

Northwest Atlantic



Fisheries Organization

Serial No. N2138

NAFO SCS Doc. 92/22

SCIENTIFIC COUNCIL MEETING - JUNE 1992

A Compilation of Research Vessel Surveys on a Stock-by-Stock Basis

by

NAFO Secretariat

Discussions in the STACREC meeting in June 1990 resulted in the compilation of information on research vessel surveys on a stock-by-stock basis. A specific format was accepted and an inventory for all stocks for which survey information was available was compiled and presented at that meeting in SCS Doc. 90/22, Serial No. N1820. It was acknowledged that the material may not have been complete or fully accurate, given the initial purpose of the compilation. Nevertheless, this inventory was judged to be very helpful for the establishment of future inventories.

STACREC agreed that the Designated Experts for the stocks be responsible for future compilations. The tabulations prepared at the June 1991 meeting was presented in SCS Doc. 91/18. In 1991, STACREC concluded (NAFO Sci. Coun. Rep., 1991, p. 114) that the best approach would be to have Designated Experts update the information annually for review by STACFIS. The following tabulations were presented and reviewed by STACFIS at the June 1992 Meeting. The updated list, however, was compiled only during the course of the June 1992 Meeting. STACFIS recommends that *in the future, Designated Experts present this updated information at the time of preparation of the preliminary assessments.* The stocks are presented in the same sequence they were considered in the agenda.

N.B. No tabulations were available for Roundnose grenadier in Subareas 2 and 3, and Shrimp in Denmark Strait.

Stock name:		Cod in Division 3M										See reverse side for guidelines to fill in columns			
Name of Survey	Location	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				Country	SCR Doc. No.
										Stock size estimates		LF	Indiv-idual weights		
										abun-dance	bio-mass				
Russian groundfish survey	3M	Apr-Jul	1971	1971-82 fixed stations 1983-90 random 1987-90 trawl and acoustic	Groundfish	12-76 85-109	Y	100	120-720	Y	Y	Y	Y	Russia	92/13
Canadian groundfish survey	3M	Jan-Feb	1977-85	Stratified-random	Groundfish	109-142	Y	100	120-720	Y	Y	Y	Y	Canada	83/29
EEC groundfish survey	3M	July	1988	Stratified-random	Groundfish	113-117	N (1988- Y)	100	120-720	Y	Y	Y	Y	EEC	92/27

Stock name: 3N0 Cod		See reverse side for guidelines to fill in columns													
Name of Survey	Location	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				Country	SCR Doc. No.
										Stock size estimates	ALK	LF	Individual weights		
										abundance	bio-mass				
Spring ground-fish survey	3N, 30	Apr-Jun	since 1971	Stratified-random bottom trawl	Groundfish Cod Flounder	209	Y	100%	31-200 ^a (Ftm)	Y	Y	Y	Y	Canada	92/75
Fall ground-fish survey	3N, 30	Nov	1st survey in 1990	Stratified-random bottom trawl	Groundfish Cod Flounder	151	Y	100%	31-300	Y	Y	Y	Y	Canada	92/75
Spring	3N, 30	Apr-Jun	since 1972	Fixed station 1972-82 Random stratified 1983-91 Trawl acoustic since 1986	Groundfish	131	Y	100	31-400	Y	Y	Y	Y	Russia USSR	92/13

^a 31-200 for all years except 1991 when depth range was 31-400 Ftm.

Redfish in Subarea 1										See reverse side for guidelines to fill in columns						
Stock name:	Name of Survey	Location	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				Country	SCR Doc. No.
											Stock size estimates		LF	Indiv- idual weights		
										abun- dance	bio- mass	ALK				
	German groundfish survey	SA 1 1B-1F	Oct/Nov	Since 1982	Stratified-random bottom trawl.	Cod	97	N	80%	0-400 m	Y	Y	N	Y	EC-DEU	92/40
	Greenland shrimp survey	SA 1 Disco Bay	Jul	1991	Stratified-random shrimp trawl.	Shrimp	44	N	<10%	150-550 m	Y	Y	N	Y	Greenland	92/43
	Greenland shrimp survey	SA 1 1A, 1B	Jul, Aug	1988	Stratified-random shrimp trawl.	Shrimp	41	N	20%	150-600 m	Y	Y	N	Y	Greenland	92/44
	Cooperative Greenland-Japan trawl survey	SA 1 1A-1D	Aug/Sep Nov	1987	Stratified-random bottom trawl.	Greenland halibut, Roundnose grenadier, Redfish	100 90	N	40%	0-1500 m	N	Y	N	Y	Greenland/ Japan	92/48

Stock name: Redfish 3M													See reverse side for guidelines to fill in columns			
Name of Survey	Location	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				Country	SCR Doc. No.	
										Stock size estimates	abundance	bio-mass	ALK			LF
EEC trawl survey	3M	Jun/Jul	since 1988	Stratified-random sampling	General groundfish	117	N	100	280-476	Y	Y	Y	Y	Y	EEC-Spain	SCR 92/27
USSR bottom trawl survey	3LMN	Apr-Jun	since 1983	Stratified-random sampling	Redfish	100	?	100	200-700	Y	N	Y	?	?	Russia	SCR 92/12
USSR acoustic survey	3LMN	Apr-Jun	since 1987	acoustic	Redfish	100	?	100	0-700	Y	N	Y	?	?	Russia	SCR 92/12

Stock name:	Redfish in Divisions 3LN					Research data related to stock					Country	SCR Doc. No.				
	Name of Survey	Location	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			Stock size estimates		LF	Individual weights
													abundance	bio-mass		
USSR ground-fish survey	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 732m	Y	Y	Y	Y	USSR	86/66	
USSR ground-fish survey	3L, 3N	Apr-Jun (mostly)	1983-91	Stratified random bottom trawl	Multi-species groundfish	approx 120-3L approx 85-3N	Y	unknown	to 732m	Y	Y	Y	"	USSR	86/66	
USSR acoustic	3LN	Apr-Jun	1987-91	Acoustic	Multi-species	unknown midwater sampling	Y	unknown	to 732m	Y	Y	Y	"	USSR	88/24	
Canadian groundfish survey (covering deep-water strata)	3L	various	1978-86	Stratified-random bottom trawl	Multi-species groundfish	min. of 40 in depths > 183m	Y	unknown	to 732m	Y	Y	Y	some-times	Canada	NAFO Sci. Coun. Studies 2	
Canada redfish survey	3L	Jan	1990	Stratified random bottom trawl	Redfish	55	Y	unknown	183-732m	Y	Y	Y	No	Canada	NAFO Sci. Coun. Studies 2	
Canada ground-fish survey	3LN	Apr-May	1990-91	Stratified random bottom trawl	Multi-species groundfish	60-70 in Redfish depths	Y	unknown	to 732m	Y	Y	Y	Yes	Canada	NAFO Sci. Coun. Studies 2	
Canada redfish survey	3L	Aug	1990-91	Stratified random bottom trawl	Redfish	125	Y	unknown	183-732m	Y	Y	Y	Yes	Canada	"	
Canada ground-fish survey	3L	Oct-Dec	1990-91	Stratified random bottom trawl	Multi-species/groundfish	161	Y	unknown	to 732m	Y	Y	Y	No	Canada	"	
Canada ground-fish survey	3N	Oct-Dec	1991	" "	"	60-70 in Redfish depths	Y	unknown	to 732m	Y	Y	Y	Yes	Canada	"	

See reverse side for guidelines to fill in columns

Stock name: 4VWX Silver hake		See reverse side for guidelines to fill in columns													
Name of Survey	Location	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				Country	SCR Doc. No.
										Stock size estimates	Individual weights	LF	ALK		
										abundance	bio-mass				
Canadian July R/V Survey	4VWX	7	1970-91	Stratified-random bottom trawl	Mixed groundfish	195	Y	100	50-300	Y	Y	Y	Y	Canada	92/50
Canada-US Joint Juvenile Survey	4VWX	10-11	1981-91	Stratified-random IGYPT trawl	Silver hake	80	12 night	80-100%	50-300	Y	Y	Y	Y	Cis-Canada	92/50 92/35

Stock name: American plaice in Division 3M														See reverse side for guidelines to fill in columns		
Name of Survey	Location	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				Country	SCR Doc. No.	
										Stock size estimates		LF	Indiv- idual weights			
										abun- dance	bio- mass					
										ALK						
Russian survey	319	Spring- summer	1972-91	Fixed station 1972-82 Random- stratified 1983-91	Groundfish	19-76 120	Y	100%	120-720	Y	Y	N	Y	N	Russia	SCS 92/12
Canadian Groundfish Survey	319	Jan-Feb	1977-85	Stratified- random	Groundfish	108- 142	Y	100%	120-720	Y	Y	Y	N	N	Canada	SCR 92/76
EEC Groundfish Survey	319	July	1988-91	Stratified- random	Groundfish	120	Y (1988) 16 hrs (1989- 91)	100%	120-720	Y	Y	Y	Y	Y	EEC	SCR 92/27

Stock name: American plaice in Divisions 3L, 3N and 3O													See reverse side for guidelines to fill in columns			
Name of Survey	Location	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				Country	SCR Doc. No.	
										Stock size estimates		LF	Indiv- idual weights			
										abun- dance	bio- mass			ALK		
Canadian Groundfish (spring)	3LN0	Spring Apr-May	1971-92	Stratified-random bottom trawl	Groundfish	320	Y	100%	Bottom depths to 731 m ¹	Y	Y	Y	Y	Canada	92/79	
Juvenile flatfish	3LN0	Autumn Aug-Sep	1985-91	Stratified-random bottom trawl	American plaice & yellowtail flounder	206	Y	90%	Bottom depths to 183 m	Y	Y	Y	Y	Canada	92/78	
USSR Groundfish	3LN0	Spring Apr-Jun	1972-91	Fixed station up to 1982. 1983-91 Stratified-random bottom trawl	Groundfish	229	Y	100%	457 to 731 m	Y	Y	Y	Y	USSR	SCS 92/12	
Canadian Groundfish (fall)	3LN0	Autumn Oct-Nov	1981-91 (3L) 1990-91 (3NO)	Stratified-random bottom trawl	Groundfish	219 151	Y	100%	Bottom depths ¹ to 731m	Y	Y	Y	Y	Canada	92/79	

¹ Depth range extended from 366 m to 731 m in 1990.

Stock name: Witch flounder in Divisions 3N and 3O													See reverse side for guidelines to fill in columns			
Name of Survey	Location	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			Country	SCR ¹ Doc. No.		
										Stock size estimates	abundance	bio-mass			ALK	LF
Canadian Groundfish (spring)	3N, 3O	Apr-May	since 1971	Stratified-random with bottom trawl	Groundfish	184		variable (minimal for witch)	<366 m (731 in 1991-92)	Y	Y	Y	Y	Y		
USSR Groundfish	3N, 3O	Apr-Jun	since 1972	Fixed station 1972-82, stratified random 1983-91 all with bottom trawl	Groundfish	131		variable	<731 M	Y	Y	-	Y	Y	USSR SCS 92/12	
Canadian Groundfish (fall)	3N, 3O	1990-91		Stratified random bottom trawl	Groundfish	151		variable	<548 m	Y	Y	Y	Y	Y	Canada	

1-No SCR Document in 1992 for Canadian survey results.

Yellowtail flounder in Divisions 3L, 3N and 3O												See reverse side for guidelines to fill in columns						
Stock name:	Name of Survey	Location	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				Country	SCR Doc. No.		
											Stock size estimates	abundance	bio-mass	ALK			LF	Individual weights
	Canadian groundfish (spring)	Div. 3LNO	Spring (Apr-May)	1971-92	Stratified-random using bottom trawl	Groundfish	320	Y	100%	Bottom depths to 731m ¹	Y	Y	Y	Y	Y	N	Canada	92/61
	Juvenile flatfish	Div. 3LNO	Autumn (Aug-Sept)	1985-91	Stratified-random using bottom trawl	Yellowtail flounder A. plaice	206	Y	90%	32-183	Y	Y	Y	Y	Y	Y	Canada	92/61
	Russian groundfish	Div. 3LNO	Spring (Apr-Jun)	1972-91	Fixed station up to 1982. 1983-91 Stratified-random using bottom trawl	Groundfish	229	Y	100%	<57-731	Y	Y	Y	Y	Y	Y	Russia	SCS 92/12
	Canadian groundfish (fall)	Div. 3LNO	Autumn (Oct-Nov)	1981-91 (3L) 1990-91 (3NO)	Stratified-random using bottom trawl	Groundfish	219 151	Y	100%	Bottom depths to 731m ¹	Y	Y	Y	Y	Y	Y	Canada	92/61

¹ Depth range extended from 366 m to 731 m in 1990.

Stock name: Greenland Halibut in Subareas 0+1												See reverse side for guidelines to fill in columns					
Name of Survey	Location	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				Country	SCR Doc. No.		
										Stock size estimates	abundance	bio-mass	ALK			LF	Individual weights
Russia Groundfish Survey	Subarea 0B	Oct/Nov	1983	Bottom trawl Stratified-random	Greenland Halibut	59	No	?	200-1500	X	X	X		X		Russia	92/22
JAMARC	Div. LABCD	Aug	1987	Bottom trawl Stratified-random	Greenland Halibut	108	No.	?	1-1500	X	X	-		X		Japan/ Greenland	92/48
JAMARC	Div. LABCD	Nov	1987	Bottom trawl Stratified-random	Greenland Halibut	51	No.	?	1-1000	X	X	-		X		Japan/ Greenland	92/48

Stock name: Greenland halibut in Subarea 2 and Divisions 3KL											See reverse side for guidelines to fill in columns					
Name of Survey	Location	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				Country	SCR ³ Doc. No.	
										Stock size estimates	abundance	bio-mass	ALK			LF
USSR Greenland halibut survey	Div. 2GH ¹	(Oct-Nov)	1979-91	Stratified-random using bottom trawl	Greenland halibut	190	Y	< 40%	200-1,500 ² m	Y	Y	Y	Y	Y	Russia/GDR	SCR 92/22
USSR groundfish	Div. 3KL	Jun-Jul	1972-91	" Fixed station (1972-80)	Groundfish	200-250	Y	< 50%	to 731 in 3L, to 1,000 in 3K	Y	Y	Y	Y	Y	Russia	SCS 92/12
Canadian groundfish	Div. 2J3KL	Nov-Dec	1978-91 2J3K 1981-91 3L	Stratified-random bottom trawl	Groundfish	400-500	Y	< 70%	to 1,000 m in 2J3K to 731 m in 3L (1990 only)	Y	Y	Y	Y	Y	Canada	SCR 92/81
USSR longline survey	Div. 2GHJ	Sep-Nov	1990	Longline	Greenland halibut	25	Y	?	500-1,500 m	Y	Y	-	Y	-	Russia	
Deepwater line transect	Div. 0B 2GHJ	Aug	1991	Line transect bottom trawl	Greenland halibut	30	Y	?	750-1,500 m	Y	-	Y	Y	-	Canada	SCR 92/82
Deepwater line transect	Div. 3KLM	Sep	1991	Line transect bottom trawl	Greenland halibut	110	Y	?	750-1,700 m	Y	-	Y	Y	-	Canada	SCR 92/82

¹ Div. 2G only in 1990

² 500-1,500 m in 1990.

³ No SCR Document in 1992 for Russian Survey Results in Div. 3KL.

Stock name: Roundnose Grenadiers in Subareas 0+1													See reverse side for guidelines to fill in columns			
Name of Survey	Location	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			Country	SCR Doc. No.		
										Stock size estimates	abundance	bio-mass			ALK	LF
Russia Groundfish Survey	Subarea 0B	Oct/Nov	1983	Bottom trawl Stratified-random	Greenland Halibut	59	No	much less than 100%	200-1500	X	X	-	X	-	Russia	92/22
JAMARC	Div. IABCD	Aug	1987	Bottom trawl Stratified-random	Greenland Halibut	108	No	much less than 100%	1-1500	X	X	-	X	-	Japan/ Greenland	92/48

Stock name: Capelin in Div. 3L																
Name of Survey	Location	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				Country	SCR Doc. No.	
										Stock size estimates		LF	Indiv-idual weights			
										abun-dance	bio-mass					ALK
Canadian acoustic survey	Div. 3L	April 1982-84 May 1985-92	since 1982	Acoustic survey midwater trawl	Capelin	26	Y	70	0-500	Y	Y	Y	Y	Y	Canada	92/57
Russian acoustic survey	Div. 3LND	May-June 1982-91	since 1982	Acoustic survey midwater trawl	Capelin	55	Y	70	0-500	Y	Y	Y	Y	Y	Russia	92/1

See reverse side for guidelines to fill in columns

Stock name: Capelin in Div. 3N0		See reverse side for guidelines to fill in columns													
Name of Survey	Location	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				Country	SCR Doc. No.
										Stock size estimates	abundance	bio-mass	ALK		
Canadian acoustic survey	Div. 3N0	June	1981-89	Acoustic survey midwater trawl	Capelin	-	Y	80	0-80	Y	Y	Y	Y	Y	90/61

Stock name: Squid in Subareas 3 and 4.										See reverse side for guidelines to fill in columns						
Name of Survey	Location	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				Country	SCR Doc. No	
										Stock size estimates		LF	Indiv- iduat weights			
										abun- dance	bio- mass					ALK
Flemish Cap groundfish survey	Flemish Cap	Jun-Jul	1988-91	Stratified-random bottom trawl	Cod	11>	N	<1		N	N	N	N	N	Spain	92/27

Stock name: Shrimp in Subareas 0 and 1														See reverse side for guidelines to fill in columns			
Name of Survey	Location	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				Country	SCR Doc. No.		
										Stock size estimates	abundance	bio-mass	ALK			LF	Individual weights
West Greenland shrimp survey	0A, 1A, 1B, 1C, 1D, 1E	Jul-Sep	since 1988	Random-stratified, bottom trawl	<i>Pandalus borealis</i>	260	N	95 (?)	100-600	Y	Y	N	Y	Greenland	92/67 92/55		
										Y	Y	N	Y	N	Y	92/44	
										Y	Y	N	Y	N	Y	92/45	
Shrimp trawl selection studies	1A, 1B, 1C	Jul	1991	Bottom trawl	<i>Pandalus borealis</i>	77	Y	?	-	N	N	N	Y	N			
										Y	Y	N	Y	N	Y		
Southwest Greenland shrimp survey	1D, 1E	Oct	1991	Random-stratified bottom trawl	<i>Pandalus borealis</i>	15	N	?	150-600	Y	Y	N	Y	N			