Y	N	Spain	SCR 11/5
EU-Spain	3L Reg. Area	July-Aug	2003-2010 (no 2005)	Stratified random Campelen	Groundfish	97	N	unknown	119-1462 m	Y	Y	N	Y	N	Spain	SCR 11/19
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 (2010)	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)	1971-2010	Stratified random - bottom trawl	Groundfish & shellfish	288	Y	100	39 to 715m	Y	Y	N	Y	Y	Canada	11/34
Canadian Groundfish (Autumn)	Div. 3LNO	Autumn (Oct-Dec)	1990-2010	Stratified-random - bottom trawl	Groundfish & shellfish	343	Y	100	58to 1448m	Y	Y	N	Y	Y	Canada	11/34
Spanish Groundfish (Spring)	Div. 3NO Regulatory Area	Spring (Apr-May)	1995-2010	Stratified-random - bottom trawl	Groundfish & shellfish	95	N	unknown	45 to 1374m	Y	Y	N	Y	N	Spain	11/06

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)	1971-2010	Stratified Random - Bottom trawl	Multispecies	78-3N 80-3O	Y	80-90	39 to 714 m	Y	Y	Previous to 1994	Y	Y	Canada	11/29
Canadian Multispecies (Autumn)	Div. 3NO	Autumn (Oct-Dec)	1990-2010	Stratified-Random - Bottom trawl	Multispecies	75-3N 75-3O	Y	80-90	40 to 667 m	Y	Y	"	Y	Y	Canada	11/29
Spanish Groundfish (Spring)	Div. 3NO Regulatory Area	Spring (Apr-May)	1995-2010	Stratified-Random - Bottom trawl	Groundfish	95	N	unknown	45 to 1374m	Y	Y	N	Y	N	EU-Spain	11/06

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 x10 ⁹	bio-mass x10 ³ 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	May -June	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
Spring Bottom Trawl Survey	3O	Apr-Jun	1971-2010 (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
Autumn Bottom Trawl Suvey	3O	Oct-Dec series	1991-2010	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 (2010)	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)	1971-2010	Stratified random - bottom trawl	Groundfish & shellfish	465	Y	100	44 to 719m	Y	Y	N	Y	Y	Canada	SCR 11/34
Canadian Groundfish (Autumn)	Div. 3LNO	Autumn (Oct-Dec)	1990-2010 (some sets in 2006)	Stratified-random - bottom trawl	Groundfish & shellfish	343	Y	100	48 to 1 424m	Y	Y	N	Y	Y	Canada	SCR 11/34
EU-Spain Groundfish	Div. 3NO Regulatory Area	Spring (May-June)	1997-2010	Stratified-random - bottom trawl	Groundfish & shellfish	95	N	unknown	40 to 1 395m	Y	Y	N	Y	N	Spain	SCR 11/07
EU-Spain Groundfish	Div. 3L Regulatory Area	Summer (July-August)	2003-2010	Stratified-random - bottom trawl	Groundfish & shellfish	103	N	unknown	105 to 1 463m	Y	Y	N	Y	N	Spain	SCR 11/20

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 (2010)	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)	1971-2010	Stratified random - bottom trawl	Groundfish & shellfish	335	Y	100	44 to 719m	Y	Y	N	Y	Y	Canada	SCR 11/34
Canadian Groundfish (Autumn)	Div. 3NO	Autumn (Oct-Dec)	1990-2010 (some sets in 2006)	Stratified-random - bottom trawl	Groundfish & shellfish	147	Y	100	48 to 1 424m	Y	Y	N	Y	Y	Canada	SCR 11/34
EU-Spain Groundfish (Spring)	Div. 3NO Regulatory Area	Spring (May-June)	1997-2010	Stratified-random - bottom trawl	Groundfish & shellfish	95	N	unknown	40 to 1 395m	Y	Y	N	N	N	Spain	SCR 11/07

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	699 in 2010	Yes		<1500	+	+		+	No	CAN	D. Power Pers. Comm SCR 11/31
Canadian Spring Survey	3LNO	Spring May-July	1978-2010	Stratified random <=1995 Engel >= 1996 Campelen	Groundfish Shellfish	288 in 2010	Yes		<730 m		+			No	CAN	D. Power Pers. Comm. SCR 11/37
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	95 in 2010	No	Low	<1500	+	+		+	+	EU-ESP	SCR 11/07
Spanish Surveys in Div. 3L	3L	August	2003	Stratified Random Campelen	Groundfish	97 in 2010	No	Low	<1500	+	+		+	+	EU-ESP	SCR 11/20
EU Flemish Cap Surveys	3M	July	1988	Stratified Random (Lofoten)	Groundfish Shrimp	153 in 2010	No	Flemish Cap	<1500	+	+	+	+	+	EU-ESP EU-PRT	SCR 11/21
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
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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	SCR Doc. No.
Canadian autumn groundfish	2J,3K, 3L	Autumn	78-10 2J3K 84-10 3L	Stratified-random Engel trawl 1978-94 2J3K Yankee trawl 1981-82 3L Engel trawl 1984-94 3L Campelen Trawl all areas 1995-10	Multispecies (Cod, flounders, G. halibut, Redfish & shellfish)	482 in 2010	Y	This column not appropriate for this species given differences in depth coverage and areas covered in the surveys.	2J3K in 2009 109-1442m 3L in 2009 58-1448 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	1995-2010	Stratified-random Campelen trawl	Multi-species survey	288	Y		39-715 m	Y	Y	Y	Y	Y	Canada	11/31
Canadian groundfish spring	3LNO	Apr-June	1995-2009	Stratified-random Campelen trawl	Groundfish	299 in 2009	Y	This column not appropriate for this species given differences in depth coverage and areas covered in the surveys.	46-732 m	Y	Y	Y	Y	Y	Canada	11/31
Canadian autumn groundfish	2J,3K, 3L	Fall	1978-2009 2J3K 1981-2009 3L	Stratified-random Engel trawl 1978-94 2J3K Yankee trawl 1981-82 3L Engel trawl 1984-94 3L Campelen Trawl all areas 1995-2009	Groundfish (Cod, flounders, G. halibut, Redfish & shellfish)	411 in 2007	Y		2J3K in 2009 127-1494 m 3L in 2009 81-1424 m	Y	Y	Y	Y	Y	Canada	11/31
EU bottom trawl	3M	Jul	1988-2009	Stratified-random Bottom trawl	Groundfish & shrimp	178 in 2009	N		128-1460 m	Y	Y	Y	Y	Y	EU	11/21
EU-Spain bottom trawl	Reg. Area 3LNO	Apr-May	3NO1995-2009 3L 2003, 2004, 2006, 2007, 2009	Stratified-random Bottom trawl	Groundfish	207 in 2009	N		56-1464 m in recent years	Y	Y	N	Y	Y	Spain	11/05
Canadian groundfish	2GH	Sep-Oct	occasion since 1978	Stratified-random Campelen in 1996-2006	Groundfish & shellfish	0 in 2H in 2009	Y		107-1437 m in 2006	Y	Y	Y	Y	Y	Canada	11/31
Canadian groundfish	3MNO	Sep-Dec	3NO 1990-2009 3M* 1996-2003, 2006-07	Stratified-random Campelen	Groundfish	0-3M 75-3N 100-3O in 2009	Y		768-1404 m 3M 48-1475 m 3N 64-1475 m 3O in 2009	Y	Y	Y	Y	Y	Canada	11/31
								3M * full coverage 1996; since 1997 only in deepwater Sackville Spur, Flem. Pass								

Russian	3M	May	1987-96	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
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
EU Bottom Trawl Survey	3NO	May June	1995 - present	Stratified-random bottom trawl	Groundfish Shellfish (crab, shrimp)/ capelin	95	No		60-1500	Y	Y				Spain	SCR 11/61
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 11/61

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
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
EU-Bottom trawl Survey	3M	Jul	1988 to present	Stratified-random bottom trawl	All	154	No	100%	<750m (88-02) <1400m (03-10)	Y	Y	Y	Y	Y	EU	SCR 10/66
EU-Bottom trawl Survey	3M	Jul	1988 to present	Stratified-random bottom trawl	All	126	No	100%	<750m (88-02) <1400m (03-10)	Y	Y	Y	Y	Y	EU	SCR 11/60

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 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	LF			
West Greenland Trawl Survey	SA0+1 (West Greenland Shelf)	July-Aug	Since 1988	Startified semi-systematic; trawl; Skjervøy 3000 w/bobbins	Northern shrimp; Groundfish	172/31	No	95	150-600m	Y	Y	N/A ²	Y	Y	GRL	SCR 03/71
	2003					187/21										SCR 04/72
	2004					194/24										SCR 05/74
	2005					221/28/11										SCR 06/58
	2006	June-Aug		Stratified semi-systematic; trawl; Cosmos 2000 w/rockhopper		212/48/8										SCR 07/71
	2007					204/54/9										SCR 08/71
	2008					247/32/11										SCR 09/67
	2009					270/29/1										SCR 10/57
	2010					192/24/0										SCR 11/58
	2011															

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: 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 distribu- tion (%)	Depth range	Research data related to stock size estimates	abun- dance	bio- mass	ALK	LF	Indiv- idual weights	Country	SCS/ SCR Doc. No
East Green- land shrimp survey	ICES XIVb	Sep	1989- 1996 (except 1991 and 1993)	Spline survey, trawl; Skjervøy 3000 w/bobbins	Northern shrimp	40	No	Not known	200-600m	Y	Y	N	Y	Y	Green- land	SCR 96/116	
East Greenland Trawl Survey	ICES XIVb		Since 2008	Stratified semi- systematic; trawl; Cosmos 2000 w/rockhopper	Northern shrimp; Groundfish		No	Not known	0 – 600 m	Y	Y	N	Y	Y	Green- land		
	2008	Aug-Sep	53			SCR 10/57											
	2009	Aug-Sep	97			SCR 10/57											
	2010	August	85			SCR 10/57											
	2011	August	85			SCR 11/56											