

SCIENTIFIC COUNCIL MEETING -2023

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 2023.

Stock name: Greenland halibut in Subarea 0 +1 (offshore)																
Name of survey	Location (Div.)	Season month(s)	Years of survey from-to or since.	Type of survey and gears	Target species	No. of sets	24 hr fishing	Area of coverage in relation to stock distribution (%)	Depth range	Research data related to stock size estimates				Individual weights	Country	SCS/SCR Doc. No.
										Abundance	Biomass	ALK	LF			
Greenland Deep Sea	1CD	Aug-Nov	1997 – 2017, 2019	Stratified Random bottom Trawl, Alfredo trawl	Greenland halibut	70	Y	-	400-1500 m	Y	Y	N	Y	Y	Greenland	SCR 23/12
Greenland deep-sea survey	1C	October	2022	Stratified Random bottom Trawl, Bacalao Trawl	Greenland halibut	71	Y	-	400-1500m	Y	Y	N	Y	Y	Greenland	SCR 23/12
Greenland Shrimp Trawl	1A-F	June-July	1991-2020, and 2022	Stratified Random bottom Trawl, Cosmos trawl since 2005 (1991-2014time-series transformed)	Shrimp Groundfish	331	N	-	50-600m	Y	Y	N	Y	Y	Greenland	SCR 23/20
Canada Deep Sea	0A	Oct-Nov	1999, 2000, 2001, 2004, 2006, 2008, 2010, 2012, 2014-2017, 2019	Stratified Random bottom Trawl, Alfredo trawl	Greenland halibut	72	Y	-	400-1500 m	Y	Y	N	Y	Y	Canada	SCR 23/29
Canada Deep Sea	0A	November	2022	Stratified Random bottom Trawl, Bacalao trawl	Greenland halibut	86	Y	-	400-1500 m	Y	Y	N	Y	Y	Canada	SCR 23/29
Canada Deep Sea	0B	Oct-Nov	2000, 2001, 2011, 2013, 2014-2016	Stratified Random bottom Trawl, Alfredo trawl	Greenland halibut	81	Y	-	400-1500 m	Y	Y	N	Y	Y	Canada	SCR 17/28
Canada Deep Sea	0B	November	2022	Stratified Random bottom Trawl, Bacalao trawl	Greenland halibut	105	Y	-	400-1500 m	Y	Y	N	Y	Y	Canada	SCR 23/29

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			
Disko bay Inshore	Disko Bay	Jun-Jul	1993-01 2001-22	Longline Gillnet	Greenland halibut	- 46	Y	-	200-700m	Y	Y	Y	Y	Y	Greenland	23/021
Uummannaq Inshore	Uummannaq	Aug-Sep	1993-15 2011-22	Longline Gillnet	Greenland halibut	- 43	Y	-	200-900m	Y	Y	Y	Y	Y	Greenland	23/022
Upernavik Inshore	Upernavik	Aug-Sep	1998-14 2012-22	Longline Gillnet	Greenland halibut	- 42	Y	-	200-900m	Y	Y	Y	Y	Y	Greenland	23/037
Greenland Shrimp and Fish survey	Disko bay + (1A-1F)	Jul-Sep	1991-20 2022	Stratified-random trawl	Shrimp & fish	25	N		50-600m	Y	Y	Y	Y	Y	Greenland	23/021 23/020

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	1982-2019	Stratified random bottom trawl	Cod, redfish, other finfish	0	N	?	0-400m	Y	Y	N	Y	Y	EU-Germany	SCR 23/003
Greenland – Deepsea	1C - 1D	Aug-Nov	1997-17 2019, 2022	Stratified random bottom trawl	Greenland halibut,	65	Y	?	400-1500m	Y	Y	N	Y	Y	Greenland	SCR 23/012
Greenland Shrimp and Fish survey	1A - 1F	Jul-Aug	since 1990-20 2022	Stratified random bottom trawl	Shrimp & fish	331	N	?	50-600m	Y	Y	N	Y	Y	Greenland	SCR 23/020
Greenland Shrimp and Fish survey - inshore	1D	May	Since 2015	Stratified fixed bottom trawl	Shrimp & fish	17	N	?	50-600m	Y	Y	N	Y	Y	Greenland	SCR 23/013

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				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 finfish	0	N	?	0-400m	Y	Y	N	Y	Y	EU-Germany	SCR 21/003
Greenland Shrimp and Fish survey	1A - 1F	Jul-Aug	since 1992	Stratified random bottom trawl	Shrimp, finfish	331	N	?	50-600m	Y	Y	N	Y	N	Greenland	SCR 23/020

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	Biomass	ALK	LF			
EU-bottom trawl survey	3M	Jun-Jul	since 1988	Stratified random	All	181	N	100%	<750 m (88-03) <1400m (04-21)	Y	Y	Y	Y	Y	EU	SCR 23/03
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 1995-1196 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: Golden redfish (<i>Sebastes norvegicus</i>) 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 Jun/Jul	1988	Stratified-random bottom trawl	Groundfish and shrimp	182	N	100	127-1460m	Y	Y	Y	Y	Y	EU-Spain EU-Portugal	23/003

Stock name: Beaked redfish (<i>Sebastes mentella</i> and <i>Sebastes fasciatus</i>) 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 Jun/Jul	1988	Stratified-random bottom trawl	Groundfish and shrimp	182	N	100	127-1460m	Y	Y	Y	Y	Y	EU-Spain EU-Portugal	23/003

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 Jun/Jul	1988	Stratified-random bottom trawl	Groundfish and shrimp	182	N	100	127-1460m	Y	Y	Y	Y	Y	EU-Spain EU-Portugal	SCR 23/03

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	1972-2019 (except 1983, 2006)	Stratified-random Bottom trawl	Multi-species	134	Y	100	38-666 m	Y	Y	Y	Y	Y	Canada	SCR 22/07
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	1990-2020 (except 2014)	Stratified-random Bottom trawl	Multi-species	121	Y	100	39-641 m	Y	Y	Y	Y	Y	Canada	SCR 22/07
EU-Spain	3NO - Regulatory Area	Jun	1995-2021 (except 2020)	Stratified-random Bottom trawl	Multi-species	113	N	20	44-1450 m	Y	Y	Y	Y	Y	Spain	SCR 23/02

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	Y	Y	Y	Y	Some-times	USSR	86/66
									1977-82: to 732 m	Y	Y	Y	Y			
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	Some-times	USSR	86/66
					Groundfish	approx. 42-3N	Y	Unknown	to 732 m	Y	Y	Y	Y			
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 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)	1991-20	Stratified-random Bottom trawl	Multi-species Groundfish	Incomplete in 3L 44-3N	Y	Unknown	39-732 in in 3N	Y	Y	N	Y	Y	Canada	22/007 and pers. com.
Canadian Groundfish (Spring)	3LN	Spring (May-Jun)	1991-22	Stratified-random Bottom trawl	Multi-species Groundfish	56 in 3L 72 in 3N	Y	Unknown	65-685 in 3L 39-674 in 3N	Y	Y	N	Y	Y	Canada	23/004 and pers. com.
Spanish Groundfish (Spring)	3N	Spring (Jun)	1995-22	Stratified-random Bottom trawl	Multi-species Groundfish	113	N	Unknown	40-1460	Y	Y	N	Y	Y	Spain	23/002
Spanish Groundfish (Summer)	3L	Summer (July-August)	2006-19	Stratified-random Bottom trawl	Multi-species Groundfish	97	N	Unknown	122-1458	Y	Y	N	Y	Y	Spain	20/014 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 size estimates				Individual weights	Country	SCS/ SCR Doc. No
										Abundance	Bio-mass	ALK	LF			
Canadian spring	3LNO	May-Jun	2022 Series = 1971-ongoing (no 2006, 2015, 2017, 2020-21)	Stratified random Campelen	Multispecies	129	Y	<100	41-717 m	Y	Y	Y	Y	Y	Canada	23/40
Canadian autumn	3LNO	Sep-Dec	2022 Series= 1990-ongoing (no 2004, 2014, 2020-22)	Stratified random Campelen	Multispecies	0	NA	No survey	No survey	N	N	N	N	N	Canada	23/40
EU-Spain	3NO Reg. Area	Jun	2022 Series = 1995-ongoing (no 2020)	Stratified random Campelen	Groundfish	113	N	11	40-1460 m	Y	Y	N	Y	N	Spain	23/02
EU-Spain	3L Reg. Area	Jul-Aug	2022 Series = 2003-ongoing (no 2005, 2020-2022)	Stratified random Campelen	Groundfish	0	NA	No survey	No survey	N	N	N	N	N	Spain	20/13
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 (m)	Research data related to stock size estimates				Individual weights	Country	SCS/ SCR Doc. No
										Abundance	Bio-mass	ALK	LF			
Canadian Multispecies Spring	3LNO	May-Jun	2022	Stratified Random Campelen Trawl, Cabot (NEW)	Groundfish & shellfish	129	Y	<100%	43-717	Y	Y	N	Y	Y	Canada	23/042
Spanish Groundfish	3NO	June	Since 1995	Stratified Random Campelen Trawl	Groundfish & shellfish	113	N	NA	40-1460	Y	Y	N	Y	N	Spain	23/002

Stock name: Witch flounder 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 (m)	Research data related to stock size estimates				Individual weights	Country	SCS/ SCR Doc. No
										Abundance	Bio-mass	AL K	LF			
Canadian Multispecies Spring	3NO	May-Jun	2022	Stratified Random Campelen Trawl, Cabot (NEW)	Groundfish & shellfish	92	Y	<100%	43-717	Y	Y	N	Y	Y	Canada	23/042
Spanish Groundfish	3NO	June	Since 1995	Stratified Random Campelen Trawl	Groundfish & shellfish	113	N	NA	40-1460	Y	Y	N	Y	N	Spain	23/002

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 trawl survey	3NO	May-June	1995-2022	Stratified Random <=2001 Pedreira >=2001 Campelen	Groundfish	113	+	?	43-1438 m	Y	Y	N	Y	Y	Spain	23/002

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.
										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 367m	Y	Y	Y	Y	N	Canada	NAFO Studies No. 2
EU-Spain	3O	Jun	1995-2019	Stratified-random Bottom trawl	Multi-species Groundfish	6-23	N	Unknown	93 - 1410 m	Y	Y	N	Y	Some Surveys	Spain	SCR 20/009
Canada groundfish	3O	Sep-Dec series + Apr-May series	1991-2013, 2015-20 1991-2015-19, 2022	Stratified-random Bottom trawl	Multi-species Groundfish	24-40 + 35-51 in redfish depths	Y	Unknown	To 732 m	Y	Y	N	Y	Y	Canada	SCR 23/042

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 (2022)	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 (April-May)	1971-2019, (Subdiv. 3Ps only) 2021-2022	Stratified-random - bottom trawl	Groundfish & shellfish	25	Y	80 (3Ps)	56 to 731 m	Y	Y	N	Y	Y	Canada	SCR 23/042
Canadian Groundfish (Autumn)	Div. 3LNO	Autumn (Oct-Dec)	1990-2022	Stratified-random - bottom trawl	Groundfish & shellfish	0		0							Canada	SCR 23/042
EU-Spain Groundfish	Div. 3NO Regulatory Area	Spring (May-June)	1997-2019, 2021-2022	Stratified-random - bottom trawl	Groundfish	113	N	15	43 to 1 438m	Y	Y	N	Y	Y	EU-Spain	SCR 23/002
EU-Spain Groundfish	Div. 3L Regulatory Area	Summer (July-August)	2003-2019	Stratified-random - bottom trawl	Groundfish											

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 (2022)	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 (April-May)	1971-2019, (Subdiv. 3Ps <i>only</i>) 2021-2022	Stratified-random - bottom trawl	Groundfish & shellfish	25 (3Ps)	Y	80 (3Ps)	56 to 731 m	Y	Y	N	Y	Y	Canada	SCR 23/042
Canadian Groundfish (Autumn)	Div. 3NO	Autumn (Oct-Dec)	1990-2022	Stratified-random - bottom trawl	Groundfish & shellfish	0		0							Canada	SCR 23/042
EU-Spain Groundfish (Spring)	Div. 3NO Regulatory Area	Spring (May-June)	1997-2019, 2021-2022	Stratified-random - bottom trawl	Groundfish	113	N	15	43 to 1 438m	Y	Y	N	Y	Y	EU-Spain	SCR 23/002

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	204 in 2021	Yes		<1500	+	+		+	No	CAN	SCR 22/07
Canadian Spring Survey	3LNO	Spring May-July	1978	Stratified random <=1995 Engel >= 1996 Campelen	Groundfish Shellfish	143 in 2021	Yes		<730 m		+			No	CAN	SCR 22/07
Canadian deepwater	3MLN	August February Spring	1991 1994 1995	Bottom trawl	Groundfish				<1500	+	+		+	No	CAN	SCR 95/51
Spanish Surveys in Div. 3NO	3NO	June	1995	Stratified Random <=2001 Pedreira >=2001 Campelen	Groundfish	113 in 2022	No	Low	<1500	+	+		+	+	EU-ESP	SCR 23/02
Spanish Surveys in Div. 3L	3L	August	2003	Stratified Random Campelen	Groundfish	96 in 2019	No	Low	<1500	+	+		+	+	EU-ESP	SCR 20/14
EU Flemish Cap Surveys	3M	July	1988	Stratified Random (Lofoten)	Groundfish Shrimp	182 in 2022	No	Flemish Cap	<1500	+	+	+	+	+	EU-ESP EU-PRT	SCR 23/03
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: 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	SCS/ SCR Doc. No
										Abundance	Bio-mass	ALK	LF			
Canadian groundfish spring	3LNO	Apr-June	Since 1995 (2006, 2015, 2020, 2021, 2022 incomplete)	Stratified-random Campelen trawl	Multi-species survey		Y		42-725 m	Y	Y	Y	Y	Y	Canada	22/007
Canadian groundfish autumn	2J3K 3LNO	Autumn	2J3K since 1978 (2008, 2022 incomplete) 3L since 1981 (2014, 2021, 2022 incomplete)	Stratified-random Engel trawl 1978-94 2J3K Yankee trawl 1981-82 3L Engel trawl 1984-94 3LNO Campelen Trawl all areas since 1995	Multi-species survey	2J3K: 149	Y	This column not appropriate for this species given differences in depth coverage and areas covered in the surveys	2J 129-1325 m 3K 139-658 m 3L 62-668 m	Y	Y	Y	Y	Y	Canada	22/007
EU bottom trawl	3M	Jun-Jul	1988-2022	Stratified-random Lofoten trawl	Groundfish & shrimp	181	N		128-1460 m	Y	Y	Y	Y	Y	EU	23/003
EU-Spain bottom trawl	Reg. Area 3LNO	Apr-May	3NO since 2003 (2000, 2008, 2020 incomplete)	Stratified-random Bottom trawl	Groundfish	3NO: 114	N		3NO 44-1450m 3L 126-1447 m	Y	Y	N	Y	Y	Spain	23/002
Canadian groundfish autumn	2GH	Sep-Oct	2G no longer covered; 2H since 1978 (2022 incomplete)	Stratified-random Campelen in 1996-2018	Multi-species survey	2H: 52	Y		98-1399 m 2H	Y	Y	Y	Y	Y	Canada	22/007
Canadian groundfish autumn	3MNO	Sep-Dec	3NO since 1990 (2021, 2022 incomplete) 3M 1996-2003, 2006-2007	Stratified-random Campelen	Multi-species survey				3N 40-634 m 3O 64-7665 m						Canada	22/007
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: Northern Shortfin 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	1970-2021	Stratified random bottom trawl	Multi-species	*	Y	Unknown	20-366 m	Y	Y	N	Y	N	Canada	
CA autumn multispecies bottom trawl	4T	Sep	1971-2021	Stratified random bottom trawl	Multi-species	156	Y, after 1986	Unknown, likely < 20%	25-364 m	Y	Y	N	N	N	Canada	
EU multispecies bottom trawl	3M	July	1988-2021	Stratified random bottom trawl	Multi-species	77	N, 0600-2200	Unknown, likely < 10%	127-730 m, 127- 1 460 m as of 2004	Y	Y	N	Y	N	EU/ESP EU/PRT	SCS Doc. 22/004
EU multispecies bottom trawl	3NO	June	1995-2021 No 2020	Stratified random bottom trawl	Multi-species	113	N	Unknown	42-1 394 m	Y	Y	N	Y	N	EU/ESP	SCS Doc. 22/005
CA spring multispecies bottom trawl	3LNOP	April-June	2005-2019 No 2020	Stratified random bottom trawl	Multi-species	*	Y	Unknown	20-870 m, but inconsistent inshore	Y	Y	N	N	N	Canada	SCS Doc. 22/007
CA autumn multispecies bottom trawl	3KLNO	Mainly Sept-Dec, but extends through Jan in some years	2005-2019	Stratified random bottom trawl	Multi-species	*	Y	Unknown	30-1 500 m, but inconsistent inshore and > 730 m	Y	Y	N	N	N	Canada	SCS Doc. 22/007

*The data in this table is only updated every three years (e.g., 2019 and 2022) when a full assessment is conducted

Stock name: Northern Shrimp in Divisions 3LNO																
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	~300 sets in 3LNO	Yes	100% of area covered	30-732 m	Y	Y	N	Y	N	Canada	SCR 16/58
Multi-species Autumn Survey	2HJ 3KLNO	October to December	1995 to present	Stratified-random bottom trawl	Groundfish Shellfish (crab, shrimp)/ capelin	~300 sets in 3LNO	Yes	100% of area covered	30-1500 m	Y	Y	N	Y	N	Canada	CSAS 2017/ 12
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 16/51
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 16/51

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				Indiv-idual weights	Country	SCS/SCR Doc.No	
										Abun-dance	Bio-mass	ALK	LF				
EU-Flemish Cap Survey	3M	Jul-Aug	1988 to present	Stratified-random bottom trawl	All	182	N	100%	<750m (88-02)	Y	Y	Y	Y	Y	EU	SCR23/052	
									<1400m								
									(03-20)								

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				Indiv-idual weights	Country	SCS/SCR Doc. No
										Abun-dance	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/rockhopper	Northern shrimp and groundfish	206	N	95	150-600m	Y	Y	N/A	Y	Y	GRL	22/045

¹First 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.

²Lack 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	July- Aug	Since 2008 No surveys in 2017, 2018, 2019 and 2021	Stratified semi-systematic; trawl; Cosmos 2000 w/rockhopper	Northern shrimp Groundfish	95	Y	unknown	0-600m	Y	Y	N	Y	Y	Greenland	22/049

*No update for 2017 -2019 and 2021 due to a cancelled survey.