# Northwest Atlantic Fisheries Organization

Serial No. N2046

NAFO SCS Doc. 92/4

#### SCIENTIFIC COUNCIL MEETING - JUNE 1992

#### Provisional Index and List of Titles of Research

#### and Summary Documents for 1991

bγ

#### NAFO Secretariat

#### CONTENTS

	Page
Introduction	. 1
List of Titles	. 3
Subject Index	. 9
Author Index	. 19

## Introduction

The Scientific Council has agreed that research (SCR) and summary (SCS) documents should be indexed on an annual basis and that these provisional indexes be combined for publication at 5-year intervals. The first NAFO issue of Index of Meeting Documents for 1979-84 was published in March 1985. The second NAFO issue of Index of Meeting Documents for 1985-89 was published in February 1991. This provisional index relates to all SCR documents (No. 1-125) and SCS documents (No. 1-21) for the calendar year 1991.

The list of SCR and SCS documents for 1991 in the first section of this document maintains the previous format and is arranged by consecutive document number.

Compilation of the 1991 author index generally follows guidelines that were used in preparing the Index of Meeting Documents for 1979-84 and 1985-89. Each of the research and summary documents is identified by its 3-character code (i.e. SCR or SCS), followed by the last two digits of the year of issue, an oblique (/), and then the designated document number. This is followed in parentheses by a shortened version of the title or an expression which indicates the object of the referenced paper.

The 1991 subject index follows the same format as the author index. However, it differs from subject indexes prior to 1988 in that the text between parentheses is not altered from that used in the author index.

			44.
			•
	,		
			<b>\$</b>
			-

# LIST OF RESEARCH AND SUMMARY DOCUMENTS, 1991

# RESEARCH DOCUMENTS (SCR)

SCR No.	Ser. No.	
91/1	N1869	SHERSTYUKOV, A. I. Distribution and abundance of young silver hake of 1989 year-class on the Scotian Shelf in 1989-1990 fall-winter season. (21 pages)
91/2	N1870	SHERSTYUKOV, A. I., and V. I. VINOGRADOV. Studies on vertical distribution of Scotian young silver hake in fall-winter season 1989-1990. (14 pages)
91/3	N1873	PODRAZHANSKAYA, S. G. Feeding habits of mesopelagic species of fish and quantitative estimation of plankton grazed in the Northwest Atlantic. (12 pages)
91/4	N1876	SIGAEV, I. K. Review of hydrographic conditions in some areas of the Northwest Atlantic, 1990. (12 pages)
91/5	พ1877	KUZMIN, S. A. Assessment of cod stock in NAFO Subarea 3 by the data from 1990 trawl-acoustic survey. (19 pages)
91/6	พ1878	VASKOV, A. A., and I. A. OGANIN. Status of redfish stock in Divisions 3LN. (8 pages)
91/7	N1879	HUNT, J. J. Comparison of Canadian and USSR estimates of age for 1989 Observer Program otolith collections. (7 pages)
91/8	N1880	SAVVATIMSKY, P. I. Causes of decrease in total catch of roundnose grenadier (Coryphaenoides rupestris Gun.) in the Northwest Atlantic in 1979-1990. (22 pages)
91/9	N1881	BAKANEV, V. S., and V. I. ZUBOV. Acoustic assessment of capelin stock in NAFO Divisions 3LNO and 2J+3K in 1990. (10 pages)
91/10	N1882	BAKANEV, V. S. Trawl survey for the 1990 year-class of capelin stock assessment in Divisions 3LNO. (8 pages)
91/11	N1883	BOROVKOV, V. A., and I. I. TEVS. Oceanographic conditions in NAFO Subareas 0, 1, 2 and 3 in 1990. (20 pages)
91/12	N1884	MOROZOVA, G. N. Length-age characteristic and fluctuation of American plaice (Hippoglossoides platessoides) abundance in Division 3M from 1983 to 1990. (11 pages)
91/13	N1885	RIKHTER, V. A., V. F. TUROK, and N. K. ISTOMINA. Distribution of silver hake, other abundant fish species and short-finned squid on the Scotian Shelf slope in 1990 from data obtained by USSR observers. (18 pages)
91/14	N1886	RIKHTER, V. A. On age changes in natural mortality rates of silver hake on the Scotian Shelf. (5 pages)
91/15	N1887	RIKHTER, V. A. Comparative analysis of the biological state and CPUE of silver hake on the Scotian Shelf in the area of foreign fisheries 1989-1990. (10 pages)
91/16	N1888	SHERSTYUKOV, A. I. Distribution and abundance of the Scotian Shelf O-group silver hake in October-November 1978-1989. (21 pages)
91/17	พ1891	STEIN, M. Greenhouse induced changes in the North Atlantic - potential impact on West Greenland cod stocks. (9 pages)
91/18	N1892	MARKOV, Yu. A., and A. I. SHERSTYUKOV. Microstructure of otoliths, age readings and growth determinations of silver hake (Merluccius bilinearis) on early development stages on the Scotian Shelf. (11 pages)
91/19	N1893	SHERSTYUKOV, A. I. On reproduction and formation of silver hake (Merluccius bilinearis Mitchill) year-class strengths at early ontogenesis on the Scotian Shelf. (18 pages)
91/20	N1897	SMEDSTAD, O. M., and S. TORHEIM. Norwegian investigations on shrimp (Pandalus borealis) in East Greenland Waters in 1990. (12 pages)
91/21	N1900	ERNST, P., U. HOFFMANN, and A. A. VASKOV. Results on the Greenland halibut survey in Divisions OB, 1B, 1C and 1D in 1990. (5 pages)
91/22	N1902	ATKINSON, D. B., and D. POWER. Roundnose grenadier (Coryphaenoides rupestris) of NAFO Subareas 2+3 with catch information from Subareas 0+1. (13 pages)

SCR Documents	(continued)	
91/23	N1903	MOGUEDET, Ph. Contribution to the assessment of the cod stock in Subdivision 3Ps. (16 pages)
91/24	N1904 `	MOGUEDET, Ph., and JC. MAHÉ Yearly variations in water temperature in NAFO Subdivision 3Ps from 1978 to 1990. (11 pages)
91/25	N1905	REINERT, J. Results from the Faroese exploratory fishery with longline for cod on Flemish Cap in 1990. (17 pages)
91/26	N1906	MOGUEDET, Ph., and JC. MAHÉ. Yearly distribution of American plaice (Hippoglossoides platessoides) in late winter in Subdivision 3Ps in the period 1978-1990. (14 pages)
91/27	N1907	MAHÉ, JC., and Ph. MOGUEDET. Determination of the growth curve parameters of the American plaice (Hippoglossoides platessoides) in the NAFO Subdivision 3Ps. (9 pages)
91/28	N1908	VAZQUEZ, A. Results from bottom trawl survey on Flemish Cap in July-August 1990. (25 pages)
91/29	ท1909	MENA, I. Northern prawn (Pandalus borealis) length distribution and fecundity in Flemish Cap. (7 pages)
91/30	N1910	ZAMARRO, J. Feeding behaviour of the American plaice (Hippoglossoides platessoides) on the southern Grand Bank of Newfoundland. (24 pages)
91/31	N1911	PAZ, F. J. J. M. CASAS, and G. PEREZ-GÁNDARAS. The feeding of cod (Gadus morhua) on Flemish Cap, 1989-90. (19 pages)
91/32	N1912	SABORIDO, F. Redfish distribution in Flemish Cap during the period 1988-1990. (21 pages)
91/33	N1913	PARSONS, D. G., and P. J. VEITCH. Canadian fishery for northern shrimp (Pandalus borealis) in Division OA, 1990. (27 pages)
91/34	N1914	YOKAWA, K. Outline of Japanese capelin fishery in Div. 3NO and some biological data of capelin in 1990. (5 pages)
91/35	N1915	WIELAND, K. Distribution of larval and 0-group fish off West Greenland in summer and autumn 1989 and 1990. (10 pages)
91/36	N1916	RÄTZ, H. J. Notes of the structures and changes in the ichthyofauna off West Greenland. (16 pages)
91/37	N1917	MILLER, D. S. Estimates of biomass from an acoustic survey for capelin (Mallotus villosus) in Division 3L, May 1990. (14 pages)
91/38	N1918	BOJE, J., and S. A. PEDERSEN. An assessment of the Greenland halibut stock component in NAFO Subareas 0+1. (12 pages)
91/39	N1919	BOJE, J. A comparison of selectivity in longlines and gillnets in the fishery for Greenland halibut in West Greenland. (7 pages)
91/40	N1920	LEHMANN, K., and H. DEGEL. An estimate of shrimp discard from shrimp factory trawlers in Davis Strait and Denmark Strait. (11 pages)
91/41	N1921	DEGEL, H., H. LASSEN, and K. LEHMANN. Selectivity in shrimp trawl. (13 pages)
91/42	N1922	WALDRON, D. E., M. A. SHOWELL, and G. HARRISON. Status of the Scotian Shelf silver hake (Whiting) population in 1990. (34 pages)
91/43	N1923	NAKASHIMA, B. S., and R. W. HARNUM. The inshore capelin fishery in NAFO Division 3L in 1990. (17 pages)
91/44	N1927	DE CÁRDENAS, E., and A. M. AVILA DE MELO. The effect of misreported catches in the assessment of the Flemish Cap cod stock: a simulation exercise. (4 pages)
91/45	N1928	KANNEWORFF, P., and S. A. PEDERSEN. Survey biomass of Greenland halibut (Reinhardtius hippoglossoides) off West Greenland (NAFO Subareas 0+1) July-August 1988, 1989 and 1990. (12 pages)
91/46	พ1929	PEDERSEN, S. A., and P. KANNEWORFF. Survey biomass of redfish (Sebastes spp.) off West Greenland (NAFO Subareas 0+1) July-August 1988, 1989 and 1990. (11 pages)
91/47	N1930	PEDERSEN, S. A., and F. RIGET. Preliminary studies on feeding habits of demersal fish species in West Greenland waters with special emphasis on predation on shrimp. (12 pages)

SCR Documents	(continued)	
91/48	N1931	PEDERSEN, S. A., and F. RIGET. Feeding habits of redfish, Sebastes spp., in West Greenland waters with special emphasis on predation on shrimp. (9 pages)
91/49	N1932	RIGET, F., and S. A. PEDERSEN. The feeding habits of Greenland halibut in West Greenland waters with special emphasis on predation on shrimp and juvenile redfish. (10 pages)
91/50	N1933	JØRGENSEN, O., and K. AKIMOTO. Results of two trawl surveys in NAFO Subarea 1 in 1990. (14 pages)
91/51	N1934	MURPHY, E. F., C. A. BISHOP, and J. W. BAIRD. Cod in Divisions 2J+3KL - estimates of blomass and age composition for the portion of the stock beyond the Canadian 200-mile fishery zone. (12 pages)
91/52	N1935	KANNEWORFF, P., and K. M. LEHMANN. Report on a stratified-random trawl survey for shrimp (Pandalus borealis) in ICES Division XIVb in 1990. (11 pages)
91/53	N1936	CARLSSON, D. M., and P. KANNEWORFF. The commercial shrimp fishery in Denmark Strait in 1990 and early 1991. (27 pages)
91/54	N1937	GASUIKOV, P. S. On sample selection when standardizing fishing effort with multiplicative model. (18 pages)
91/55	N1938	UOZUMI, Y., and S. KAWAHARA. On the management regime of the Illex fisheries in Subareas 3 and 4. (5 pages)
91/56	N1940	BRODIE, W. B., A. K. CHUMAKOV, and W. R. BOWERING. Update of abundance and biomass estimates of Witch flounder in Divisions 3NO and Greenland halibut in Divisions 3KL from USSR surveys in 1987-90. (7 pages)
91/57	N1941	CARLSSON, D. M., and H. LASSEN. A catch-rate index for large shrimp in the Greenland shrimp fishery in NAFO Division 1B. (14 pages)
91/58	N1942	SKÚLADÓTTIR, U. The catch statistics of the shrimp fishery (Pandalus borealis) in the Denmark Strait in the years 1980-1990. (16 pages)
91/59	N1943	SAVVATIMSKY, P. I., and D. B. ATKINSON. Length-weight relationships of roundnose grenadiers ( <i>Coryphaenoides rupestris</i> Gunn.) in different areas of the Northwest Atlantic. (11 pages)
91/60	N1944	BRODIE, W. B., A. K. CHUMAKOV, J. W. BAIRD, and W. R. BOWERING. Results of American plaice from USSR surveys in Divisions 3KLMNO. (15 pages)
91/61	N1945	BRODIE, W. B., A. K. CHUMAKOV, J. W. BAIRD, and W. R. BOWERING. Results for yellowtail flounder from USSR surveys in Divisions 3LNO. (9 pages)
91/62	N1946	RIGET, F., and H. HOVGARD. Trends in catch and effort in the Greenland trawl fishery for cod. (8 pages)
91/63	N1947	HOVGARD, H., and F. RIGET. Preliminary results from cod tagging off West Greenland, 1989. (4 pages)
91/64	N1948	NYGAARD, K. H., and S. A. PEDERSEN. Young cod distribution and abundance in West Greenland inshore areas, 1990. (7 pages)
91/65	N1949	RIGET, F., and H. HOVGÅRD. Observation on discarding in the West Greenland fishery in 1990. (5 pages)
91/66	N1950	CHUMAKOV, A. K., and S. M. SOSHIN. Results of stratified-random bottom trawl and long-line survey on Greenland halibut in NAFO Div. OB in 1990. (11 pages)
91/67	N1951	DE CARDENÁS, E., and A. AVILA DE MELO. Trends in the population of 3M cod and biological reference points: an approach using survey data. (13 pages)
91/68	N1952	GODINHO, M. L. A method to help age American plaice in Division 3M. (6 pages)
91/69	N1953	CARLSSON, D. M., and P. KANNEWORFF. The shrimp fishery in NAFO Subarea 1 in 1990. (19 pages)
91/70	N1954	CARLSSON, D. M., and P. KANNEWORFF. Report on stratified-random trawl survey for shrimp (Pandalus borealis) in NAFO Subareas 0+1 in July-August 1990, and a comparison with earlier surveys. (34 pages)
91/71	พ1955	SAVARD, L., I. H. McQUINN, and D. G. PARSONS. Investigating the potential of sequential population analysis for Northern shrimp (Pandalus borealis) in Division OA. (12 pages)

SCR Documents	(continued)	
91/72	N1956	SKÚLADÓTTIR, U. The Icelandic shrimp fishery (Pandalus borealis) in the Denmark Strait in 1989 and 1990. (16 pages)
91/73	N1957	RATZ, H. J. NAFO Subarea 1 golden and beaked redfish: spatial distribution pattern, survey abundance and biomass estimates in 1982-90 and length frequency in 1990. (11 pages)
91/74	N1958	CARLSSON, D. M. Data and preliminary assessment of shrimp in Subareas 0+1. (4 pages)
91/75	N1959	POWER, D., and A. K. CHUMAKOV. Abundance and biomass estimates of redfish (Sebastes mentella) in Div. 3LN from USSR groundfish surveys during 1972-1990. (15 pages)
91/76	N1960	HOVGARD, H. Preliminary assessment of Subarea 1 cod. (21 pages)
91/77	N1961	GASUIKOV, P. S., and R. S. DOROVSKIKH. Redfish stock size in Division 3M in 1990 and estimated TAC for 1992. (19 pages)
91/78	N1962	VAZQUEZ, A. Cod catch sampling of pair-trawlers fishing in Flemish Cap, 1988-1990. (8 pages)
91/79	N1963	FUCHS, F., and M. STEIN. A new method for estimating a hydrographic situation. (2 pages)
91/80	N1964	BRODIE, W. B., S. J. WALSH, and J. W. BAIRD. An assessment of the yellowtail flounder stock in Divisions 3LNO. (38 pages)
91/81	N1965	WALSH, S. J. Juvenile American plaice on the Grand Banks, NAFO Divisions 3LNO. (18 pages)
91/82	N1966	ZAMARRO, J. The American plaice stock on the Flemish Cap (NAFO Division 3M). (3 pages)
91/83	N1967	BAIRD, J. W., C. A. BISHOP, and E. F. MURPHY. An assessment of the cod stock in NAFO Div. 3NO. (33 pages)
91/84	N1968	WALSH, S. J. Effect of tow duration on gear selectivity. (9 pages)
91/85	N1969	KEELEY, J. R. Marine Environmental Data Service Report for 1990. (11 pages)
91/86	N1970	PETRIE, B., K. F. DRINKWATER, and R. PETTIPAS. Temperature and salinity variability at decadal time scales on the Scotlan Shelf and in the Gulf of Maine: some initial results. (22 pages)
91/87	N1971	DRINKWATER, K. F., and R. W. TRITES. Overview of environmental conditions in the Northwest Atlantic in 1990. (27 pages)
91/88	N1972	BRODIE, W. B. An assessment of Greenland halibut in SA 2 + Divisions 3KL. (29 pages)
91/89	N1973	STEIN, M. Report on the Second World Climate Conference (Geneva, 29 October-7 November 1990). (26 pages)
91/90	N1974	POWER, D., and J. W. BAIRD. An assessment of redfish in NAFO Divisions 3LN. (30 pages)
91/91	N1975	JOSSI, J. W., and R. L. BENWAY. Surface and bottom temperatures and surface salinities: Massachusetts to Cape Sable, N.S. and New York to the Gulf Stream. 1990. (15 pages)
91/92	N1976	JOSSI, J. W., D. E. SMITH, and J. R. GOULET. Continuous plankton records: Massachusetts to Cape Sable, and New York to the Gulf Stream, 1990. (12 pages)
91/93	N1978	BRODIE, W. B, and J. W. BAIRD. An assessment update for the American plaice stock in Divisions 3LNO. (41 pages)
91/94	N1979	STEIN, M. Thermohaline variability of the West Greenland current -how useful are monitoring stations? (9 pages)
91/95	N1980	VAZQUEZ, A. Flemish Cap cod stock analysis. (18 pages)
91/96	N1985	SKÚLADÓTTIR, L. SAVARD, K. LEHMANN, D. G. PARSONS, and D. M. CARLSSON. Preliminary assessment of shrimp in the Denmark Strait. (24 pages)

SCR Documents	(continued)	
91/97*	N1986	BAGGE, O., E. STEFFENSEN, and J. BAY. The fluctuations in abundance of the stock of cod compared to environmental changes and the fishery. (19 pages)
91/98*	ท1990	PAZ, J., and M. G. LARRANETA. Testing non-parametric methods to estimate cod recruitment in NAFO Div. 3NO. (8 pages)
91/99*	N1991	MILLAR, R. B. Modelling the effect of environment on growth of cod: fitting to growth increment data versus fitting to size-at-age data. (7 pages)
91/100*	พ1992	ORLOVA, E. L., and A. K. CHUMAKOV. Comparative assessment of the intensity of feeding of cod of the southern Barents Sea and Newfoundland. (11 pages)
91/101*	N1993	KENCHINGTON, T. J. Some effects of bottom trawling on the availability of cod blomass to an inshore longline fishery: a discussion. (21 pages)
91/102*	N1994	SCHOPKA, S. A. The Greenland cod at Iceland 1941-1990 and its impact on assessment. (7 pages)
91/103*	ท1995	SINCLAIR, A. Distribution of Scotian Shelf cod with respect to age, depth and (13 pages)
91/104*	N1996	SWAIN, D. P. Annual variation in the distribution of cod (Gadus morhua) in the southern Gulf of St. Lawrence. (20 pages)
91/105*	N1997	MORRISON, C. The digestive tract of the cod eleutheroembryo ("yolk-sac larva") and larva. (3 pages)
91/106*	N1998	MORRISON, C. The reproductive stages of cod. Gross anatomy and histology. (1 page)
91/107*	N1999	SERCHUK, F. M., and S. E. WIGLEY. Assessment and management of the Georges Bank cod fishery. (38 pages)
91/108*	N2001	BRANDER, K. Comparison of spawning characteristics of cod (Gadus morhua) stocks throughout the North Atlantic. (14 pages)
91/109*	N2002	HEESSEN, H. J. L. The distribution of cod in the southeastern North Sea. (17 pages)
91/110*	N2003	FRÉCHET, A., and P. GAGNON. Changes in distribution of the 3Pn, 4RS cod stock and the failure of the winter fixed gear fisheries off southwestern Newfoundland. (13 pages)
91/111*	N2004	PAZ, J., M. CASAS, and G. PEREZ-GÁNDARAS. Summer feeding of cod (Gadus morhua) and its relationship with other biological parameters on Flemish Cap. (8 pages)
91/112*	N2005	XU, X., J. BAIRD, C. BISHOP, and J. HOENIG. Temporal variability in cod maturity and spawning biomass in NAFO Divisions 2J+3KL. (12 pages)
91/113*	N2006	MYERS, R. A. Recruitment variability of cod stocks. (13 pages)
91/114*	N2007	MOGUEDET, Ph. Variation in cod abundance in NAFO Subdivision 3Ps on the period 1978-1990. (15 pages)
91/115*	N2008	BAIRD, J. W., and C. A. BISHOP. Changes in stock abundance for some cod stocks in Subareas 2 and 3. (10 pages)
91/116*	ท2009	BOROVKOV, V. A., and V. P. SEREBRYAKOV. Fluctuations of cod year-class strength in the North Atlantic in relation to the spawning stock biomass and survival conditions. (15 pages)
91/117*	N2010	GODØ, O. R., and H. R. SKJOLDAL. Fluctuations in abundance of the Barents Sea cod related with environmental and ecological changes. (1 page)
91/118*	N2011	HOVGÅRD, H. Fluctuations in cod abundance off West Greenland in the 20th Century. (3 pages)
91/119*	N2012	ROSE, G. A., L. FAHRIG, S. NARAYANAN, B. DeYOUNG, and C. WALTERS. The migration pathways of Atlantic cod (Gadus morhua) on the NE Newfoundland Shelf: a model based on oceanography and fish behaviour. (1 page)
91/120*	N2013	ANDERSON, C. An overview of the ocean production enhancement network (OPEN). (2 pages)

Symposium Papers

# SCR Documents (continued)

91/121	N2014	ALBIKOVSKAYA, L. K., O. V. GERASIMOVA, and S. M. KOTLAROV. Estimates of consumption of major food objects by cod in Grand Bank areas in Spring-Summer 1990. (11 pages)
91/122	N2015	NAKASHIMA, B. S. The geographical distribution of capelin (Mallotus villosus) in the Northwest Atlantic based on tagging experiments. (25 pages)
91/123	N2016	MILLER, D. S., and J. E. CARSCADDEN. Results of two acoustic surveys for capelin (Mallotus villosus) in NAFO Division 3L in 1991. (6 pages)
91/124	N2017	KUZMIN, S. A., and I. I. TEVS. Distribution of various age-groups of cod in the Newfoundland area by the 1988-1990 survey results. (15 pages)
91/125	N2018	GERASIMOVA, O. V., L. K. ALBIKOVSKAYA, and S. P. MELNIKOV. Preliminary results from feeding analysis for abundant commercial fishes on the Newfoundland Bank in April-May 1991. (20 pages)

Symposium Papers

SCS #

# SUMMARY DOCUMENTS (SCS)

91/1	N1868	NAFO SECRETARIAT. Historical catches of selected species by stock area and country for the period 1979-89. (38 pages)
91/2	N1872	NAFO SECRETARIAT. Provisional index and list of titles of research and summary documents for 1990. (24 pages)
91/3	N1874	RAWSON, B. Canadian request for scientific advice on management in 1992 of certain stocks in Subareas 0 to 4. (1 page)
91/4	N1875	CHRISTENSEN, S. Denmark (Greenland) request for scientific advice on management of certain stocks in 1992. (2 pages)
91/5	พ1889	RIKHTER, V. A., T. K. SIGAEV., BOROVKOV, V., S. KOVALEV, and P. SAVVATIMSKY. USSR research report for 1990. (25 pages)
91/6	พ1890	LOCH, J. S., KOELLER, P., M. ROBERGE, and A. FRÉCHET. Canadian research report for 1990. (27 pages)
91/7	N1894	NAFO SECRETARIAT. Tagging activities reported for the Northwest Atlantic, 1990. (3 pages)
91/8	N1895	STERN, H. United States research report for 1990. (13 pages)
91/9	พ1896	NAFO SECRETARIAT. Notes on statistical activities and publications since June 1990. (2 pages)
91/10	N1898.	NAFO SECRETARIAT. List of biological sampling data for 1989. (45 pages)
91/11	N1899	REINERT, J. Faroe Islands research report for 1990. (6 pages)
91/12	N1901	ERNST, P., R. EGGERS, and Ch. NAGEL. German Democratic Republic research report for 1990. (5 pages)
91/13	N1924	JENSEN, J. M. Denmark/Greenland research report for 1990. (8 pages)
91/14	N1925	UOZUMI, Y. Japanese research report for 1990. (7 pages)
91/15	N1926	GODINHO, L., R. ALPOIM, M. CARNEIRO, A. M. AVILA DE MELO. Portuguese research report for 1990. (51 pages)
91/16	N1939	VAZQUEZ, A., G. P. GANDARAS, J. PAZ, and J. ZAMARRO. Spanish research report for 1990. (22 pages)
91/17	N1981	NAFO SECRETARIAT. Provisional nominal catches in the Northwest Atlantic, 1990. (43 pages)
91/18	N1982	NAFO SECRETARIAT. A compilation of research vessel surveys on a stock-by-stock basis. (18 pages)
91/19	N1984	NAFO SECRETARIAT. Report of Scientific Council, June 1991 Meeting. (125 pages)
91/20	N2021	NAFO SECRETARIAT. Report of Scientific Council, Annual Meeting, September 1991. (30 pages)
91/21	N2032	PACIORKOWSKI, A. J. Polish research report, 1990. (8 pages)

[A] SCR 91/ 93 (assessment update of A plaice in NAFO Div 3LNO) (Flemish Cap cod stock analysis)
(distribution of eastern Scotian Shelf cod)
(distribution of cod in S. Gulf of St. Lawrence) Abundance; abundance index dist., abundance 0-group S hake Div 4VWX 1989-90) (cod assessment, SA 3 1990 trawl acoustic data) (status of redfish stock in Dlvisions 3LM) (decrease in catch of grenadier SA 0-3, 1979-90) (USSR capelin acoustic survey 1990, Div 2J+3KLNO) (capelin 0-group trawl survey 1990, Div 3LNO) (abundance of A plaice 1983-90 in Div 3M) (dist., abundance 0-group S hake Div 4VWX 1978-89) (greenhouse effects in N Atlantic on W Greenl. cod) (year-class strengths of S hake Div 4VWX) (G halibut survey Div 0B and 1BCD 1990) (roundnose greenadier in SA 2+3 and catch in 0+1) (cod assessment in Subdiv 3Ps) (dist. of A plaice in winter in Subdiv 3Ps 1978-90) (results of bottom trawl survey, Flemish Cap 1990) (length dist & fecundity of shrimp on Flemish Cap) (interaction of fish stocks off W Greenl., 1989-90) (structure 4 changes in ichthyofauna off W Greenl.) (selectivity in shrimp trawl) (status of Scotian Shelf S hake non in 1990) determination (comparison of S hake otoliths, Can-USSR 1989) (otoliths, ageing and growth of S hake Div 4VWX) (age-length relation of A plaice Subdiv 3Ps) (redfish distribution in Flemish Cap, 1988-90) (method to help age A plaice in Div 3M) SCR 91/ 7 American plaice (see Plaice, American) Anarhichas lupus (see Wolffish, Atlantic) 23 26 Anarhichas minor (see Wolffish, spotted) . Arctic cod (see Cod, Arctic) interaction of fish stocks off W Greenl., 1989-90)
(structure & changes in ichthyofauna off W Greenl.)
(selectivity in shrimp trawl)
(status of Scotian Shelf S hake pop. in 1990)
(misreporting effects on Flemish C. cod: simulation)
(biomass of G halibut in SA 0+1, 1988-90)
(biomass of redfish in SA 0+1, 1988-90)
(biomass of redfish in SA 0+1, 1988-90)
(strat. random trawl survey, shrimp in ICES XIV)
(abund; biomass, witch flo. Div 3NO G halibut 3KL)
(catch-rate index for Greenland shrimp Div 1B)
(USSR surveys-results for A plaice in Div 3KLMNO)
(USSR surveys-results for A plaice in Div 3KLMNO)
(USSR surveys-results for yellowtail flo. Div 3LNO)
(S. halibut strat. ran. trawl & longl. survey 1990)
(survey recruitment and biomass for cod Div 3MN)
(sequential population analysis, shrimp in Div OA)
(redfish in SA 1, dist., abund., biomass, 1982-90)
(redfish in Div 3LN, abund. & biomass, 1982-90)
(redfish in Div 3LN, abund. & biomass, 1972-90)
(assessment of yellowtail flounder, Div 3LNO)
(juvenile A plaice on the Grand Bank, Div 3LNO)
(juvenile A plaice on the Grand Bank, Div 3LNO)
(sassessment of redfish in NAFO Div 3LN)
(continuous plankton records 1990 off eastern USA)
(assessment update of A plaice in NAFO Div 3LNO)
(Flemish Cap cod stock analysis)
(preliminary assess. of shrimp at Denmark Strait)
(fluctuation and abundance of cod in Baltic Sea)
(theories of effects on cod trawling)
(assess. & manage. of the Georges Bank cod fishery)
(distribution of cod in the southeastern North Sea)
(distrib. of 3Pn&RS cod and gear failure SW Nfld)
(variability of cod and biomass, Div 20+3KL)
(cod stock abundance in Subdiv. 3Ps, 1978-90)
(changes in cod stock abundance in SA 2 and 3)
(cod year-class strength related to SSB 4 survival)
(Barents Sea cod abundance en active to environment)
(W Greenland cod abundance in the 20th century) Assessment (cod assessment, SA 3 1990 trawl acoustic data)
(USSR capelin acoustic survey 1990, Div 2J+3KINO)
(capelin 0-group trawl survey 1990, Div 3LINO)
(abundance of A plaice 1983-90 in Div 3M)
(G halibut survey Div OB and 1BCD 1990)
(cod assessment in Subdiv 3Ps)
(structure & changes in ichthyofauna off W Greenl.)
(assessment of G halibut stock SA 0+1)
(status of Scotian Shelf S hake pop. in 1990)
(catch and effort trends, W Greenland cod)
(preliminary assessment of SA 1 cod)
(redfish stock size in Div 3M, 1990 & TAC for 1992)
(assessment of yellowtail flounder, Div 3LNO)
(A plaice stock on Flemish Cap, Div 3M)
(assessment of the cod stock in NAFO Div 3LNO)
(assessment of Tedfish in NAFO Div 3LNO)
(assessment update of A plaice in NAFO Div 3LNO)
(preliminary assess. of shrimp at Denmark Strait)
(distribution of eastern Scotian Shelf cod)
(assess. & manage. of the Georges Bank cod fishery)
(changes in cod stock abundance in SA 2 and 3) SCR 91/ 5 82 83 90 103 (changes in cod stock abundance in SA 2 and 3) (Canadian request for scientific advice for 1992) (Denmark-Greenland request for sci. advice 1992) SCS 91/ 3 Atlantic cod (see Cod, Atlantic) 112 Atlantic halibut (see Halibut, Atlantic) 116 Atlantic herring (see Herring, Atlantic) Atlantic mackerel (see Mackerel, Atlantic) Acoustics Atlantic Ocean, North (see also Arctic) (USSR capelin acoustic survey 1990, Div 2J+3KLNO) (capelin biomass by acoustics Div 3L, 1990) (acoustic surveys for capelin in Div 3L, 1991) SCR 91/ 9 SCR 91/ 17 (greenhouse effects in N Atlantic on W Greenl. cod) Atlantic Ocean, Northeast (see also under names of specific areas as only the more general references are listed here) Adaptive framework (ADAPT) (strat. random trawl survey, shrimp in ICES XIV) (shrimp fishery Denmark Strait 1990-early 1991) (Denmark Strait shrimp, catch & effort 1980-90) (shrimp fishery in Denmark Strait 1989-90) (fluctuation and abundance of cod in Baltic Sea) (spawning characteristics of cod in N. Atlantic) SCR 91/ 52 (status of Scotian Shelf S hake pop. in 1990) (sequential population analysis, shrimp in Div QA) (assessment of the cod stock in NAFO Div 3NO) (assessment of G hallbut stock SA 2, Div 3KL) (assessment update of A plaice in NAFO Div 3LNO) 83 72 108 (distribution of cod in the southeastern North Sea)
(Barents Sea cod abundance relative to environment) (cod assessment, SA 3 1990 trawl acoustic data)
(status of redfish stock in Divisions 3LM)
(decrease in catch of grenadler SA 0-3, 1979-90)
(USSR capelin acoustic survey 1990, Div 2J+3KLMO)
(capelin 0-group trawl survey 1990, Div 3LNO)
(abundance of A plaice 1983-90 in Div 3M)
(natural mortality of S hake on the Scotian Shelf)
(analy. of indices 6 CPUE, S hake Div 4WWX 1989-90)
(year-class strengths of S hake Div 4WWX 1989-90)
(year-class strengths of S hake Div 4WWX)
(roundnose grenadier in SA 2+3 and catch in 0+1)
(cod assessment in Subdiv 3Ps)
(Farcese longline cod fishery Flemish Cap 1990)
(results of bottom trawl survey, Flemish Cap 1990)
(redfish distribution in Flemish Cap, 1988-90)
(Japanese capelin fishery Div 3NO, 1990)
(capelin blomass by acoustics Div 3L, 1990)
(biomass & age of cod Div 2J+3KL outside 200 miles)
(USSR surveys-results for A plaice in Div 3KLMNO)
(sequential population analysis, shrimp in Div OA)
(preliminary assessment of SA 1 cod)
(cod samp. of pair trawlers on Flemish Cap 1988-90)
(assessment of the cod stock in NAFO Div 3NO)
(assessment of C halibut stock SA 2, Div 3KL)
(assessment of redfish in NAFO Div 3LN) Age, composition SCR 91/ 5 Atlantic Ocean, Northwest (see also under names of specific areas as only the more general references are listed here) (oceanographic conditions in NAFO SA 0-3 in 1990) (variations in water temp. Subdiv 3Ps 1978-90) (length-weight relationships of round. grenadier) (new method for estimating hydrographic situation) (MEDS report for 1990) (overview of NAFO environmental conditions, 1990) SCR 91/ 11 59 (historical catches for some stocks, 1979-89)
(Canadian request for scientific advice for 1992)
(Denmark-Greenland request for sci. advice 1992)
(USSR research report for 1990)
(Canadian research report for 1990)
(tagging activities reported in 1990)
(US research report for 1990)
(statistical activities and publications note)
(list of biological sampling data for 1989)
(Faroe Islands research report for 1990)
(Denmark/Greenland research report for 1990)
(Japanese research report for 1990)
(Yortuguese research report for 1990)
(Spanish research report for 1990)
(provisional nominal catches for 1990)
(Polish research report for 1990) SCS 91/ 25

```
Atlantic redfish (see Redfish, Atlantic)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   [C]
 Atmosphere
                                                                                                                                                                                                                                                                                                                                                                      CAFSAC
                                                                                                                                                                                                                                                                                                                                                                                                                                    (theories of effects on cod trawling)
(distribution of eastern Scotian Shelf cod)
(distribution of cod in S. Gulf of St: Lawrence)
  SCR 91/ 11
                                                                (oceanographic conditions in NAFO SA 0-3 in 1990)
                                                                                                                                                                                                                                                                                                                                                                      SCR 91/101
                                                                (overview of NAFO environmental conditions, 1990)
                                                                                                                                                          [8]
                                                                                                                                                                                                                                                                                                                                                                      Canada
                                                                                                                                                                                                                                                                                                                                                                                                                                    (comparison of S hake otoliths, Can-USSR 1989)
(Canadian shrimp fishery Div OA, 1990)
(method to help age A plaice in Div 3M)
(cod stock abundance in Subdiv. 3Ps, 1978-90)
                                                                                                                                                                                                                                                                                                                                                                     SCR 91/ 7
Baffin Island (Subarea 0)
                                                             (decrease in catch of grenadier SA 0-3, 1979-90)
(coeanographic conditions in NAFO SA 0-3 in 1990)
(G halibut survey Div 0B and 1BCD 1990)
(roundnose grenadier in SA 2+3 and catch in 0+1)
(Canadian shrinp fishery Div 0A, 1990)
(assessment of G halibut stock SA 0+1)
(blomass of G halibut in SA 0+1, 1988-90)
(blomass of G redfish in SA 0+1, 1988-90)
(length-weight relationships of round. grenadier)
(G. halibut strat. ran. trawl & longl. survey 1990)
(strat. random trawl survey, SA 0+1 shrimp 1990)
(sequential population analysis, shrimp in Div 0A)
(data and pralim. assessment of shrimp in SA 0+1)
(overview of NAFO environmental conditions, 1990)
                                                                                                                                                                                                                                                                                                                                                                                                                                      (overview: Ocean Production Enhancement Network)
                                                                                                                                                                                                                                                                                                                                                                      SCS 91/
                                                                                                                                                                                                                                                                                                                                                                                                                                      (Canadian request for scientific advice for 1992)
                                                                                                                                                                                                                                                                                                                                                                                                                                      (Denmark-Greenland request for sci. advice 1992) (Canadian research report for 1990)
                                           59
                                                                                                                                                                                                                                                                                                                                                                      Capelin (Mallotus villosus)
                                                                                                                                                                                                                                                                                                                                                                                                                                  (USSR capelin acoustic survey 1990, Div 2J+3KLNO) (capelin 0-group trawl survey 1990, Div 3LNO) (food and feeding of A plaice S. Grand Bank) (Japanese capelin fishery Div 3No. 1990) (capelin biomass by acoustics Div 3L, 1990) (inshore capelin fishery in Div 3L in 1990) (tagged distribution of capelin in the NW Atlantic) (acoustic surveys for capelin in Div 3L, 1991) (food and feeding of comm. fishes, Nfid Bank, 1991)
                                                                                                                                                                                                                                                                                                                                                                      SCR 91/
  Bay of Fundy
  SCR 91/ 85
                                                               (MEDS report for 1990)
(overview of NAFO environmental conditions, 1990)
 Biological surveys (see Surveys, biological)
                                                                                                                                                                                                                                                                                                                                                                                                         catch/effort
                                                                                                                                                                                                                                                                                                                                                                                                                                    (cod assessment, SA 3 1990 trawl acoustic data)
(status of redfish stock in Divisions 3LN)
(decrease in catch of grenadier SA 0-3, 1979-90)
(capelin 0-group trawl survey 1990, Div 3LNO)
(abundance of A plaice 1983-90 in Div 3M)
(analy. of indices & CPUE, S hake Div 4VWX 1978-89)
(dist., abundance 0-group S hake Div 4VWX 1978-89)
(Norwegian shrimp study in E Greenland waters 1990)
(roundnose grenadier in SA 2+3 and catch in 0+1)
(cod assessment in Subdiv 3Ps)
 Biomass (see also Abundance; Stock size)
                                                           cod assessment, SA 3 1990 trawl acoustic data)
(status of redfish stock in Divisions 3LN)
(decrease in catch of grenadier SA 0-3, 1979-90)
(USSR capelin acoustic survey 1990, Div 2J+3KLNO)
(capelin 0-group trawl survey 1990, Div 3LNO)
(abundance of A plaice 1983-90 in Div 3M)
(dist, abundance 0-group S hake Div 4VWX 1978-89)
(year-class strengths of S hake Div 4VWX 1978-89)
(reaclass strengths of S hake Div 4VWX)
(G halibut survey Div 0B and 1BCD 1990)
(roundnose grenadier in SA 2+3 and catch in 0+1)
(cod assessment in Subdiv 3Ps)
(dist. of A plaice in winter in Subdiv 3Ps 1978-90)
(results of bottom trawl survey, Flemish Cap 1990)
(length dist & fecundity of shrimp on Flemish Cap)
(structure & changes in ichthyofauna off W Greenl.)
(capelin blomass by acoustics Div 3L, 1990)
(selectivity in shrimp trawl)
(misreporting effects on Flemish C. cod: simulation)
(biomass of G halibut in SA 0+1, 1988-90)
(results of two trawl surveys in SA 1, 1990)
(solutis of two trawl surveys in SA 1, 1990)
(solutis of two trawl surveys in SA 1, 1990)
(sults of two trawl surveys in SA 1, 1990)
(sults of two trawl surveys in SA 1, 1990)
(sults of two trawl surveys in SA 1, 1990)
(sults of two trawl surveys in SA 1, 1990)
(sults of two trawl surveys in SA 1, 1990)
(sults of two trawl surveys in SA 1, 1990)
(survey recruitment and biomass for cod Div 3KLNO)
(G. halibut strat. ran. trawl 4 longl. survey 1990)
(survey recruitment and biomass for cod Div 3M)
(strat. random trawl survey, SA 0+1 shrimp 1990)
(redfish in SA 1, dist., abund., biomass, 1982-90)
(redfish in Div 3LN, abund. a biomass, 1982-90)
(redfish in Cap 1910 tail flounder, Div 3LNO)
(juvenile A plaice on the Grand Bank, Div 3LNO)
(juvenile A plaice on the Grand Bank, Div 3LNO)
(felemish Cap cod stock analysis)
(non-parametric methods of estimating cod, Div 3NO)
(distrib. of 3Pn44RS cod and gear failure SW Nfld)
(variability of cod and biomass, Div 2J-4KL)
(cod year-class strength related to SSB 6 survival)
(acoustic surveys for capelin in Div 3L, 1991)
                                                                                                                                                                                                                                                                                                                                                                      SCR 91/ 5
                                                                (cod assessment, SA 3 1990 trawl acoustic data)
                                                                                                                                                                                                                                                                                                                                                                                                                                   (roundhose grenadier in SA 2+3 and catch in 0+1) (cod assessment in Subdiv 3Ps) (Farcese longline cod fishery Flemish Cap 1990) (Canadian shrimp fishery Div OA, 1990) (Japanese capelin fishery Div 3NO, 1990) (assessment of G halibut stock SA 0+1) (shrimp discards in Davis St. & Denmark St.) (status of Scotian Shelf S hake pop. in 1990) (inshore capelin fishery in Div 3L in 1990) (misreporting effects on Flemish C. cod: simulation) (shrimp fishery Denmark Strait 1990-early 1991) (abund: biomass, witch flo. Div 3NO G halibut 3KL) (catch-rate index for Greenland shrimp Div 1B) (Denmark Strait shrimp, catch 4 effort 1980-90)
                                                                                                                                                                                                                                                                                                                                                                                                                                  (abund: biomass, witch flo. Div 3NO G halibut 3KL)

(catch-rate index for Greenland shrimp Div 1B)

(Denmark Strait shrimp, catch & effort 1980-90)

(catch & effort trends, W Greenland cod)

(dist. & abund. of young cod, W Greenland 1990)

(discarding of young cod, W Greenland 1990)

(c. halibut strat. ran. trawl & longl. survey 1990)

(the shrimp fishery in NAFO'SA 1 in 1990)

(sequential population analysis, shrimp in Div 0A)

(shrimp fishery in Denmark Strait 1989-90)

(preliminary assessment of SA 1 cod)

(redfish stock size in Div 3M, 1990 & TAC for 1992)

(cod samp. of pair trawlers on Flemish Cap 1988-90)

(assessment of yellowtail flounder, Div 3LNO)

(juvenile A plaice on the Grand Bank, Div 3LNO)

(A plaice stock on Flemish Cap, Div 3M)

(assessment of the cod stock in NAFO Div 3NO)

(assessment of cadish in NAFO Div 3NN)

(assessment of redfish in NAFO Div 3LNO)

(Flemish Cap cod stock analysis)

(preliminary assess. of shrimp at Denmark Strait)

(fluctuation and abundance of cod in Baltic Sea)

(theories of effects on cod trawling)

(distribution of eastern Scotian Shelf cod)
                                                                                                                                                                                                                                                                                                                                                                                                                 62
64
65
                                            61
66
67
70
                                            73
74
75
77
80
                                                                                                                                                                                                                                                                                                                                                                                                                80
81
82
                                            81
                                                                                                                                                                                                                                                                                                                                                                                                                                      (theories of effects on cod trawling) (distribution of eastern Scotian Shelf cod) (changes in cod stock abundance in SA 2 and 3) (Barents Sea cod abundance relative to environment) (W Greenland cod abundance in the 20th century) (survey distribution of cod in Nfld Area, 1988-90)
   Bivalves (general) (see under common names)
                                                                                                                                                                                                                                                                                                                                                                                                             117
                                                             (Norwegian shrimp study in E Greenland waters 1990) (Farcese longline cod fishery Flemish Cap 1990) (Canadian shrimp fishery Div OA, 1990) (interaction of fish stocks off W Greenl., 1989-90) (inshore capelin fishery in Div 3L in 1990) (biomass of G halibut in SA O+1, 1988-90) (biomass of redfish in SA O+1, 1988-90) (feeding habits of demersal fish in W Greenland) (shrimp fishery Denmark Strait 1990-early 1991) (the shrimp fishery in NAFO SA 1 in 1990) (redfish in SA 1, dist., abund., biomass, 1982-90) (data and prelim. assessment of shrimp in SA O+1) (preliminary assess. of shrimp at Denmark Strait)
   SCR 91/ 20
                                                                                                                                                                                                                                                                                                                                                                       SCS 91/ 1
                                                                                                                                                                                                                                                                                                                                                                                                                                       (historical catches for some stocks, 1979-89) (provisional nominal catches for 1990)
                                                                                                                                                                                                                                                                                                                                                                       Cephalopods (see under common names)
                                                                                                                                                                                                                                                                                                                                                                        Climate
                                                                                                                                                                                                                                                                                                                                                                        SCR 91/ 89 (report on Second World Climate Conference)
                                                                                                                                                                                                                                                                                                                                                                       Circulation, atmospheric (see Meteorology)
                                                                                                                                                                                                                                                                                                                                                                       Cod, Arctic (Boreogadus saida) (see also Cod, Atlantic)
```

SCR 91/ 38 (assessment of G halibut stock SA 0+1)

```
(cod assessment, SA 3 1990 trawl acoustic data)
(dist. of S hake & other species in Div 4WWX, 1990)
(greenhouse effects in N Atlantic on W Greenl. cod)
(cod assessment in Subdiv 3Ps)
(Farcese longline cod fishery Flemish Cap 1990)
(results of bottom trawl survey, Flemish Cap 1990)
(results of bottom trawl survey, Flemish Cap 1990)
(interaction of fish stocks off W Greenl., 1989-90)
(misreporting effects on Flemish C. cod: simulation)
(blomass & age of cod Div 2J-3KL outside 200 miles)
(catch and effort trends, W Greenland cod)
(prelim: results cod tagging off W Greenland 1989)
(dist. & abund. of young cod, W Greenland 1990)
(discarding of young cod, W Greenland 1990)
(discarding of young cod, W Greenland 1990)
(survey recruitment and hiomass for cod Div 3M)
(preliminary assessment of SA 1 cod)
(cod samp. of pair trawlers on Flemish Cap 1988-90)
(assessment of the cod stock in NAFO Div 3NO)
(Flemish Cap cod stock analysis)
(fluctuation and abundance of cod in Baltic Sea)
(non-parametric methods of estimating cod, Div 3NO)
(effect of environment on growth of cod)
(intensity of feeding of cod, S Barents S. vs Nfld)
(theories of effects on cod trawling)
(impact of Greenland cod at Iceland, 1941-90)
(digestive tract of cod and larva)
(the reproductive stagss of cod)
(assess. & manage. of the Georges Bank cod fishery)
(apawning characteristics of cod in N. Atlantic)
(distribution of cod in the southeastern North Sea)
(summer feeding of cod on Flemish Cap)
(variability of cod and blomass, Div 2J-3KL)
(recruitment variability of cod stocks)
(cod stock abundance in SA 2 and 3)
(cod year—class strength related to SSB 4 survival)
(Barents Sea cod abundance relative to environment)
(W Greenland cod abundance in the 20th century)
(overview: Ocean Production Enhancement Network)
(food consumption of cod in Crand Bank, 1990)
(survey distribution of cod in Crand Bank, 1990)
Cod, Atlantic (Gadus morhus)
                                                                                                                                                                                                                                                                                                                                                                                                Depth
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (vertical dist. & feeding S hake Div 4VWX 1989-90) (cod assessment, SA 3 1990 trawl acoustic data) (oceanographic conditions in NAFO SA 0-3 in 1990) (redfish distribution in Flemish Cap, 1988-90) (structure & changes in inchthyofauna off W Greenl.) (abund; biomass, witch flo. Div 3NO G halibut 3KL) (strat. random trawl survey, SA 0+1 shrimp 1990) (juvenile A plaice on the Grand Bank, Div 3LNO) (overview of NAFO environmental conditions, 1990) (distribution of eastern Scotlan Shelf cod) (distribution of cod in S. Gulf of St. Lawrence) (distribution of cod in the southeastern North Sea) (survey distribution of cod in Nfld Area, 1988-90)
                                              35
44
51
62
63
64
65
76
78
                                                                                                                                                                                                                                                                                                                                                                                                 Discards (fish discarded at sea)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (Norwegian shrimp study in E Greenland waters 1990) (Canadian shrimp fishery Div OA, 1990) (shrimp discards in Davis St. & Denmark St.) (inshore capelin fishery in Div 3L in 1990) (catch-rate index for Greenland shrimp Div 1B) (discarding of young cod, W Greenland 1990) (data and prelim. assessment of shrimp in SA 0+1) (juvenile A plaice on the Grand Bank, Div 3LNO) (preliminary assess, of shrimp at Depmark Strait)
                                                                                                                                                                                                                                                                                                                                                                                                 SCR 91/ 20
                                                                                                                                                                                                                                                                                                                                                                                                                                              40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (preliminary assess. of shrimp at Denmark Strait)
                                         102
                                                                                                                                                                                                                                                                                                                                                                                                                                                              (dist., abundance)

(dist., abundance O-group S hake Div 4VWX 1989-90)
(vertical dist. 6 feeding S hake Div 4VWX 1989-90)
(hydrographic conditions in SA3+4VWX 1990)
(USSR capelin acoustic survey 1990, Div 2J+3KLNO)
(capelin O-group trawl survey 1990, Div 3LNO)
(dist. of S hake 6 other species in Div 4VWX, 1990)
(dist. of S hake 6 other species in Div 4VWX, 1990)
(dist., abundance O-group S hake Div 4VWX 1988-90)
(dist., abundance O-group S hake Div 4VWX 1978-89)
(year-class strengths of S hake Div 4VWX 1978-89)
(gear-class strengths of S hake Div 4VWX)
(G halibut survey Div OB and IBCD 1990).
(roundnose grenadier in SA 2+3 and catch in O+1)
(cod assessment in Subdiv 3Ps)
(Farcese longline cod fishery Flemish Cap 1990)
(dist. of A place in winter in Subdiv 3Ps 1978-90)
(redfish distribution in Flemish Cap, 1988-90)
(canadian shrimp fishery Div OA, 1990)
(assessment of G halibut stock SA O+1)
(biomass of G halibut in SA O+1, 1988-90)
(results of two trawl survey, shrimp in ICES XIV)
(shrimp fishery Denmark Strait 1990-early 1991)
(catch and effort trends, W Greenland cod)
(dist. & abund. of young cod, W Greenland cod)
(dist. & abund. of young cod, W Greenland cod)
(dist. & abund. of young cod, W Greenland 1990)
(G. halibut strat. ran. trawl & longl. survey 1990)
(redfish in SA 1, dist., abund., biomass, 1982-90)
(redfish in Div 3LN, abund. & biomass, 1982-90)
(redfish in Div 3LN, abund. & biomass, 1982-90)
(redfish in Of cod in S. Gulf of St. Lawrence)
(assess. & manage. of the Georges Bank cod fishery)
(W Greenland cod on NE NTId Shelf: a model)
(survey distribution of cod in Nfld Area, 1988-90)
                                                                                                                                                                                                                                                                                                                                                                                                 Distribution (see also Abundance)
                                         107
                                        108
                                         116
                                         121
                                                                                                                                                                                                                                                                                                                                                                                                                                              23
                                                                                                                                                                                                                                                                                                                                                                                                                                               32
                                                                                                                                                                                                                                                                                                                                                                                                                                              33
38
45
46
50
52
53
64
 Cohort analysis (see Sequential population analysis)
 Commercial fisheries
                                                                  dist. of S hake 6 other species in Div 4vWX, 1990) (Norwegian shrimp study in E Greenland waters 1990) (G halibut survey Div 0B and 1BCD 1990) (roundnose grenadier in SA 2+3 and catch in 0+1) (dist. of A plaice in winter in Subdiv 3Ps 1978-90) (shrimp discards in Davis St. 6 Denmark St.) (selectivity in shrimp trawl) (inshore capella fishery in Div 3L in 1990) (shrimp fishery Denmark Strait 1990-early 1991) (catch-rate index for Greenland shrimp Div 1B) (the shrimp fishery in NAFO SA 1 in 1990) (preliminary assessment of SA 1 cod) (assessment of yellowtail flounder, Div 3LNO) (juvenile A plaice on the Grand Bank, Div 3LNO) (assessment of the cod stock in NAFO Div 3NO) (report on Second World Climate Conference) (assessment update of A plaice in NAFO Div 3LNO) (preliminary assess. of shrimp at Denmark Strait) (cod stock abundance in Subdiv. 3Ps. 1978-90) (Barents Sea cod abundance relative to environment)
  SCR 91/ 13
                                                                                                                                                                                                                                                                                                                                                                                                                                               75
                                                                                                                                                                                                                                                                                                                                                                                                                                          107
                                               81
                                               83
89
                                                                                                                                                                                                                                                                                                                                                                                                  Diurnal effects/patterns
                                                                                                                                                                                                                                                                                                                                                                                                  SCR 91/ 2 (vertical dist. & feeding S hake Div 4VWX 1989-90)
- 3 (food,and feeding of mesopelagics in NW Atlantic)
  Copedpods
  SCR 91/ 92 (continuous plankton records 1990 off eastern USA)
 Currents (water circulation)
                                                                                                                                                                                                                                                                                                                                                                                                  East Greenland Area (see Greenland, East)
 SCR 91/ 3
                                                                   (food and feeding of mesopelagics in NW Atlantic)
(hydrographic conditions in SA3+4VWX 1990)
(abundance of A plaice 1983-90 in Div 3M)
(dist. of A plaice in winter in Subdiv 3Ps 1978-90)
(MEDS report for 1990)
(temp. 4 salinity on the Scotian S. 4 G. of Maine)
(report on Second World Climate Conference)
(migration of cod on NE Nfld Shelf: a model)
                                                                                                                                                                                                                                                                                                                                                                                                  Echo-sounding (see Acoustics)
                                                                                                                                                                                                                                                                                                                                                                                                  Ecology (see Environment)
                                                                                                                                                                                                                                                                                                                                                                                                  Eddies
                                                                                                                                                                                                                                                                                                                                                                                                 SCR 91/ 85 (MEDS report for 1990)
87 (overview of NAFO environmental conditions, 1990)
                                                                                                                                                                                                                                                                                                                                                                                                 Effort (see Catch)
                                                                                                                                                                                                                                                                                                                                                                                                 Eggs; Ová
Davis Strait (see Baffin Island and Greenland, West)
                                                                                                                                                                                                                                                                                                                                                                                                                                      / 19 (year-class strengths of S hake Div 4VWX)
29 (length dist & fecundity of shrimp on Flemish Cap)
108 (spawning characteristics of cod in N. Atlantic)
                                                                                                                                                                                                                                                                                                                                                                                                  SCR 91/ 19
Denmark
SCR 91/ 25 (Faroese longline cod fishery Flemish Cap 1990) 62 (catch and effort trends, W Greenland cod)
                                                                                                                                                                                                                                                                                                                                                                                                 Environment (see also specific subject headings)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (greenhouse effects in N Atlantic on W Greenl. cod)
(MEDS report for 1990)
(overview of NAFO environmental conditions, 1990)
(report on Second World Climate Conference)
(fluctuation and abundance of cod in Baltic Sea)
                                                                    (Denmark-Greenland request for sci. advice 1992)
(Faroe Islands research report for 1990)
(Denmark/Greenland research report for 1990)
                                                                                                                                                                                                                                                                                                                                                                                                 SCR 91/ 17
 SCS 91/
```

Denmark Strait (see Greenland, East)

```
(effect of environment on growth of cod)
(theories of effects on cod trawling)
(distribution of cod in S. Gulf of St. Lawrence)
(recruitment variability of cod stocks)
(Barents Sea cod abundance relative to environment)
 SCR 91/ 99
                          104
                                                                                                                                                                                                                                                                  Cadidae (see under specific common names)
                                                                                                                                                                                                                                                                    Gadus morhua (see Cod, Atlantic)
Environmental Subcommittee (NAFO)
                                                                                                                                                                                                                                                                    Georges Bank (Div. 5Z) (see also New England area)
SCS 91/ 19 (report of Scientific Council, Jun 1991)
                                                                                                                                                                                                                                                                    SCR 91/87 (overview of NAFO environmental conditions, 1990)
107 (assess. 4 manage. of the Georges Bank cod fishery)
Euphausiids (see under plankton and specific names)
                                                                                                                                                                                                                                                                    SCS 91/ 8 (US research report for 1990)
                                                                                                                                                                                                                                                                    German Democratic Republic (GDR)
Farce Islands (see Denmark)
                                                                                                                                                                                                                                                                    SCS 91/ 12' (GDR research report for 1990)
Fecundity
                                                                                                                                                                                                                                                                    Gillnet (see also Fishing gear)
SCR 91/ 29 (length dist & fecundity of shrimp on Flemish Cap) 72 (shrimp fishery in Denmark Strait 1989-90)
                                                                                                                                                                                                                                                                    SCR 91/ 39 (compar. gillnet & longl. in G halibut, W Greenl.)
64 (dist. & abund. of young cod, W Greenland 1990)
88 (assessment of G halibut stock SA 2, Div 3KL)
Feeding, Food
                                         (vertical dist. & feeding S hake Div 4VWX 1989-90) (food and feeding of mesopelagics in NW Atlantic) (analy, of indices & CPUE, S hake Div 4VWX 1989-90) (dist., abundance 0-group S hake Div 4VWX 1978-89) (year-class strengths of S hake Div 4VWX) (food and feeding of A plaice S. Grand Bank) (feeding of cod on Flemish Cap, 1989-90) (assessment of G halibut stock SA 0+1) (feeding habits of demersal fish in W Greenland) (food and feeding of redfish in W Greenland) (stomach contents of G halibut in W Greenland) (intensity of feeding of cod, S Barents S. vs Nfld) (summer feeding of cod on Flemish Cap) (migration of cod on NE Nfld Shelf: a model) (food consumption of cod in Grand Bank, 1990) (food and feeding of comm. fishes, Nfld Bank, 1991)
                                                                                                                                                                                                                                                                    Glyptocephalus cynoglossus (see Flounder, witch)
SCR 91/ 2
                                                                                                                                                                                                                                                                    Golden redfish (see Redfishes, golden)
                                                                                                                                                                                                                                                                    Grand Bank (Div. 3LNO including inshore)
                                                                                                                                                                                                                                                                                                          (biv. 3LNO including inshore)

(hydrographic conditions in SA3+4VWX 1990)
(cod assessment, SA 3 1990 trawl acoustic data)
(status of redfish stock in Divisions 3LN)
(USSR capelin acoustic survey 1990, Div 2J-3KLNO)
(capelin 0-group trawl survey 1990, Div 3LNO)
(food and feeding of A plaice S. Grand Bank)
(Japanese capelin fishery Div 3NO, 1990)
(capelin biomass by acoustics Div 3L, 1990)
(inshore capelin fishery in Div 3L in 1990)
(abund; biomass, witch flo. Div 3NO G halibut 3KL)
(USSR surveys-results for A plaice in Div 3LNO)
(assessment of yellowtail flounder, Div 3LNO)
(juvenile A plaice on the Grand Bank, Div 3LNO)
(juvenile A plaice on the Grand Bank, Div 3NO)
(effect of tow duration on gear selectivity)
(assessment of G halibut stock SA 2, Div 3KL)
(assessment update of A plaice in NAFO Div 3LNO)
(assessment update of A plaice in NAFO Div 3LNO)
(food consumption of cod in Grand Bank, 1990)
(food and feeding of comm. fishes, Nfld Bank, 1991)
 Fishing effort (see catch)
 Fishing gear (see also specific gear)
                                            (Farcess longline cod fishery Flemish Cap 1990)
(compar. gillnet & longl. in G halibut, W Greenl.)
(shrimp discards in Davis St. & Denmark St.)
(selectivity in shrimp trawl)
(inshore capelin fishery in Div 3L in 1990)
(catch-rate index for Greenland shrimp Div 1B)
(discarding of young cod, W Greenland 1990)
(preliminary assessment of SA 1 cod)
(cod samp. of pair trawlers on Flemish Cap 1988-90)
(assessment of G halibut stock SA 2, Div 3KL)
(assessment of redfish in NAFO Div 3LN)
(Flemish Cap cod stock analysis)
                                                                                                                                                                                                                                                                                                   90
                                                                                                                                                                                                                                                                    Greenland (see Denmark)
                                                                                                                                                                                                                                                                    Greenland, East ((Denmark Strait)
                                                                                                                                                                                                                                                                   SCR 91/20 (Norwegian shrimp study in E Greenland waters 1990)
35 (interaction of fish stocks off W Greenl., 1989-90)
40 (shrimp discards in Davis St. & Denmark St.)
53 (shrimp fishery Denmark Strait 1990-early 1991)
58 (Denmark Strait shrimp, catch & effort 1980-90)
72 (shrimp fishery in Denmark Strait 1989-90)
96 (preliminary assess. of shrimp at Denmark Strait)
100 (intensity of feeding of cod, S Barents S. vs Nfld)
117 (Barents Sea cod abundance relative to environment)
 Flatfish (see specific names)
 Flemish Cap (Div. 3M) (see also Grand Bank)
                                            (abundance of A plaice 1983-90 in Div 3M)
(Faroese longline cod fishery Flemish Cap 1990)
(results of bottom trawl survey, Flemish Cap 1990)
(length dist & fecundity of shrimp on Flemish Cap)
(feeding of cod on Flemish Cap, 1988-90)
(redfish distribution in Flemish Cap, 1988-90)
(misreporting effects on Flemish C. cod: simulation)
(USSR surveys-results for A plaice in Div 3KLMNO)
(Survey recruitment and biomass for cod Div 3M)
(redfish stock size in Div 3M, 1990 & TAC for 1992)
(cod samp. of pair trawlers on Flemish Cap 1988-90)
(A plaice stock on Flemish Cap, Div 3M)
(Flemish Cap cod stock analysis)
(summer feeding of cod on Flemish Cap)
                                                                                                                                                                                                                                                                 SCR 91/ 8 (decrease in catch of grenadier SA 0-3, 1979-90)
11 (oceanographic conditions in NAFO SA 0-3 in 1990)
12 (greenhouse effects in N Atlantic on W Greenh. cod)
13 (G halibut survey Div OB and IBCD 1990)
14 (roundhose grenadier in SA 2+3 and catch in 0+1)
15 (interaction of fish stocks off W Greenl., 1989-90)
16 (structure & changes in ichthyofauna off W Greenl.)
18 (assessment of G halibut stock SA 0+1)
19 (compar. gillnet & longl. in G halibut, W Greenl.)
40 (shrimp discards in Davis St. & Denmark St.)
45 (biomass of G halibut in SA 0+1, 1988-90)
46 (biomass of G halibut in SA 0+1, 1988-90)
47 (feeding habits of demersal fish in W Greenland)
48 (food and feeding of redfish in W Greenland)
49 (stomach contents of G halibut in W Greenland)
50 (results of two trawl surveys in SA 1, 1990)
57 (catch-rate index for Greenland shrimp Div IB)
59 (length-weight relationships of round. granadier)
62 (catch and effort trends, W Greenland cod)
63 (prelim. results cod tagging off W Greenland 1990)
64 (dist. & abund. of young cod, W Greenland 1990)
65 (discarding of young cod, W Greenland 1990)
66 (discarding of young cod, W Greenland 1990)
70 (strat. random trawl survey, SA 0+1 shrimp 1990)
71 (redfish in SA 1, dist., abund., biomass, 1982-90)
72 (data and prelim. assessment of Shrimp in SA 0+1)
73 (redfish in SA 1, dist., abund., biomass, 1982-90)
74 (detrambaline variab. of the W Greenland Current)
118 (W Greenland cod abundance in the 20th century)
                                                                                                                                                                                                                                                                    Greenland, West (Subarea 1)
                                60
  Flounder, witch (Glyptocephalus cynoglossus)
 SCR 91/ 13 (dist. of S hake & other species in Div 4VWX, 1990) 56 (abund; biomass, witch flo. Div 3NO G halibut 3KL)
  Flounder, yellowtail (Limanda ferruginea)
 SCR 91/ 13 (dist. of S hake 4 other species in Div 4VWX, 1990)
61 (USSR surveys-results for yellowtail flo. Div 3LNO)
80 (assessment of yellowtail flounder, Div 3LNO)
Food (see Feeding)
 France
 SCR 91/23 (cod assessment in Subdiv 3Ps)
114 (cod stock abundance in Subdiv. 3Ps, 1978-90)
                                                                                                                                                                                                                                                                                                                  (W Greenland cod abundance in the 20th century)
 Fylla Bank (see also Greenland, West)
                                                                                                                                                                                                                                                                    Greenland halibut (see Halibut, Greenland)
```

SCR 91/ 79 (new method for estimating hydrographic situation)

```
Grenadier, roughhead (Macrourus berglax)
                                                                                                                                                                                     Herring, Atlantic (Clupes harengus)
SCR 91/ 22 (roundhose grenadier in SA 2+3 and catch in 0+1)
                                                                                                                                                                                     SCR 91/ 13 (dist. of S hake & other species in Div 4VWX, 1990)
Grenadier, roundnose (Coryphaenoides rupestris)
                                                                                                                                                                                     Hippoglossus hippoglossus (see Halibut, Atlantic)
SCR 91/ 8 (decrease in catch of grenadier SA 0-3, 1979-90)
22 (roundnose grenadier in SA 2+3 and catch in 0+1)
50 (results of two trawl surveys in SA 1, 1990)
59 (length-weight relationships of round, grenadier)
                                                                                                                                                                                     Hydroacoustics (see Acoustics)
                                                                                                                                                                                     Hydrography (see also specific subjects)
                                                                                                                                                                                                                     (hydrographic conditions in SA3+4VWX 1990)
                                                                                                                                                                                     SCR 91/ 4
                                                                                                                                                                                                                     (oceanographic conditions in NAFO SA 0-3 in 1990) (variations in water temp. Subdiv 3Ps 1978-90) (new method for estimating hydrographic situation) (temp. & salinity on the Scotian S. & G. of Maine) (water temperature & salinity, G. of Maine 1990) (thermohaline variab. of the W Greenland Current)
Groundfish (see also common names)
                               (G halibut survey Div OB and IBCD 1990)
(results of bottom trawl survey, Flemish Cap 1990)
(status of Scotian Shelf S hake pop. in 1990)
(feeding habits of demersel fish in W Greenland)
(results of two trawl surveys in SA 1, 1990)
(USSR surveys-results for A plaice in Div 3KMMNO)
(USSR surveys-results for yellowtil flo. Div 3LNO)
(redfish in Div 3LN, abund. & biomass 1972-90)
(theories of effects on cod trawling)
SCR 91/ 21
                                                                                                                                                                                                                                                                    [1]
                                                                                                                                                                                     ICES (International Council for the Exploration of the Sea)
Growth
                                                                                                                                                                                     SCR 91/52 (strat. random trawl survey, shrimp in ICES XIV)
108 (spawning characteristics of cod in N. Atlantic)
                               (dist., abundance 0-group S hake Div 4VWX 1989-90) (comparison of S hake otoliths, Can-USSR 1989) (otoliths, ageing and growth of S hake Div 4VWX) (effect of environment on growth of cod) (intensity of feeding of cod, S Barents S. vs Nfld) (summer feeding of cod on Flemish Cap) (Barents Sea cod abundance relative to environment)
SCR 91/ 1
                                                                                                                                                                                     Ice: Icebergs
                                                                                                                                                                                     SCR 91/ 11 (oceanographic conditions in NAFO SA 0-3 in 1990)
87 (overview of NAFO environmental conditions, 1990)
89 (report on Second World Climate Conference)
                                                                                                                                                                                     Iceland area (see also Greenland, East)
Gulf of Maine (Div. 5Y)
                                                                                                                                                                                     SCR 91/35 (interaction of fish stocks off W Greenl., 1989-90
52 (strat. random trawl survey, shrimp in ICES XIV)
58 (Denmark Strait shrimp, catch & affort 1980-90)
63 (prelim. results cod tagging off W Greenland 1989)
72 (shrimp fishery in Denmark Strait 1989-90)
102 (impact of Greenland cod at Iceland, 1941-90)
SCR 91/86 (temp. & salinity on the Scotian S. 4 G. of Maine)
91 (water temperature & salinity, G. of Maine 1990)
92 (continuous plankton records 1990 off eastern USA)
Gulf of St. Lawrence (Div. 4RSTV)
SCR 91/ 24
                 / 24 (variations in water temp. Subdiv 3Ps 1978-90)
87 (overview of NAFO environmental conditions, 1990).
104 (distribution of cod in S. Gulf of St. Lawrence)
110 (distrib. of 3Pn44RS cod and gear fallure SW Nfld)
                                                                                                                                                                                      Ichthyoplankton (see Plankton)
                                                                                                                                                                                     Illex illecebrosus (see Squid, short-finned)
                                                                                                                                                                                     Inshore (see also respective areas)
Gulf Stream (see also hydrography and oceanography)
                                                                                                                                                                                                                     (compar. gillnet & longl. in G halibut, W Greenl.)
(inshore capelin fishery in Div 3L in 1990)
(dist. & abund. of young cod, W Greenland 1990)
(prellminary assessment of SA 1 cod)
(overview of NAFO environmental conditions, 1990)
                                                                                                                                                                                     SCR 91/ 39
43
                               (temp. & salinity on the Scotian S. & G. of Maine)
(overview of NAFO environmental conditions, 1990)
(water temperature & salinity, G. of Maine 1990)
(continuous plankton records 1990 off eastern USA)
                                                                                                                                                                                     Irminger Current (see also currents)
                                                                                                                                                                                     SCR 91/ 35 (interaction of fish stocks off W Greenl., 1989-9 94 (thermohaline variab. of the W Greenland Current)
                                                                                                                                                                                                                                                                                                                                  1989-90)
Haddock (Melanogrammus aeglefinus)
SCR 91/ 13 (dist. of S hake & other species in Div 4VWX, 1990)
                                                                                                                                                                                                                                                                    [J]
Hake, red (Urophycis chuss)
                                                                                                                                                                                     Japan
SCR 91/ 13 (dist. of S hake & other species in Div 4VWX, 1990)
                                                                                                                                                                                     SCR 91/ 34 (Japanese capelin fishery Div 3NO, 1990)
Hake, silver (Merluccius bilinearis)
                              (dist., abundance 0-group S hake Div 4VWX 1989-90) (vertical dist. & feeding S hake Div 4VWX 1989-90) (hydrographic conditions in SA3+4VWX 1990) (comparison of S hake otoliths, Can-USSR 1989) (dist. of S hake & other species in Div 4VWX, 1990) (natural mortality of S hake on the Scotian Shelf) (analy. of indices & CCUE, S hake Div 4VWX 1989-90) (dist., abundance 0-group S hake Div 4VWX 1988-89) (otoliths, ageing and growth of S hake Div 4VWX) (year-class strengths of S hake Div 4VWX) (status of Scotian Shelf S hake pop. in 1990)
                                                                                                                                                                                     SCS 91/ 14 (Japanese research report for 1990)
SCR 91/ 1
                                                                                                                                                                                     Labrador area (Subarea 2)
                                                                                                                                                                                      SCR 91/
                                                                                                                                                                                                                      (hydrographic conditions in SA3+4VWX 1990)
                                                                                                                                                                                                                     (hydrographic conditions in SA3+4VWX 1990) (decrease in catch of grenadier SA 0-3, 1979-90) (USSR capelin acoustic survey 1990, Div 2J+3KLNO) (oceanographic conditions in NAFO SA 0-3 in 1990) (roundnose grenadier in SA 2+3 and catch in 0+1) (blomass & age of cod Div 2J+3KL outside 200 miles) (assessment of G halibut stock SA 2, Div 3KL) (variability of cod and blomass, Div 2J+3KL) (changes in cod stock abundance in SA 2 and 3)
Hake, white (Urophycis tenuis)
 SCR 91/ 13 (dist. of S hake & other species in Div 4VWX, 1990)
Halibut, Atlantic (Hippoglossus hipplglossus)
                                                                                                                                                                                     Larvae
                                                                                                                                                                                     SCR 91/35 (interaction of fish stocks off W Greenl., 1989-90)
38 (assessment of G halibut stock SA 0+1)
105 (digestive tract of cod and larva)
SCR 91/ 47 (feeding habits of demersal fish in W Greenland)
Halibut, Greenland (Reinhardtius hippoglossoides)
                              (dist. of S hake & other species in Div 4VWX, 1990) (G halibut survey Div OB and 1BCD 1990) (interaction of fish stocks off W Greenl., 1989-90) (assessment of G halibut stock SA 0+1) (compar. gillnet & longl. in G halibut, W Greenl.) (biomass of G halibut in SA 0+1, 1988-90) (feeding habits of demersal fish in W Greenland) (stomach contents of G halibut in W Greenland) (results of two trawl surveys in SA 1, 1990) (abund; biomass, witch flo. Div 3NO G halibut 3KL) (G. halibut strat, ran, trawl & longl. survey 1990) (assessment of G halibut stock SA 2, Div 3KL) (food and feeding of comm. fishes, Nfld Bank, 1991)
                                                                                                                                                                                     Length: Length composition
                      21
                                                                                                                                                                                                                   (dist., abundance 0-group S hake Div 4VWX 1989-90) (cod assessment, SA 3 1990 trawl acoustic data) (status of redfish stock in Divisions 3LN) (decrease in catch of granadier SA 0-3, 1979-90) (USSR capelin acoustic survey 1990, Div 2J+3KLNO) (capelin 0-group trawl survey 1990, Div 3LNO) (abundance of A plaice 1983-90 in Div 3M) (natural mortality of S hake on the Scotian Shelf) (analy. of indices & CPUE, S hake Div 4VWX 1989-90) (otoliths, ageing and growth of S hake Div 4VWX) (Norwegian shrimp study in E Greenland waters 1990)
                                                                                                                                                                                     SCR 91/ 1
```

```
(G halibut survey Div OB and IBCD 1990)
(cod assessment in Subdiv 3Ps)
(Farcese longline cod fishery Flemish Cap 1990)
(age-length relation of A plaice Subdiv 3Ps)
(length dist 4 fecundity of shrimp on Flemish Cap)
(redfish distribution in Flemish Cap, 1988-90)
(Canadian shrimp fishery Div OA, 1990)
(Japanese capelin fishery Div 3No, 1990)
(assessment of G halibut stock SA 0+1)
(results of two trawl surveys in SA 1, 1990)
(length-weight relationships of round. grenadier)
(USSR surveys-results for A plaice in Div 3KLMNO)
(dists urveys-results for yellowtail flo. Div 3LNO)
(dist. 4 abund. of young cod, W Greenland 1990)
(G. halibut strat. ran. trawl 4 longl. survey 1990)
(survey recruitment and blomass for cod Div 3M)
(strat. random trawl survey, SA 0+1 shrimp 1990)
(shrimp fishery in Denmark Strait 1989-90)
(redfish in SA 1, dist., abund., blomass, 1982-90)
(cod samp. of pair trawlers on Flemish Cap 1988-90)
(A plaice stock on Flemish Cap, Div 3M)
(assessment of redfish in NAFO Div 3LN)
                                                                                                                                                                                                                              Migration (see also Tagging)
                                                                                                                                                                                                                                                                   (vertical dist. & feeding S hake Div 4VWX 1989-90) (interaction of fish stocks off W Greenl., 1989-90) (prelim. results cod tagging off W Greenland 1989) (theories of effects on cod trawling) (impact of Greenland cod at Iceland, 1941-90) (distribution of cod in S. Gulf of St. Lawrence) (distrib. of 3Pn+4RS cod and gear failure SW Nfid) (variability of cod and blomass, Div 2J+3KL) (cod stock abundance in Subdiv. 3Ps, 1978-90) (changes in cod stock abundance in SA 2 and 3) (cod year-class strength related to SSB 4 survival) (Barents Sea cod abundance relative to environment) (W Greenland cod abundance in the 20th century) (migration of cod on NE Nfid Shelf: a model) (tagged distribution of capelin in the NW Atlantic)
                                                                                                                                                                                                                                                     102
                         50
                         61
                                                                                                                                                                                                                                                     116
                                                                                                                                                                                                                              Molluscs (general) (see under common names)
                                                                                                                                                                                                                              Mortality
                                                                                                                                                                                                                                                                     (natural mortality of S hake on the Scotian Shelf) (food and feeding of A plaice S. Grand Bank) (feeding of cod on Flemish Cap, 1989-90) (shrimp discards in Davis St. & Denmark St.) (feeding habits of demersal fish in W Greenland) (food and feeding of redfish in W Greenland) (stomach contents of G halibut in W Greenland) (discarding of young cod W Greenland 1990)
Limanda ferruginea (see Flounder, yellowtail)
Logbooks
SCR 91/ 69 (the shrimp fishery in NAFO SA 1 in 1990)
                                                                                                                                                                                                                                                                     (discarding of young cod, W Greenland 1990) (assessment of redfish in NAFO Div 3LN)
Loligo pealei (see Squid, long-finned)
                                                                                                                                                                                                                                                                    (impact of Greenland cod at Iceland, 1941-90) (food consumption of cod in Grand Bank, 1990)
Long-finned squid (see Squid, long-finned)
SCR 91/ 13 (dist. of S hake & other species in Div 4VWX, 1990)
                                                                                                                                                                                                                              Multiplicative model
                                                                                                                                                                                                                            SCR 91/ 22 (roundnose grenadier in SA 2+3 and catch in 0+1)
26 (dist. of A plaice in winter in Subdiv 3Ps 1978-90)
54 (multiplicative model for effort standardization)
57 (catch-rate index for Greenland shrimp Div 1B)
60 (USSR surveys-results for A plaice in Div 3KLMNO)
61 (USSR surveys-results for yellowtail fio. Div 3LNO)
62 (catch and effort trends, W Greenland cod)
75 (redfish in Div 3LN, abund. & biomass 1972-90)
69 (assessment of yellowtail flounder, Div 3LNO)
90 (assessment of redfish in NAFO Div 3LN)
SCS 91/ B (US research report for 1990)
Longline
                                     (Faroese longline cod fishery Flemish Cap 1990)
(assessment of G halibut stock SA 0+1)
(compar gillnet & longl. in G halibut, W Greenl.)
(G. halibut strat. ran. trawl & longl. survey 1990)
(preliminary assessment of SA 1 cod)
(theories of effects on cod trawling)
(distrib. of 3Pn&4RS cod and gear failure SW Nfld)
SCR 91/ 25
                                                                                                 [M]
                                                                                                                                                                                                                                                                                                                                111
MEDS (Marine Environmental Data Service)
                                                                                                                                                                                                                              Nematodes
                                                                                                                                                                                                                               New England area (Subareas 5 and 6) (pertains generally to southern New England, see Georges Bank and Gulf of Maine for other parts of the area)
 SCR 91/ 85 (MEDS report for 1990)
Mackerel, Altantic (Scomber scombrus)
                                                                                                                                                                                                                              SCR 91/ 85 (MEDS report for 1990)

86 (temp. & salinity on the Scotian S. & G. of Maine)
87 (overview of NAFO environmental conditions, 1990)
91 (water temperature & salinity, G. of Maine 1990)
92 (continuous plankton records 1990 off eastern USA)
107 (assess. & manage. of the Georges Bank cod fishery)
SCR 91/ 13 (dist. of S hake & other species in Div 4VWX, 1990)
Macrouridae (see Grenadier)
Mallotus villosus (see Capelin)
Management
                                                                                                                                                                                                                                SCS 91/ 8 (US research report for 1990)
                                     (structure & changes in ichthyofauna off W Greenl.)
(biomass & ago of cod Div 2J+3KL outside 200 miles)
(review of management in the Illex fishery SA 3&4)
(assess. & manage. of the Georges Bank cod fishery)
(overview: Ocean Production Enhancement Network)
SCR 91/ 36
                                                                                                                                                                                                                                Newfoundland area (Subarea 3, including inshore)
                                                                                                                                                                                                                                                                     (cod assessment, SA 3 1990 trawl acoustic data) (status of redfish stock in Divisions 3LN) (decrease in catch of grenadier SA 0-3, 1979-90) (USSR capelin acoustic survey 1990, Div 2J+3KLNO) (capelin 0-group trawl survey 1990, Div 3LNO) (Japanese capelin fishery Div 3NO, 1990) (capelin blomass by acoustics Div 3L, 1990) (inshore capelin fishery in Div 3L in 1990) (assessment of G halibut stock SA 2, Div 3KL) (distrib. of 3Pn&4RS cod and gear failure SW Nfld) (migration of cod on NE Nfld Shelf: a model) (tagged distribution of capelin in Div 3L, 1991) (survey distribution of cod in Nfld Area, 1988-90)
                                                                                                                                                                                                                                SCR 91/ 5
                          3 (Canadian request for scientific advice for 1992)
4 (Denmark-Greenland request for sci. advice 1992)
20 (report of Scientific Council, Sep 1991)
SCS 91/ 3
Marine Environmental Data Service (see MEDS)
                                                                                                                                                                                                                                                          43
Maturation; Maturity
                                       (hydrographic conditions in SA3+4VWX 1990)
(Farcese longline cod fishery Flemish Cap 1990)
(Japanese capelin fishery Div 3NO, 1990)
(the reproductive stages of cod)
(variability of cod and biomass, Div 2J+3KL)
(Barents Sea cod abundance relative to environment)
                                                                                                                                                                                                                                                                      (survey distribution of cod in Nfld Area, 1988-90)
                                                                                                                                                                                                                                Northeast Atlantic (see also Atlantic Ocean, Northeast)
                                                                                                                                                                                                                               SCR 91/ 52 (strat. random trawl survey, shrimp in ICES XIV)
53 (shrimp fishery Denmark Strait 1990-early 1991)
58 [Denmark Strait shrimp, catch 4 effort 1980-90)
72 (shrimp fishery in Denmark Strait 1989-90)
Meristics
 SCR 91/ 18
                                    (otoliths, ageing and growth of S hake Div 4VWX) (method to help age A plaice in Div 3M)
                                                                                                                                                                                                                                Northern shrimp (see Shrimp, northern)
 Merluccius bilinearis (see Hake, silver)
                                                                                                                                                                                                                                Northwest Atlantic (see Atlantic Ocean, Northwest)
 Meteorology
                                                                                                                                                                                                                                Norway
                                       (greenhouse effects in N Atlantic on W Greenl. cod) (temp. & salintty on the Scotian S. & G. of Maine) (overview of NAFO environmental conditions, 1990) (thermohaline variab. of the W Greenland Current)
 SCR 91/ 17
```

SCR 91/ 20 (Norwegian shrimp study in E Greenland waters 1990)

101

#### SUBJECT INDEX

Quotas

```
(biomass of G halibut in SA 0+1, 1988-90)
(biomass of redfish in SA 0+1, 1988-90)
(juvenile A plaice on the Grand Bank, Div 3LNO)
(fluctuation and abundance of cod in Baltic Sea)
(distribution of cod in the southeastern North Sea)
(W Greenland cod abundance in the 20th century)
SCR 91/ 45
                                                                                                                                                                                                                          (Canadian shrimp fishery Div OA, 1990)
(misreporting effects on Flemish C. cod: simulation)
                                                                                                                                                                                                                                                                          [R]
Oceanography (see also specific subjects)
                                                                                                                                                                                         Recreational fishing
                                (oceanographic conditions in NAFO SA 0-3 in 1990) (new method for estimating hydrographic situation) (temp. 6 salinity on the Scotian S. 6 G. of Maine) (overview of NAFO environmental conditions, 1990) (water temperature 6 salinity, G. of Maine 1990) (thermohaline variab. of the W Greenland Current)
                                                                                                                                                                                          SCR 91/107 (assess. & manage, of the Georges Bank cod fishery)
SCR 91/ 11
                                                                                                                                                                                          Recruitment
                      86
                                                                                                                                                                                                                         (cod assessment, SA 3 1990 trawl acoustic data) (USSR capelin acoustic survey 1990, Div 2J+3KlNO) (capelin 0-group trawl survey 1990, Div 3LNO) (dist., abundance 0-group S heke Div 4VWX 1978-89) (preliminary assessment of SA 1 cod) (assessment of the cod stock in NAFO Div 3NO) (Flemish Cap cod stock analysis) (non-parametric methods of estimating cod, Div 3NO) (recruitment variability of cod stocks)
                                                                                                                                                                                          SCR 91/ 5
                                 (overview: Ocean Production Enhancement Network)
Otoliths
                                                                                                                                                                                                               83
                                (comparison of S hake otoliths, Can-USSR 1989) (dist. of S hake & other species in Div 4VWX, 1990) (natural mortality of S hake on the Scotian Shelf) (otoliths, ageing and growth of S hake Div 4VWX) (age-length relation of A plaice Subdiv 3Ps) (method to help age A plaice in Div 3M)
SCR 91/
                                                                                                                                                                                          Redfishes, Atlantic (Sebastes sp.)
                                                                                                                                                                                                                         (status of redfish stock in Divisions 3LN)
(dist. of S hake & other species in Div 4VWX, 1990)
(results of bottom trawl survey, Flemish Cap 1990)
(interaction of fish stocks off W Greenl., 1989-90)
(structure & changes in ichthyofauna off W Greenl.)
(biomass of redfish in SA 0+1, 1988-90)
(feeding habits of demersal fish in W Greenland)
(food and feeding of redfish in W Greenland)
(stomach contents of G halibut in W Greenland)
(results of two trawl surveys in SA 1, 1990)
(redfish stock size in Div 3M, 1990 & TAC for 1992)
(assessment of redfish in NAFO Div 3LN)
                                                                                                                                                                                          SCR 91/
Otter trawls (see Trawls)
Ova; Ovaries (see Eggs)
Oxygen
                                (MEDS report for 1990)
(overview of NAFO environmental conditions, 1990)
 SCR 91/ 85
87
                                                                                  [9]
Pandalus sp. (see Shrimp)
                                                                                                                                                                                          Redfish, beaked (Seabastes fasciatus, S. mentella)
                                                                                                                                                                                                                         (redfish distribution in Flemish Cap, 1988-90)
(structure & changes in ichthyofauna off: W Greenl.)
(blomass of redfish in SA 0+1, 1988-90)
(feeding habits of demersal fish in W Greenland)
(food and feeding of redfish in W Greenland)
(stomach contents of G halibut in W Greenland)
(redfish in SA 1, dist., abund., blomass, 1982-90)
(redfish in Div 3LN, abund. & blomass 1972-90)
Pandalus borealis (see Shrimp)
Pandalus montaqui (see Shrimp)
Photography (see Remote-sensing)
Phytoplankton (see Plankton)
Plaice, American (Hippoglossoides platessoides)
                                (abundance of A plaice 1983-90 in Div 3M)
(dist. of A plaice in winter in Subdiv 3Ps 1978-90)
(results of bottom trawl survey, Flemish Cap 1990)
(food and feeding of A plaice S. Grand Bank)
(feeding habits of demersal fish in W Greenland)
(USSR surveys-results for A plaice in Div 3KLMNO)
(method to help age A plaice in Div 3M)
(juvenite A plaice on the Grand Bank, Div 3LNO)
(A plaice stock on Flemish Cap, Div 3M)
(assessment update of A plaice in NAFO Div 3LNO)
(food and feeding of comm. fishes, Nfld Bank, 1991)
                                                                                                                                                                                          Redfish, golden (Sebastes marinus)
SCR 91/ 12
                                                                                                                                                                                                                       (redfish distribution in Flemish Cap, 1988-90)
(structure & changes in ichthyofauna off W Greenl.
(biomass of redfish in SA 0+1, 1988-90)
(feeding habits of demersal fish in W Greenland)
(food and feeding of redfish in W Greenland)
(stomach contents of G halibut in W Greenland)
(redfish in SA 1, dist., abund., biomass, 1982-90)
                                                                                                                                                                                                                                                                                                                            off W Greenl.)
                      82
                                                                                                                                                                                          Reinhardtius hippoglossoides (see Halibut, Greenland)
                                                                                                                                                                                          Remote-sensing .
Plankton
                                                                                                                                                                                          SCR 91/87 -(overview of NAFO environmental conditions, 1990)
                                 (vertical dist. & feeding S hake Div 4VWX 1989-90)
SCR 91/ 2
                                 (food and feeding of mesopelagics in NW Atlantic)
(structure & changes in ichthyofauna off W Greenl.)
(continuous plankton records 1990 off eastern USA)
                                                                                                                                                                                          Reproduction (see also Eggs, Maturity, Spawning)
                                                                                                                                                                                          SCR 91/106 (the reproductive stages of cod)
                                                                                                                                                                                          Research reports (national)
Poland
                                                                                                                                                                                                                          (USSR research report for 1990)
(Canadian research report for 1
(US research report for 1990)
(Faroe Islands research report
(CDR research report for 1990)
SCS 91/ 21 (Polish research report for 1990)
                                                                                                                                                                                          SCS 91/ 5
                                                                                                                                                                                                                                                                                             for 1990)
Pollachius virens (see Pollock)
Pollock (saithe, Pollachius virens)
                                                                                                                                                                                                                           (Johnmark/Greenland research report for 1990)
(Japanese research report for 1990)
(Portuguese research report for 1990)
(Spanish research report for 1990)
SCR 91/13 (dist. of S hake 4 other species in Div 4VWX, 1990)
                                                                                                                                                                                                                           (Spanish research report for 1990 (Polish research report for 1990)
Portugal
```

STACFIS (Standing Committee on Fishery Science) SCR 91/68 (method to help age A plaice in Div 3M)

Roughhead grenadier (see Grenadier, roughhead)

Roundnose grenadier (see Grenadier, roundnose)

SCS 91/ 19 (report of Scientific Council, Jun 1991)
20 (report of Scientific Council, Sep 1991)

(provisional index for 1990 SCR and SCS documents) (statistical activities and publications note)

SCR 91/87 (overview of NAFO environmental conditions, 1990)

SCR 91/ 48 (food and feeding of redfish in W Greenland)
49 (stomach contents of G halibut in W Greenland)

SCS 91/ 15 (Portuguese research report for 1990)

Predation (see also Feeding)

Pressure (atmospheric)

Publications

Nursery

```
(Denmark Strait shrimp, catch & effort 1980-90) (the shrimp fishery in NAFO SA 1 in 1990) (shrimp fishery in Denmark Strait 1989-90) (data and prelim: assessment of shrimp in SA 0+1)
STACPUB (Standing Committee on Publications)
                                                                                                                                                                                                       SCR 91/ 58
SCS 91/ 19 (report of Scientific Council, Jun 1991)
20 (report of Scientific Council, Sep 1991)
                                                                                                                                                                                                                              72
STACREC (Standing Committee on Research Coordination)
                                                                                                                                                                                                       Silver hake (see Hake, silver)
SCS 91/ 18 (research vessel surveys by stock)
19 (report of Scientific Council, Jun 1991)
                                                                                                                                                                                                      Spain
                                                                                                                                                                                                       SCR 91/68 (method to help age A plaice in Div 3M)
SCS 91/ 20 (report of Scientific Council, Sep 1991)
Saithe (see Pollock)
                                                                                                                                                                                                       SCR 91/ 78 (cod samp. of pair trawlers on Flemish Cap 1988-90)
Salinity
                                                                                                                                                                                                       SCS 91/ 16 (Spanish research report for 1990)
                                 (oceanographic conditions in NAFO SA 0-3 in 1990) (overview of NAFO environmental conditions, 1990) (water temperature & salinity, G. of Maine 1990) (thermohaline variab. of the W Greenland Current) (fluctuation and abundance of cod in Baltic Sea) (distribution of cod in the southeastern North Sea)
SCR 91/ 11
                                                                                                                                                                                                       Spawning (see also Eggs, Maturation, Reproduction)
                                                                                                                                                                                                       SCR 91/ 97 (fluctuation and abundance of cod in Baltic Sea)
108 (spawning characteristics of cod in N. Atlantic)
122 (tagged distribution of capelin in the NW Atlantic)
                                                                                                                                                                                                       Squid (species)
Sampling, biological
                                 (comparison of S hake otoliths, Can-USSR 1989)
(abundance of A plaice 1983-90 in Div 3M)
(cod assessment in Subdiv 3Ps)
(dist. of A plaice in winter in Subdiv 3Ps 1978-90)
(age-length relation of A plaice Subdiv 3Ps)
(capelin biomass by acoustics Div 3L, 1990)
(status of Scotian Shelf S hake pop. in 1990)
(inshore capelin fishery in Div 3L in 1990)
(misreporting effects on Flemish C. cod: simulation)
(the shrimp fishery in NAFO SA 1 in 1990)
(strat. random trawl survey, SA 0+1 shrimp 1990)
(shrimp fishery in Denmark Strait 1989-90)
(MEDS report for 1990)
(overview of NAFO environmental conditions, 1990)
(assessment update of A plaice in NAFO Div 3LNO)
(acoustic surveys for capelin in Div 3L, 1991)
                                                                                                                                                                                                       SCR 91/ 13 (dist. of S hake & other species in Div 4VWX, 1990)
                                                                                                                                                                                                       Squid, long-finned (Loligo pealei)
                       23
                                                                                                                                                                                                       Squid, short-finned (Illex illecebrosus)
                                                                                                                                                                                                       SCR 91/ 13 (dist. of S hake & other species in Div 4VWX, 1990)
55 (review of management in the Illex fishery SA 364)
                                                                                                                                                                                                       Statistics
                       69
70
                                                                                                                                                                                                      SCR 91/58 (Denmark Strait shrimp, catch & effort 1980-90)
74 (data and prelim. assessment of shrimp in SA 0+1)
76 (preliminary assessment of SA 1 cod)
80 (assessment of yellowtail flounder, Div 3LNO)
83 (assessment of the cod stock in NAFO Div 3NO)
85 (MEDS report for 1990)
88 (assessment of C halibut stock SA 2, Div 3KL)
93 (assessment update of A plaice in NAFO Div 3LNO)
104 (distribution of cod in S. Gulf of St. Lawrence)
117 (Barenta Sea cod abundance relative to environment)
 SCS 91/ 10 (list of biological sampling data for 1989)
 Satellite imagery (see also Remote-sensing)
                                                                                                                                                                                                       SCS 91/ 1
                                                                                                                                                                                                                             1 (historical catches for some stocks, 1979-89)
9 (USSR capelin acoustic survey 1990, Div 2J+3KLNO)
17 (greenhouse effects in N Atlantic on W Greenl. cod)
 SCR 91/87 (overview of NAFO environmental conditions, 1990)
Scallop, sea (Placopecten magellanicus)
 SCR 91/120 (overview: Ocean Production Enhancement Network)
                                                                                                                                                                                                       Stock density
                                                                                                                                                                                                       SCR 91/ 15 (analy. of indices & CPUE, S hake Div 4VWX 1989-90)
 Scientific Council
SCS 91/ 19 (report of Scientific Council, Jun 1991)
20 (report of Scientific Council, Sep 1991)
                                                                                                                                                                                                       Stock, discrimination (see also Distribution)
                                                                                                                                                                                                        SCR 91/88 (assessment of G halibut stock SA 2, Div 3KL)
 Scotian Shelf (Div. 4VWX)
                                  (dist., abundance 0-group S hake Div 4VWX 1989-90) (vertical dist. & feeding S hake Div 4VWX 1989-90) (hydrographic conditions in SA3+4VWX 1990) (dist. of S hake 4 other species in Div 4VWX, 1990) (natural mortality of S hake on the Scotian Shelf) (analy. of indices & CPUE, S hake Div 4VWX 1989-90) (dist., abundance 0-group S hake Div 4VWX 1978-89) (otoliths, ageing and growth of S hake Div 4VWX) (year-class strengths of S hake Div 4VWX) (status of Scotian Shelf S hake pop. in 1990) (temp. & salinity on the Scotian S. & G. of Maine) (continuous plankton records 1990 off eastern USA) (spawning characteristics of cod in N. Atlantic)
                                                                                                                                                                                                                            stock size (see also Abundance; Assessment)
 SCR 91/ 1
2
                                                                                                                                                                                                                                        (status of redfish stock in Divisions 3LN)
(USSR capelin acoustic survey 1990, Div 2J+3KLNO)
(capelin 0-group trawl survey 1990, Div 3LNO)
(dist., abundance 0-group Shake Div 4VWX 1978-89)
(year-class strengths of Shake Div 4VWX)
(G halibut survey Div OB and 1BCD 1990)
(results of bottom trawl survey, Flemish Cap 1990)
(compar. gillnet & longl. in G halibut, W Greenl.)
(blomass & age of cod Div 2J+3KL outside 200 miles)
(strat. random trawl survey, shrimp in ICES XIV)
(length-weight relationships of round. grenadier)
(USSR surveys-results for A plaice in Div 3KLMNO)
(USSR surveys-results for A plaice in Div 3KLMNO)
(USSR surveys-results for A plaice in Div 3KLMNO)
(dist. & abund. of young cod, W Greenland 1990)
(preliminary assessment of SA 1 cod)
(assessment of yellowtail flounder, Div 3LNO)
(assessment of the cod stock in NAFO Div 3NO)
(Flemish Cap cod stock analyais)
(impact of Greenland cod at Iceland, 1941-90)
(assess. & manage. of the Georges Bank cod fishery)
(distrib. of 3Pn44RS cod and gear failure SW Nfld)
(variability of cod and blomass, Div 2J+3KL)
(recruitment variability of cod stocks)
(cod stock abundance in SNA 2 and 3)
(cod year-class strength related to SSB & survival)
(W Greenland cod abundance in the 20th century)
(tagged distribution of capelin in the NW Atlantic)
                                                                                                                                                                                                       SCR 91/ 6
                                                                                                                                                                                                                                          (status of redfish stock in Divisions 3LN)
                                                                                                                                                                                                                               52
 Sebastes sp. (see under Redfishes, Atlantic)
 Sequential population analysis (SPA)
                                                                                                                                                                                                                               80
 SCR 91/
                                    (status of redfish stock in Divisions 3LN)
                                  (status of redrish stock in Divisions 3LN)
(misreporting effects on Flemish C. cod: simulation)
(survey recruitment and biomass for cod Div 3M)
(sequential population analysis, shrimp in Div 0A)
(redfish stock size in Div 3M, 1990 4 TAC for 1992)
(assessment of G halibut stock SA 2, Div 3KL)
(assessment of redfish in NAFO Div 3LN)
                                                                                                                                                                                                                            102
                                                                                                                                                                                                                             107
                                                                                                                                                                                                                             112
                                                                                                                                                                                                                             114
                               (assessment update of A plaice in NAFO Div 3LNO) (impact of Greenland cod at Iceland, 1941-90)
                                                                                                                                                                                                                            122 (tagged distribution of capelin in the NW Atlantic)
 Short-finned squid (see Squid, short-finned)
 Shrimp (Pandalus sp.)
                                                                                                                                                                                                        Subcommittee, reports
SCR 91/ 20 (Norwegian shrimp study in E Greenland waters 1990)
29 (length dist & facundity of shrimp on Flemish Cap)
33 (Canadian shrimp fishery Div OA, 1990)
40 (shrimp discards in Davis St. & Denmark St.)
41 (selectivity in shrimp trawl)
48 (food and feeding of redfish in W Greenland)
49 (stomach contents of G halibut in W Greenland)
52 (strat. random trawl survey, shrimp in ICES XIV)
53 (shrimp fishery Denmark Strait 1990-early 1991)
57 (catch-rate index for Greenland shrimp Div 1B)
                                                                                                                                                                                                        SCS 91/ 19 (report of Scientific Council, Jun 1991)
                                                                                                                                                                                                        Surveys, biological
                                                                                                                                                                                                                                          (dist., abundance 0-group S hake Div 4VWX 1989-90) (vertical dist. & feeding S hake Div 4VWX 1989-90) (food and feeding of mesopelagics in NW Atlantic) (cod assessment, SA 3 1990 trawl acoustic data) (status of redfish stock in Divisions 3LN) (decrease in catch of grenadier SA 0-3, 1979-90)
                                                                                                                                                                                                        SCR 91/ 1
```

```
(USSR capelin acoustic survey 1990, Div 2J+3KLNO)
(capelin 0-group trawl survey 1990, Div 3LNO)
(capelin 0-group trawl survey 1990, Div 3LNO)
(dist., abundance 0-group S hake Div 4VWX 1978-89)
(year-class strengths of S hake Div 4VWX)
(Norwegian shrimp study in E Greenland waters 1990)
(G halibut survey Div OB and IBCD 1990)
(cod assessment in Subdiv 3Ps)
(wariations in water temp. Subdiv 3Ps 1978-90)
(dist. of A plaice in winter in Subdiv 3Ps 1978-90)
(results of bottom trawl survey, Flemish Cap 1990)
(results of bottom trawl survey, Flemish Cap 1990)
(results of bottom trawl survey, Flemish Cap 1990)
(structure 4 changes in ichthyofauna off W Greenl.)
(assessment of G halibut stock 50 fW Greenl., 1989-90)
(structure 4 changes in ichthyofauna off W Greenl.)
(status of Scotian Shelf S hake pop. in 1990)
(biomass of G halibut in SA 0+1, 1988-90)
(piomass of redfish in SA 0+1, 1988-90)
(con assurvey-results for A plaice in Dlv 3KLMNO)
(USSR surveys-results for A plaice in Dlv 3KLMNO)
(USSR surveys-results for yellowtail flo. Dlv 3KLMNO)
(g. halibut strat. ran. trawl & longl. survey 1990)
(survey recruitment and blomass for cod Dlv 3M)
(satrat. random trawl survey, SA 0+1 shrimp 1990)
(redfish in SA 1, dist., abund., blomass, 1982-90)
(preliminary assessment of SA 1 cod)
(assessment of yellowtail flounder, Dlv 3LNO)
(preliminary assessment of SA 1 cod)
(assessment of the cod stock in NAFO Div 3LNO)
(preliminary assessment of SA 1 cod)
(assessment of the cod stock in NAFO Div 3LNO)
(preliminary assessment of SA 1 cod)
(assessment of redfish in NAFO Div 3LNO)
(preliminary assessment of SA 1 cod)
(assessment of redfish in NAFO Div 3LNO)
(preliminary assessment of SA 1 cod)
(assessment of redfish in NAFO
                                                                                                                                                                                                                                                                                                                                                                                             (temp. 4 salinity on the Scotian S. & G. of Maine)
(overview of NAFO environmental conditions, 1990)
(report on Second World Climate Conference)
(water temperature & salinity, G. of Maine 1990)
(thermohaline variab. of the W Greenland Current)
                                                                                                                                                                                                                                                                                                                                      SCR 91/ 86
                                                                                                                                                                                                                                                                                                                                                                                              (effect of environment on growth of cod)
(distribution of eastern Scotian Shelf cod)
(distribution of cod in S. Gulf of St. Lawrence)
(distribution of cod in the southeastern North Sea)
(variability of cod and biomass, Div 2J+3KL)
(migration of cod on NE Nfld Shelf: a model)
                                                                                                                                                                                                                                                                                                                                     Trawl (see also fishing gear)
                                                                                                                                                                                                                                                                                                                                                                                            (results of bottom trawl survey, Flemish Cap 1990)
(selectivity in shrimp trawl)
(results of two trawl surveys in SA 1, 1990)
(strat. random trawl survey, shrimp in ICES XIV)
(catch and effort trends, W Greenland cod)
(G. halibut strat. ran. trawl & longl. survey 1990)
(strat. random trawl survey, SA 0+1 shrimp 1990)
(cod samp. of pair trawlers on Flemish Cap 1988-90)
(effect of tow duration on gear sefectivity)
(theories of effects on cod trawling)
(survey distribution of cod in Nfld Area, 1988-90)
                                                                                                                                                                                                                                                                                                                                      SCR 91/ 28
                                                                                                                                                                                                                                                                                                                                      USA (see United States of America)
                                                                                                                                                                                                                                                                                                                                      USSR (see Union of Soviet Socialist Republics)
                                                                                                                                                                                                                                                                                                                                      Union of Soviet Socialist Republics
                                                                                                                                                                                                                                                                                                                                                                                             (comparison of S hake otoliths, Can-USSR 1989)
(USSR capelin acoustic survey 1990, Div 2J+3KLNO)
(capelin 0-group trawl survey 1990, Div 3LNO)
(dist. of S hake & other species in Div 4WWX, 1990)
(abund: biomass, witch flo. Div 3NO G halibut 3KL)
(USSR surveys-results for A plaice in Div 3KLNO)
(USSR surveys-results for yellowtil flo. Div 3LNO)
(redfish in Div 3LN, abund. 6 biomass 1972-90)
                                                                                                                                                                                                                                                                                                                                      SCR 91/ 7
                                                                                                                                                                                                                                                                                                                                      SCS 91/ 5 (USSR research report for 1990)
                                                                                                                                                                                                                                                                                                                                      United States of America (USA)

    (water temperature & salinity, G. of Maine 1990)
    (continuous plankton records 1990 off eastern USA)
    (assess. & manage. of the Georges Bank cod fishery)

                                                                                                                                                                                                                                                                                                                                      SCR 91/ 91
                                                                                                                                                                                                                                                                                                                                     SCS 91/ 8 (US research report for 1990)
                                                         (research vessel surveys by stock)
(report of Scientific Council, Jun 1991)
SCS 91/ 18
                                                                                                                                                                                                                                                                                                                                      VPA (see Sequential population analysis)
Symposia
SCS 91/ 20 (report of Scientific Council, Sep 1991)
                                                                                                                                                                                                                                                                                                                                      Von Bertalanffy
                                                                                                                                                                                                                                                                                                                                      SCR 91/ 27 (age-length relation of A plaice Subdiv 3Ps)
TAC (Total allowable catch)
                                                        (status of redfish stock in Divisions 3LN) (roundnose grenadier in SA 2+3 and catch in 0+1) (Canadian shrimp fishery Div 0A, 1990) (misreporting effects on Flemish C. cod: simulation) (shrimp fishery Denmark Strait 1990-early 1991) (review of management in the Illex fishery SA 364) (the shrimp fishery in NAFO SA 1 in 1990) (redfish stock size in Div 3M, 1990 & TAC for 1992) (assessment of yellowtail flounder, Div 3LNO) (A plaice stock on Flemish Cap, Div 3M) (assessment update of A plaice in NAFO Div 3LNO) (Flemish Cap cod stock analysis) (preliminary assess. of shrimp at Denmark Strait)
                                                         (status of redfish stock in Divisions 3LN)
                                                                                                                                                                                                                                                                                                                                      Warm-core rings (see Eddies)
                                                                                                                                                                                                                                                                                                                                      Water circulation (see Currents)
                                                                                                                                                                                                                                                                                                                                       SCR 91/ 85
87
                                                                                                                                                                                                                                                                                                                                                                                             (MEDS report for 1990)
(overview of NAFO environmental conditions, 1990)
                                                                                                                                                                                                                                                                                                                                      Weight (see also Catch)
                                                                                                                                                                                                                                                                                                                                                                                            (year-class strengths of S hake Div 4VWX)
(G halibut survey Div 0B and 1BCD 1990)
(cod assessment in Subdiv 3Ps)
(Farcese longline cod fishery Flemish Cap 1990)
(length dist & fecundity of shrimp on Flemish Cap)
(structure & changes in ichthyofauna off W Greenl.)
(shrimp discards in Davis St. & Denmark St.)
(biomass of G halibut in SA 0+1, 1988-90)
(biomass of redfish in SA 0+1, 1988-90)
(biomass of redfish in SA 0+1, 1988-90)
(abund; biomass, witch flo. Div 3NO G halibut 3KL)
(length-weight relationships of round. grenadier)
(sequential population analysis, shrimp in Div OA)
(redfish in Div 3IM, abund. & biomass 1972-90)
(cod samp. of pair trawlers on Flemish Cap 1988-90)
(assessment of yellowtail flounder, Div 3LNO)
(juvenile A plaice on the Grand Bank, Div 3LNO)
(assessment of the cod stock in NAFO Div 3NO)
(assessment of redfish in NAFO Div 3LN)
Tagging (methods, recaptures, returns, etc.)
                                                         (prelim. results cod tagging off W Greenland 1989)
(impact of Greenland cod at Iceland, 1941-90)
(tagged distribution of capelin in the NW Atlantic)
SCS 91/ 7
                                                         (tagging activities reported in 1990)
Temperature
                                                       (dist., abundance 0-group S hake Div 4VWX 1989-90) (hydrographic conditions in SA3+4VWX 1990) (cod assessment, SA 3 1990 trawl acoustic data) (decrease in catch of grenadier SA 0-3, 1979-90) (oceanographic conditions in NAFO SA 0-3 in 1990) (greenhouse effects in N Atlantic on W Greenl. cod) (variations in water temp. Subdiv 3Ps 1978-90) (dist. of A plaice in winter in Subdiv 3Ps 1978-90) (assessment of G halibut stock SA 0+1)
SCR 91/ 1
                                                                                                                                                                                                                                                                                                                                      West Greenland (see Greenland, West)
```

(new method for estimating hydrographic situation)

## Winds

SCR 91/ 85 (MEDS report for 1990) 87 (overview of NAFO environmental conditions, 1990)

Witch flounder (see Flounder, witch)

Wolffishes (Anarhichas sp.)

SCR 91/36 (structure & changes in ichthyofaune off W Greenl.)
47 (feeding habits of demersal fish in W Greenland)

Yellowtail flounder (see Flounder, yellowtail)

## Yield: Yield-per-recruit

- SCR 91/3 (food and feeding of mesopelagics in NW Atlantic)
  42 (status of Scotian Shelf S hake pop. in 1990)
  77 (redfish stock size in Div 3M, 1990 & TAC for 1992)
  82 (A plaice stock on Flemish Cap, Div 3M)
  97 (fluctuation and abundance of cod in Baltic Sea)

[Z]

Zooplankton (see Plankton)

#### AUTHOR INDEX

[A] [C] AKIMOTO, K. (Japan) CÁRDENAS, E. de (Spain) SCR 91/44 (misreporting effects on Flemish C. cod: simulation)
67 (survey recruitment and biomass for cod Div 3M) SCR 91/ 50 (results of two trawl surveys in SA 1, 1990) ALBIKOVSKAYA, L. K. (USSR) CARLSSON, D. M. (Denmark) /121 (food consumption of cod in Grand Bank, 1990)
 125 (food and feeding of comm. fishes, Nfld Bank, 1991) (shrimp fishery Denmark Strait 1990-early 1991) (catch-rate index for Greenland shrimp Div 1B) (the shrimp fishery in NAFO SA 1 in 1990) (strat. random trawl survey, SA 0+1 shrimp 1990) (data and prellm. assessment of shrimp in SA 0+1) (preliminary assess. of shrimp at Denmark Strait) SCR 91/ 53 ALPOIM, R. (Portugal) SCS 91/ 15 (Portuguese research report for 1990) ANDERSON, C. (Canada) CARNEIRO, M. (Portugal) SCR 91/120 (overview: Ocean Production Enhancement Network) SCS 91/ 15 (Portuguese research report for 1990) ATKINSON, D B. (Canada) CARSCADDEN, J. E. (Canada) (roundnose granadier in SA 2+3 and catch in 0+1) (length-weight relationships of round, granadier) SCR 91/123 (accoustic surveys for capelin in Div 3L, 1991) A. M. (Portugal) AVILA DE MELO, CASAS, M. (Spain) (misreporting effects on Flemish C. cod: simulation) (survey recruitment and biomass for cod Div 3M) SCR 91/ 31 (feeding of cod on Flemish Cap, 1989-90) (summer feeding of cod on Flemish Cap) SCS 91/ 15 (Portuguese research report for 1990) CHRISTENSEN. S. (Denmark) SCS 91/ 4 (Denmark-Greenland request for sci. advice 1992) [8] CHUMAKOV, A. K. (USSR) BAGGE, O. (Denmark) (abund; biomass, witch flo. Div 3NO G halibut 3KL) (USSR surveys-results for A plaice in Div 3KLMNO) (USSR surveys-results for yellowtail flo. Div 3LNO) (G. halibut strat. ran. trawl & longl. survey 1990) (redfish in Div 3LN, abund. & biomass 1972-90) (redfish stock size in Div 3M, 1990 & TAC for 1992) (intensity of feeding of cod, 5 Barents S. vs Nfld) SCR 91/ 56 SCR 91/ 97 (fluctuation and abundance of cod in Baltic Sea) BAIRD, J. W. (Canada) (biomass & age of cod Div 2J+3KL outside 200 miles) (USSR surveys-results for A plaice in Div 3KLMNO) (USSR surveys-results for yellowtail flo. Div 3LNO) (assessment of yellowtail flounder, Div 3LNO) (assessment of the cod stock in NAFO Div 3NO) (assessment of redfish in NAFO Div 3LN) (assessment update of A plaice in NAFO Div 3LNO) (variability of cod and biomass, Div 2J+3KL) (changes in cod stock abundance in SA 2 and 3) 100 B0 [D] DEGEL, H. (Denmark) (shrimp discards in Davis St. & Denmark St.) (selectivity in shrimp trawl) BAKANEV, V. S. (USSR) DeYOUNG, B. (Canada) (USSR capelin acoustic survey 1990, Div 2J+3KLNO) (capelin 0-group trawl survey 1990, Div 3LNO) SCR 91/119 (migration of cod on NE Nfld Shelf: a model) BAY, J. (Denmark) DOROVSKIKH, R. S. (USSR) SCR 91/ 97 (fluctuation and abundance of cod in Baltic Sea) SCR 91/ 77 (redfish stock size in Div 3M, 1990 & TAC for 1992) BENWAY, R. L. (USA) DRINKWATER, K. F. (Canada) (temp. & salinity on the Scotian S. & G. of Maine) (overview of NAFO environmental conditions, 1990) SCR 91/ 91 (water temperature & salinity, G. of Maine 1990) -SCR 91/ 86 BISHOP, C. A. (Canada) (blomass & age of cod Div 2J+3KL outside 200 miles) (assessment of the cod stock in NAFO Div 3NO) (variability of cod and blomass, Div 2J+3KL) (changes in cod stock abundance in SA 2 and 3) EGGERS, R. (Federal Republic of Germany) SCS 91/ 12 (GDR research report for 1990) J. (Denmark) ERNST, P. (Federal Republic of Germany) SCR 91/ 38 (assessment of G halibut stock SA 0+1) (compar. gillnet & longl. in G halibut, W Greenl.) SCR 91/ 21 (G halibut survey Div 0B and IBCD 1990) BOROVKOV, V. A. (USSR) SCS 91/ 12 (GDR research report for 1990) SCR 91/11 (oceanographic conditions in NAFO SA 0-3 in 1990)
116 (cod year-class strength related to SSB 4 survival) [F] SCS 91/ 5 (USSR research report for 1990) FAHRIG, L. (Canada) BOWERING, W. R. (Canada) SCR 91/119 (migration of cod on NE Nfld Shelf: a model) (abund; biomass, witch flo. Div 3NO G halibut 3KL) (USSR surveys-results for A plaice in Div 3KLMNO) (USSR surveys-results for yellowtail flo. Div 3LNO) SCR 91/ 56 FRECHET, A. (Canada) SCR 91/110 (distrib. of 3Pn&4RS cod and gear failure SW Nfld) SCS 91/ 6 (Canadian research report for 1990) BRANDER, K. (United Kingdom) SCR 91/108 (spawning characteristics of cod in N. Atlantic) FUCHS, F. (Federal Republic of Germany) SCR 91/ 79 (new method for estimating hydrographic situation) BRODIE, W. B. (Canada) (abund; biomass, witch flo. Div 3NO G halibut 3KL) (USSR surveys-results for A plaice in Div 3KLMNO) (USSR surveys-results for yellowtail flo. Div 3LNO) (assessment of yellowtail flounder, Div 3LNO) (assessment of the cod stock in NAFO Div 3NO) (assessment update of A plaice in NAFO Div 3LNO) SCR 91/ 56 [G]

GAGON, P. (Canada)

SCR 91/110 (distrib. of 3Pn&4RS cod and gear failure SW Nfld)

KAWAHARA, S. (Japan)

SCR 91/55 (review of management in the Illex fishery SA 364)

#### AUTHOR INDEX

GANDARAS, G. P. (Spain) KEELEY, J. R. (Canada) SCS 91/ 16 (Spanish research report for 1990) SCR 91/ 85 (MEDS report for 1990) GASUIKOV, P. S. (USSR) KENCHINGTON, T. J. (Canada) SCR 91/54 (multiplicative model for effort standardization)
77 (redfish stock size in Div 3M, 1990 4 TAC for 1992) SCR 91/101 (theories of effects on cod trawling) KOELLER, P. A. (Canada) GERASIMOVA, O. V. (USSR) SCS 91/ 6 (Canadian research report for 1990) SCR 91/121 (food consumption of cod in Grand Bank, 1990) 125 (food and feeding of comm. fishes, Nfld Bank, 1991) KOTLYAROV, S. M. (USSR) SCR 91/121 (food consumption of cod in Grand Bank, 1990) GODINHO, M. L. (Portugal) SCR 91/ 68 (method to help age A plaice in Div 3M) KOVALEV, S. (USSR) SCS 91/ 15 (Portuguese research report for 1990) SCS 91/ 5 (USSR research report for 1990) KUZMIN, S. A. (USSR) GODØ, O. R. (Norway) SCR 91/117 (Barents Sea cod abundance relative to environment) SCR 91/ 5 (cod assessment, SA 3 1990 trawl acoustic data) 124 (survey distribution of cod in Nfld Area, 1988-90) GOULET, J. R. (USA) SCR 91/ 92 (continuous plankton records 1990 off eastern USA) [L] LARRAÑETA, M. G. (Spain) SCR 91/ 98 (non-parametric methods of estimating cod, Div 3NO) HARNUM, R. W. (Canada) LASSEN, H. (Denmark) SCR 91/43 (inshore capelin fishery in Div 3L in 1990) SCR 91/ 41 (selectivity in shrimp trawl)
57 (catch-rate index for Greenland shrimp Div 1B) HARRISON, G. (Canada) SCR 91/ 42 (status of Scotian Shelf S hake pop. in 1990) LEHMANN, K. M. (Denmark) (shrimp discards in Davis St. & Denmark St.) (selectivity in shrimp trawl) (strat. random trawl survey, shrimp in ICES XIV) (preliminary assess. of shrimp.at Denmark Strait) HEESSEN, H. J. L. (The Netherlands) SCR 91/ 40 SCR 91/109 (distribution of cod in the southeastern North Sea) HOENIG, J. (Canada) LOCH, J. S. (Canada) SCR 91/112 (variability of cod and biomass, Div 2J+3KL) SCS 91/ 6 (Canadian research report for 1990) HOFFMANN, U. (Federal Republic of Germany) SCR 91/ 21 (G halibut survey Div 08 and 18CD 1990) [M] HOVGÁRD, H. (Denmark) MAHE, J. C. (France) (catch 4 affort trends, W Greenland cod)
(prelim. results cod tagging off W Greenland 1989)
(discarding of young cod, W Greenland 1990)
(preliminary assessment of SA 1 cod)
(W Greenland cod abundance in the 20th century) SCR 91/ 62 SCR 91/ 24 24 (variations in water temp. Subdiv 3Ps 1978-90)
26 (dist. of A plaice in winter in Subdiv 3Ps 1978-90)
27 (age-length relation of A plaice Subdiv 3Ps) MARKOV, Yu. A. (USSR) HUNT, J. J. (Canada) SCR 91/ 18 (otoliths, ageing and growth of S hake Div 4VWX) SCR 91/ 7 (comparison of S hake otoliths, Can-USSR 1989) MELNIKOV, S. P. (USSR) SCR 91/125 (food and feeding of comm. fishes, Nfld Bank, 1991) [1] MENA, I. (Spain) ISTOMINA, N. K. (USSR) SCR 91/ 29 (length dist & fecundity of shrimp on Flemish Cap) SCR 91/ 13 (dist. of S hake & other species in Div 4VWX, 1990) MILLAR, R. B. (Canada) [J] SCR 91/ 99 (effect of environment on growth of cod) JENSEN, J. M. (Denmark) MILLER, D. S. (Canada) SCS 91/ 13 (Denmark/Greenland research report for 1990) SCR 91/ 37 (capelin biomass by acoustics Div 3L, 1990) 123 (acoustic surveys for capelin in Div 3L, 1991) JØRGENSEN, O. (Denmark) MOGUEDET, Ph. (France) SCR 91/ 50 (results of two trawl surveys in SA 1, 1990) 5CR 91/ 23 (cod assessment in Subdiv 3Ps) JOSSI, J. W. (USA) 24 (variations in water temp. Subdiv 3Ps 1978-90)
26 (dist. of A place in winter in Subdiv 3Ps 1978-90)
27 (age-length relation of A plaice Subdiv 3Ps)
114 (cod stock abundance in Subdiv. 3Ps, 1978-90) (water temperature & salinity, G. of Maine 1990) (continuous plankton records 1990 off eastern USA) MOROZOVA, G. N. (USSR) [K] SCR 91/ 12 (abundance of A plaice 1983-90 in Div 3M) KANNEWORFF, P. (Denmark) MORRISON, C. (Canada) SCR 91/45 (biomass of G halibut in SA 0+1, 1988-90)
46 (biomass of redfish in SA 0+1, 1988-90)
52 (strat. random trawl survey, shrimp in ICES XIV)
53 (shrimp fishery Denmark Strait 1990-early 1991)
69 (the shrimp fishery in NAFO SA 1 in 1990)
70 (strat. random trawl survey, SA 0+1 shrimp 1990) SCR 91/105 (digestive tract of cod and larva) 106 (the reproductive stages of cod) MURPHY, E. F. (Canada)

SCR 91/ 51 (biomass & age of cod Div 2J+3KL outside 200 miles) 83 (assessment of the cod stock in NAFO Div 3NO)

## AUTHOR INDEX

POWER, D. (Canada) McQUINN, I. H. (Canada) SCR 91/ 71 (sequential population analysis, shrimp in Div 0A) SCR 91/ 22 (roundnose grenadier in SA 2+3 and catch in 0+1) (redfish in Div 3LN, abund. 6 biomass 1972-90) (assessment of redfish in NAFO Div 3LN) MYERS, R. A. (Canada) SCR 91/113 (recruitment variability of cod stocks) ſNI RATZ, H-J. (Federal Republic of Germany) SCR 91/ 36 (structure 4 changes in ichthyofauna off W Greenl.) 73 (cod samp. of pair trawlers on Flemish Cap 1988-90) NAFO SCS 91/ 19 (report of Scientific Council, Jun 1991) 20 (report of Scientific Council, Sep 1991) RAWSON, B. (Canada) SCS 91/ 3 (Canadian request for scientific advice for 1992) NAFO SECRETARIAT (historical catches for some stocks, 1979-89) (provisional index for 1990 SCR and SCS documents) (tagging activities reported in 1990) (statistical activities and publications note) (list of biological sampling data for 1989) (provisional nominal catches for 1990) (research years) surveys by stock) SCS 91/ 1 REINERT, J. (Farce Islands) SCR 91/ 25 (Faroese longline cod fishery Flemish Cap 1990) SCS 91/ 11 (Faroe Islands research report for 1990) (research vessel surveys by stock) RIGET, F. (Denmark) 47 (feeding habits of demersal fish in W Greenland)
48 (food and feeding of redfish in W Greenland)
49 (stomach contents of G halibut in W Greenland)
62 (catch & effort trends, W Greenland cod)
63 (prelim. results cod tagging off W Greenland 1989)
65 (discarding of young cod, W Greenland 1990) NAGEL, Ch. (Federal Republic of Germany) SCR 91/ 47 SCS 91/ 12 (GDR research report for 1990) NAKASHIMA, B. S. (Canada) SCR 91/43 (inshore capelin fishery in Div 3L in 1990)
122 (tagged distribution of capelin in the NW Atlantic) RIKHTER, V. A. (USSR) SCR 91/ 13 (dist. of S hake & other species in Div 4VWX, 1990)
14 (natural mortality of S hake on the Scotian Shelf)
15 (analy. of indices & CPUE, S hake Div 4VWX 1989-90) NARAYANAN, S. (Canada) SCR 91/119 (migration of cod on NE Nfld Shelf: a model) SCS 91/ 5 (USSR research report for 1990) NYGAARD, K. H. (Denmark) SCR 91/64 (dist. & abund. of young cod, W Greenland 1990) ROBERGE, M. M. (Canada) SCS 91/ 6 (Canadian research report for 1990) [0] ROSE, G. A. (Canada) OGANIN, I. A. (USSR) SCR 91/119 (migration of cod on NE Nfld Shelf: a model) SCR 91/ 6 (status of redfish stock in Divisions 3LN) ORLOVA, E. L. (USSR) [5] SCR 91/100 (intensity of feeding of cod, S Barents S. vs Nfld) SABORIDO, F. (Spain) SCR 91/ 32 (redfish distribution in Flemish Cap, 1988-90) SAVARD, L. (Canada) PACIORKOWSKI, A. J. (Poland) SCR 91/ 71 (sequential population analysis, shrimp in Div 0A) 96 (preliminary assess. of shrimp at Denmark Strait) SCS 91/ 21 (Polish research report for 1990) PARSONS, D. G. (Canada) SAVVATIMSKY, P. I. (USSR) SCR 91/ 8 (decrease in catch of grenadier SA 0-3, 1979-90) 59 (length-weight relationships of round. grenadier) SCR 91/ 33 (Canadian shrimp fishery Div OA, 1990)
71 (sequential population analysis, shrimp in Div OA)
96 (preliminary assess. of shrimp at Denmark Strait) SCS 91/ 5 (USSR research report for 1990) PAZ, J. (Spain) SCHOPKA, S. A. (Iceland) SCR 91/31 (feeding of cod on Flemish Cap, 1989-90)
98 (non-parametric methods of estimating cod, Div 3NO)
111 (summer feeding of cod on Flemish Cap) SCR 91/102. (impact of Greenland cod at Iceland, 1941-90) SERCHUK, F. M. (USA) SCS 91/ 16 (Spanish research report for 1990) SCR 91/107 (assess. & manage. of the Georges Bank cod fishery) PEDERSEN, S. A. (Denmark) SCS 91/ 8 (US research report for 1990) SCR 91/45 (biomass of G halibut in SA 0+1, 1988-90)
46 (biomass of redfish in SA 0+1, 1988-90)
47 (feeding habits of demersal fish in W Greenland)
48 (food and feeding of redfish in W Greenland)
49 (stomach contents of G halibut in W Greenland)
64 (dist. 6 abund. of young cod, W Greenland 1990) SEREBRYAKOV, V. P. (USSR) SCR 91/116 (cod year-class strength related to SSB & survival) SHERSTYUKOV, A. I. (USSR) 1 (dist., abundance 0-group S hake Div 4VWX 1989-90)
2 (vertical dist. 6 feeding S hake Div 4VWX 1989-90)
16 (dist., abundance 0-group S hake Div 4VWX 1978-89)
18 (otoliths, ageing and growth of S hake Div 4VWX)
19 (year-class strengths of S hake Div 4VWX)
76 (preliminary assessment of SA 1 cod) PEREZ-GANDARAS, G. (Spain) SCR 91/ 1 SCR 91/31 (feeding of cod on Flemish Cap, 1989-90) 111 (summer feeding of cod on Flemish Cap) PETRIE, B. (Canada) SCR 91/86 (temp. & salinity on the Scotian S. & G. of Maine) SHOWELL, M. A. (Canada) PETTIPAS, R. (Canada) SCR 91/ 42 (status of Scotian Shelf S hake pop. in 1990) SCR 91/86 (temp. & salinity on the Scotian S. & G. of Maine) SIGAEV, I. K. (USSR) PODRAZHANSKAYA, S. G. (USSR) SCR 91/ 4 (hydrographic conditions in SA3+4VWX 1990)

SCS 91/ 5 (USSR research report for 1990)

SCR 91/ 3 (food and feeding of mesopelagics in NW Atlantic)

#### AUTHOR INDEX

SINCLAIR, A. (Canada) SCR 91/103 (distribution of eastern Scotian Shelf cod) SKJOLDAL, H. R. (Norway) SCR 91/117 (Barents Sea cod abundance relative to environment) SKÚLADÓTTIR, U. (Iceland) SCR 91/ 58 (Denmark Strait shrimp, catch & effort 1980-90)
72 (shrimp fishery in Denmark Strait 1989-90)
96 (preliminary assess. of shrimp at Denmark Strait) SMEDSTAD, C. M. (Norway) SCR 91/ 20 (Norwegian shrimp study in E Greenland waters 1990) SMITH, D. E. (USA) SCR 91/ 92 (continuous plankton records 1990 off eastern USA) SOSHIN, S. M. (USSR) SCR 91/66 (G. halibut strat. ran. trawl & longl. survey 1990) STEFFENSEN, E. (Denmark) SCR 91/ 97 (fluctuation and abundance of cod in Baltic Sea) STEIN, M. (Federal Republic of Germany) (greenhouse effects in N Atl. on W Greenl. cod)
(new method for estimating hydrographic situation)
(report on Second World Climate Conference)
(thermohaline variab. of the W Greenland Current) SCR 91/ 17 STERN, H. (USA) SCS 91/ 8 (US research report for 1990) SWAIN, D. P. (Canada) SCR 91/104 (distribution of cod in S. Gulf of St. Lawrence) TEVS, I. I. (USSR) SCR 91/11 (oceanographic conditions in NAFO SA 0-3 in 1990) 124 (survey distribution of cod in Nfld Area, 1988-90) TORHEIM, S. (Norway) SCR 91/ 20 (Norwegian shrimp study in E Greenland waters 1990) TRITES, R. W. (Canada) SCR 91/87 (overview of NAFO environmental conditions, 1990) TUROK, V. F. (USSR)

SCR 91/ 13 (dist. of S hake & other species in Div 4VWX, 1990)
[U]

UOZUMI, Y. (Japan)

SCR 91/ 55 (review of management in the Illex fishery SA 344)

SCS 91/ 14 (Japanese research report for 1990)

[V]

VASKOV, A. A. (USSR)

SCR 91/ 6 (status of redfish in Divisions 3LN)
21 (G. halibut survey Div OB and 1BCD 1990)

VAZQUEZ, A. (Spain)

SCR 91/ 28 (results of bottom trawl gurvey, Flemish Cap 1990) 78 (cod samp. of pair trawlers on Flemish Cap 1988-90)

SCS 91/ 16 (Spanish research report for 1990)

VEITCH, P. J. (Canada)

SCR 91/ 33 (Canadian shrimp fishery Div OA, 1990)

VINOGRADOV, V. I. (USSR)

SCR 91/ 42 (vertical dist. & feeding S hake Div 4VWX 1989-90)

[ W]

WALDRON, D. E. (Canada)

SCR 91/ 42 (status of Scotian Shelf S hake pop. in 1990).

WALSH, S. J. (Canada)

SCR 91/80 (assessment of yellowtail flounder, Div 3LNO)
81 (juvenile A plaice on the Grand Bank, Div 3LNO)
84 (effect of tow duration on gear selectivity)

WALTERS, C. (Canada)

SCR 91/119 (migration of cod on NE Nfld Shelf: a model)

WIELAND, K. (Federal Republic of Germany)

SCR 91/ 35 (interaction of fish stocks off W Greenl., 1989-90)

WIGLEY, S. E. (USA)

SCR 91/107 (assess. 4 manage. of the Georges Bank cod fishery)

[X]

XU, X. (Canada)

SCR 91/112 (variability of cod and biomass, Div 2J+3KL)

(Y)

YOKAWA, K. (Japan)

SCR 91/ 34 (Japanese capelin fishery Div 3NO, 1990)

[Z]

ZAMARRO, J. (Spain)

SCR 91/ 30 (food and feeding of A plaice S. Grand Bank) 82 (A plaice stock on Flemish Cap, Div 3M)

SCS 91/ 16 (Spanish research report for 1990)

ZUBOV, V. I. (USSR)

SCR 91/ 9 (USSR capelin acoustic survey 1990, Div 2J+3KLNO)