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Available Data from the Commercial Fisheries Related to Stock Assessment (2003)

and

Inventory of Biological Surveys Conducted in the NAFO Area in 2003

and

Biological Surveys Planned for 2004 and Early-2005

At its meetings in June 2002 and 2003, the Scientific Council (STACREC) agreed that three Tables which are usually compiled and presented as Tables 3, 4 and 5 in the STACREC report are important and need to be complete with information from all Scientific Council sources. Accordingly, STACREC in June 2002 recommended that *in future years the Secretariat compile the reports of research activities as a working document for the June Meeting, and that it then be presented to STACREC as a SCS document at its September Meeting.*

The attached Tables were drafted as Scientific Council Working Papers during the June 2004 Scientific Council Meeting and updated/corrected through correspondence during the summer.

These Tables are now being forwarded for final review by STACREC, and be checked for accuracy and completeness. These Tables will be finalized and printed as a SCS Document based on comments forwarded to the NAFO Secretariat during the September 2004 Meeting..

Available data from the commercial fisheries related to stock assessment (2003). (+ means data available).

Biological Sampling								
Stock	Country ¹	Catch	CPUE	Sex	Length	Age	Individual Wt.	Maturity
2J3KL Cod	CAN	+	+	+	+	+	+	+
	RUS	+		+	+			+
3M Cod	RUS	+		+	+			+
3NO Cod	CAN-N	+		+	+	+		+
	CAN-M	+						
	EU-PRT	+				+		
	EU-ESP	+						
	EST	+						
	NOR	+						
	LTU	+						
	RUS	+		+	+			
SA 1 Redfish								
Div. 3M Redfish	EU/PRT	+		+	+			
	EU/ESP	+				+		
	JPN	+						
	LTU	+						
	EST	+						
	RUS	+		+	+			+
3LN Redfish	CAN	+		+	+			
	RUS	+		+	+			+
3O Redfish	CAN-M	+	+					
	CAN-N	+	+	+	+			
	EU-PRT	+				+		
	EU-ESP	+				+		
	RUS	+		+	+			+
3M American plaice	EU-PRT	+		+	+			
	EU-ESP	+				+		
	EST	+						
	RUS	+						
	JPN	+						
3LNO American plaice	CAN	+		+	+	+		
	RUS	+				+		
	EU/PRT	+				+		
	EU/ESP	+				+		
	JPN	+						
	EST	+						
	LTU	+						
3NO Witch flounder	CAN	+						
	EU-PRT	+				+		
	EU-ESP	+				+		
	RUS	+						
2J+3KL Witch flounder	CAN	+						
	EU-PRT	+				+		
	EU-ESP	+				+		
	RUS	+						
3M Witch flounder	RUS	+						
3LNO Yellow-tail flounder	CAN	+	+	+	+			
	EU/PRT	+		+	+			
	EU/ESP	+						
	EST	+						
	RUS	+						

Available data from the commercial fisheries related to stock assessment (2003). (+ means data available).
(continued)

Biological Sampling								
Stock	Country ¹	Catch	CPUE	Sex	Length	Age	Individual Wt.	Maturity
SA 0 + 1B-F	CAN	+	+	+	+	+		
Greenland halibut	NOR	+						
	GRL	+		+		+		
	EU/DEU	+		+				
	EU/ESP	+				+		
	RUS	+		+	+	+	+	
SA 1A Greenland halibut	RUS	+		+	+	+	+	+
SA 2+3 Greenland halibut	CAN	+	+	+	+	+		
	EU/PRT	+	+	+	+			
	EU/ESP	+	+	+	+	+		
	EST	+						
	GRL	+						
	JPN	+						
	NOR	+			+			
	RUS	+			+	+		
SA 0+1 Roundnose Grenadier	CAN	+						
	NOR	+						
	EU/DEU	+						
	GRL	+						
SA 2+3 Roundnose grenadier	CAN	+						
	EU/ESP	+						
	EST	+						
	RUS	+						
SA 2+3 Rough-head grenadier	CAN	+						
	EU-ESP	+		+	+	+	+	+
	RUS	+		+	+			
3NO Capelin	CAN	+						
	RUS			+	+	+	+	+
SA 3+4 Squid	CAN	+			+			
SA 1 Other finfish	GRL	No						
	RUS	+		+	+		+	+
3LNOPs	CAN	+	+	+	+			
Thorny skate	EU-ESP	+	+	+	+			
	EU-PRT	+	+	+	+			
	EST	+						
	JPN	+						
	NOR	+						
	RUS	+		+	+			+
3LN Shrimp	CAN	+	+	+	+	+		+
	EST	+	+					
	GRL	+	+					
	ISL	+	+	+	+	+		+
	NOR	+	+					
	RUS	+	+					
3M Shrimp	ISL	+	+	+	+	+		+
	NOR	+	+					
	EU-ESP	+		+	+			
	EST	+						

Available data from the commercial fisheries related to stock assessment (2003). (+ means data available).
(continued)

		Biological Sampling						
Stock	Country ¹	Catch	CPUE	Sex	Length	Age	Individual Wt.	Maturity
SA 0+1 Shrimp	CAN	+						
	GRL	+	+	+	+	+	+	+
Denmark Strait Shrimp	GRL	+	+	+	+	+		+
	NOR	+						
	ICE	+	+	+	+	+		+
	EU/DEN	+	+					
	FRO	+	+					

¹ Country abbreviations as found in NAFO Statistical Bulletin.

Inventory of biological surveys conducted in the NAFO Area in 2003

Subarea/Division	Country	Month	Type of survey	No. of sets
Stratified-Random Surveys				
2,3JKLMNO	CAN-N	10-12	Multispecies survey	660
3LMNO	CAN-N	5-6	Multispecies Survey	313
3Ps	CAN-N	4-5	Multi-species trawl survey	176
4R	CAN-Q	9	Herring survey	n/a
4X	USA	1	Ecosystems Monitoring Survey	12
4X	USA	4	Spring Bottom Trawl Survey	16
4X	USA	3,4	Ecosystems Monitoring Survey	12
4X	USA	5	Ecosystems Monitoring Survey	2
4X	USA	8	Ecosystems Monitoring Survey	13
4X	USA	10	Autumn Bottom Trawl Survey	29
4X	USA	10	Ecosystems Monitoring Survey	15
4X	USA	11	Ecosystems Monitoring Survey	1
5Y, Z	USA	1	Ecosystems Monitoring Survey	44
5Y, Z	USA	2, 3	Winter Bottom Trawl Survey	26
5Y, Z	USA	2	Ecosystems Monitoring Survey	3
5Y, Z	USA	3, 4	Spring Bottom Trawl Survey	169
5Y, Z	USA	3, 4	Ecosystems Monitoring Survey	43
5Y, Z	USA	5	Ecosystems Monitoring Survey	34
5Y, Z	USA	7, 8	Northern Shrimp Survey	62
5Y, Z	USA	8, 9	Ecosystems Monitoring Survey	44
5Y, Z	USA	9, 10	Autumn bottom trawl survey	152
5Y, Z	USA	9, 10	Ecosystems Monitoring Survey	44
5Y, Z	USA	11	Ecosystems Monitoring Survey	40
5Z	USA	7, 8	Sea Scallop Survey	327
6A, B, C	USA	2	Winter Bottom Trawl Survey	81
6A, B, C	USA	2	Ecosystems Monitoring Survey	36
6A, B, C	USA	3	Spring Bottom Trawl Survey	147
6A, B, C	USA	3,4	Ecosystems Monitoring Survey	52
6A, B, C	USA	7, 8	Sea Scallop Survey	177
6A, B, C	USA	9	Autumn Bottom Trawl Survey	155
6A, B, C	USA	9, 10	Ecosystems Monitoring Survey	54
6A, B, C	USA	11	Ecosystems Monitoring Survey	23
3L	EU/ESP	6	Groundfish	40
3M	EU/ESP-EU/PRT	6,7	Groundfish	209
3NO	EU/ESP	5	Groundfish	127

Other Surveys

3K	CAN-N	9	White Bay/Notre Dame Bay snow crab trawl/trap survey	n/a
3KL	CAN-N	4-5	Capelin Distribution & Abundance	n/a
3KLNO	CAN-N	10-11	Physical/Biological Oceanography	n/a
3L	CAN-N	5-9	Larval Fish Growth	n/a
3L	CAN-N	5-6	Inshore cod acoustics survey	n/a
3L	CAN-N	5-6	Avalon snow crab trawl/trap survey	n/a
3L	CAN-N	7	Fish/Seabird Interactions	n/a
3L	CAN-N	7-8	Bonavista Bay snow crab trawl/trap survey	n/a
3L	CAN-N	9-10	Conception Bay snow crab trawl/trap survey	n/a
3L	CAN-N	1	Cod habitat and acoustics	n/a
3L	CAN-N	1	Overwintering acoustic survey	n/a

Inventory of biological surveys conducted in the NAFO Area in 2003 (continued)

Subarea/Division	Country	Month	Type of survey	No. of sets
Other Surveys				
3L	CAN-N	1	Overwintering acoustic survey	n/a
3L	RUS	8-12	Greenland halibut, selectivity of bottom trawl	50
3LMNO	CAN-N	4	Physical & Biological Oceanography	n/a
3O	RUS	12	Redfishes, selectivity of bottom trawl	3
3O	RUS	2	Redfishes, selectivity of bottom trawl	25
3Ps	CAN-N	3-4	Cod Tagging	n/a
3Ps	CAN-N	4	Inshore cod tagging	n/a
3Ps	CAN-N	4	Inshore pre-spawning cod trawl/acoustics survey	n/a
3Ps	CAN-N	6	Inshore cod tagging	n/a
3Ps	CAN-N	6	Scallops	n/a
3Ps	CAN-N	11	Cod Tagging/tagging mortality	n/a
4W,X	USA	7,8	Humpback whale survey	n/a
4X	USA	3-11	North Atlantic right whale aerial surveys	n/a
5Y,Z	USA	7, 8	North Atlantic right whale survey	n/a
5Y,Z	USA	3-11	North Atlantic right whale aerial surveys	n/a
5Y,Z	USA	9, 10	Pelagic Hydroacoustic Survey	198
5Z	USA	10, 11	Benthic Habitat	15

Biological surveys planned for the NAFO Area in 2004 and early-2005.

Subarea/Division	Country	Type of Survey	Dates
Stratified-random Surveys			
0A	CAN-CA	Groundfish Assessment	Sept./Oct.
2+3HJ+KLMNO	CAN-N	Multi-species trawl survey	Oct 1-Jan 17
3LNO	CAN-N	Multi-species trawl survey	May 15-Jul 5
3M	EU/ESP-EU/PRT	Groundfish	Jun-Sep
3NO	EU/ESP	Groundfish	Jun
3Ps	CAN-N	Multi-species trawl survey	Apr 19-May 14
4X	USA	Ecosystems monitoring	Jan 20- 30, 2004
4X	USA	Spring bottom trawl	Mar 1- Apr 23, 2004
4X	USA	Ecosystems monitoring	May 24- Jun 11, 2004
4X	USA	Ecosystems monitoring	Aug 16-Sep 3, 2004
4X	USA	Autumn bottom trawl	Sep 7-Oct 29, 2004
4X	USA	Ecosystems monitoring	Nov 1-19, 2004
4X	USA	Ecosystems monitoring	Jan 24-eb 7, 2005
4X	USA	Spring bottom trawl	Mar 1-Apr 22, 2005
5Y,Z	USA	Ecosystems monitoring	Jan 20- 30, 2004
5Y,Z	USA	Spring bottom trawl	Mar 1- Apr 23, 2004
5Y,Z	USA	Ecosystems monitoring	May 24- Jun 11, 2004
5Y,Z	USA	Ecosystems monitoring	Aug 16-Sep 3, 2004
5Y,Z	USA	Northern shrimp	Jul 22-Aug 5, 2004
5Y,Z	USA	Autumn bottom trawl	Sep 7-Oct 29, 2004
5Y,Z	USA	Ecosystems monitoring	Nov 1-19, 2004
5Y,Z	USA	Ecosystems monitoring	Jan 24-Feb 7, 2005
5Y,Z	USA	Winter bottom trawl	Jan 31-Feb 25, 2005
5Y,Z	USA	Spring bottom trawl	Mar 1-Apr 22, 2005
5Z	USA	Winter bottom trawl	Feb 2- 28, 2004
5Z	USA	Sea scallop survey	Jul 6-Aug 6, 2004
6A,B,C	USA	Winter bottom trawl	Feb. 2-28, 2004
6A,B,C	USA	Spring bottom trawl	Mar 1- Apr 23, 2004
6A,B,C	USA	Ecosystems monitoring	May 24- Jun 11, 2004
6A,B,C	USA	Sea scallop survey	Jul 6-Aug 6, 2004
6A,B,C	USA	Ecosystems monitoring	Aug 16-Sep 3, 2004
6A,B,C	USA	Autumn bottom trawl	Sep 7-Oct 29, 2004
6A,B,C	USA	Ecosystems monitoring	Nov 1-19, 2004
6A,B,C	USA	Winter bottom trawl	Jan 31-Feb 25, 2005
6A,B,C	USA	Spring bottom trawl	Mar 1-Apr 22, 2005
6B,C	USA	Apex Predators (sharks)	Apr 12- May 28, 2004
Other Surveys			
2+1F+3K	RUS	Redfish, trawl-acoustic survey	June-July 2005
2+1F+3K	RUS	Redfish, selectivity of trawl	July-September 2004
2+1F+3K	RUS	Redfish, biological sampling for commercial fisheries	July-October 2004, 2005
3K	CAN-N	White/Notre Dame Bay snow crab trap/trawl survey	Aug 30-Sep 16
3KL	CAN-N	Capelin acoustic/trawl survey	May 10-29
3KL	CAN-N	Trinity Bay Ecosystem Surveys	May 10-ct 5
3KL	CAN-N	Marine Salmon	Sep 11-Sep 30
3KLMNO	CAN-N	Physical & biological oceanography	Nov 17-Dec 7
3L	CAN-N	Bonavista Bay cod habitat and acoustics	Jan 21-31
3L	CAN-N	Avalon snow crab trawl/trap survey	May 27-Jun 14
3L	CAN-N	Bonavista Bay snow crab trap/trawl survey	Aug 2-16
3L	CAN-N	Conception Bay snow crab trap/trawl survey	Oct 7-19
3KLMNO	CAN-N	Physical and biological oceanographic survey	Apr 17-May 2
2J+3KLMNO	CAN-N	Physical and biological oceanographic survey	Jul 20-Aug 5
3LMNO	RUS	Redfishes, Greenland halibut and multispecial, trawl-acoustic survey	May-June 2005
3MO	RUS	Redfishes, selectivity of trawl	March-July 2005

Biological surveys planned for the NAFO Area in 2004 and early-2005. (continued)

Subarea/Division	Country	Type of Survey	Dates
Other Surveys			
4X,W	USA	Northern right whale biology	Jul 26-Aug 19, 2004
4X	USA	Atlantic herring hydroacoustic	Sep 7- Oct 15, 2004
4X	USA	Survey trawl study	Oct 18-22, 2004
5Y,Z	USA	Cod Spawning and sea state vs. catch rate study	Jan 20-29, 2004
5Y,Z	USA	Survey vessel calibration	Feb 2-28, 2004
5Y,Z	USA	Northern right whale biology	Jul 26-Aug 19, 2004
5Y,Z	USA	Atlantic herring hydroacoustic	Sep 7-Oct 15, 2004
5Z	USA	Northeast Channel hydrography	Jan 5-11, 2004
5Z	USA	Pilot whale and common dolphin	Feb 2-28, 2004
5Z	USA	Pelagic cetacean	Jul 6- 23, 2004
5Z	USA	Benthic habitat	Aug 23- Sep 3, 2004
5Z	USA	Survey trawl study	Oct 18-22, 2004
5Z	USA	Benthic habitat	Nov 1-12, 2004
5Z	USA	Benthic habitat	Nov 1-12, 2004
5Z	USA	Small Pelagics hydroacoustic	Mar 14-Apr 1, 2005
5Zu	USA	Deepwater biodiversity	May 17-Jun 11, 2004
6A	USA	Benthic habitat	Aug 23- Sep 3, 2004
6A	USA	Benthic habitat	Nov 1-12, 2004
6A,B,C	USA	Small pelagics hydroacoustic	Apr 26-May 12, 2004
6A,B,C	USA	Deepwater biodiversity	May 17- Jun 11, 2004
6A,B,C,D	USA	Pelagic cetacean	Jul 6- 23, 2004
6A,B,C	USA	Benthic habitat	Nov 1-12, 2004
6A,B,C	USA	Small Pelagics hydroacoustic	Mar 14-Apr 1, 2005
6B,C	USA	Pilot whale and common dolphin	Feb 2-28, 2004